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Alternative Dispute Resolution
Utilizing ADR to resolve Construction Disputes: A quantitative survey of Scottish legal practitioners’ awareness and experiences

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Abstract:
It is widely documented that legal practitioners perform a gate-keeping role, advising clients on the most appropriate form of dispute resolution for particular cases (Agapiou & Clark, 2010). It would be interesting to ask whether the attitudes of the legal fraternity in Scotland creates a real limit on what could be implemented by a government that seeks to promote novel means of dispute disposal as part of its civil justice reform agenda. Drawn from questionnaire -based research, the aim of this paper is to establish lawyers’ awareness, attitudes and experiences of Alternative Dispute Resolution (ADR). Despite the small sample used in this study, there is evidence that more education in ADR procedures and their application could provide further opportunity to develop them as settlement tools in Scotland by building on more positive aspects of responses within the survey. Only some in the legal fraternity have embraced the challenge of what the study has found to be regarded widely as an opportunity. Further education, training and publication of successful execution may be necessary to convince doubters that ADR needs to be part of the menu of methods of dispute resolution for the modern practitioner.

Keywords:
alternative dispute resolution, lawyers, Scotland

1 Introduction

There is no doubt that ADR has experienced growth over recent years. The Eversheds‘ survey found 41% of litigants had used ADR in 2000, compared to 30% in 1998. However, it has been concluded that over 96% of the respondents in a 1997 survey by Brooker and Lavers had never used any form of ADR (Brooker and Lavers, 1998). 70% of those respondents who have never used ADR said they would consider doing so, although a surprisingly large proportion (27%) said they did not know…Only 3% (6 of the 229 respondents) said they would not use ADR‘(Gould et al, 1998). By 2001, it would seem that matters had moved forward in respect to the use of mediation. In a postal survey, Brooker and Lavers (Lavers and Brooker, 2001) reported that 66% of respondents had used mediatory techniques to resolve disputes. Similarly, in a 2010 survey of construction lawyers in Scotland, 58% of respondents had working experience of representing a party in at least one mediation case (Agapiou & Clark, 2010). The government has also influenced growth over time. For example in March 2001, the Lord Chancellor pledged that standard government procurement contracts would incorporate clauses to promote the use of ADR to resolve disputes as an alternative to litigation. By 2008, the figure had increased to 314 referrals (Lynch, 2010). Despite the fact that much has been written about lawyers‘ role in and experiences of ADR in commercial disputes in Scotland, and construction matters in other jurisdictions such as England and Wales and the USA (see for example, Povey (2005)), little is known about lawyers‘ interaction with the process with regard to disputes in Scotland. While recent research has focused on Scots
construction lawyers’ experience of and attitudes to mediation in construction disputes (Agapiou & Clark (2010), the research presented in this paper covers a wider and more in-depth investigation of lawyers’ opinions encompassing early neutral evaluation, conciliation and min-trials. This paper seeks to establish the level of awareness of, interest in and concerns regarding Alternative Dispute Resolution among Scottish legal practitioners, and to assess the implications for the resolution of disputes within the construction industry.

2 The growth of ADR in Scotland

Seemingly, the Commercial Court in Scotland does not have the power to direct the use of ADR without the consent of the parties. The enthusiasm of the English courts for the use of ADR to resolve disputes was driven by the Woolf Review, and the subsequent introduction of the Civil Procedure Rules (Gould, 2009). The ability in the English Rules to encourage the use of ADR has been backed up by comment and orders from judges in a series of cases since 2000 culminating in the decision of the Court of Appeal in Halsey v Milton Keynes NHS Trust decided in May 2004. Further examples where the English courts would not tolerate the unreasonable refusal to take part in mediation where the parties have contracted to mediate or where the courts consider it might achieve a settlement outcome include Burchell v Balland in April 2005, Wethered Estate Limited v Michael Davis and Others, and Earl of Malmesbury v Strutt & Parker decided in March 2008. Nonetheless, it is difficult to trace similar judicial enthusiasm in Scotland, according to Clark (2008). There does not seem to be an equivalent rule in Scotland that encourages the use of ADR in either the Court of Session rules or the Sheriff Court rules. The only exceptions to that are contained in the rules for conduct of Commercial Actions in the Court of Session introduced in December 2004, and the rules for Commercial Actions in the Sheriff Court which were introduced in March 2001. Although these rules have been introduced there is little evidence of the use of ADR being encouraged to resolve commercial disputes either by Court of Session judges or by Sheriffs. Nevertheless, pilot schemes involving in-court mediations were established by the Scottish Government in Sheriff Courts across Scotland. These were designed to test different models of provision to help inform discussions about future sustainability of mediation services. However, according to Clark (2008) these were confined to low value claims involving individuals rather than commercial disputes. Many commentators (e.g. Clark, 2009) have suggested that there is little demand for ADR in Scotland, citing judicial attitudes; change resistant legal profession; absence of an ADR body and lack of client awareness, as barriers to the further development of ADR within the Scottish arena.

2.1 Legal Profession

In most cases, when clients bring their disputes seeking advice, lawyers automatically enter into litigation: the adversarial process they are familiar and comfortable with, without any thought to possible alternatives. Not only is ADR an unknown quantity to many in the legal fraternity, they also appear unwilling to view it as an opportunity to expand their dispute resolution business rather than a threat to their fee income. This is true notwithstanding the fact that 94% of court actions generally settle (30% of these within one week of proof) (Brooker and Lavers, 1998). Surely the Scottish legal profession should be more enthusiastic in their promotion of alternatives to avoid such door of the court settlements, if for no other reason than to attain reduced client costs? There was some interesting research on this matter conducted by Agapiou & Clark (2010). The authors surveyed Scottish construction lawyers and, amongst a series of interesting results, found that almost three-fifths of respondents (58%) had working experience of representing clients in mediations; with 57% citing reduced client costs as by far the most important determining factor in recommending mediation to a client.
2.2 ADR Body

Prior to the establishment of Core Mediation in Edinburgh there was no accreditation body with the necessary infrastructure to supply appropriate mediators and manage disputes from initial enquiry through to a concluded mediation. Whether the existence of such a body will allay any fear judges may have regarding responsibility for the conduct of mediation cases before the courts remains to be seen. In a response to the Scottish Civil Courts Review Consultation Paper, Core Mediation highlighted that they had conducted over 200 mediations since 2002 (Sturrock, 2007). Although this may seem a small number on face value, it is interesting to note that of the total mediation many have taken place within the last few years.

2.3 Client Awareness

With ADR being little used in Scotland and lawyers reluctant to promote it, commercial clients are on the whole unaware of its possible benefits which have led to a resultant lack of demand. However, many large commercial disputes in Scotland involve international companies. Perhaps the greater use of ADR in other jurisdictions may well lead to a better appreciation of its benefits within the Scottish construction context, resulting in similar growth in Scotland as has been seen in England. Ultimately, such demand may force Scottish legal practitioners to expand their dispute resolution portfolio, or risk losing their clients’ base (Clark, 2008).

2.4 Prospect for change in Scotland?

Scotland has not been as radical in its reforms of the civil justice system. In spite of calls and measures to encourage ADR, including the introduction in 2001 and 2004, respectively, of rules governing Commercial Actions in the Court of Session and to rules for Commercial Actions in the Sheriff Court, there is little evidence to suggest that ADR has been widely embraced north of the border (Clark, 2009). Indeed, is there any prospect that ADR will ever gain credibility and acceptability amongst the judiciary, legal professionals, clients and government in Scotland? Interestingly, there has been plethora of government reviews and consultations focusing on reform of the civil justice system in Scotland since 2001, cumulating in the publication of the Gill Review of Civil Justice in 2009. All the reports are, to a certain extent, critical of the status quo and have been instrumental in moving the ADR agenda forward by advocating a move away from litigation towards more consensual approaches to dispute resolution, particularly from a value for money and access to justice perspectives (see for example, Scottish Consumer Council (Civil Justice Advisory Group), 2002). In 2007 the then Scottish Executive [now Scottish Government] published a report entitled ‘Modern Laws for a Modern Scotland – A Report on Civil Justice in Scotland’. The report itself was a response to the Scottish Consumer Council’s call for a review of the Civil Justice System in Scotland. It compares and contrasts the range of dispute resolution options available to disputing parties, but rather than describing them as either consensual or binding methods, the authors of the report suggested that options should be viewed as being on a continuum ranging from least [court] intervention at one end to most at the other. The Scottish Executive report seems to endorse the Sheriff Court Rules Council and the Court of Session Rules Council governing the use of ADR in the court process, while suggesting that ADR, and especially mediation, should be an integral part of civil justice system in Scotland following Lord Gill’s Review (Gill, 2009). Nevertheless, it seems unlikely that the proposals in the Gill Review will lead to a rapid adoption of ADR in Scotland, as compared to the proposals within Woolf Review within England and Wales. Notwithstanding the recommendations of the Gill review, the power to make an order for ADR to take place already exists in the Sheriff Court rules, so can we presume that this power will begin to be used in appropriate cases?
3 Data Collection & Analysis

The aim of the research was to establish the level of awareness of, interest in and concerns regarding ADR relative to legal practitioners in Scotland. Having defined the framework for the survey, the next step was to develop the necessary data collection tool in accordance with the research objectives. The questionnaire was distributed via the internet to 600 legal professionals randomly selected from the membership lists of professional associations for Solicitors & Advocates (Advocates are Barristers in Scotland) based and operating in Scotland.

3.1 Data collection process

Since the questionnaire was self-administered, there was a need for it to be self-explanatory. In order to achieve this, a covering letter and an introductory page describing the aims and objectives of the research was attached to the questionnaire. The questionnaire was structured into 3 sections: Firstly, a number of variables from the survey were selected from the questionnaires as the basis for assessing the use of ADR including the background and experience among Solicitors and Advocates, their training in ADR and organisational policies and practices towards ADR. Secondly, in terms of experiences of ADR, respondents were asked to rate the extent of their and their firms’ involvement within civil disputes cases over the last 12 months as well as the extent to which ADR procedures were actively used to resolve these disputes. Thirdly, as part of the study the respondents were asked to rate their perceptions of dispute resolution and ADR. The purpose of the questions was to ascertain an understanding of the barriers to the use of ADR more generally and for construction disputes in particular. The attitudes were measured by asking the sample frame to rate their responses to 11 statements on a Likert scale (strongly agree =1; moderately agree = 2; neither agree nor disagree = 3; moderately disagree = 4; strongly disagree =5).

3.2 Survey Results

A total of 600 questionnaires were distributed among legal practitioners in Scotland. Of the total, 191 were returned by post wholly or substantially completed, which represents a response rate of 32%. According to Andrews et al (2002), this a relatively high response rate for web-based surveys. McAdoo et al (2003) concur that a 32% response rate is relatively high for social science-based surveys of legal practitioners.

3.3 Background of the respondents and their organisations

A number of variables from the survey were selected from the questionnaires as the basis for assessing the knowledge and use of ADR including the background and experience of the respondents in the legal profession, their training in ADR and organisational policies and practices towards ADR. Of the total numbers of practitioners who responded, 57% described themselves as Partners, 20% as Associates, 15% as Advocates and the remainder as QCs and Assistants. In terms of numbers of years within the legal profession, almost 80% of respondents had practised law for more than 10 years, with 20% having more than 30 years’ experience in practice.

3.4 ADR training

A number of questions focused on formative training in ADR methods among legal practitioners at pre and post qualification stages. In terms of whether respondents had training in consensual forms of dispute resolution prior to entering legal practice, the figures were consistent among legal practitioners. It seems that 95% of those who responded had not received training in ADR techniques. Perhaps this is a reflection of the relatively novelty of ADR as a dispute resolution mechanism within Scotland per se and the lack of taught provision within the respective Law Schools more specifically? However, this finding is consistent with to Clark & Dawson’s 2007 survey in which only 4% of respondents had any exposure to mediation at Law School (Clark & Dawson, 2007). It seems that training in ADR techniques increased after respondents had entered...
legal practice. Around 22% of respondents had received some formal training in ADR techniques. It is widely recognised that post-qualification training had undergone significant reform in recent years. The reforms developed and introduced through organisations such as Core Mediation & the Scottish Mediation Network have been instrumental in promoting more consensual forms of dispute resolution in Scotland such as mediation among newer members of the profession, especially (Sturrock, 2007).

3.4.1 Client representation in Civil Disputes

The questions asked respondents to indicate their and their firms’ involvement in civil dispute work over the previous 12 month period. It seems that civil dispute work comprised in excess of 50% of the total workload of 42% of the practitioners who responded to the survey (see Table 1). However, it seems that only 17% of their firms had a workload in which civil dispute work comprised more than 50% of overall activity. Thus, it would appear that 83% of practitioners who responded worked in firms whose civil dispute work comprised less than 50% of their firm's workload (See Table 1).

<table>
<thead>
<tr>
<th>Percentage of time representing client in civil disputes</th>
<th>Individual practitioner’s Response %</th>
<th>Respondents’ Firm Involvement %</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Less than 25%</td>
<td>29</td>
<td>42</td>
</tr>
<tr>
<td>Between 25% and 50%</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td>Between 50% and 75%</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Between 75% and 100%</td>
<td>31</td>
<td>9</td>
</tr>
</tbody>
</table>

3.5 Methods of dispute resolution employed

The question sought to ascertain the methods of dispute resolution employed by legal practitioners in Scotland. It was in three parts on each of the surveys. Firstly, it dealt with legal practitioners generally in Scotland in part (a), then focused on the respondent’s firm in part (b) and then the firm in the last year in part (c).

3.5.1 Litigation, Negotiation & Arbitration

It seems that litigation and negotiation were almost universally recognised as means of dispute disposal employed regularly by practitioners in Scotland. It would appear from the survey that Arbitration received wide support as a means of resolving disputes although it was noteworthy that of 109 lawyers who identified it as a method of dispute resolution only 36 had actually used it within the last 12 months. These figures seem to reflect a decline in the overall use of Arbitration more generally (Kennedy et al, 2010), and are consistent with several studies on the Arbitration in Scotland, specifically (Dundas and Bartos, 2010).

3.5.2 Adjudication, Mediation and Conciliation

Around two-thirds of the total respondents recognised Adjudication as a means of dispute resolution employed by legal practitioners in Scotland. Nevertheless, it seems that only 8% of those who responded to the survey were actively involved with the process. These figures may reflect the increasing involvement of other professionals in adjudication procedures, and are consistent with the findings of the recent studies of the Adjudication process (Kennedy et al, 2010). The respondents also seem to have recognised Mediation as a means of dispute resolution involving legal practitioners with responses almost mirroring the support for Arbitration. Around 57% of the
total number of those who responded to the survey recognised Mediation as an ADR process employed by Scots legal practitioners. As will be seen later in the survey, these figures perhaps reflect the fact that mediation is viewed as a prominent method of dispute resolution in Family, Matrimonial and Employment matters (Lynch, 2010). These are both specialist areas and they would therefore have many fewer practitioners active in them. Around two-thirds of lawyers who responded recognised conciliation as a method of dispute resolution in Scotland (see Table 2). However, the level of active involvement is much less in this case with 21% of respondents actively involved in the procedure. While conciliation is a term used particularly in the area covered by Tribunals, it is often used as an alternative expression for mediation and indeed the terms are often interchangeably within legal texts (Clark, 2009).

<table>
<thead>
<tr>
<th>Table 2. Use of ADR</th>
<th>Legal practitioners in Scotland (N)</th>
<th>Your Practice (N)</th>
<th>Your Practice within the last 12 months (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Litigation</td>
<td>112</td>
<td>102</td>
<td>100</td>
</tr>
<tr>
<td>Negotiation</td>
<td>113</td>
<td>104</td>
<td>101</td>
</tr>
<tr>
<td>Arbitration</td>
<td>109</td>
<td>45</td>
<td>36</td>
</tr>
<tr>
<td>Adjudication</td>
<td>79</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>Mediation</td>
<td>108</td>
<td>48</td>
<td>38</td>
</tr>
<tr>
<td>Conciliation</td>
<td>18</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Neutral Evaluation</td>
<td>15</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Mini Trial</td>
<td>5</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Nevertheless, while conciliation may not have any legal standing, it differs from mediation in that parties are not required to meet as part of the process.

3.5.3 Neutral Evaluation & Min-trials

It seems that Neutral Evaluation was recognised by only 8% of respondents as a method of dispute disposal used in Scotland. Even fewer respondents recognised mini-trials as a means of dispute resolution in Scotland, and had been involved with it to a large extent over the last 12 months. It seems that while the procedures are being used to suit particular situations and needs in dispute disposal, their identification and use is only marginal. Unless a particular method was specified in contracts for dispute disposal as happens with arbitration and adjudication, or was the known industry method e.g. conciliation in employment disputes, then there appears to be little use of ADR to settle disputes. Most disputes appear to be resolved by either by negotiation or litigation, generally.

3.6 Recent experience of using ADR processes

In terms of respondents’ most recent dispute experience, it seems that litigation was, overwhelmingly, the most common method for resolving disputes in Scotland according to the figures in Table 3).
Table 3. Recent experience of ADR processes**

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1-5</th>
<th>5-10</th>
<th>10-20</th>
<th>20+</th>
<th>50+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Litigation</td>
<td>16</td>
<td>11</td>
<td>4</td>
<td>14</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>Arbitration</td>
<td>45</td>
<td>49</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Adjudication</td>
<td>60</td>
<td>21</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Mediation</td>
<td>56</td>
<td>35</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Conciliation</td>
<td>60</td>
<td>15</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Neutral Evaluation</td>
<td>60</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Mini-trial</td>
<td>65</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>other (please specify)</td>
<td>40</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**The total minimum number of procedures in each category group is added up then on the basis that respondents represented clients on each side of the same dispute.

The question sought to ascertain the level of use of litigation and alternative means of dispute resolution among the sample of respondents. The respondents were asked to indicate the total number of cases dealt with by type of means of disputes resolution ranging from 0-50+ for all practitioners. It would appear even on the most arbitrary level of assessment taking the response at the bottom of the range, that litigation was used on 4931 instances (see Table 3), whereas other means of dispute resolution were used on 1208 occasions: litigation accounting for over 80% of the total number of total number of cases resolved. In fact this figure itself could be a gross underestimate of the actual number of litigations being handled by respondents as, for instance, one lawyer stated that he had handled over 400 cases involving litigation. This certainly may be an exception but may also be indicative of much higher levels of involvement with litigation as compared to the volume of cases calculated through an arbitrary assessment of cases.

3.7 Appropriate use of ADR

This question proved the most challenging for most respondents. Many of the respondents made numerous entries identifying that many of the ADR procedures were appropriate means of resolution given the nature of the dispute. A few respondents made only one or two entries with still others making no entries that may suggest that none of the procedures were appropriate. There seems to be a clear consensus among the respondents that mediation was appropriate for family and matrimonial disputes. Of the lawyers who responded to the survey 94 considered mediation appropriate for family and matrimonial disputes (see Table 4).
Table 4. Appropriate use of ADR

<table>
<thead>
<tr>
<th></th>
<th>Arbitration</th>
<th>Adjudication</th>
<th>Mediation</th>
<th>Neural Evaluation</th>
<th>Mini-Trial</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>70</td>
<td>75</td>
<td>51</td>
<td>28</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Family or matrimonial</td>
<td>12</td>
<td>9</td>
<td>140</td>
<td>25</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Medical negligence</td>
<td>22</td>
<td>21</td>
<td>42</td>
<td>32</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Employment</td>
<td>45</td>
<td>26</td>
<td>35</td>
<td>25</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Other Civil</td>
<td>45</td>
<td>29</td>
<td>57</td>
<td>22</td>
<td>12</td>
<td>13</td>
</tr>
</tbody>
</table>

This figure equates to 49% of the total respondents. There also seemed to be a consensus among respondents, albeit to a lesser extent, that mediation was appropriate in resolving employment-related disputes. It would seem that respondents considered binding procedures to be the most appropriate for resolving construction disputes. Indeed, around 58% of those who responded to the survey acknowledged Arbitration and Adjudication as standard methods of resolving such disputes. It was possible that some of the respondents reserved their position regarding the use of adjudication for the resolution construction disputes. The question sought means of resolution, implying permanence, and while pragmatically adjudication often was, in fact, resolution of the dispute, technically it is only temporarily binding (Dundas & Barton, 2010), and many of the respondents would be familiar with that particular paradox. There did not seem to be significant support for any particular ADR procedure for disputes involving medical negligence matters although mediation and ENE were identified as most appropriate among legal practitioners. Indeed, 5% of those who responded identified mediation as the most appropriate means of ADR, while ENE was identified by 8% of respondents as most suitable in medical negligence cases. It would appear that Mini-trial was the procedure that seemed least understood by respondents. Many of those who responded to the survey considered all other means of ADR appropriate to many of the disputes ahead of the mini-trial process.

3.8 Legal practitioners’ attitudes to ADR

3.8.1 ADR and business relationships

It seems that the majority of those who responded to the survey considered that dispute resolution avoiding judicial or quasi-judicial methods would better preserve business relationships, with 52% of respondents in strong or moderate agreement with the proposition (see Table 5).
<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree (%)</th>
<th>Moderately agree (%)</th>
<th>Neither agree nor disagree (%)</th>
<th>Moderately Disagree (%)</th>
<th>Strongly disagree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispute resolution avoiding judicial or quasi-judicial methods better preserves business relationships.</td>
<td>13</td>
<td>39</td>
<td>22</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>Dispute resolution avoiding judicial or quasi-judicial methods are less expensive and less time consuming for clients</td>
<td>17</td>
<td>40</td>
<td>29</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Dispute resolution avoiding judicial or quasi-judicial methods would reduce the workload in the legal community</td>
<td>9</td>
<td>24</td>
<td>47</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Dispute resolution avoiding judicial or quasi-judicial methods would add to the workload in the legal community</td>
<td>2</td>
<td>10</td>
<td>55</td>
<td>24</td>
<td>9</td>
</tr>
<tr>
<td>Compromise and settlement are the most effective means of dispute resolution</td>
<td>31</td>
<td>48</td>
<td>14</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Legal practitioners should routinely encourage clients to choose the dispute resolution process most appropriate to their business</td>
<td>39</td>
<td>37</td>
<td>12</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Training in the whole range of dispute resolution processes should now be a core part of a legal practitioner's university education</td>
<td>37</td>
<td>33</td>
<td>19</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>A dispute resolution approach avoiding the formal legal process should always be tried in order to avoid if possible formal proceedings</td>
<td>13</td>
<td>38</td>
<td>21</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>A structured set of legal guidelines defining these terms and their parameters would be a useful reference for application to contracts</td>
<td>26</td>
<td>49</td>
<td>18</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>The use of other means of dispute resolution as an initial approach preceding the formal legal process should be included in the Rules of Court. Time bar and prescription issues would thus have been accommodated</td>
<td>13</td>
<td>30</td>
<td>29</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>On the basis you saw it as a threat, if your views on the financial consequences were suspended, would the use of ADR be a social benefit</td>
<td>9</td>
<td>43</td>
<td>40</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>
This acknowledgement however does not necessarily suggest support for consensual means of dispute disposal in itself. A number of the respondents made the point that settlement prior to formal legal proceedings was the most common outcome for litigation and their response to the question was recognition that litigation would have a detrimental effect on business relationships between parties involved in a dispute.

3.8.2 ADR and Clients

In terms of whether dispute resolution avoiding judicial or quasi-judicial methods are less expensive and less time consuming for clients, the majority of those who responded to the survey, 55%, supported the proposition with 17% in strong agreement (see Table 5). This finding may suggest that in some circumstances respondents would recommend mediation to clients as an alternative to more traditional methods of dispute resolution. Perhaps, where the speed and cost of settlement are important determining factors? It would be interesting to ascertain whether ADR does indeed have an overall effect by reducing the number of cases that would ultimately go through the formal tribunal process or whether by conducting a mediation or other ADR procedure during the tribunal would shorten the process; or reduce the scale of the dispute; or mitigate costs in some other way over what would have been achieved, in any event, by negotiation?

3.8.3 Legal practitioners and Workload

The respondents were asked whether dispute resolution avoiding judicial or quasi-judicial methods would reduce legal practitioners' workload. Around 55% of those who responded to the survey held a neutral stance of the impact of ADR on their workload, with the balance 45% strongly agreeing that their workload would be reduced (see Table 5). The informal nature of ADR procedures and the reduced barriers to entry may allow more players, outwith the legal fraternity, to participate in provision of the service, so it could be argued that there would be a reduction in workload for the legal profession. The view being expressed was perhaps an acknowledgement of the Scottish Government’s objective of reducing time to settlement and process costs that may be more readily achieved by the removal or reduction of input by legal practitioners (Lynch, 2010). There is of course a counter argument that if the average cost a dispute declined access to justice would be easier thereby allowing more disputes to be processed and workload maintained at current levels. In terms of whether dispute resolution that would avoid judicial or quasi-judicial methods would add to the workload of legal practitioners, there was no clear consensus from respondents either way. It seems only small proportions of respondents held the view that it would add work, with 9% of respondents in agreement with that proposition. A significant number of respondents, 47% of respondents, took a more neutral stance when posed with question as compared to previous questions. Perhaps, this finding reflects the profile of respondents relative to their level of seniority within the profession.

3.8.4 Effective means of dispute disposal

The respondents were then asked whether compromise and settlement are the most effective means of dispute resolution. It would appear that 80% of practitioners in agreement with the proposition, with only 7% holding a contrary view (see Table 5). This may reflect the experience of legal practitioners in Scotland, that most cases involving litigation settle before formal process begins. The respondents also agreed with the proposition, 51%, that practitioners should routinely encourage client to select dispute resolution process most appropriate to their business.

3.8.5 ADR knowledge and training

The majority of respondents considered that training in the whole range of dispute resolution processes should now be an integral part of a legal practitioner's university education. This would seem to concur with Mackie's suggestions for increased education in consensual methods of dispute disposal (Mackie (1991)). It seems that 70% of those who responded to the survey agreed with the
proposition. These responses may reflect a greater interest and desire to be better acquainted with ADR procedures than previously thought. On a related issue, findings from the survey underlined the need for the Government and others involved in the promotion of ADR to better explain procedures and to a wider audience, at least within the legal fraternity: this is consistent with the recommendations of the Gill Review (Gill, 2009). Indeed, respondents agreed, 76% of respondents, that a structured set of legal guidelines incorporating terminology and parameters would be a useful reference document for the application to contracts.

3.8.6 Effective use of ADR

A question was posed on whether dispute resolution approach avoiding the formal legal process should always be tried in order to avoid if possible formal proceedings. The results of survey were far from conclusive with only around 50% of respondents in agreement with the proposition (see Table 5). This may reflect self-interest and to a certain extent self-preservation of those who responded to the survey. Patterson and Seabolt (2001) suggest that ‘ADR adds an extra layer of doubt and intrigue to situations where there may already be considerable disagreement’ (pg 391), in which case ADR may in fact exacerbate matters further worsening an already fraught state of affairs. Nevertheless, most construction industry commentators disagree with this view asserting that ADR is indeed an adjunct to other forms of dispute disposal (CIC, 2002).

3.8.7 ADR and the Courts

It seems that 29% of respondents to the survey strongly disagreed with the proposition that ADR should be included in the Rules of Court (see Table 5). The proposition could be read as going beyond the Woolf Reforms to the civil procedure rules in England and Wales and this may have contributed to the negative view from some of the respondents.

3.8.8 The opportunities and threats from ADR

In response to a question as to whether ADR constitute an opportunity or a threat to legal practitioners within Scotland, the majority of respondents, 52%, agreed that ADR was an opportunity rather than a threat; only 7% of respondents identified ADR as a threat to the legal profession (see Table 5). Interestingly when asked the question ‘on the basis you saw it as a threat, if your views on the financial consequences were suspended, would the use of ADR be a social benefit?’ 52% of respondents agreed with the proposition. Perhaps a more tellingly finding was that only 7% of respondents disagreed that the use of ADR would be a social benefit (see Table 5). It could be that the perception of the legal fraternity as inherently conservative towards non-court sanctioned dispute resolution is unfounded, or that perhaps this was the most socially-acceptable response?

4 Conclusion

While a significance body of case law does exist, proceedings involving ADR are not widely disseminated seemingly amongst legal practitioners according to the survey sample. The study has also shown that Scots legal practitioners overwhelmingly agree that binding forms of dispute resolution such as adjudication and arbitration remain the most effective means of resolving construction disputes, albeit opportunities for mediation are emerging. The survey findings will hopefully provide added impetus to the debate surrounding ADR more generally, and the development of a strategy for the greater use of consensual means of dispute disposal for resolving disputes with particular reference to the construction industry in Scotland. Such a strategy will require further education & training in ADR processes among legal practitioners in addition to the wider dissemination of case law relative to the use of ADR in construction disputes.
5 Acknowledgements

A more developed version of this paper will be published in a forthcoming edition of the ICE Proceedings Journal of Management Procurement and Law, and we are grateful to the publishers of the paper for permission to reproduce extracts from this publication.

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Earl of Malmesbury v Strutt & Parker [2008] EWHC 424 (QB)
Analysis of recent amendments made to security of payment legislation in New South Wales

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Abstract:
The Building and Construction Industry Security of Payment Amendment Act 2010 (NSW) (‘the 2010 amending Act’) was assented to on 29 November 2010. The 2010 amending Act makes changes to the operation of the Building and Construction Industry Security of Payment Act 1999 (NSW), and is designed to enhance the ability of sub-contractors to recover payment by allowing claimants to attach moneys payable to the respondent by the respondent's principal. Currently, when, in response to a payment claim, the respondent fails to provide a payment schedule, the claimant can elect between recovering the unpaid portion of the claimed amount as a debt in any court of competent jurisdiction and making an adjudication application. If the claimant elected to recover the debt in a court, the claimant could commence proceedings in a court and apply to the court for an attachment order under s 14 of the Contractors Debts Act 1997 (NSW). This is unchanged by the 2010 amending Act. However, if the claimant elected to go to adjudication, the claimant could not require the 'principal contractor' (i.e., the respondent's principal) to withhold payments to the respondent. The 2010 amending Act plugs this gap by establishing that a principal contractor can be required to retain sufficient money to cover the amount claimed against the respondent without requiring the claimant to go through the courts. This paper provides an analysis of the amendments introduced by 2010 amending Act and addresses the main implications of the amendments for the three parties affected, namely, the claimant, the respondent and the respondent's principal.

Keywords: adjudication, amendments, New South Wales, security of payment

1 Introduction

1.1 Sub-contracting and security of payment

The Australian building and construction industry is a project-based industry and consists of a large number of small private firms (ABS, 2004). In project-based industries like the building and construction industry the delivery of projects to clients typically requires a head-contractor to purchase 'sub-projects' and expertise from a large number of external trade suppliers. Consequently, head-contractors in the construction industry often act as systems integrators and take responsibility for actively coordinating a network of sub-contractors (Martinsuo and Ahola, 2010). According to Harris and McCaffer (2001), the practice by head-contractors of sub-contracting the works under the head-contract has been on the rise in Australia since the 1980's. However, Uher and Davenport (2009) place the shift to sub-contracting as early as the late 1960's, which was about the time when most Western economies began to experience periodic economic downturns when
head-contractors’ economic capacity as direct employers of tradespeople began to diminish. Harris and McCaffer (2001) and Uher and Davenport (2009) agree that sub-contracting has now become widespread in the construction industry and is an essential component of the project procurement structure and delivery process.

To appreciate how prolific sub-contracting is in the construction industry in Australia, the National Electrical and Communications Association in Australia indicates that about 95% of the labour content on construction projects, and 75% of the total project value, is undertaken by sub-contractors (Cole, 2003). As at the end of June 2003, there were about 340,000 construction businesses operating in Australia with employment of just over 700,000 people. Trade service businesses accounted for about 270,000 (or about 80%) of all construction businesses and employed just over 500,000 people, which represents about 75% of the total construction employment. The majority of trade service businesses (about 70%) were earning an annual income of less than AU$100,000 (ABS, 2004).

The reasons for the widespread use of sub-contracting in the construction industry are many. However, according to Goldfayl (1999), one notable advantage to head-contractors of sub-contracting relevant here is the ability of head-contractors to divest much of the financial risk of delivery of the works under the head-contract to sub-contractors – the advantage for head-contractors being improved cash flow through the effective up-front financing of the bulk of a project by sub-contractors (Maqsood et. al., 2003). This reduces head-contractors’ need for interim borrowings and so reduces head-contractors project costs. This, of course, makes good commercial sense for head-contractors and their clients. However, it is the systematic abuse of sub-contracting that appreciably contributes to the security of payment problem in the construction industry – the abuse being to wrongfully delay and devalue payments to sub-contractors due under the sub-contract to further enhance the financial position of the head-contractor.

Typically, construction projects are characterised by a hierarchical chain of contracts involving cascading payment obligations (Commonwealth Government, 2002). Under this hierarchical chain the Principal (sometimes called _the Employer_ or _the Owner_ ) pays the head-contractor, the head-contractor then pays the sub-contractor and the sub-contractor then pays sub-sub-contractors and suppliers. While money flows smoothly down the construction chain, all is well. However, all too often one party in the chain does not pay the other party for work done contrary to the contract between them. If the head-contractor wants to reduce its overdraft or is short of money, there is a temptation to delay or withhold passing on payments down the chain. Sometimes the head-contractor will simply not want to pay money to project participants down the chain. Sometimes the head-contractor is dishonest and, in effect, takes the sub-contractor’s money with no intention of ever paying the sub-contractor. Sometimes, instead of passing money down the chain, the head-contractor uses the money to pay other creditors. In any event, a delay or failure to make payments by one participant higher up in the contractual chain can create significant financial strain on many more project participants lower down in the chain. Ongoing delays or failures by a head-contractor to pass money down the chain can reduce sub-contractors’ cash flow to zero. If this happens, a sub-contractor may be forced to carry bad debts, and in extreme cases, may be forced into some form of insolvency (Commonwealth Government, 2002).

The problem is not new. More than 100 years ago, the NSW Government enacted the *Contractors Debts Act 1897* as a means of providing some security of payment to workers and tradespeople during the construction of the NSW railways. The *Contractors Debts Act 1897* has since been replaced by the *Contractors Debts Act 1997* (NSW), but it has not materially altered the scheme under the *Contractors Debts Act 1897*. Section 14 of the *Contractors Debts Act 1997* (NSW) provides that if court proceedings are commenced by an unpaid sub-contractor against a head-contractor for recovery of money for work carried out or materials supplied, the court may make an _attachment order_ against the Principal. The Principal served with the attachment order has to retain from progress payments to the head-contractor sufficient money to cover the debt due to the sub-contractor. If, while the order is in effect, the Principal fails to withhold the money, the sub-contractor can sue the Principal for the amount.
If under an attachment order money is retained by the Principal, the sub-contractor upon obtaining judgment against the head-contractor asks the court for a ‘debt certificate’ under s 7 of the Contractors Debts Act 1997 (NSW). If the sub-contractor serves on the Principal a copy of the debt certificate and a ‘notice of claim’ the effect is that the money owed by the Principal to the head-contractor is assigned to the sub-contractor. However, the Contractors Debts Act 1997 (NSW) has been rarely used. This is because, to obtain the attachment order, the sub-contractor had to commence litigation and satisfy the court that the head-contractor owes the sub-contractor money for work carried out or materials supplied. Litigation is costly, time consuming and requires engaging a lawyer. The money is frozen in the hands of the Principal until the litigation is complete, which may be months or years. In the meantime, sub-contractors may be forced into insolvency through lack of cash flow.

1.2 Security of payment legislation in New South Wales

Following the introduction of the Housing Grants, Construction and Regeneration Act 1996 (UK), the Building and Construction Industry Security of Payment Act 1999 (NSW) (‘the NSW Act’) was introduced by the Carr Labour Government in an attempt to counter the security of payment problem in the NSW construction industry. The NSW Act was assented to on 5 October 1999 and commenced on 26 March 2000. New South Wales was the first Australian jurisdiction to introduce this type of legislation. As a consequence of a formal review undertaken at the end of the NSW Act’s first three years of operation, the NSW Act was significantly amended by the Building and Construction Industry Security of Payment Amendment Act 2002 (NSW). The NSW Act (as amended by the Building and Construction Industry Security of Payment Amendment Act 2002) commenced on 3 March 2003. The object of the NSW Act:

is to ensure that any person who undertakes to carry out construction work (or who undertakes to supply related goods and services) under a construction contract is entitled to receive, and is able to recover, progress payments in relation to the carrying out of that work and the supplying of those goods and services.¹

To achieve this objective, the NSW Act has introduced new statutory rights for claimants, such as: a right to progress payments;² a right to interest on late payments;³ a right to suspend work;⁴ and a right of lien.⁵ The NSW Act also renders void ‘pay-when-paid’ clauses in construction contracts.⁶ The parties cannot contract out of the NSW Act.

The NSW Act also introduced a unique form of ‘rapid adjudication’ to deal with disputes over the amount of progress payments due, whereby an independent adjudicator makes an interim determination as to the amount of progress payment to be paid to a claimant by a respondent. Only a claimant (i.e., the person who has contracted to carry out construction work or to provide related goods and services) can initiate the adjudication process, however, both parties are entitled to make submissions to the adjudicator (subject to s. 20(2B) of the NSW Act). An adjudicator can only be appointed by an Authorised Nominating Authority (ANA) chosen by the claimant.⁷ An extended overview of the operation and performance of the NSW Act is provided by Brand and Uher (2010). A detailed review of the NSW Act, and comparable legislation operating in Australia, is provided by Davenport (2010).

¹ Building and Construction Industry Security of Payment Act 1999 (NSW) s. 3.
² Building and Construction Industry Security of Payment Act 1999 (NSW) s. 8(1).
³ Building and Construction Industry Security of Payment Act 1999 (NSW) s. 11(2).
⁴ Building and Construction Industry Security of Payment Act 1999 (NSW) ss. 15(2), 16(2), 24(1).
⁵ Building and Construction Industry Security of Payment Act 1999 (NSW) s. 11(3).
⁶ Building and Construction Industry Security of Payment Act 1999 (NSW) s. 12(1).
⁷ Building and Construction Industry Security of Payment Act 1999 (NSW) s. 34.
Prior to the introduction of the NSW Act it was not feasible to sue for progress payments. By the time the matter was finally heard by a court, the sub-contract would be complete and any right to progress payments would be replaced by the final accounting between the parties. The sub-contractor would then want a final judgment not merely a judgment for an interim payment. The NSW Act changed that; it enables a sub-contractor to make claims for progress payments and have them adjudicated in a matter of weeks. Suddenly, it became feasible to sue for progress payments. Judgment could be obtained by simply filing an adjudication certificate. Nevertheless, whilst adjudication speeds up the passing of money down the line, it does not remove the ability of a head-contractor, in the interim, to use for the head-contractor’s own purposes money which is for the sub-contractor’s work. If that ability is removed, the incentive to delay and withhold the money is removed.

Subsequent to the introduction of the NSW Act, section 7(1A) of the *Contractors Debts Act 1997* (NSW) was amended by the insertion of s 7(1)(A), which provides:

If an adjudication certificate within the meaning of the *Building and Construction Industry Security of Payment Act 1999* has been filed as a judgment for a debt in accordance with section 25 of that Act, the court may, by order made on the application by the person who filed the adjudication certificate, issue a debt certificate in respect of that debt under this section.

Nevertheless, the problem still remained that to freeze moneys in the hands of the Principal until the adjudication certificate is filed, the claimant had to commence legal proceedings in parallel with adjudication proceedings. However, that would be an abuse of process; the two proceedings cannot co-exist. The consequence was that a sub-contractor was unable to freeze moneys in the hands of the Principal if the sub-contractor submitted the payment claim for adjudication. The NSW Government has now rectified the problem in the *Building and Construction Industry Security of Payment Amendment Act 2010* (NSW), which is discussed in detail below.

2 The Building and Construction Industry Security of Payment Amendment Act 2010 (NSW)

2.1 Background

In September 2010, the NSW Department of Services, Technology and Administration released a discussion paper for building and construction industry stakeholder consideration. The discussion paper identified a number of matters of concern regarding operation of the NSW Act. The discussion paper pointed to, _inter alia_, the difficulties being experienced by ‘sub-contractor-claimants’ in securing payment after adjudication, particularly when the respondent became insolvent (DSTA, 2010).

As a consequence of the comments made by industry stakeholders in reply to the discussion paper, the *Building and Construction Industry Security of Payment Amendment Act 2010* NSW (‘the 2010 amending Act’) was introduced. The 2010 amending Act was assented to on 29 November 2010 and commenced on 28 February 2011. The 2010 amending Act inserts sections 26A to 26F, section 34A and Schedule 2, Part 4 into the NSW Act. The 2010 amending Act applies to existing and future construction contracts and the amendments apply to current and future adjudication applications.

The 2010 amending Act enables a sub-contractor to freeze in the hands of the Principal money that is or will become payable to the head-contractor. It enables a sub-contractor to achieve speedily, inexpensively and without a court order what an ‘attachment order’ under *Contractors Debts Act 1997* (NSW) previously achieved. Whereas attachment orders under the *Contractors Debts Act* (NSW) have been uncommon, payment withholding notices under the the NSW Act are expected to be frequently used.
2.2 Payment withholding request

A sub-contractor claiming payment from a head-contractor may serve upon the head-contractor’s Principal a ‘payment withholding request’ at any time after lodging an adjudication application. The prescribed form of payment withholding request and the standard statutory declaration that must accompany the payment withholding request are made readily available by NSW Procurement (2011). The effect of service of the payment withholding request is that while it remains effective the Principal must retain and not pass on to the head-contractor moneys owed by the Principal to the head-contractor for work carried out or materials supplied by the head-contractor. Some qualifications are discussed below.

The problem that the 2010 amending Act addresses is best explained by an example. Assume that a sub-contractor (the claimant) does $10,000 worth of work for a head-contractor (the respondent) and at the end of the month the sub-contractor makes a progress claim. About the same time the respondent will make a progress claim against the respondent’s Principal for payment for that work. If, within 10 business days after being served with the claimant’s payment claim, the respondent gives the claimant a payment schedule for less than the claimed amount, the claimant can immediately apply to an authorised nominating authority to have the payment claim adjudicated. At the same time as the claimant makes the adjudication application, the amendment enables the claimant to give a payment withholding request to the Principal.

Upon receipt of the payment withholding request, the Principal must retain $10,000 from moneys due or subsequently becoming due from the Principal to the respondent for work carried out by the claimant. If the claimant moves quickly, the claimant should be able to serve the payment withholding request before the Principal has paid the respondent. When payment cycles are monthly, this should be trouble-free. The effect is that the respondent will not be able to use the claimant’s money for the respondent’s own purposes.

2.3 The Principal’s obligation to retain money

Under the Act the person with whom the respondent contracts to provide work or materials is called _the Principal contractor_. That term is confusing. In this paper the term ‘Principal’ will be used. The Principal is the person, if any, one step up the contract chain from the respondent. If the head-contractor to the Government, an owner or developer is the respondent in an adjudication application, the Government, the owner or the developer is the Principal. If a sub-contractor to the head-contractor is a respondent in an adjudication application, the head-contractor is the Principal.

The purpose of an attachment order under s 14 of the _Contractors Debts Act 1997_ (NSW) and a payment withholding request under s 26A of the NSW Act is to freeze moneys in the hands of the Principal until the claimant’s entitlement to the moneys is decided by a court. To obtain payment of those moneys from the Principal the claimant must obtain a judgment and ask the court for a debt certificate under s 7 of the _Contractors Debts Act 1997_ (NSW). To obtain payment from the Principal the claimant must serve on the Principal a notice of claim in an approved form together with a copy of the debt certificate.\(^1\) The procedure is described in detail by Davenport (2010, pp. 223-25).

If served with a payment withholding request, the Principal must act quickly to stop all payments to the respondent for work carried out or materials supplied by the respondent until the Principal can ascertain how much of those payments are for work or materials that the respondent engaged the claimant to carry out. Out of money that is or subsequently becomes payable by the Principal to the respondent, the Principal must withhold sufficient to cover the amount claimed in the payment claim. There are some qualifications. There are three ceilings on the amount to be retained. The Principal is obliged to retain the smallest of the following:

A. the amount claimed in the payment claim the subject of the adjudication application, less any part payment made;\(^2\)

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B. the amount owed, or which subsequently becomes payable, by the Principal to the respondent when or after the payment withholding request is served on the Principal;¹ or
C. the amount that is or becomes payable by the Principal to the respondent for or incidental to the work or materials that the respondent engaged the claimant to carry out or supply.²

A claimant may claim any amount but the amount which the Principal must retain is only the amount that is payable by the Principal to the respondent for the work or materials supplied by the claimant. For example, under the sub-contract the claimant may claim $1m for certain piling work – this is amount _A_ above. Under the head contract the amount payable by the Principal to the respondent for the piling work may be only $100,000 – this is the amount _C_ above. The Principal is only required to withhold payment of $100,000 even though the Principal owes the respondent $500,000 – this is the amount _B_ above. The amount by which _B_ exceeds _C_ is for work other than the work or materials carried out or supplied by the claimant. It may be for work carried out by other sub-contractors to the respondent.

The obligation to retain money does not extend to all money payable by the Principal to the respondent. It does not apply to money payable to the respondent for work carried out or materials supplied by sub-contractors other than the claimant. The obligation applies not only to payment for the work indicated in the payment claim which is the subject of the adjudication. It also applies to payment for any other work carried out or materials supplied by the claimant under the sub-contract. The application of the NSW Act to refund (by the Principal) retention moneys and security deposits may present problems.

The money which is subject to the payment withholding request is not only the amount which represents the value of that work but _money that is or becomes payable…for work_³. That could include extra payable for delay, variations and, perhaps, damages. Section 26B(2) provides:

> The amount is only required to be retained out of money that is or becomes payable by the Principal contractor to the respondent for work carried out or materials supplied by the respondent to the Principal contractor as part of or incidental to the work or materials that the respondent engaged the claimant to carry out or supply.

Note the word _incidental_. Assume that the claimant supplies bricks to the respondent and the payment claim is for $1,000 for the value of the bricks. Assume that the amount payable by the Principal to the respondent for the bricks is $1,100. The extra $100 represents the respondent’s entitlement for profit and attendance. Assume that at the time of receipt of the payment withholding request (for $1,000) the Principal has paid the respondent $500 and the Principal owes the respondent $600. It seems that the respondent must retain the $600 even if $100 of that could be said to be the respondent’s entitlement for profit and overheads.

Now assume that the respondent’s work involves building a house with the bricks. Assume that there are many sub-contractors and the contract price is a lump sum. Progress payments by the Principal to the respondent are payments on account of the lump sum price. It will not be possible to identify any particular amount that is payable by the Principal to the respondent for the bricks. But, ultimately, part of the contract price for the house will represent money that is payable by the Principal to the respondent for the bricks supplied by the claimant. In that situation it seems that the Principal must withhold payment to the respondent of $1,000.

Without the consent of the respondent or a notice from the claimant attaching a debt certificate under s 7 of the _Contractor’s Debts Act 1997_ (NSW) the Principal must not pay any amount to the claimant. If, prior to issue by the court of a debt certificate under s 7 of the _Contractors Debts Act 1997_ (NSW), the respondent is placed in liquidation or made bankrupt, the claimant cannot obtain a debt certificate without special leave of the court. Commonwealth legislation, rather than the _Contractor’s Debts Act 1997_ (NSW) and the NSW Act, then applies to moneys withheld. If, while

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¹ Building and Construction Industry Security of Payment Act 1999 (NSW), s 26B(1).
² Building and Construction Industry Security of Payment Act 1999 (NSW), s 26B(2).
withholding money pursuant to a payment withholding request, the Principal receives an attachment order (a garnishee order) from another creditor of the respondent, the Principal would not be able to pay the creditor out of the moneys which the Principal is required to withhold.

If after being served with a payment withholding request, the Principal is uncertain whether an amount due from the Principal to the respondent should be paid to the respondent or be withheld, the Principal should seek the opinion of the respondent and, if there is a difference of opinion, obtain legal advice. Of the two options, paying or withholding, the second involves less risk for the Principal. If the Principal wrongly withholds payment, the Principal will probably be liable to pay interest to the respondent but if the Principal pays the amount to the respondent, the Principal could be liable to the claimant for the amount and possibly interest. Section 26C of the NSW Act provides:

If the Principal contractor discharges the Principal contractor’s obligation to pay money owed under a contract to the respondent in contravention of a requirement under this Division to retain the money, the Principal contractor becomes jointly and severally liable with the respondent in respect of the debt owed by the respondent to the claimant (but only to the extent of the amount of money to which the contravention relates).

If an amount becomes payable by the Principal to the respondent and it must be retained pursuant to a payment withholding request, the Principal cannot discharge its obligation to the respondent by setting off an amount that subsequently becomes due from the respondent to the Principal. For example, if at 30 June the respondent is entitled to a progress payment from the Principal of $10,000 and the Principal receives a payment withholding request for an amount of $10,000 or more, the Principal must retain the $10,000. If subsequently, the respondent’s work was found to be defective and only worth $1,000, the Principal must still retain the $10,000. There is no obligation on the Principal to deposit in a trust account the money withheld. However, for accounting purposes, the Principal should separately show the money withheld. Even if in the next progress valuation the work is valued at $1,000 or, because the respondent is liable to the Principal for liquidated damages for delay, the next progress certificate shows that the respondent owes the Principal money (and the Principal does not owe the respondent any money), or the contract has been terminated by the Principal on account of the respondent’s breach of contract, it seems that when the respondent receives a notice of claim and debt certificate for $10,000 under s 6 of the Contractor’s Debts Act 1997 (NSW), the Principal must pay the $10,000 to the claimant.

It seems that for the Principal there is one only way around the problem. That would be for the Principal to obtain a judgment against the respondent. When the Principal obtains such a judgment, it seems that the $10,000 is no longer an amount which is owed by the Principal to the respondent. The previous debt merges in the judgment. It seems that the amount payable by the Principal pursuant to the notice of claim and debt certificate under s 6 of the Contractor’s Debts Act 1997 (NSW) could not require the Principal to pay the claimant any amount exceeding the amount owed by the Principal to the respondent under the judgment.

If a person is served with a payment withholding request and the person is not (or is no longer) a Principal contractor in relation to the payment claim, the person must give written notice to the claimant within 10 business days after receiving the payment withholding request. A person may have once been but is no longer a Principal contractor (within the meaning of s 26A(4) of the NSW Act) because, before receiving the payment withholding request, the person has paid all moneys due from that person to the respondent and no further moneys will become due.

The Principal is not required by the payment withholding request to retain the money if 20 business days have elapsed since the Principal was served with a copy of the adjudicator’s determination of the payment claim to which that payment withholding request relates. In counting the 20 business days, the date upon which a copy of the determination was served on the Principal is not counted.

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1 Building and Construction Industry Security of Payment Act 1999 (NSW), s 26C(1).
The Principal must allow 20 business days to pass and on the day after the 20th business day has expired, the Principal is no longer required by that payment withholding request to retain any moneys.

Section 26B(5) of the NSW Act provides that within 5 business days after the adjudicator’s determination is served on the claimant (by the adjudicator) the claimant must serve a copy of the adjudicator’s determination on the Principal. The Principal must not act on that. It is only for information. Even if the determination is that there is no progress payment due to the claimant, the Principal must continue to withhold payment until 20 business days have elapsed after the Principal is served with a copy of the determination. 1 It is always possible that within that period the claimant will commence another adjudication and serve another payment withholding request. The reason why the Principal must retain the moneys for 20 business days is to give the parties time to make applications to the appropriate court. Either party may seek orders from a court with respect to the adjudication determination. To actually have a right to recover moneys from the Principal, the claimant must obtain a debt certificate from the court.

Sometimes a respondent obtains from the NSW Supreme Court a declaration that an adjudicator’s determination is void even though the adjudication application is valid. By the time that declaration is obtained, it will be too late for the claimant to withdraw the adjudication application. 2 Sometimes the Court will be far sighted enough to make it a condition of the declaration that the parties agree to an extension of time for the making of an adjudication determination but often this is not the case. Then there could be a valid adjudication application but no possibility of there ever being an adjudication determination. In that event, if the respondent does not obtain an appropriate order from the Court, the Principal's obligation to retain money continues. 3 The limitation period in s 17 of the Contractors Debts Act 1997 (NSW) does not apply and there is no limitation under the NSW Act on how long the Principal must retain the money. This appears to be a drafting oversight. If the Principal does pay it to the respondent or uses it to discharge an obligation of the respondent to the Principal, the claimant can sue the Principal. 4 Consequently, when a respondent seeks a decision from the NSW Supreme Court declaring an adjudication determination void the respondent should ensure that an appropriate order is made with respect to any payment withholding request that the claimant may have served or might even thereafter serve on the respondent with respect to the adjudication application.

Sometimes the claimant will not know if there is a Principal or who the Principal is. Under s 26E of the NSW Act the claimant may ask the adjudicator to request the respondent to provide information to the claimant as to the identity and contact details of the Principal. The Act does not prescribe a time for the supply by the respondent of the information. The adjudicator should state a time. If the claimant thinks that there may be more than one Principal, the claimant can serve a payment withholding request on each person that the claimant believes is a Principal.

Section 7(2)(b) of the NSW Act provides that the NSW Act does not apply to a construction contract for the carrying out of residential building work (within the meaning of the Home Building Act 1989 NSW) on such part of any premises as the party for whom the work is carried out resides in or proposes to reside in. If the contract between the Principal and the respondent is a construction contract to which the NSW Act does not apply by reason of s 7(2)(b), then the claimant cannot validly serve a payment withholding notice on the Principal; that Principal is exempt from the NSW Act. 5

If the claimant withdraws an adjudication application under s 26(2)(a) of the NSW Act, and makes a new adjudication application under s 26(2)(b), the claimant must give any Principal who has been served with a payment withholding request notice of the withdrawal. 6 A payment withholding

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request based upon the original adjudication application (now withdrawn) would not apply to the new adjudication application. The claimant would have to serve a new payment withholding request.

Section 26D of the NSW Act provides some protection for the Principal against claims by the respondent. While the statutory obligation to retain money continues, it acts as a defence to a claim by the respondent against the Principal for the money. Any period during which the Principal retains money pursuant to the obligation is not to be taken into account for the purposes of reckoning the period for payment by the Principal of the respondent.

The respondent could not claim interest from the Principal for the period during which the Principal lawfully withheld payment. If the respondent made a claim under the NSW Act against the Principal, in calculating the due date for payment of the amount withheld, time for payment would not run during the period that the Principal withheld payment in compliance with a valid payment withholding request.

The Principal should only make a payment to the claimant with the consent of the respondent or pursuant to a notice under s 6 of the *Contractors Debts Act 1997* (NSW) attaching a copy of debt certificate from a court. If a payment is made pursuant to the court's debt certificate, the *Contractors Debts Act 1997* (NSW) provides protection for the Principal.

When a contract between the Principal and the respondent provides that the Principal can retain moneys (retention moneys) from payments to the respondent, it may be prudent to have an express provision that moneys retained in accordance with a statutory requirement are not to be considered to be part of the retention moneys which the Principal is entitled to retain.

The Principal's obligation to withhold money can be discharged, in whole or in part, if the respondent pays an amount to the claimant or, with the authority of the respondent, the Principal pays an amount to the claimant. In addition, the Principal is entitled to rely in good faith on a statement in a statutory declaration by the respondent that a specified amount claimed has been paid to the claimant. A prudent Principal would check with the claimant before releasing any amount to the respondent.

Finally, the Principal's obligation to withhold money is discharged if the adjudication application is withdrawn. The term _withdrawn_ is not defined. Withdrawal of a payment claim or the payment withholding request is not the same as withdrawal of an adjudication application. Section 26D(4) provides that the Principal is entitled to rely in good faith on a statement in a statutory declaration by the respondent that an adjudication application has been withdrawn. The claimant can at any time notify the Principal that the claimant withdraws the payment withholding request. A statement by the claimant to the Principal that the claimant withdraws the payment claim would effectively be notice that the claimant withdraws the payment withholding request.

### 3 Concluding remarks

The 2010 amending Act follows the release of a discussion paper by the NSW Department of Services, Technology and Administration in September 2010 as part of a formal review of the NSW Act. The amendments aim to improve security of payment by addressing difficulties experienced by subcontractor-claimants in securing payment after adjudication an accessing the benefits of the *Contractors Debts Act 1997* (NSW).

The 2010 amending Act enables a claimant to _freeze_ money in the hands of the Principal that is owed to the head-contractor under the head-contract. The effect of the procedure under the 2010 amending Act is similar to that under the *Contractors Debts Act 1997* (NSW), but has been made more accessible to sub-contractors electing to go to adjudication under the NSW Act. Whereas a claimant could not previously compel a Principal to withhold payments to the respondent if the

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claimant elected to go to adjudication, the 2010 amending Act establishes that a Principal can be required to retain sufficient money to cover the amount claimed against the defaulting respondent without requiring the claimant to go through the courts. This means that claimants now have the ability to secure the claimed amount from the Principal immediately after an adjudication application has been made and ahead of any determination made by the adjudicator of that application. The 2010 amending Act, thus, adds appreciably to the scope of the NSW Act.

For head-contractors, the 2010 amending Act gives sub-contractors direct influence over the cash flow of head-contractors albeit within the relatively short time frame prescribed by the 2010 amending Act. Thus, the NSW Act is likely to further encourage timely negotiation between the parties over payments and early settlement of payment disputes.

The 2010 amending Act has, for the first time, brought Principals squarely into play when it comes to payment disputes between the parties one step down in the contractual chain. A failure by the Principal to comply with the obligation to withhold money pursuant to a payment withholding request renders the Principal jointly and severally liable (with the Respondent) to pay the adjudicated amount to the extent of any failure by the Principal to withhold the money. For that reason, Principals should have adequate internal mechanisms in place to ensure that any payment withholding request promptly comes to the Principal’s notice.

4 References


Case Study: 
Developing Admission Criteria for SAICE Adjudicators

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Abstract:
Adjudication is a relatively new method of alternative dispute resolution in the South African construction industry. There are low levels of knowledge and use of adjudication. There are not enough Adjudicators in the industry, and there is no established framework for skills and training. It is generally considered that the introduction of Payment and Adjudication legislation can improve the situation.
The author and others have endeavoured to improve the practice and study of adjudication in the construction industry, and have continued to publish and engage in other ways with industry bodies in this pursuit. In order to develop Adjudicator Admission Criteria for the South African Institution of Civil Engineering (SAICE), the author undertook limited research, drafted the admission criteria and sourced comment on this from key industry role players.
Criteria which were supported the most included experience, construction law and formal assessment. Objectivity of criteria was the most recurring theme, which led to the conclusion that the criteria as they are can only be regarded as interim, whilst a longer-term solution is being developed based on formal assessment.

Keywords: adjudication, admission criteria, alternative dispute resolution, skills

1 Introduction

This paper outlines an investigation into adjudicator skills and training, presents how each admission criteria considered was identified, reviewed and subsequently modified where necessary to finalize the SAICE adjudicator admission criteria. Comments received are analysed to identify trends and themes, and conclusions are drawn where appropriate.

2 Literature Review

2.1 Fundamentals of admission criteria

The Oxford Dictionary (2000) defines admission as entering or being allowed into a building, society or school. Requirements for admission can vary from one extreme to the other, from one’s origins, appearance, place in society, educational background, to professional achievements and national honours. For example, whilst admission to a primary school may only require that the place of residence be within a certain radius from the school, admission to a post-graduate programme at a university may require a completely different set of attributes like experience, leadership and intellectual capability.

Admission into professional societies is also varied, depending on whether these are statutory bodies or voluntary associations. Statutory bodies are normally regulated from the minimum educational qualification required, the type and length of experience, and any examination or peer review mechanism employed. An examples is the Engineering Council of South Africa, which is
regulated by the Engineering Profession Act No. 46 of 2000. Voluntary associations such as SAICE on the other hand have admission criteria defined by the society itself, with the only proviso typically being that such criteria should not be in conflict with its founding constitution. The subject of the paper relates to the latter.

2.2 SAICE in the South African Construction Industry

The South African construction industry is generally broken up into the building and engineering construction sectors. There are other related sectors and disciplines (quantity surveyors, architects, engineers, project managers, etc.) which together comprise what has come to be known as the Built Environment, including various bodies operating at different levels, from statutory bodies to voluntary associations, of which SAICE is one. Amongst the aims and objectives of SAICE, the following is relevant for this paper:

…to promote the science and practice of civil engineering.

In keeping with this noble aspiration, SAICE recently introduced a new version of its ‘General Conditions of Contract for Construction’ (GCC 2010), and this introduces dispute resolution by adjudicators and/or dispute boards, whose nomination can be referred to the SAICE President by the contracting parties.

SAICE enjoys wide recognition from other industry bodies, such as the Construction Industry Development Board (CIDB) and the Engineering Council of South Africa (ECSA), and it plays a critical role in the development of industry norms, guidelines and regulations. This is part of the reason why the idea of an industry-wide centre for dispute resolution has been mooted in many of its proceedings under the dispute resolution portfolio. The paper will however, only consider dispute resolution within the ambit of SAICE, in particular with regard to adjudicators and how these are admitted onto the SAICE President’s List. (Discussions regarding the centre are being pursued separately).

Whilst general membership of SAICE has quite straightforward admission criteria, to serve on the SAICE President's List of Adjudicators has its own different admission criteria due to the specialised nature of the skill required.

2.3 Knowledge, skills and training on adjudication

Adjudication is a relatively new method of alternative dispute resolution in the South African construction industry. Maritz (RICS, 2007) concluded that there were low levels of knowledge and use of adjudication. Maiketso and Maritz (RICS, 2009) concluded that there were not enough Adjudicators in the industry, and that there was no established framework for skills and training.

Some research undertaken into skills and training on adjudication in South Africa showed that:

Adjudicators need an “adjudication qualification”, in addition to their professional qualification (Maritz, 2007).

In trying to unpack the finding above, further research (Maiketso, 2008) showed that the following amongst other findings:

- There was a need to establish a framework for skills and training, including provision for accreditation;
- There was general agreement on relevant skills, useful techniques and desirable personal attributes of adjudicators;
- There was broad agreement on the possible content of an “adjudication qualification” if it were to be implemented, from the acquisition of knowledge and experience, to the assessment and accreditation of competence.

The foregoing references amongst others supported the introduction of Payment and Adjudication legislation to improve the situation. Efforts are starting to be put into the conception of this
mammoth task, but until such legislation is introduced together with guidelines or regulations on all of the above aspects, each sector of the industry has to address its needs as it best sees fit. The CIDB provides guidance on this matter and therefore was relied upon in developing the SAICE admission criteria, together with the Institute of Civil Engineers (ICE, UK) admission criteria. A comparison was also made between skills and training information sourced from selected institutions associated with adjudication, i.e. CIDB, ICE (UK), Chartered Institute of Arbitrators (CIArb, UK), Dispute Resolution Board Foundation (DRBF, USA), Queensland subordinate legislation for adjudication qualification (Australia), Construction Industry Council (CIC, UK), American Association of Arbitrators (AAA, USA), Federation Internationale des Ingenieurs-Conseils (FIDIC) and others. This is presented in Table 1 below (after Maiketso, 2008). General findings from these showed that experience and professional registration appear to be widely accepted or assumed where not specified, and knowledge of the relevant conditions of contract is also taken for granted. Whilst attendance of a relevant course was considered to be adequate by a few institutions, the general trend appeared to be moving towards formal tuition and peer review to facilitate accreditation.

It is with these considerations in mind that the SAICE adjudicator admission criteria were developed.

Table 1: Information from selected institutions on skills framework and accreditation for adjudicators (after Maiketso, 2008)

<table>
<thead>
<tr>
<th>Institution</th>
<th>Experience</th>
<th>Registration</th>
<th>CoC</th>
<th>Course</th>
<th>Assignment</th>
<th>Examination</th>
<th>Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIDB</td>
<td>PM past 5 yrs 45 yrs age</td>
<td>10 yrs standing</td>
<td>Recom</td>
<td>written appl</td>
<td></td>
<td></td>
<td>x 1</td>
</tr>
<tr>
<td>ICE</td>
<td>10 yrs PM In past 15 yrs</td>
<td>10 yrs standing</td>
<td>required</td>
<td>x 1</td>
<td>x 1</td>
<td>x 1</td>
<td></td>
</tr>
<tr>
<td>CIArb</td>
<td>required</td>
<td>x 3 modules</td>
<td>x 2</td>
<td>x 2 modules</td>
<td>x 3 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Queensland</td>
<td>required</td>
<td>x 18</td>
<td>x 1</td>
<td>x 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIC</td>
<td>RICS, RIBA, ICE, CIArb, CIOB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRBF</td>
<td>Attributes only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AAA</td>
<td>10 yrs snr</td>
<td>As appropriate</td>
<td>Recom</td>
<td>Recom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIDIC</td>
<td>required</td>
<td>written appl</td>
<td>x 2</td>
<td>x 2</td>
<td>x 2 days</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations used in table:
PM – Project Manager; yrs – years; CoC – Conditions of Contract; Recom – Recommended; appl – application; snr – senior

3 Research Methodology

Purposeful sampling was adopted due to the specialised nature of the research subject. Initially theoretical sampling was used to obtain all relevant views, and subsequently discriminant sampling was used to obtain closure. Having drafted the criteria, a selected sample of industry role-players was used to source comment, and the outcome was then subjected to further internal review from within the Project Management and Construction Division (PMCD) of SAICE. The criteria were first drafted based on two key reference documents:

- CIDB Best Practice Guideline #C3 Adjudication, 2005; and
- ICE Requirements for entry onto ICE’s List of Adjudicators, 2006.

Key considerations were that these should define minimum requirements in the following aspects:

- Experience;
• Professional registration; and
• Forms of contract, construction law and adjudication.

Work in developing the first draft commenced in 2008. PMCD was afforded an opportunity to provide initial comment on this and suggest direction in terms of sourcing further comment. As background, PMCD was also provided with the full version of Table 1 to provide context. The following institutions were then approached for comment, and feedback was received at the times shown:

• SAICE PMCD (internal), Jan-Feb 2009, Sep-Oct 2009;
• Association of Arbitrators (Southern Africa) (AASA), Oct-2009;
• Dispute Review Board Foundation (DRBF) local chapter, Nov-2009;
• South African Federation of Civil Engineering Contractors (SAFCEC), Feb-2010;
• Consulting Engineers South Africa (CESA), April 2010; and
• Construction Industry Development Board of South Africa (CIDB), June 2010.

The final draft is included in the Appendix, following the incorporation of comments, as reflected under the next section (Results). In keeping with standard research ethics, confidentiality was maintained and privacy of the respondents was respected in the presentation of results. Data handling was mostly based on content analysis. Data was organized and classified into common themes; an attempt was then made to synthesise the emerging trends into a whole, so that conclusions and/or generalisations could be drawn where possible.

To provide safeguards to the case study, as recommended by Leedy and Ormrod (2005), the following disclosures would be in order:

• Attention was paid to any contradictory comment and/or conclusion, in order to validate the overall results and not simply dismiss it as insignificant; and
• Bias, beliefs or values may have played a role, as the author is responsible for the dispute resolution portfolio within SAICE PMCD, and as such had a direct interest in the positive outcome of the exercise, to enable the criteria to be implemented.

It is trusted that these will not have unduly compromised the results and/or conclusions, and that the outcome can still lead to meaningful debate, even if the research itself may be lacking in academic rigour and impartiality.
4 Results Furniture and equipment for a two bedroom dwelling

The results presented below are in the form of comments made, compared against corresponding changes in the original criteria circulated for comment. Where a change was not considered necessary, a reason is provided. The last column headed “type” relates to the content analysis that follows in Figure 1, which is based on the concept(s) found in the comment and to some extent in the change made / reason given.

Table 2: Comments and changes/reasons

<table>
<thead>
<tr>
<th>Comments raised</th>
<th>Corresponding changes made / reasons if not changed</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Exam not supported: could discourage senior applicants and needs much work in developing it, interim solution required</td>
<td>1. Exam initially removed, subsequently reinstated in the long-term, interim solution provided via sunset/transitional clause</td>
<td>a, p</td>
</tr>
<tr>
<td>2. CPD requirements needed for those on list</td>
<td>2. No change: administrative aspects of running the President’s list</td>
<td>b</td>
</tr>
<tr>
<td>3. Qualifications need to be defined for Panel members</td>
<td>3. No change: administrative aspects of running the President’s list</td>
<td>b</td>
</tr>
<tr>
<td>4. Include “Fellow of SAICE” or similar, to emphasize peer recognition and respect within the industry</td>
<td>4. No change: SAICE resolved not to use professional honours/peer recognition as an exclusionary criterion</td>
<td>c</td>
</tr>
<tr>
<td>5. Are there suitable courses?</td>
<td>5. No change: several courses available, suitability unconfirmed</td>
<td>d</td>
</tr>
<tr>
<td>6. Include knowledge of contract law and procedure</td>
<td>6. Adopted knowledge of contract law, but not of procedure (rules of natural justice applicable instead)</td>
<td>e</td>
</tr>
<tr>
<td>7. Include knowledge of the English language</td>
<td>7. No change: communication skills considered to be covered by Pr Eng and experience requirements</td>
<td>f</td>
</tr>
<tr>
<td>8. Include impartiality</td>
<td>8. Impartiality added to fairness and independence</td>
<td>g</td>
</tr>
<tr>
<td>9. Formal qualification via course and exam supported only if courses available in RSA</td>
<td>9. Initially watered down, then removed, but subsequently reinstated as part of long-term solution</td>
<td>a, d, p</td>
</tr>
<tr>
<td>10. Include holding of senior position for approx. 10 yrs</td>
<td>10. No change: post Pr Eng experience requirement considered to be adequate</td>
<td>h</td>
</tr>
<tr>
<td>11. Include knowledge of conditions of contract, which must be examined</td>
<td>11. Adopted, and referred to SAICE GCC in particular, exam retained for the longer term</td>
<td>i, a, p</td>
</tr>
<tr>
<td>12. Make exam/interview discretionary if application/CV does not provide evidence of competence</td>
<td>12. No change: requirements and application of exam / interview to be defined in the longer term, but would be made standard not discretionary</td>
<td>a, j, p</td>
</tr>
<tr>
<td>13. Make exam/presentation mandatory, as adjudication itself requires studying a case, interviewing the disputing parties and presenting a ruling</td>
<td>13. Exam/interview reinstated in the longer term, current arrangement transitional whilst exam/interview requirements are being developed</td>
<td>a, j, p</td>
</tr>
<tr>
<td>14. Reduce experience requirement from 10 to 5 years</td>
<td>14. No change: 10 years post Pr Eng experience considered necessary</td>
<td>h</td>
</tr>
<tr>
<td>15. Remove professional registration or include other professional categories besides Pr Eng, e.g. Pr Tech</td>
<td>15. No change: retained Pr Eng or equivalent to provide for Pr Tech et al</td>
<td>k</td>
</tr>
<tr>
<td>16. Must not have criminal record</td>
<td>16. No change: “must not have” criteria not included</td>
<td>l</td>
</tr>
<tr>
<td>Comments raised</td>
<td>Corresponding changes made / reasons if not changed</td>
<td>Type</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>17. Must have legal qualification, with experience in construction</td>
<td>17. No change: knowledge of construction contract law and conditions of contract considered adequate</td>
<td>e, h, i, m</td>
</tr>
<tr>
<td>19. Be capable of fair, impartial and sound judgment</td>
<td>19. Impartiality added to fairness and independence, adjudication requires reasoned decision (in response to sound judgment)</td>
<td>g</td>
</tr>
<tr>
<td>20. Knowledge of construction regulations, procurement processes, and Constitution of country</td>
<td>20. No change: knowledge of construction contract law, conditions of contract and adjudication considered adequate, supporting laws and regulations to be more fully defined in the longer term</td>
<td>e, h, i, m</td>
</tr>
<tr>
<td>21. Include lawyers, do not limit to Pr Eng</td>
<td>21. No change: SAICE resolved to remain within its jurisdiction of civil engineering (industry-wide centre for dispute resolution being pursued separately)</td>
<td>m</td>
</tr>
<tr>
<td>22. Include knowledge of construction contract law and rules of natural justice</td>
<td>22. Adopted</td>
<td>e</td>
</tr>
<tr>
<td>23. Fairness and independence can be claimed by any applicant, not easy to assess</td>
<td>23. Impartiality introduced, key consideration being to avoid conflict of interest/bias</td>
<td>g</td>
</tr>
<tr>
<td>24. Assessment must allow demonstration of potential for those who haven’t done adjudications, and example adjudications for those who have</td>
<td>24. No change: to incorporate assessment in formal process to be adopted in the longer term</td>
<td>a, o, p</td>
</tr>
<tr>
<td>25. Applicants to show appreciation of tight time constraints of adjudication</td>
<td>25. No change: familiarity with adjudication considered sufficient</td>
<td>o</td>
</tr>
<tr>
<td>26. Include lawyers and claims consultants, do not limit to civil engineers</td>
<td>26. No change: SAICE resolved to remain within its jurisdiction of civil engineering (industry-wide centre for dispute resolution being pursued separately)</td>
<td>m</td>
</tr>
<tr>
<td>27. Increase experience from 10 to 15 years</td>
<td>27. No change: 10 years post Pr Eng experience considered sufficient</td>
<td>h</td>
</tr>
<tr>
<td>28. Fellow of SAICE not pre-requisite, experience and contract management enough</td>
<td>28. No change: SAICE resolved not to use professional honours/peer recognition as an exclusionary criterion</td>
<td>c, e, i</td>
</tr>
<tr>
<td>29. Course/exam not supported, will put potential applicants off</td>
<td>29. Exam/course removed for now, to be adopted in the longer term</td>
<td>a, d</td>
</tr>
<tr>
<td>30. Most appointments are done by personal reference not via these lists</td>
<td>30. No change: Emphasises need to regularise, status quo not optimal</td>
<td>b</td>
</tr>
<tr>
<td>31. Course needs careful consideration, many available, but none sufficient</td>
<td>31. Course removed for now, to be adopted in the longer term</td>
<td>d</td>
</tr>
<tr>
<td>32. Review panel to consist of experienced adjudicators</td>
<td>32. No change: administrative aspects of running the President’s list</td>
<td>b</td>
</tr>
<tr>
<td>33. Accept or interview applicant depending on strength of CV</td>
<td>33. No change: acceptance criteria defined for now, interview to be adopted in the longer term as part of the formal process</td>
<td>j, p</td>
</tr>
<tr>
<td>34. Pay annual fees to stay on the list</td>
<td>34. No change: administrative aspects of running the President’s list (currently not applied for mediators and arbitrators, but may consider in future)</td>
<td>b</td>
</tr>
<tr>
<td>Comments raised</td>
<td>Corresponding changes made / reasons if not changed</td>
<td>Type</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>35. Provide for mentorship to facilitate training and experience</td>
<td>35. No change: further unpacking of skills and training to be addressed in the longer term</td>
<td>n, p</td>
</tr>
<tr>
<td>36. Include other built environment professionals, not limited to Pr Eng</td>
<td>36. No change: SAICE resolved to remain within its jurisdiction of civil engineering (industry-wide centre for dispute resolution being pursued separately)</td>
<td>k, m</td>
</tr>
<tr>
<td>37. Remove length of professional membership, as experience is addressed elsewhere</td>
<td>37. No change: post Pr Eng experience requirement considered to be necessary to ensure adequate seniority, and the two length requirements (i &amp; ii) are not mutually exclusive</td>
<td>h</td>
</tr>
<tr>
<td>38. Provide for specialisation</td>
<td>38. No change: administrative aspects of running the President’s list – on application form, as done for mediators and arbitrators</td>
<td>b</td>
</tr>
<tr>
<td>39. Consider geographic location</td>
<td>39. No change: administrative aspects of running the President’s list – when selecting, proximity to disputing parties considered</td>
<td>b</td>
</tr>
<tr>
<td>40. Minimum requirements must be objective, assessment criteria must be in keeping with CIDB guideline, avoid vague and subjective criteria which could be open to abuse</td>
<td>40. Criteria qualified as a transitional arrangement whilst a formal accreditation / admission process (course/exam/interview) is being developed</td>
<td>p</td>
</tr>
</tbody>
</table>

The results above were then grouped according to key concepts identified to enable a content analysis below in Figure 1 (the numbers in brackets are the frequencies).
Figure 1: Content analysis

- Exam / Assessment (8)
- Course (4)
- Interview (3)
- Mentorship (1)
- Long-term solution (9)
- Administrative (7)
- Experience (7)
- Peer recognition (2)
- Communication (1)
- Contract Law (6)
- Conditions of contract / Contract Management (4)
- Adjudication (1)
- Impartiality (3)
- Criminal Record (1)
- Non-Engineers (5)
- Provide for Pr Tech (2)

Formal Assessment (8+4+3+1=16)

Objectivity of Criteria (9)

Administrative (7)

Additional Criteria (2+1=3)

Construction Law (6+4+1=11)

Conduct (3+1=4)

Lawyers & non-engineers (5)

Civil other than Pr Eng (2)

Civil, Lawyers & Non-Engineers (2+5=7)

Additional, Other (3+2=5)

Formal Assessment & Objectivity (16+9=25)
5 Discussion

From the results above, the following observations can be made at the Concept level:

- The most numerous comments were made in connection with the long term solution, followed by exam, experience and administrative aspects.
- The least number of comments were made in connection with additional criteria of communication, criminal record and mentoring.

The following patterns emerged from a categorisation of the concepts:

- The most conceived Category was formal assessment, followed by construction law and objectivity of admission criteria.
- The least conceived Category of criteria was other professional designations besides Pr Eng, followed by conduct and other additional criteria.

Further synthesis revealed the following Themes out of the broad categories formulated above:

- The most common Theme was objectivity of admission criteria, as supported by formal assessment and the need for a long term solution.
- The second most common Theme relates to law, as supported by construction law, conduct and reference to lawyers (reference to lawyers given dual treatment, both in the positive and in the negative: for confirming additional qualifications and as a basis for exclusion).

Although it is recognised that the sourcing of comments was not on a 'clean slate' basis as standard research would require, as the draft criteria on which the respondents had to comment already influenced them to think in a certain way; their responses are nonetheless useful in terms of whether they support or do not support the fundamental requirements. This recognition therefore necessitated the following further analysis of the data, which was undertaken to ascertain which fundamental requirements had been most supported, and which had been the least supported, in the original draft of the admission criteria as circulated for comment:

- The most commented-upon criterion was formal assessment, as shown by reference to exam, course and interview: only four out of twenty-five comments did not support this criterion, and the rest either supported, conditionally supported, or provided suggestions/advice on how it could be implemented.
- The least questioned criterion was experience, as shown by almost no dispute being raised for the requirement for familiarity with the construction process. Although the length of experience was questioned in two instances (one to increase it, the other to decrease it), the content of the necessary experience was not disputed. This however, cannot be considered to be a positive confirmation of whether the criterion is supported or not supported, but can be viewed more as a silent affirmation.
- The least supported criterion appears to have been to widen the net to include lawyers and others: there was strong support and motivation for SAICE to remain within its jurisdiction of civil engineering (whilst not abandoning the pursuit of an industry-wide dispute resolution centre as a separate exercise).

It is further instructive to note the high level of interest in how the panel is constituted and operates (administrative aspects), as this would be responsible for putting these criteria into effect. Perhaps because of the long-decried fragmentation of the construction industry on dispute resolution and other contractual matters, the industry needs assurance that SAICE knows what it is doing, and that
such fragmentation must not simply be replaced by half-baked solutions or over-regulation without properly thinking through the full process requirements.

6 Conclusion

The results therefore appear to lead to the conclusion that the admission criteria in their current form cannot be considered as final, and that more objectivity needs to be introduced to achieve this. It is considered that such objectivity will be achieved through a formal assessment process involving a course, exam and/or interview process. This conclusion led to the introduction of a ‘sunrise clause’, and an interim application period during which a longer-term solution must be developed.

7 Recommendation

The following recommendations are therefore made:

- That SAICE adopts the proposed current adjudicator admission criteria as an interim measure to introduce a measure of organisation into the process of adjudication and adjudicator selection in civil engineering construction contracts.
- That SAICE develops robust formal assessment criteria involving a course, a qualifying exam and/or an interview to be implemented in the long term.
- That SAICE publicises these measures and invites interested parties to participate in charting the way forward.

8 References


Appendix – draft SAICE Adjudicator Admission Criteria

INTERIM ADMISSION CRITERIA FOR SAICE ADJUDICATORS
(2011 – 2014)

9 Requirements for persons wishing to be considered for inclusion in the SAICE President’s List of Adjudicators, to be applied in the period 2011 to 2014 until final criteria are developed

9.1 Introduction
This document is based on the following documents, for which the relevant institutions have granted their kind permission:
CIDB Best Practice Guideline #C3 Adjudication, 2005
ICE Requirements for entry onto ICE’s List of Adjudicators, 2006.
SAICE can nominate adjudicators in terms of the SAICE General Conditions of Contract and maintains a President’s List of adjudicators for this purpose (the List), as well as to facilitate adjudicator selection by Employers and/or Contractors. Admission to the List does not guarantee that any nomination will be made or that appointments will follow.
SAICE sets requirements for admission to the List and for maintenance of a name on the List. Candidates wishing to be selected for the List must complete the standard SAICE application form for Mediators, Arbitrators and Adjudicators, and satisfy the SAICE’s Dispute Resolution Panel that they meet minimum requirements stipulated below. Failure to demonstrate the necessary competence may result in one of two options:
Where clarification is required, the applicant may be invited for an interview
Where certain requirements have not been met, a response will be issued specifying this.
The SAICE Dispute Resolution Panel’s (the Panel’s) decisions on all such matters are final.

9.2 Minimum Qualification Requirements for Entry onto the SAICE President’s List of Adjudicators

Applicants should:
have worked as Project Manager, Contract Manager, Engineer, Principal Agent or equivalent on engineering construction projects for a period of at least 10 years, preferably within the past 5 years, with appropriate disputes experience;
(i) be registered as a Professional Engineer or equivalent of at least 10 years standing.

have detailed working knowledge of at least one, and preferably more, of the standard forms of contract recommended by the CIDB, in particular the General Conditions of Contract published by SAICE (including the adjudication provisions);
have working knowledge of international and local practice, legislation and institutional guidelines on adjudication, including CIDB guidelines;
have working knowledge of construction contract law and rules of natural justice have appreciation of:
the factors that affect construction costs
investigations, design, construction and fabrication methods
programming and delay assessment
resource and risk assessment;
be impartial and capable of fair and independent judgment;
if invited for an interview, be able to satisfy the panel that they are a suitable person who has achieved the necessary level of knowledge of construction and dispute resolution and possesses the necessary personal management and communication skills to conduct an adjudication.

9.3 **Sunset clause / interim application period**

This document shall apply for a maximum period of three (3) years beginning from 2011, in which time SAICE shall develop more objective assessment criteria to be applied for all new applicants. These shall include but not be limited to the establishment of requirements for:

- Written application
- Passing Adjudication course(s) and / or Qualifying Examination
- Panel interview
Statutory Adjudication in New South Wales: Operational Problems and Potential Improvements

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Abstract:
The Australian state of New South Wales (NSW) was the second jurisdiction in the common law world and the first in Australia to introduce statutory adjudication. Although being modelled after the UK statutory adjudication regime, there are significant differences in the NSW regime that make it distinctive. The NSW regime is essentially a neutral certification process conducted by an adjudicator whose role is that of a certifier. However, due to its rapid nature and judicial interventions, there have been some serious problems with regard to the operation of the regime. This paper attempts to identify the operational problems of the NSW regime from neutral (adjudicator) and user (legal representatives in adjudication) viewpoints, allowing for the establishment of potential improvements to the current regime. The first stage involved a review of the relevant literature, parliamentary speeches and consultation documents, cases on statutory adjudication, and expert commentaries. It was followed by qualitative interviews with 11 leading adjudicators and construction lawyers who represent parties in adjudication proceedings. The main problems identified are court involvement, invariability in the quality of adjudicators, rubber stamp approach and the accessibility of the NSW Act. It is established that the introduction of a dual system of adjudication and an adjudication registry could solve most of the problems identified above.

Keywords: adjudication, cash-flow, construction contracts, disputes, payment.

1 Introduction

New South Wales was the first jurisdiction in Australia to introduce statutory adjudication when the Building and Construction Industry Security of Payment Act¹ (the NSW Act) was on the statute books in 1999. Historically, statutory adjudication in the common-law world was first introduced three years earlier in the United Kingdom, when the Housing Grants Construction and Regeneration Act (the UK Act) was passed. Despite following the UK government’s footsteps in introducing statutory adjudication, the NSW State Government established a completely different scheme of adjudication in terms of procedure and application in its construction industry. The stark difference between the UK and the NSW adjudication schemes is that the latter imposes a reference to ‘rapid mandatory adjudication’ contingent on the crystallisation of progress payment disputes as prescribed by the NSW Act, whilst the former was designed for adjudication to be independent of payment. In other words, the UK adjudication model caters to all types of disputes as long as they arise under the contract, whereas the NSW model confines its application exclusively to progress payment disputes as established by the NSW Act. The UK adjudication model has been adopted

¹ The NSW Act has been amended twice since its inception. The first once was in 2002 and the second was once in 2010.
(with modifications) in New Zealand,\(^1\) a few Australian states (Western Australia\(^2\) and the Northern Territory\(^3\)), and the Isle of Man,\(^4\) whereas the NSW adjudication model appears, to varying degrees, has been emulated by a number of Australian states (Victoria,\(^5\) Queensland,\(^6\) Tasmania,\(^7\) the Australian Capital Territory,\(^8\) and South Australia\(^9\)) and Singapore.\(^{10}\) The adjudication regimes in Western Australian and Northern Territory which are closely modelled after the UK regime are collectively referred to in industry parlance as the west coast model whereas those states and territories in Australian whose their adjudication regimes are largely based on the NSW regime are together known as the east coast model.

The difference in terms of adjudication operations in New South Wales and the UK is understandable, since the objectives of both Acts that underpin adjudication in these jurisdictions are fundamentally different. As stated by the then Construction Minister Nick Raynsford the objectives of the UK Act were:

First of all, it is necessary to address serious payment problems affecting many in the industry - particularly smaller firms. I receive a steady stream of mail from firms facing unnecessary hardship and even insolvency because they have not been paid for work carried out in good faith. This legislation will help to protect such firms from this sort of bad practice. Second, the legislation will address the problem of the costs and delays currently involved in settling even the most straightforward construction disputes. The legislation offers a quick means of resolving disputes so work can continue on site without delay and disruption.\(^{11}\)

Conversely, Morris Iemma the Minister for Public Works and Services of New South Wales had this to say:

The main thrust of this bill is to reform payment behaviour in the construction industry. The bill creates fair and balanced payment standards for construction contracts. The standards include use of progress payments, quick adjudication of disputes over progress payment amounts and provision of security for disputed payments while a dispute is being resolved. The bill will speed up payments by removing incentives to delay.\(^{12}\)

The objective of the NSW Act is thus clear, i.e., to improve payment practices in the construction industry. Adjudication under the NSW Act is merely a tool to achieve its policy objective. Conversely, the objective of the UK Act is two-fold. It first attempts to improve cash flow in the construction industry. Its other objective is to improve the efficiency of dispute resolution in the construction industry.

Since the objective of the NSW Act is different from its UK counterpart, its adjudication regime has been designed to be prescriptive, with strict and tight time frames for each step in the adjudication process, from the nomination of the adjudicator until the delivery of the decision. The scope of this regime's application is also considerably narrower than that of the UK regime. Only disputes on progress payments as crystallised under the NSW Act can be referred to adjudication. The definition of progress payments as prescribed by the NSW Act is, however, wide enough to include final payments.\(^{13}\) Based on the take-up rates published by the NSW Department of Commerce, it may be

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2. Construction Contracts Act 2004, Western Australia, Australia.
11. 'Laying Down the Law'; Building; 17 April 1998.
12. In the second reading of the Bill on 8 September 1999.
13. See the definitions of „Progress Payment” under Section 4 of the NSW Act.
inferred that statutory adjudication has been effective in New South Wales (Coggins et al, 2010). This supports the notion that, if adjudication is not effective, industry participants will simply not use it.

The success of statutory adjudication in New South Wales, however, is not without its challenges. The adjudication system underpinned by the amended NSW Act seems to have drifted away from its original mission (Coggins, 2009). Adjudication was intended as a system to provide an impartial, neutral certification process, independent from the contract administration process, conducted by an adjudicator acting as a certifier (Davenport, 2007 & Uher and Brand, 2007). However, due to considerable judicial intervention, adjudication is now subject to the rules of natural justice, (which are applicable in litigation and arbitration), and adjudication determinations are amenable to judicial review. The courts have also allowed damages claims to be included in progress payment claims, which clearly was not the legislation’s intent (Davenport, 2007). This somewhat broad interpretation by the courts creates severe repercussions for the NSW adjudication regime, as it was not designed to assess such claims.

A proposal has since been made by a leading adjudicator in New South Wales to have a dual process of adjudication (Davenport, 2007 & Brand and Davenport, 2010). In essence, a dual process of adjudication combines both the strengths of the NSW and UK adjudication regimes. This process works on the idea that the UK adjudication regime is effective in dealing with damages claims, and that the NSW adjudication regime is effective in dealing with certification claims. There will be two different schemes in adjudication. The first scheme will be similar to the one currently provided under the amended NSW Act, except that its scope is restricted to certification claims (excluding damages claims) made by the claimant. The second scheme will deal exclusively with damages claims made by either the claimant or the respondent. Each scheme will have different time frames for responding to a claim and making an adjudication determination. This proposal should be distinguished from another proposal of harmonising Security of Payment (SOP) legislation in Australia, which is in essence the amalgamation of the east coast and west coast models (Coggins, et. al, 2010). This means that there will be a single scheme incorporating both the strengths of the two models.

The amended (2002) NSW Act was amended again on 29th November 2010 and came into force on 28th February 2011. The amendment deals only with the additional right given to the claimant subcontractor to ask the principal to freeze money due to the respondent contractor. The perceived problems with the NSW statutory adjudication regime were not addressed in the Building and Construction Industry Security of Payment Amendment Act 2010 (the new NSW Act). Accordingly, the aim of this paper is to identify the operational problems of the NSW regime from neutral (adjudicators) and user (legal representatives in adjudication) viewpoints. It also establishes potential improvements to the current regime. When the data for this research paper was collected in July 2010, the new NSW Act had not been passed, therefore, the interview questions were structured to ask the respondents about the operational problems of the Act and potential improvements to the NSW adjudication regime. Since the new NSW Act is now in force, the potential improvements to the NSW adjudication regime proposed in this paper may be regarded as missed opportunities instead.

## 2 Methods

A socio-legal approach was adopted for this study. The first stage involved the review of the relevant literature, parliamentary speeches and consultation documents, cases on statutory adjudication and expert commentaries. It was followed by qualitative interviews with five leading adjudicators and six construction lawyers who represent employers (n=3) and contractors (n=3) in adjudication. This study chose a purposive sampling method to identify interviewees in New South

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Wales. Using this sampling method, individuals are selected because they have specific experiences central to the phenomenon or because they conform to the criteria set by the researcher. The interviewees in this study had to meet one of a set of strict criteria. They must be:

A senior adjudicator from one of various backgrounds (construction professionals, i.e., architects, engineers and surveyors and construction lawyers) who has been appointed as an adjudicator for at least five cases and must have made determinations on those cases;

A senior construction lawyer who has represented claimants or respondents in adjudications or court cases involving adjudication matters for at least five cases; or

A senior legal advisor to a contractor, consultant, subcontractor, supplier organisation or group, who has substantial knowledge in adjudication matters.

The reason why the number five (cases) was considered sufficient was that the interviewees would have substantial knowledge on the practice and procedure of adjudication particularly on the difficulties associated with it and potential improvements to the regime. Adjudicators are considered the neutrals in the adjudication process. The neutral signifies the third party appointed by the disputing parties to resolve a dispute (Sai-on Cheung et. al, 2002). To obtain holistic views on the issues investigated, this study also included the users of adjudication. Due to the complexity of this study, the users should have specialist knowledge on the scope, law, practice and procedure of adjudication. In this regard, the user category should exclude contractors, consultants, subcontractors and suppliers who have been involved in adjudications. Rather, users should include construction lawyers who have represented them in adjudications.

Whenever possible, face-to-face interviews were conducted with the interviewees. This was possible as the author was in Sydney from the 18th to the 24th of July 2010. However, out of 11 interviewees, three were interviewed by phone when the author was back in the UK. Each interview was taped with the consent of the interviewee and then transcribed. The transcripts of the interviews were sent to the interviewees for confirmation. The interview data were analysed using thematic analysis.

3 Operational Problems in the NSW Regime

3.1 Inconsistent Judicial Interpretations

The operation of statutory adjudication in New South Wales has been subject to a great deal of judicial interpretations since its inception in 1999. Unfortunately, there has been apparent inconsistency in judicial interpretations concerning a number of important issues. A leading construction lawyer in New South Wales revealed that:

[S]o far as challenging adjudication determinations well in New South Wales what we have noticed is a bit of an exploration of how that should be done for the first few years of the Act, then the law became fairly settled and just recently in New South Wales the Court of Appeal has actually said well, it’s got to all change again so we have gone back full circle. So it’s constantly evolving it’s not static, difficult to know where a person actually stands in so far as their rights, both under the contract and where the contract fits in, together with the Act.

These conflicting judicial interpretations have resulted in a flood of jurisdictional challenges in New South Wales. Parties who have lost their adjudications (mostly employers) may exploit these opportunities to challenge an adjudicator’s determination, with the hope to delay or avoid payment to the winning parties. It can be seen from the case law covered in a later part of this paper that the courts’ attitude toward enforcement of adjudication decisions in New South Wales differs considerably from its UK counterparts. Whilst the courts in the UK are more vigorous in enforcing adjudication decisions, the courts in New South Wales are more robust in setting aside adjudication determinations.

1 Construction Lawyers/NSW/Contractors/
The crux of judicial inconsistency in New South Wales appears to be caused by the uncertainty of the legal nature of adjudication as interpreted by the courts (either it is intended to be a quasi-judicial dispute resolution method or a neutral certification process). Several judges in New South Wales seem to have perceived adjudication as a quasi-judicial dispute resolution method, rather than a neutral certification process. Notably, McDougall J, who is one of the Supreme Court Judges in New South Wales and has been responsible in many adjudication-related court cases, regards adjudication as a decision making tribunal (McDougall, 2009).

This is contrary to the statement made by Mr. Morris Iemma, the then Minister for Public Works and Services of New South Wales, in the second reading speech of the Building and Construction Industry Security of Payment Amendment Bill 2002 when he said:

Parliament intended that a progress payment, on account, should be made promptly and that any disputes over the amount finally due should be decided separately. The final determination could be by a court or by an agreed alternative dispute resolution procedure. But meanwhile the claimant's entitlement, if in dispute, would be decided on an interim basis by an adjudicator, and that interim entitlement would be paid.

As can be deduced from the above statement, statutory adjudication imposed by the NSW Act is merely a neutral certification scheme (Davenport, 2007 & Uher and Brand, 2007). Three interviewees (all of whom are adjudicators) affirmed that the Government intended adjudication to operate a neutral certification process. An adjudicator with considerable adjudication experience emphasised that adjudication is _supposed to be a certification process in New South Wales at least, but that is not how it's panned out. It's a quasi judicial._

Five interviewees (four construction lawyers and one adjudicator) although did not specifically mention that adjudication is essentially a neutral certification process support the view that only progress payment disputes should be subject to adjudication and therefore imply that adjudication is a neutral certification process. A senior adjudicator explained:

[T]he preferable model is...a model that ensures that small contractors and subcontractors, have a mechanism for being paid, and the model would be that it looked only at progress payment claims and that is no claims for damages, no claims for time related costs or damages, and it simply meant that if somebody was not getting paid, they could get an assessment._

The effect of the misconception of the intended nature of adjudication by the courts is three-fold. First, adjudicators' determinations (similar to court judgements or arbitrators' awards) are amenable to judicial review. Second, statutory adjudication is subject to the rules of natural justice (which are applicable in litigation and arbitration proceedings). Third, the scope of adjudication has been widened to include damages claims.

The examination of caselaw discovers that the inconsistency in judicial analysis by the courts, had created a practice amongst dissatisfied claimants to refer a payment claim for the same work that is identical or nearly identical to the one that was earlier referred to adjudication for the second or even the third time, until a favourable determination is achieved. This practice is known in New South Wales as "forum shopping.

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2. Adjudicator/NSW/Legal/2.
South Wales industry parlance as **adjudicator shopping**. Three interviewees (two construction lawyers and one adjudicator) affirmed the existence of such a practice in the past. One of them stated: ‘Adjudicator shopping...has been a big issue...there are provisions in the Act that deal with that...but the court has made it very clear now that, once the adjudicator has dealt with the issue, then it would be an abuse of process to allow that issue to be re-agitated.’

The first case in New South Wales that gave rise to the practice of adjudicator shopping was *Rothnere v Quasar*. In that case, McDougall J held that the submission of a second claim identical to the first claim to another adjudicator did not offend the provisions of the NSW Act and was therefore acceptable. Later, in *John Goss v Leighton Contractors*, the same learned judge was asked to determine whether the subsequent adjudicator was bound by Section 22(4) of the NSW Act to follow the decision of the first adjudicator. In that case, the first adjudicator decided that the failure on the part of the claimant to comply with Clause 45 in the contract—concerned with the issue of notice of the claim in the prescribed time, manner, and form to the respondent for claims over and above the contract amount—barred its entitlement under the contract. In that case, the first adjudicator decided that the claimant was not entitled to payment for the delay and disruption claims. The second adjudicator was of the view that he was bound by Section 22(4) of the NSW Act and, therefore, followed the decision of the first adjudicator in deciding that the claimant was not entitled to additional money. He refused to follow the ruling in *Rothnere* because of its contradiction with the principle of issue estoppel. McDougall J later set aside the second adjudicator’s determination and reiterated that a claimant can make a further adjudication application for the same claims that have been decided and rejected in earlier adjudication decisions.

The effects of these two decisions led the flourishing practice of adjudicator shopping in New South Wales (Davenport, 2010). Claimants had more than one chance to submit a claim and would continue to do so until favourable determinations were achieved. This practice created a scope for potential injustice to respondents, who may be faced with one adjudication case after another, on the same work that had been previously decided in their favour. The NSW Court of Appeal found this practice unacceptable in *Dualcorp v Remo Constructions*, when it acknowledged that the principle of issue estoppel is applicable in adjudication determinations made under the NSW Act. Once an entitlement to a payment or a decision as to the value of construction work has been determined by one adjudicator, the decision is binding on any subsequent adjudicators.

### 3.2 Variability in the Quality of Adjudicators

There has been concern raised by the interviewees on the quality of the adjudicators in New South Wales. These interviewees are generally construction lawyers who predominantly represent employers or contractors. Generally, the construction lawyer interviewees are not satisfied with the quality of the adjudicators in New South Wales. An interviewee, who has done more than 120 adjudication cases as a legal representative to employers predominantly, discovered that there is variability in experience and expertise of adjudicators. Similarly another interviewee who has done more than 100 adjudications as a construction lawyer representing contractors predominantly stated that we have got a lot of adjudicators in New South Wales...of different grades and qualities. These interviewees provide valuable insights on the quality of the adjudicators in New South Wales. They are in an ideal position to assess the quality of the adjudicators across the board since they have represented parties in a substantial number of adjudications as legal representatives.

The analysis of the interview data discovers two factors which may contribute to the variability in quality of the adjudicators in New South Wales. First, the variability in quality of the Authorised

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1. (Adjudicator/NSW/Construction Management)
5. Construction Lawyer/Employers.
Nominating Authorities (ANAs). Second, the extension of the NSW adjudication regime to include damages claims.

3.2.1 Variability in Quality of the Authorised Nominating Authorities

At present, there are nine ANAs responsible for the nomination of adjudicators under the NSW Act. These ANAs are comprised of professional bodies, contractor organisations and private companies. In the absence of prescribed qualifications and experience applied to adjudicators in the NSW Act, the minimum qualifications and experience standards of adjudicators are set by these ANAs, which are responsible for recruiting adjudicators to serve on their panels. Three interviewees (one construction lawyer and two adjudicators) perceived that the quality of the ANAs in New South Wales is varied. One of them pointed out that ‘not all of the ANAs are the same, [and] not all of the ANAs have that same quality control over adjudicators.’

Some interviewees observed that the selection process undertaken by ANAs in recruiting prospective adjudicators is varied. Some ANAs specify high requirements for prospective adjudicators to serve on their panels, whilst others stipulate less extensive requirements. The amount of training provided to prospective adjudicators by ANAs is also varied. Some ANAs provide months of training while others provide mere days of training. The quality of monitoring of adjudicators on the panels also differs. Certain ANAs provide mentoring and reviewing systems, whilst others do not. Some ANAs are also perceived to have a reputation of being claimant-friendly.

The problem of variability in quality of adjudicators among ANAs could be caused by several factors. The absence of specific provisions in the NSW Act regarding qualifications and experience of adjudicators may be a contributing factor. Each ANA imposes a varying set of selection criteria for the recruitment of adjudicators, and some ANAs impose stricter requirements than others. The absence of an adjudication registry, similar to that established in Queensland, that nominates training organisations responsible for delivering courses in accordance to an approved syllabus may also be a factor contributing to varying quality of adjudicators across the ANAs. The registration of an adjudicator under the NSW Act should be standardised so that the exact requirements in terms of qualification and experience can be set at a higher standard across all the ANAs.

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1 As pointed out by one interviewee: ‘The quality of the adjudicators comes down to the quality of the ANA’, Adjudicator/Construction Management/3.
2 Institute of Arbitrators and Mediators Australia, LEADR – Association of Dispute Resolvers and Royal Institution of Chartered Surveyors Dispute Resolution Service (RICS DSR).
3 Air Conditioning and Mechanical Contractors Association of NSW Limited, Master Builders Association of NSW Pty Limited and Master Plumbers Association of NSW.
4 Able Adjudication Pty Limited, Adjudicate Today Pty Ltd and Australian Solutions Pty Limited.
5 Construction Lawyer/NSW/Employers/6.
6 For example one interviewee highlighted that ‘The ANAs are varied I guess in their approach to adjudication in a number of ways. One of those may be the emphasis their place on training for example. What kind of selection process they go through to, to put the people on to their panel.’ Adjudicator/NSW/Construction Management/3.
7 As highlighted by one interviewee who is an adjudicator ‘Our training is not two days, it’s three months.’ Adjudicator/NSW/Legal/5.
8 As highlighted by one construction lawyer interviewee: ‘[prospective adjudicators] merely have to go through a short course, that course is no longer available, so people who are already qualified are already in and nobody else is being admitted to be an adjudicator.’ Construction Lawyer/NSW/Contractors/8.
9 As highlighted by one interviewee: ‘[T]here is insufficient scrutiny of the adjudicators.’ Adjudicator/NSW/Legal/2.
10 One interviewee explained ‘[A]ll adjudicators are in groups, so that if they’re resting an issue, they don’t have to, they are not alone, they can go into the group, and say, I am resting with this issue, has any one encountered with this issue before? This is the way the courts work. That’s how the judges work.’ Adjudicator/NSW/Legal/5.
11 As highlighted by an interviewee who is also a senior adjudicator on an ANA’s panel: In the XXX [the name of a nominating body], there is a process whereby every adjudication determination is reviewed...to ensure that the standard is met. Adjudicator/Legal/2.
12 As pointed out by a construction lawyer who has done more than 100 adjudications; ‘Some ANAs are very claimant friendly, and so, people tend to go to the most friendly ANA.’. Construction Lawyer/NSW/Contractors/9.
3.2.2 The Extension of Adjudication to include Damages Claims

It may be argued that the extension of the scope of application of adjudication to include damages claims may have caused the varying quality of adjudicators in New South Wales. Damages claims, which usually involve complex analysis of the law, are arguably unsuitable for the NSW adjudication regime, which is designed as a certification process with a short time frame for the adjudicator to make a determination (Davenport, 2007). As some adjudicators have little or no legal knowledge, this could contribute to the lack of quality of the adjudicators specifically when dealing with damages claims. As pointed out by one interviewee, "many of the current adjudicators are not legally qualified and they are producing very bizarre and terrible results." It is expected that adjudicators with little or no legal knowledge may find it difficult to assess damages claims, particularly on the parties' entitlements of damages under the law. The entitlement of damages claims involves a complex analysis of culpability and is largely based on the examination of case law. Furthermore, the strict time frame of ten business days to make a determination may add considerable pressure to the adjudicator. These two factors may lead to adjudicators producing erroneous determinations.

3.3 Rubber Stamp Approach

One of the main criticisms of the NSW adjudication regime advanced in the literature is the fact that it allows the claimant to apply for summary judgment on the statutory debt created as a result of the respondent's failure to issue a payment schedule. One respondent expressed this concern when he said: "It's very harsh particularly during the learning cycle of how the Act works for respondents to be unfairly penalised because of ignorance. For example of they don't put on a payment schedule, they might be hit with a payment claim or a judgement for $2million simply because they didn't know. That is not fair." The case of Walter Construction Group v CPL (Surry Hills) provides a good illustration on the inherent difficulties caused by this so-called rubber-stamp mechanism. In that case, a multi-million dollar payment claim, which included damages claims to the respondent, was issued over Christmas. The respondent later failed to issue a payment schedule. The failure allowed the claimant to recover the claimed amount as a statutory debt in a court of competent jurisdiction by way of summary judgment. The claimant then went into liquidation and the respondent could not recover the overpaid amount. In that case, the claimant made a claim which exceeded the amount to which the claimant was entitled, and there was no option for the claimant to apply for adjudication.

3.4 Accessibility of the NSW Act

A majority of adjudicators and one construction lawyer indicated that the NSW Act is not being widely used by industry participants. They found that the NSW Act is used by big construction companies, but not small or medium-sized companies. One of the interviewees stated: "I guess the only difficulty with it is,...it is still not used by such small subcontractors. It is really only the big ones who can afford legal representation probably." The finding of the study confirms the study of Brand and Uher (2010), it must be stressed that, the sample size of this qualitative study is small, therefore this finding cannot be generalised to reflect the whole population. The adjudicators and construction lawyers who have been involved in many adjudications between them are in a good position to assess who has been using the NSW Act, as they are appointed by parties to become adjudicators or legal representatives. From their personal experience in adjudication, they found that the NSW Act is not used by all levels of the contractual payment chain, but rather at the top level, i.e., between the employer and the contractor.

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1 Construction Lawyer/NSW/Contractors/8.
2 Sections 15(2)(a) and 16(2)(a) of the NSW Act.
3 Construction Lawyer/NSW/Contractors/9.
4 [2003] NSWSC 266.
5 The construction lawyer used to be a legal advisor to a contractor organisation and now a member of a contractor organisation in New South Wales.
6 Construction Lawyer/NSW/Contractors/10.
This is divergent from the intention of Parliament, as the NSW Act was intended to assist small builders to recover payment for their errant paymasters. The fact that the NSW Act covers oral contracts as well as written contracts exemplifies Parliament's intention to provide cash flow protection to subcontractors, as they normally carry out work based on oral contracts. Therefore, if subcontractors are not using the NSW Act as Parliament intended, it brings the effectiveness of the NSW Act into question.

4 Potential Improvements

4.1 Administrative Improvements

4.1.1 The Variability in the Quality of Adjudicators in New South Wales

It is established from the analysis of the interviews that the quality of the adjudicators is effectively determined by the ANAs. From the interviews, it was discovered that some ANAs provide a review system in which adjudicators' determinations are reviewed by a senior adjudicator or a panel of senior adjudicators before being published.1 Some ANAs have a mentoring system in which a junior adjudicator may discuss the case he or she is currently working on with a senior adjudicator.2 Some ANAs have extensive databases that provide information on case law and past adjudicators’ determinations.3 Certain ANAs are very efficient in ‘picking the right sort of adjudicator for the right sort of dispute’.4 In some ANAs, the adjudicators are placed in groups to discuss their adjudication cases.5

4.1.2 Accessibility of the NSW Act

The issue of the accessibility of the NSW Act is fundamental, as one of the parameters to measure the effectiveness of Security of Payment legislation is by determining its level of use by industry players (Uher and Brand, 2008). The findings of the interviews reveal that the NSW Act is not widely used by subcontractors – the primary intended beneficiaries of the NSW Act. This is unfortunate, as the NSW Act has been in operation for more than a decade now, yet a large segment of the industry is not using it.

Despite having some of the highest numbers of adjudication applications in Australia (together with Queensland), there is reason to believe that the NSW Act is not widely used by the industry. Since 2005, the number of adjudication applications in New South Wales has levelled out at around 900 applications annually (Coggins, 2009). Queensland, which was the third jurisdiction in Australia to enact SOP legislation, had the highest number of adjudication applications (around 1000) in the period between 2008 and 2009. In the period between 2007 and 2008 the number of adjudication applications in Queensland was around 500. There was almost a 100 percent increase in terms of the number of appointments from the period of 2007-2008 to 2008-2009 in Queensland. The fact that Queensland has overtaken New South Wales in terms of having the highest number of adjudication applications in Australia offers some interesting observations. Despite Queensland

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1 As highlighted by an interviewee who is also a senior adjudicator on an ANA’s panel: In the XXX [the name of an ANA], there is a process whereby every adjudication determination is reviewed...to ensure that the standard is met. Adjudicator/NSW/Legal/2.
2 As highlighted an interviewee: I’m involved in mentoring of adjudicators. Adjudicator/NSW/Legal/5.
3 As highlighted an interviewee: [The adjudicators] have access to enormous internal resources. Adjudicator/NSW/Legal/5.
4 Construction Lawyer/NSW/Employers/6.
5 As highlighted by an interviewee: [A]ll adjudicators are in groups, so that if they’re resting an issue, they don’t have to, they are not alone, they can go into the group, and say, I am resting with this issue, has any one encountered with this issue before? This is the way the courts work. That’s how the judges work. Someone might say, yeah, I’ve dealt with that, when they talk about it, the adjudicator doesn’t have to follow it, but the process, the fact that they are talking to people in their group who collectively is a massive amount of experience available. Adjudicator/NSW/Legal/5.
having a population of only 4.53 million compared to 7.25 million in New South Wales,\(^1\) and less volume of construction activity when compared with New South Wales, based on the recent number of adjudication applications it may be inferred that Queensland has been successful in terms of addressing the issue of accessibility of its SOP legislation. The Queensland version of the Security of Payment legislation closely resembles the NSW’s SOP legislation; therefore, the argument that the NSW Act is more complex than its Queensland counterpart in terms of operation, which may have the effect of deterring industry usage, is not attestable. The reason statutory adjudication is widely used in Queensland could be attributed to the measures taken by the government to promote the SOP legislation.

The Queensland government formed the Building and Construction industry agency, a branch of the Building Services Authority,  \(\_\) to provide the infrastructure to assist the Adjudication Registry, in its duties to give effect to the Building and Construction Industry Payments Act 2004.\(^2\) One of the roles of the Adjudication Registry is to \_ensure that an effective educational and awareness strategy is in place with regard to the statutory obligations and entitlements established under the Act.\(^3\) No equivalent agency exists in New South Wales. The agency responsible for matters relating to Security of Payment in New South Wales, is NSW Procurement, a division of the NSW Department of Services, Technology and Administration. The roles of the NSW Procurement are varied and are not solely focused on Security of Payment matters.

It is proposed that an agency whose exclusive role is to look into Security of Payment matters should be established in New South Wales to actively promote accessibility to the NSW Act. Apart from the government, promotion of the NSW Act also falls upon the authorised nominating authorities, professional bodies and trade associations.

### 4.2 Potential Legislative Improvements to the NSW regime

#### 4.2.1 Dual Process of Adjudication

Four interviewees (three adjudicators and one construction lawyer) support the proposal of introducing a dual process of adjudication. As stated in one interview:

> [T]he ideal would be to have, a dual system, allowing the popularity obvious success of the New South Wales model in dealing with payment claims, to allow that to run, parallel to another adjudication system which ultimately connects in the end, that deals with other types of money claims that allows both parties to enter into the arena, and it looks more like an arbitration in a sense.\(^4\)

There are two opposing views expressed by the rest of the interviewees. Four interviewees (comprising of both three construction lawyers and one adjudicator) agreed that adjudication should only be used for progress payment claims. Three interviewees (two construction lawyers and one adjudicator) supported introducing adjudication to a wide spectrum of disputes, but one of them felt that the issue of quality of adjudicators must be first addressed. The introduction of a dual process of adjudication could fulfil the aspirations of these two diverging groups.

The dual process of adjudication is essentially a hybrid between the UK and New South Wales adjudication schemes. In essence, the dual process of adjudication combines the positive attributes of both the NSW and UK adjudication regimes (Davenport, 2007). This process is based on the idea that the UK adjudication regime is effective in dealing with damages claims but deficient in dealing with certification claims, while the NSW adjudication regime is effective in dealing with certification claims but deficient in dealing with damages claims. Interestingly, the limitations and the strengths of these two adjudication schemes do not overlap; hence, an integration of these

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\(^3\) http://www.bcipa.qld.gov.au/Pages/AboutUs.aspx.

\(^4\) Adjudicator/NSW/Construction Management/3.
schemes could offset the weaknesses inherent within one scheme by adopting the strengths of the other.

There are two different schemes for a dual process of adjudication. The first is similar to the system currently provided under the amended NSW Act, except that its scope would be restricted to certification claims made by the claimant. The second scheme, which mirrors the UK adjudication regime, would deal exclusively with damages claims made by either the claimant or the respondent. Each proposed system would have different time frames for responding to a claim and making an adjudication determination. For ease of reference, the term certification scheme will be used to refer to the adjudication regime that mirrors a certification process whereas the term dispute resolution scheme will be used to refer to the adjudication regime that is akin a quasi-judicial dispute resolution method.

Three interviewees, although they did not specifically mention the dual adjudication process, suggested that there should be different time frames for different disputes. One of them suggested; that there be perhaps slightly different time frames or different processes for different types of disputes. This suggestion appears to be consistent with the idea of the dual process of adjudication.

The proposal for a dual process of adjudication should be distinguished from another proposal of harmonising Security of Payment legislation in Australia, which is essentially the amalgamation of the east coast and west coast models (Coggins, et. al, 2010). This means that there would be a single scheme incorporating the strengths of both models. The SOP regimes in Western Australian and the Northern Territory, which are closely modelled after the UK regime, are collectively referred to in industry parlance as the west coast model, whereas those states and territories in Australia whose SOP regimes are largely based on the NSW regime are together known as the east coast model. Some of the interviewees applauded this idea, however, they felt that it may be difficult to realize. As one said: _Well I think that is admirable intent but the problem is that you have got two radically different models at the moment._

The dual process of adjudication could solve most of the problems identified earlier in this paper. The problems that have emerged as a result of inconsistent judicial analysis may be eliminated by the dual process of adjudication. The certification scheme should not be subject to judicial review and the rules of natural justice, as it is designed to be prescriptive as a result of limited time frames and the claimant's sole right to initiate adjudication. There should be an express provision in the NSW Act that gives effect to these exclusions. These may mean that grounds for jurisdictional challenges, which are usually advanced by respondents to resist payment to claimants, would therefore be minimised; this works toward the policy objective of the NSW Act by improving cash flow in the construction industry.

The scope of the certification scheme should also exclude damages claims. In order to distinguish between certification and damages claims one interviewee proposed that; _Distinction between what is a damages claim, we're looking at similar types of words towards the Victorian legislation, which already pull out a lot of the damages claims._ However, the Victoria legislation excludes unapproved variations from being subject to adjudication. Arguably, unapproved variations are not damages claims and therefore should be part of the certification scheme. Conversely, delay and disruption claims arising from variations either approved or otherwise should be excluded from the certification scheme, as they are essentially damages claims. The inclusion of unapproved variations within the scope of the certification scheme may enliven the practice of ambush claims. Nonetheless, the severity of these ambush claims may be minimised if a time bar provision is introduced in the Security of Payment legislation.

An example of this time bar provision can be found in the Victorian Act. The Victorian Act provides that a period of 3 months after the reference date referred to in Section 9(2) is the minimum period for a claimant to make a claim (either a monthly, one-off or final payment claim). It also Act provides freedom to the parties to agree to a longer period for the claimant to make a claim, but to

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1 Construction Lawyer/NSW/Employers/7.
2 Adjudicator/NSW/Legal/4.
3 Adjudicator/NSW/Legal/5.
do so is to the detriment to the respondent, who may be faced with ambush claims if the claimant has a longer time to make a payment claim.

The exclusion of damages claims from the ambit of the certification scheme may eliminate the problems of ambush, limited time frame for the respondent to respond to a payment schedule and adjudication application, and limited time frame for the adjudicator to make a determination. Since ambush tactics are more common in damages claims, the distinction made by the dual process of adjudication may eliminate or at least diminish the risk ambush in the certification scheme. If the risk of ambush claims were minimised, the respondent and the adjudicator might no longer be faced with time pressure to perform their duties as prescribed in the SOP legislation.

The dispute resolution scheme that the dual process introduces should be subject to judicial review and the rules of natural justice. There should be an express provision in the NSW Act to this effect. Since the dispute resolution scheme performs a quasi-judicial function, it is acceptable that adjudication determinations made under this scheme should be subject to judicial review and some of the rules of natural justice. The problem created by the courts in extending the application of the NSW adjudication regime to include damages claims may also be solved, as the dispute resolution scheme provides longer time frames for the respondent and the adjudicator to perform their duties under the SOP legislation, and allows both parties in the contract to initiate adjudication. The problem with ambush claims may also be minimised if the dispute resolution scheme adopts the time bar provision as proposed in the certification scheme.

4.2.2 Administration of Authorised Nominating Authorities and Adjudicators by the Adjudication Registry in the NSW Act.

As explained earlier, in New South Wales the quality of the Authorised Nominating Authorities is varied. This leads to a varying quality of adjudicators. The problem lies in a lack of monitoring on the part of the ANAs. For example, the absence of specific provisions in the NSW Act about qualifications and experience of adjudicators, means that ANAs are at liberty to specify any selection criteria; this may lead to the variability of quality among adjudicators.

In Queensland there is a body that closely monitors the conduct of the ANAs and the adjudicators. The Adjudication Registry, a body created by the Queensland Act consisting of a Registrar and other staff, has functions of registering adjudicators and ANAs, publishing adjudicators’ determination and collecting statistical data. The administration of the ANAs and Adjudicators by the Adjudication Registry is spelled out in detail in the Queensland Act. The requirements imposed on the ANAs in recruiting adjudicators are consistent as prescribed in the Queensland Act. As a result, the ANAs all apply the same set of selection criteria in recruiting their adjudicators. This leads to consistency in terms of quality of adjudicators. It is proposed that in order to have consistency in the quality of adjudicators, the approach taken by the Queensland Government in spelling out the administrative matters of the ANAs and the qualifications of adjudicators in the body of SOP legislation should be introduced.

5 Conclusion

It is evident that the NSW Adjudication regime has been effective thus far in improving payment practices. However, there remain problems areas which need to be addressed. The guidance from courts so far has been inconsistent. Inconsistent courts’ interpretations lead to jurisdictional challenges. This is to contrary to the objective of Parliament that adjudication should be subject to minimum court involvement. It is apparent from this study that the quality of the adjudicators in New South Wales is varied amongst the ANAs. The rubber stamp approach is also perceived as one of the main deficiencies of the NSW regime. The fact that adjudication is not widely utilised by subcontractors is also a major issue of concern. The introduction of a dual process of adjudication could solve most of the problems identified above. As to the quality of adjudicators, the ANAs

1 Clause 38 of the Queensland Act.
should be more rigorous in recruiting their adjudicators by imposing stricter selection criteria. It is important that the quality of the adjudicators in these ANAs should be sustained and improved upon by having the mechanisms discussed earlier in this paper. The introduction of an adjudication registry that is entrusted with the task to actively promote adjudication should address the issue of accessibility of the NSW Act. This governing agency should also monitor the conduct of the ANAs.

6 References


Factors which impact upon the selection of Dispute Resolution methods for commercial construction in the Melbourne industry: Comparison of the Dispute Review Board with other Alternative Dispute Resolution methods

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Abstract:
This paper provides an insight into the factors which impact upon the selection of dispute resolution methods for commercial construction in the Melbourne industry. The ten factors used are cost, speed, outcome, enforceability, privacy and confidentiality, open and fairness, control, flexibility, creative remedies and relationships. The dispute review board will be compared with alternative dispute resolution methods to demonstrate the differences and the impact it has on construction performance, primarily time, cost and quality. Through questionnaire survey, the relative importance of these factors in the selection of dispute resolution methods is examined and through interviews, the efficiency of the current alternative dispute resolution methods operating in Melbourne is compared with the efficiency of the dispute review board. Concerns regarding the use of DRB arising from high costs, lack of faith in the board's ability to achieve qualities of neutrality and impartiality in the selection of broad members as well as the general attitude of resistance to change in the highly adversarial culture of the construction industry will be discussed. Negotiation is still the preferred method of dispute resolution in Melbourne.

Keywords:
dispute review board, alternative dispute resolution, Melbourne construction industry

1 Introduction

Construction is a highly complex activity filled with uncertainties: economical, financial, and physical risks, as well as scope variations and documentation complexities (She, 2010). Research of the past indicates that during the construction process these risks can lead to disputes arising between two or more of the parties involved in the works (Goldfayl, 2004). In Australia, 50% of all projects over 500 million are delayed (Dawson, 2007).

The key requirements of any methods of dispute resolution are they must be based on justice and is fair and impartial (Goldfayl, 2004). Construction law in Australia is based the common law. For litigation, it is based on the adversary system consisting of a series of statements of facts and arguments of law put forward by the party to be disputed and challenged by the other party (McGranaghan, 1992). For other dispute resolution methods such as the Alternative Dispute Resolution (ADR) it is non-binding however when a written agreement has been concluded between the two parties then it becomes a contract which both parties are obliged to comply. The Dispute Review Board (DRB or DB) is a Dispute Avoidance Procedure method to settle various construction dispute claims (Gerber, 2001). Other techniques include voluntary negotiations
between the parties; third party assisted negotiations such as mediation, conciliation and adjudication; and adversarial approaches such as arbitration or litigation (Sprague, 2006). The Melbourne construction industry is based more on relationships than most others and as a result dispute resolution using ADR methods, such as mediation allow flexibility in addressing technical issues and preservation of relationships as well as minimising adverse publicity (Sprague, 2006) (Megens, 2005). However, sufficient attention should be directed to the dispute resolution clauses at the time of contract preparation and negotiation to avoid costly, time consuming as well as distracting and ineffective dispute resolution processes later on. (Gould, 2006).

This research aims to explore the importance of the factors which affect the selection of dispute resolution methods in Melbourne when compared to the dispute review board as well as the efficiency of the current dispute resolution methods in Melbourne.

2 Conflict and Dispute

Conceptually a conflict is a difference between two or more beliefs, ideas, or interests (Collin et al. 1996). Based on the above definition conflict in construction may include dissatisfaction, disagreements over contract administrator’s decisions, anger, hostility, and negative attitudinal propensities by parties (Aibinu et al 2008).

2.1 Disputes - When conflicts are unresolved

Dispute arises in a situation when a claim or assertion made by one party is rejected by another party and this rejection is not accepted (Kumaraswamy, 1998). A claim is an assertion of a right to money, and property, or a remedy and can be made under the contract itself, for breach of the contract, or for breach of a duty in common law (Powell-Smith and Stephenson, 1989). Construction claims can be in the form of money and time claims by the main contractor against the project owner for extension of contract time and additional payment arising from a specified event in the contract (Aibinu et al 2008). The claim can be any application to the project management team pursuant to any relevant clause of the contract including any variation to payments, extension of time and or damages for any alleged breach of duty by the employer or employer’s management team (Kumaraswamy, 1998).

3 Dispute Resolution Methods

The common dispute resolution methods operating in Melbourne are litigation, arbitration, mediation, conciliation, adjudication, mini-trials, facilitated negotiation, partnering and expert determination.

3.1 Litigation

Litigation is a legal proceeding in a court or a judicial context to determine and enforce legal rights (Hill, 2008). This is the least preferred method in the construction industry as the courts act on the adversary system (Bailey, 1998) and damage business relationships (Sprague, 2006). Besides the slow, expensive, time consuming, risky and stressful procedure which litigation brings, there is no real certainty of results other than a certainty of at least one loser (Merritt, 2006).

3.2 Arbitration

Arbitration is a mini-trial for a law suit ready to go to trial, held in an attempt to avoid a trial and is conducted by an independent person, usually with some relevant skill or knowledge, to determine the dispute (Bailey, 1998). During the arbitration process, parties make submission to an arbitrator and are bound by the arbitrator’s decision (ACDC, 2005).
3.3 Mediation
Mediation is a prominent ADR method used in the Melbourne construction industry and is now a firmly established preferred dispute resolution tool for construction claims (Megens, 2005). Mediation is an attempt to settle a legal dispute through an active participation of a third party, a mediator, who works to find points of agreements and make those in conflict agree on a fair result (Hill, 2008). Resolution is attempted but settlement is not always achieved (Hill, 2008).

3.4 Conciliation
Conciliation is similar to mediation however the main goal is to conciliate by seeking concessions.

3.5 Adjudication/Security of Payment
Adjudication is the process where an independent person, the adjudicator, makes a determination as to the amount, if any, which the respondent owes to the claimant, on a specific date it was (or will be due) to be paid and on what interest applicable (IAMA, 2006). The objective is to impose a settlement on parties.

3.6 Mini-Trials
Mini-trials are a structured information exchange attended by representatives authorised to settle the dispute and are used where a dispute exists between the key decision makers of both parties (Sprague, 2006).

3.7 Facilitated Negotiation
Facilitated negotiation involves an independent and objective person which enters the negotiation session to assist the parties in reaching agreement (Berman, 1995). The purpose is to facilitate a mutual understanding of both parties rather than settlement (Sprague, 2006).

3.8 Expert Determination/Appraisal
Expert determination is a person who a specialist in a technical subject who may present his or her expert opinion without having been a witness to any occurrence relating to the lawsuit or criminal case (Hill, 2008). The critical areas of importance for the ‘expert’ are to remain independent of, and act fairly and impartially between parties and to adopt a suitable procedure whilst avoiding unnecessary delay and expense in the given circumstances (Sprague, 2006).

3.9 Partnering in Alliance Contracting- towards proactive dispute avoidance
Partnering is a project procurement method where the parties to the contract share a common goal aim to complete the project successfully (Sprague, 2006). This is achieved by sharing both the benefits and risks of the project. Partnering is a proactive dispute avoidance technique. It is based on relationships and trust that all parties share a common goal (Eilenberg, 1996). Under this procurement method, a contract is set up with an agreed target price and incentives for parties.

4 Factors which impact upon the selection of dispute resolution methods
Many researchers and practitioners have investigated the attributes of ADR methods. York (1996) was concerned with the practical issues and identified time, cost and preservation of relationships, enforceability, degree of control by parties, flexibility in procedure and confidentiality as factors which had an impact upon the selection of dispute resolution methods (Cheung et al 2002). David (1988) focused on social and human issues such as impartiality, consensus, and continuing business relationships (Cheung et al 2002).
Cheung et al (2002) has identified ten criteria as the most common factors which affect the performance and selection of dispute resolution methods. These are:
4.1 Cost
The costs associated with dispute resolution involve reaching settlement agreements including expenses relating to revenue, the neutral third party fee, documentation, and settlement costs. Cost is one of the most critical criteria for organisations when assessing which dispute resolution method to use for dispute resolution as it affects the profit share of the project outcome. In assessing the suitability of a case for ADR, a cost-benefit analysis of the costs and value of the case must be undertaken. This involves trading off the various criteria and also helps the parties to better understand the issues involved and the expense likely to be incurred if the dispute continues. (Cheung et al, 2002).

4.2 Openness, Neutrality and Fairness
Neutrality and fairness depend heavily on the competence, training, and integrity of the neutral third parties. During the resolution process, a neutral third party owes a duty of care to his or her clients to remain impartial. He or she facilitates the parties’ reaching a settlement but must make a conscientious effort to avoid personal biases. The neutral third must not have any professional or financial relationship with any party otherwise the information must be disclosed to the other party. Finally the neutral third party must be agreed by both sides. Since the choice of the neutral third party is of paramount importance there must be a code of conduct to monitor the standard of professional mediators, conciliators and arbitrators. This will enhance the trust and comfort level between parties to voluntarily reach a settlement.

4.3 Speed
Time is money in the world of business and project management. Lengthy delay of dispute resolution will delay the progress of works resulting in extra costs and incur potential penalty points.

4.4 Outcome
The outcome of a construction dispute is usually related to the costs liability. The party which initiates the dispute feels that the other party owe costs for reasons such as variation of payments, quality of workmanship, and final payments or owes compensation costs due to factors such as delay of works, payment for extension of time and liquidated damages.

4.5 Privacy and Confidentiality
Confidentiality is an implied and inherent feature of ADR processes that parties to a dispute are not allowed to disclose any information or materials to the public unless by mutual consent of the parties.

4.6 Enforceability
ADR methods of dispute resolution are non-binding therefore it cannot be enforced upon by the courts unless a written agreement is concluded. However, the selection of a competent neutral facilitator with excellent negotiation skills can encourage the parties to settle.

4.7 Preservation of Relationships
A continuing relationship is one of the key elements for any organization to strive for. A good relationship is always based on trust, common interests, and respect and requires the effort and commitment of the parties to make it last. ADR methods allow parties to negotiate the process of dispute resolution and the neutral facilitator assists both parties to always focus on the issue of the dispute and to try to achieve a win-win situation which is crucial to the Melbourne construction industry as it is heavily reliant on relationships (Sprague, 2006).
4.8 Flexibility
The non-binding nature of ADR methods is likely to encourage cooperation for all parties to reach an agreement through negotiation as it is more flexible than traditional methods.

4.9 Creative Remedies
Creative agreement is directly related to the skills, experience, and inherent character of a neutral third party. Depending on the nature and requirements of the parties, he or she should try to come up with a solution that can satisfy both parties' needs. Settlements can include human factors such as business relationships and personal issues can be considered. Lateral thinking by the facilitator is vital as it takes the various factors into consideration before reaching a settlement. Reality testing by writing down the pros and cons of each possible outcome will allow parties to feel fully informed with the decision making power in their hands.

4.10 Degree of Control
When parties feel in control of the outcome and processes involved to reach an agreement, it will also mitigate the adversarial climate between disputing parties.

5 Dispute Review Board-Overview of the structure, components and use
The Dispute Review Board (DRB) consists of three qualified members committee, nominated by both parties, formed at the start of the project and meet periodically on site to discuss issues (DRBF, 2007). Then they form non-binding recommendations. If the parties are unsatisfied, they can turn to other methods of binding or non-binding methods of such as mediation and conciliation or any other ADR methods (DRFB, 2007).

5.1 Selecting, nominating and appointing Board Members
The three members nominated by both parties (Gould, 2006):
They must not have any financial ties to any party either directly or indirectly involved in the contract, not be currently employed by any party directly or indirectly in respect of the contract, and Not have a close professional or personal relationship with a key member of any party directly or indirectly involved in the contract that could give rise to the perception of bias
Each party selects one member which is approved by the other party and then a third member is chosen by the two selected members. The three DRB members then selects one as the chair with the approval of both the contractor and the owner.
Members must be qualified in both the technical and legal facets of construction practices and methods.

5.2 Formation of DRB clause into the contract at the commencement of the project (Gaitskell, 2005):
When DRB is established before the commencement of the project, the members will have the relevant design documentations, specifications and project scope as well as understanding the contract conditions.

5.3 Periodic visits on site to resolve issues (Gaitskell, 2005):
Meeting 3 to 4 times a year or more frequently as agreed by both parties
Issues are seen, heard and resolved as they arise on site.

5.4 Issuing non-binding recommendations (Gaitskell, 2005):
DRB can act as a flexible and informal advisory panel. Before issuing a recommendation, the DRB may be asked for general advice on any particular matter. The DRB would then look at documents
and or visit the site as appropriate and most usually, provide an informal oral recommendation, which the parties may choose to adopt.
If the parties were not satisfied, the DRB would follow the formal procedure of exchange of documents and a hearing and afterwards issue a formal written recommendation. The decisions made by the board are non-binding but are generally accepted by the parties due to the merit of the expert opinion been admissible of the matter proceeds to arbitration or litigation.

5.5 **Costs associated to implement the Dispute Review Board (DRBF, 2007):**

The fees will be shared by both parties. The fees will range between 0.05%- 0.25% of the project value and will act as an insurance premium against potential heft dispute costs if the claim progresses to litigation and arbitration.

6 **Analysis of how the DRB should perform with the ten factors which impact upon the performance and selection of Dispute Resolution Methods**

Ten factors were used to test the performance and selection of dispute resolution methods namely, cost, speed, outcome, enforceability, privacy and confidentiality, open and fairness, control, flexibility, creative remedies and relationships as identified by Cheung *et al*, (2002).

6.1 **Cost**
The direct fees for the DRB ranging from 0.05% to 0.25% of the total construction cost. The fees are shared by both parties which mitigate the conflict of interest and perception of bias that all three DRB members will take one particular side. In mediation, conciliation and other current ADR methods operating in Melbourne, there is only one member facilitating the negotiation for settlement between two parties.

6.2 **Openness, Neutrality and Fairness**
Neutrality, openness and fairness are the core values of the DRB. The board members must not have financial ties with any party. If there is a conflict of interest, it must be disclosed to all parties. The selection process for the DRB members is a consensus approach.

6.3 **Speed**
The DRB is established before the commencement of the project. It will involve the experts every early on the project and potential claims dispute may be identified before the issues surfaces as the conflict is resolved as they arise on site where as the current ADR methods in Melbourne resolve disputes after the event has occurred. This solves the problem of delaying the time to sort out missing documentation and historical information to make an accurate determination. Additionally, the periodic site visit will improve the adversarial nature between conflicting parties when liability can be determined before the conflict turns into a dispute.

6.4 **Outcome**
The DRB has the flexibility of acting as an advisor as well as issue non-binding recommendations. The use of lawyers on the board is discouraged to avoid an adversarial climate however the question of liability is ruled upon by three members. This should encourage the parties to accept the board decisions especially if the contract language includes a provision for the admissibility of a DRB recommendation into any subsequent arbitration or legal proceeding.
6.5 Privacy and Confidentiality
The code of ethics for DRB stipulates that the DRB must keep all information arising from the DRB review and hearing confidential and since the dispute is resolved on site, no external party will know that an issue exists. This should preserve business relationships and prevent any unnecessary complexity which may arise from external parties after hearing about the dispute.

6.6 Enforceability
The DRB is non-binding however, the goal of the DRB is facilitate the conflicting parties to resolve their differences so that construction works can continue on site.

6.7 Preservation of Relationships
Both parties agree on the selection of the DRB members at the appointment of the board. This means that all parties are willing to cooperate with each other in good faith and trust the board’s decision making abilities when a conflict arises. If the parties are unsatisfied with the decisions of the DRB, they are free to sort dispute resolution methods.

6.8 Flexibility
The DRB can act as a flexible panel acting as an advisor which will facilitate the negotiation process more than the current ADR methods which can only act as a neutral facilitator as with mediation or act to make a judgement of a technical issue as with expert determination. Litigation and arbitration are the least flexible methods as it is only interested in the issue which relate to a point of law and does not take into account of any other factors.

6.9 Creative Remedies
The DRB is a panel of three experts with different but relevant qualifications, skills and more than ten years of experience within the construction industry. The blend of qualifications and experience of the three-person DRB can provide a powerful combination of decision-making abilities than one person trying to make a judge within their limits of understanding and experience which is the case with expert determination.

6.10 Degree of Control
As mentioned before, the DRB members are agreed upon by both parties and the board resolves issues on site. The board can also act as an advisory panel which is not possible with the current operation of ADR methods. These factors give both parties a feeling of being control of the outcome and processes involved to reach an agreement.

7 Methodology
The entire process comprised of a pre-interview questionnarie, structured interview and a post interview questionnaire to examine the respondents’ perception of the DRB’s conflict management mechanisms in comparison with other dispute resolution methods.

Pre-interview questionnaire: The respondents were asked to comment on their experience with the current dispute resolution methods operating in Melbourne as well as the efficiency of the methods. Interview Questions: and then they were asked to read some information regarding the use of DRB and they were asked questions regarding their perception of the DRB as well as any concerns regarding the implementation of the mechanism in the Melbourne construction industry. Questionnaire: There were eleven survey questions asking the respondents to rank from the likert scale of 1 to 5 (1 for extremely unimportant and 5 for extremely important), whether they think the ten criteria factors are important in the comparison for the selection of dispute resolution methods.
7.1 Population and Sample
The population sample was restricted to the Melbourne industry. The research sample consisted of twenty one respondents which undertook both the structured interview and questionnaires. The research sample included: five architects, three engineers, three quantity surveyors, two development managers, three project managers, one project director, one CEO, one site foreman and two construction managers. Fifteen of these participants had over ten years of experience in their respective field of work. Eighty percent of the respondents answered that the project size their company generally undertake is in excess of $10 million. The average number of disputes that each building professional had been involved in over the last five years was five which confirms that these respondents have had a reasonable level of experience.

7.2 Data Analysis Tool

7.2.1 Structured Interview Analysis
The structured interview has been analysed using the ‘grounded theory’ approach, an example can be referred in Strauss and Corbin (1998).

7.2.2 Questionnaire Survey data analysis
To measure the performance of the conflict management mechanisms of the DRB in comparison with other dispute resolution methods a mathematical equation, Relative Importance Index (RPI) was used for the analysis of the quantitative data.

7.2.3 Relative Performance Index
To determine the performance of any dispute resolution method when compared with DRB on each criterion, the respondents’ ratings are transformed in Relative Performance Index (RPI) for each criterion. RPI is computed using the following mathematical expression:
RPI = ΣWi/(A× n)
Where ΣWi is the total score assigned importance of a decision criterion by all the respondents;
A is the highest weight (5; and
n is the number of respondents
The computed RPI are then ranked for each dispute resolution method on each criterion. The areas of comparative advantages of the DRB over dispute resolution method on each criterion were identified.

8 Results

8.1 Analysis of Data from Pre-Interview Questionnaires
The results of this section present the demographics of the respondents and the current climate of dispute resolution in the Melbourne construction industry.
8.1.1 Profile of Respondents

Figure 8.1.2 Diverse mix of professionals interviewed for this research.

As shown in figure 8.1.2 48% of the respondents held positions in a managerial capacity and 52% of the respondents held positions as a consultant in design, engineering and cost management. This demonstrates that all the respondents who participated in the research had the capacity of to make decisions regarding dispute resolution in their organisation.

8.1.2 Respondents Age

Figure 8.1.3 Age groups of the respondents who participated in the research.

As shown in figure 8.1.3, 76% of the respondents were over thirty years old. 33% of the respondents were between the age group of 30-40 years old and 29% of the respondents were between 40-50 years old. 14% of the respondents were between the ages 50-60 years and held positions in senior management and 24% of the respondents were between the ages of 25-30 years. Different age groups of professional have a different perception towards conflict management due to the length of their life and work experience.

8.1.3 Years of Experience in the Construction industry

Figure 8.1.4 Number of years of experience which the respondents had within the construction industry.

As shown in figure 8.1.4, 33% of the respondents had more than 20-30 years of experience within the construction industry, 24% of the respondents had 10-20 years of experience, 14% of the respondents had more than 30 years of experience and 29% of the respondents had less than 10 years of experience.
years of experience. These respondents worked in a range of middle to senior management positions. Senior managers focus on strategic views whilst middle managers focus on efficient project operation and younger managers bring creativity into the workplace.

### 8.1.4 Size of Projects

[Size of Projects diagram]

Figure 8.1.5 Size of projects which the respondents’ organisation usually undertook.

71% of the respondents worked in large corporations which usually undertook big project in access of more than $30 million. Usually, the larger projects have more complexity and risks associated than smaller projects and so are more likely to encounter disputes.

### 8.1.5 Contractual disputes encountered during the past five years

[Contractual disputes diagram]

Figure 8.1.6 Number of contractual disputes encountered by the respondents during the past five years.

As shown in the pie chart above the 72% of the respondents encountered between one to three disputes during the past five years.

### 8.1.6 Types of Dispute

[Type of Dispute diagram]

Figure 8.1.7 most common type of disputes which were encountered by the respondents who participated in the research.
As shown in figure 8.1.7 the most common types of dispute encountered by the respondents were all related to money, in particular 37% of the disputes were related payment for variation, 17% of the disputes were related to quality of materials and 14% of the disputes were extensions of time.

8.1.7 Most commonly used Dispute Resolution Methods

![Dispute Resolution Methods Graph](image)

Figure 8.1.9 Most commonly used dispute resolution methods by the respondents who participated in the research.

As shown in figure 8.1.9 negotiation was the most commonly used method for dispute resolution followed by mediation. Respondents preferred to negotiate at all times to resolve disputes.

8.1.8 Overall satisfaction with the current dispute resolution methods

![Satisfaction Graph](image)

Figure 8.1.10 Overall satisfaction of how the current dispute resolution methods are operating in relation to their response in 8.1.9.

Respondents were most satisfied when negotiation was used for dispute resolution. Through the interviews, respondents were most satisfied with the outcome of negotiation and emphasised the importance of excellent communication skills and the preservation of relationships in the Melbourne construction industry.

8.2 Analysis of Interview Responses -Perception of the current operation of dispute resolution methods in Melbourne

Participants were asked to comment on the efficiency of the dispute resolution processes in Melbourne. Every respondent agreed that litigation was the least efficient and preferred method as it was time consuming, costly with no guarantee of satisfactory results and was just a ‘revenue for the lawyers’. Of the twenty one respondents, thirteen professionals were moderately satisfied with the current operation of mediation in terms of the time involved in the process and outcome. Three respondents did not have any strong opinion towards any ADR methods as they felt dispute resolution ‘was just part of their job in project management’ as the Melbourne construction industry has an adversarial work culture. Five of the respondents felt confident about their negotiation ability
to resolve conflicts and the ability to maintain relationships with their contractors and subcontractors as they only collaborated with people they knew. Participants were then asked if they felt that an unresolved issue often had a detrimental impact on the cooperation, coordination and communication between parties before the conflict is transformed into a dispute. Sixty five percent of the respondents commented that with any conflict that arises cooperation between parties always broke down first. Thirty percent of the respondents felt that communication became the most difficult task as unsatisfied parties were often unresponsive to written confirmations and other correspondence requests. One project manager stated that when subcontractors and contractors became uncooperative the problem of coordination delayed the project. All respondents emphasised on the importance of preserving relationships in the Melbourne construction industry.

8.3 **Perception and concerns of the Dispute Review Board method**

<table>
<thead>
<tr>
<th>Positive Perception of DRB</th>
<th>Concerns regarding DRB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experts will be involved in the project very early with the formation of DRB clause into the contract at the commencement of the project.</td>
<td>Practicability of achieving qualities of neutrality, impartiality and independence in the selection, nomination and appointment of the DRB members</td>
</tr>
<tr>
<td>Selection process is open.</td>
<td>Melbourne Construction industry is relatively small and more reliant on relationships than US market.</td>
</tr>
<tr>
<td>Fairness can be achieved in the extent that both parties agree on the other party's chose of member.</td>
<td>Adequate knowledge of DRB members in all stages of the project.</td>
</tr>
<tr>
<td>Use lawyer is discouraged.</td>
<td>Fairness may not be achieved if influenced by political interests.</td>
</tr>
<tr>
<td>Independence could be achieved as board members have no financial ties with any party.</td>
<td>DRB’s function is perceived to be very similar to a panel of three expert witness so impartiality may not be achieved.</td>
</tr>
<tr>
<td>DRB will enhance cooperation among the project manager, the owner and the contractor as all parties have the intention to abide by the board's ability to make decisions and investigate any unreasonable behaviour when the board is formed at the start of the project.</td>
<td>Use of Design and Construct contracts may not be suitable for DRB design is not fully documented before the construction starts therefore the experts' knowledge of the design documentation is limited.</td>
</tr>
<tr>
<td>Incorporate a spirit of cooperation among parties.</td>
<td>that the periodic site visits needed to be weekly and at the end of every milestone to effectively mitigate conflicts transforming into disputes.</td>
</tr>
<tr>
<td></td>
<td>Adversarial attitude between will not improve if DRB members can determine the liability before the conflicts turns into a dispute as the notion of liability is subjective.</td>
</tr>
<tr>
<td></td>
<td>Fee of 0.05%-0.25% of the total project costs was too high to be factored into the overall construction cost preservation of relationships is not a strong enough incentive for most respondents to implement the DRB at the current cost structure.</td>
</tr>
<tr>
<td></td>
<td>small matters can inflate unnecessary with the existence of the DRB whereas before, the matter could have been resolved through private negotiation.</td>
</tr>
<tr>
<td></td>
<td>Whether decisions be accepted depends on the person and their capability.</td>
</tr>
</tbody>
</table>
8.4 Importance of the selection criteria for dispute resolution methods

Respondents were asked to rank on a 1-5 likert scale the perceived importance of the ten criteria in the selection of dispute resolution methods. Results from the Relative Importance Indices analysis are displayed in table 5.1.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Total Score</th>
<th>RII*</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>105</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Open and fairness</td>
<td>98</td>
<td>0.933</td>
<td>2</td>
</tr>
<tr>
<td>Speed</td>
<td>98</td>
<td>0.933</td>
<td>2</td>
</tr>
<tr>
<td>Privacy and Confidentiality</td>
<td>65</td>
<td>0.619</td>
<td>8</td>
</tr>
<tr>
<td>Outcome</td>
<td>98</td>
<td>0.933</td>
<td>2</td>
</tr>
<tr>
<td>Enforceability</td>
<td>83</td>
<td>0.79</td>
<td>6</td>
</tr>
<tr>
<td>Relationship</td>
<td>88</td>
<td>0.838</td>
<td>5</td>
</tr>
<tr>
<td>Flexibility</td>
<td>63</td>
<td>0.6</td>
<td>9</td>
</tr>
<tr>
<td>Creative remedies</td>
<td>51</td>
<td>0.486</td>
<td>10</td>
</tr>
<tr>
<td>Control</td>
<td>70</td>
<td>0.667</td>
<td>7</td>
</tr>
</tbody>
</table>

*RII= Relative Importance Index

Results indicate that the cost, with the highest ranking of 1, was the most important criteria when considering the selection of dispute resolution methods. The second most important factor in the selection of the dispute resolution methods are open and fairness, speed and outcome. Preservation of relationship and enforceability was the third most important factor when considering methods of dispute resolution. Degree of control ranked 7 and privacy and confidentiality ranked 8. The ranking of this research demonstrates that respondents are primarily concerned with the tangible benefits of dispute resolution. However, preservation of relationships is crucial for the Melbourne construction industry. Flexibility scored a lower ranking of 9 and creative remedies scored the lowest ranking of 10. This indicates that respondents are less concerned with how disputes are resolved but focus on the results of the outcome.

9 Conclusion

Negotiation is still the preferred method of dispute resolution in Melbourne. Cost achieved the highest ranking RII value of 1 indicating that it was the most important performance criteria when in the selection of dispute resolution methods. Other critically important factors are speed, outcome, open and fairness as well as relationships. Flexibility and creative remedies received the lowest ranking score of 9 and 10 in RII indicating that in the context of project management professionals are more interested in the immediate tangible outcome when selecting dispute resolution methods than long term intangible benefits such as improvement in the process of dispute resolution for future benefits.

The spirit of cooperation is evident in the dispute review board but is inadequate to improve adversarial attitude between parties. Extensive training at the graduate level is needed in order to change the general attitude of the high level of resistance to change in Melbourne. The notion that “things can’t improve” and “disputes is just part of the job in this industry” hinders the potential for the Melbourne construction industry to develop in full capacity and compete at international level.

Further research can be done in the field of organisational change and learning to improve the training in organisational leadership and conflict management in project management.
10 References

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Abstract:
Currently litigation and arbitration are too time consuming, costly and damaging in business relationships whilst Alternative Dispute Resolution (ADR) methods such as mediation and conciliation are increasing becoming formal and costly. This research examined the stakeholders’ perception of the Dispute Review Board (DRB) in managing conflicts in construction projects and assessed whether the performance of DRB may achieve a better dispute resolution outcome than other dispute resolution methods. This research involved construction professionals with experience in dispute resolution. Survey questionnaire was used to find out the perception on the use of the DRB using the ten criteria, namely cost, speed, outcome, enforceability, privacy and confidentiality, open and fairness, control, flexibility, creative remedies and relationships. The results found that DRB is perceived to have a comparative advantage in nearly all criteria over litigation and arbitration and has a higher comparative advantage in the capacity to maintain relationships when compared with mediation and conciliation. Structured interviews were also used to examine the perception of the DRB and found concerns regarding the use of DRB are costs, distrust as well as the general attitude of resistance to change in the adversarial Melbourne construction industry. Recommendations for areas where DRB can be improved are discussed to suit the Melbourne construction industry. This paper demonstrates that the suitability of the Dispute Review Board in Melbourne requires more than good faith and willingness to implement the mechanism as the Dispute Review Board is still an external party representing formal authority and governance over the complex process of the construction management.

Keywords:
dispute review board, alternative dispute resolution, Melbourne construction industry, performance of dispute review board, comparative advantage

1 Introduction

Disputes are a significant factor that causes project delays. Less than 50% respondents are satisfied that the dispute resolution methods used were effective in terms of cost, outcome, time and process (Dawson, 2007). Project level negotiation and executive negotiation resolution methods were resolved disputes in less than three month and 16% of disputes using other methods such as mediation took over 12 months to resolve (Dawson, 2007). Litigation and arbitration are notoriously cost inefficient and time consuming but above all, it breaks goodwill between business relationships, which is detrimental to the nature of the construction industry, heavily reliant on collaborative teamwork (Sprague, 2006). Another problem associated with litigation and arbitration is that it can also have adverse effects on the construction programme and the quality of the works, irrespective of the size of the project (Cheung, 1995) (Bailey, 1998). Combined with the increasing formality of Alternative Dispute Resolution (ADR) these systems will eventually increase in the
costs involved hence in future, most disputes will need to be resolved on site (Miles, 1996). For these reasons, the Dispute Review Board (DRB) may improve the current dispute resolution system if it is implemented in Melbourne.

The Dispute Review Board (DRB or DB) is a Dispute Avoidance Procedure method to settle various construction dispute claims (Gerber, 2001). Other ADR techniques include voluntary negotiations between the parties; third party assisted negotiations such as mediation, conciliation and adjudication; and adversarial approaches such as arbitration or litigation (Sprague, 2006). The Melbourne construction industry is based more on relationships than most others and as a result dispute resolution using ADR methods, such as mediation allow flexibility in addressing technical issues and preservation of relationships as well as minimising adverse publicity (Sprague, 2006) (Megens, 2005). However, sufficient attention should be directed to the dispute resolution clauses at the time of contract preparation to avoid costly, time consuming as well as distracting and ineffective dispute resolution processes later on. (Gould, 2006).

This research aims to explore the construction industry’s stakeholders’ perception regarding the use of the Dispute Review Board in managing conflicts in Melbourne construction projects. Additionally, this research aims to examine the potential effects of these conflict management mechanisms when compared with the other dispute resolution methods currently in use.

2 Conflict and Dispute

Conceptually a conflict is a difference between two or more beliefs, ideas, or interests (Collin et al. 1996). Based on the above definition conflict in construction may include dissatisfaction, disagreements over contract administrator’s decisions, anger, hostility, and negative attitudinal propensities by parties (Aibinu et al 2008).

2.1 Disputes- When conflicts are unresolved

Dispute arises in a situation when a claim or assertion made by one party is rejected by another party and this rejection is not accepted (Kumaraswamy, 1998). A claim is an assertion of a right to money, and property, or a remedy and can be made under the contract itself, for breach of the contract, or for breach of a duty in common law (Powell-Smith and Stephenson, 1989). Construction claims can be in the form of money and time claims by the main contractor against the project owner for extension of contract time and additional payment arising from a specified event in the contract (Aibinu et al 2008). The claim can be any application to the project management team pursuant to any relevant clause of the contract including any variation to payments, extension of time and or damages for any alleged breach of duty by the employer or employer’s management team (Kumaraswamy, 1998).

3 Dispute Resolution Methods

The common dispute resolution methods operating in Melbourne are litigation, arbitration, mediation, conciliation, adjudication, mini-trials, facilitated negotiation, partnering and expert determination.

3.1 Litigation

Litigation is a legal proceeding in a court or a judicial context to determine and enforce legal rights (Hill, 2008). This is the least preferred method in the construction industry as the courts act on the adversary system (Bailey, 1998) and damage business relationships (Sprague, 2006). Besides the slow, expensive, time consuming, risky and stressful procedure which litigation brings, there is no real certainty of results other than a certainty of at least one loser (Merritt, 2006).
3.2 Arbitration

Arbitration is a mini-trial for a lawsuit ready to go to trial, held in an attempt to avoid a trial and is conducted by an independent person, usually with some relevant skill or knowledge, to determine the dispute (Bailey, 1998). During the arbitration process, parties make submission to an arbitrator and are bound by the arbitrator’s decision (ACDC, 2005).

3.3 Mediation

Mediation is a prominent ADR method used in the Melbourne construction industry and is now a firmly established preferred dispute resolution tool for construction claims (Megens, 2005). Mediation is an attempt to settle a legal dispute through an active participation of a third party, a mediator, who works to find points of agreements and make those in conflict agree on a fair result (Hill, 2008). Resolution is attempted but settlement is not always achieved (Hill, 2008).

3.4 Conciliation

Conciliation is similar to mediation however the main goal is to conciliate by seeking concessions.

3.5 Adjudication/Security of Payment

Adjudication is the process where an independent person, the adjudicator, makes a determination as to the amount, if any, which the respondent owes to the claimant, on a specific date it was (or will be due) to be paid and on what interest applicable (IAMA, 2006). The objective is to impose a settlement on parties.

3.6 Mini-Trials

Mini-trials are a structured information exchange attended by representatives authorised to settle the dispute and are used where a dispute exists between the key decision makers of both parties (Sprague, 2006).

3.7 Facilitated Negotiation

Facilitated negotiation involves an independent and objective person which enters the negotiation session to assist the parties in reaching agreement (Berman, 1995). The purpose is to facilitate a mutual understanding of both parties rather than settlement (Sprague, 2006).

3.8 Expert Determination/Appraisal

Expert determination is a person who a specialist in a technical subject who may present his or her expert opinion without having been a witness to any occurrence relating to the lawsuit or criminal case (Hill, 2008). The critical areas of importance for the ‘expert’ are to remain independent of, and act fairly and impartially between parties and to adopt a suitable procedure whilst avoiding unnecessary delay and expense in the given circumstances (Sprague, 2006).

3.9 Partnering in Alliance Contracting- towards proactive dispute avoidance

Partnering is a project procurement method where the parties to the contract share a common goal aim to complete the project successfully (Sprague, 2006). This is achieved by sharing both the benefits and risks of the project. Partnering is a proactive dispute avoidance technique. It is based on relationships and trust that all parties share a common goal (Eilenberg, 1996). Under this procurement method, a contract is set up with an agreed target price and incentives for parties.
4 Dispute Review Board—Overview of the structure, components and use

The Dispute Review Board (DRB) consists of three qualified members committee, nominated by both parties, formed at the start of the project and meet periodically on site to discuss issues (DRBF, 2007). Then they form non-binding recommendations. If the parties are unsatisfied, they can turn to other methods of binding or non-binding methods of such as mediation and conciliation or any other ADR methods (DRFB, 2007).

4.1 Selecting, nominating and appointing Board Members

The three members nominated by both parties (Gould, 2006):

They must not have any financial ties to any party either directly or indirectly involved in the contract, not be currently employed by any party directly or indirectly in respect of the contract, and Not have a close professional or personal relationship with a key member of any party directly or indirectly involved in the contract that could give rise to the perception of bias

Each party selects one member which is approved by the other party and then a third member is chosen by the two selected members. The three DRB members then selects one as the chair with the approval of both the contractor and the owner.

Members must be qualified in both the technical and legal facets of construction practices and methods.

4.2 Formation of DRB clause into the contract at the commencement of the project

(Gaitskell, 2005)

When DRB is established before the commencement of the project, the members will have the relevant design documentations, specifications and project scope as well as understanding the contract conditions.

4.3 Periodic visits on site to resolve issues (Gaitskell, 2005)

Meeting 3 to 4 times a year or more frequently as agreed by both parties

Issues are seen, heard and resolved as they arise on site.

4.4 Issuing non-binding recommendations (Gaitskell, 2005)

DRB can act as a flexible and informal advisory panel. Before issuing a recommendation, the DRB may be asked for general advice on any particular matter. The DRB would then look at documents and or visit the site as appropriate and most usually, provide an informal oral recommendation, which the parties may choose to adopt.

If the parties were not satisfied, the DRB would follow the formal procedure of exchange of documents and a hearing and afterwards issue a formal written recommendation.

The decisions made by the board are non-binding but are generally accepted by the parties due to the merit of the expert opinion been admissible of the matter proceeds to arbitration or litigation.

4.5 Costs associated to implement the Dispute Review Board (DRBF, 2007)

The fees will be shared by both parties.

The fees will range between 0.05%–0.25% of the project value and will act as an insurance premium against potential hefty dispute costs if the claim progresses to litigation and arbitration.
5  Factors which impact upon the performance and selection of Dispute Resolution Methods

There are ten factors used to test the performance and selection of dispute resolution methods namely, cost, speed, outcome, enforceability, privacy and confidentiality, open and fairness, control, flexibility, creative remedies and relationships as identified by Cheung et al, (2002).

5.1  Cost
The direct fees for the DRB ranging from 0.05% to 0.25% of the total construction cost. The fees are shared by both parties which mitigate the conflict of interest and perception of bias that all three DRB members will take one particular side. In mediation, conciliation and other current ADR methods operating in Melbourne, there is only one member facilitating the negotiation for settlement between two parties.

5.2  Openness, Neutrality and Fairness
Neutrality, openness and fairness are the core values of the DRB. The board members must not have financial ties with any party. If there is a conflict of interest, it must be disclosed to all parties. The selection process for the DRB members is a consensus approach.

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The DRB has the flexibility of acting as an advisor as well as issue non-binding recommendations. The use of lawyers on the board is discouraged to avoid an adversarial climate however the question of liability is ruled upon by three members. This should encourage the parties to accept the board decisions especially if the contract language includes a provision for the admissibility of a DRB recommendation into any subsequent arbitration or legal proceeding.

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As mentioned before, the DRB members are agreed upon by both parties and the board resolves issues on site. The board can also act as an advisory panel which is not possible with the current operation of ADR methods. These factors give both parties a feeling of being control of the outcome and processes involved to reach an agreement.

6 Methodology
The entire process comprised of a a structured interview and a questionnaire.

**Questionnaire:** There were 10 survey questions asking the respondents to rank from the likert scale of 1 to 5 (1 for extremely disagree, 5 for extremely agree) using the ten criteria factors, the respondents were asked to rank each of the criterion on whether they agree or disagree that the performance of DRB has a comparative advantage over the eight other dispute resolution methods.

**Interview Questions:** The respondents were asked to read some information regarding the use of DRB and they were asked questions regarding their perception of the DRB as well as any concerns regarding the implementation of the mechanism in the Melbourne construction industry.

6.1 Population and Sample
The population sample was restricted to the Melbourne industry. The research sample consisted of twenty one respondents which undertook both the structured interview and questionnaires. The research sample included: five architects, three engineers, three quantity surveyors, two development managers, three project managers, one project director, one CEO, one site foreman and two construction managers. Fifteen of these participants had over ten years of experience in their respective field of work. Eighty percent of the respondents answered that the project size their company generally undertake is in excess of $10 million. The average number of disputes that each building professional had been involved in over the last five years was five which confirms that these respondents have had a reasonable level of experience.

6.2 Data Analysis Tool

6.2.1 **Structured Interview Analysis**
The structured interview has been analysed using the ‘grounded theory’ approach, an example can be referred in Strauss and Corbin (1998).
6.2.2 Questionnaire Survey data analysis

To measure the performance of the conflict management mechanisms of the DRB in comparison with other dispute resolution methods two mathematical equations were used for the analysis of the quantitative data. There are Relative Performance Index (RPI) and Relative Attractiveness (RA) for each dispute resolution method.

Step 1. Relative Performance Index

To determine the performance of any dispute resolution method when compared with DRB on each criterion, the respondents’ ratings are transformed in Relative Performance Index (RPI) for each criterion. RPI is computed using the following mathematical expression:

\[ \text{RPI} = \frac{\sum Wi}{(A \times n)} \]  

Where \( \sum Wi \) is the total score assigned importance of a decision criterion by all the respondents; 
\( A \) is the highest weight (5); and 
\( n \) is the number of respondents

The computed RPI are then ranked for each dispute resolution method on each criterion. The areas of comparative advantages of the DRB over dispute resolution method on each criterion were identified.

Step 2. Relative Attractiveness

The next step is to evaluate the relative attractiveness (RA) of each dispute resolution method on each of the 10 criteria. This may be obtained by combining the Relative Importance Index (RII) of a criterion and the Relative Performance Index of that criterion. This may be obtained using the following model:

\[ \text{RA}_a = \left( \frac{\text{RII}_a \times \text{RPI}_a}{25} \right) \]  

Where:
- \( \text{RA}_a \) is the Relative Attractiveness of a dispute resolution method on criterion \( a \)
- \( \text{RII}_a \) is the Relative Importance Index of criterion \( a \)
- \( \text{RPI}_a \) is the Relative Performance Index (RPI) of a dispute resolution method on criterion \( a \)

7 Results

7.1 Interview responses-Perception and concerns of the Dispute Review Board method

After reading the information regarding the structure, components and use of the DRB, sixty two percent of the respondents had concerns regarding the practicality of achieving the qualities of neutrality, impartiality and independence in the selection, nomination and appointment of the DRB members. These respondents felt that the Melbourne construction industry is relatively small therefore it is even more reliant on relationships than compared with the US market. One respondent had concerns regarding the adequate knowledge of the DRB members. The construction process is made up of different stages requiring different specialists in each stage. The three members may not be knowledgeable for all facets and stages of project management.

Another respondent stated that the selection process was open but did not necessary achieve fairness as humans are always influenced by political interests. Ten percent of the respondents perceive the DRB’s function being very similar to a panel three expert witnesses providing technical knowledge therefore they do not have full faith in the impartiality of the board members although the board is paid by both parties. The negative attitudes highlight the lack of trust among the parties within the highly adversarial Melbourne construction industry. However, twenty percent of the respondents felt that independence could be achieved as the board members have no financial ties with any party. Furthermore, the both parties agree on the other party’s chose of member so fairness is achieved in this extent.

Eighty five percent of the respondents agreed that the formation of the DRB clause into the contract at the commencement for the project will involve the experts very early on the project as they will have the relevant design documentations, specifications and project scope as well as understand the contract conditions. It will also incorporate a spirit of cooperation among the parties. However,
twenty percent of the respondents also noted that for potential claims dispute to be identified before the issue surfaces is dependent on the particular job, type of contract used, the parties involved as well as the effective management of the board. The use of Design and Construct contracts may not be suitable for the DRB as the selection of the board members may be time consuming and delay the commencement of the works. Furthermore, in a Design and Construct contract, design is not fully documented before the construction starts therefore the experts’ knowledge of the design documentation is limited.

Fifty percent of the respondents felt that the periodic site visits needed to be weekly and at the end of every milestone to effectively mitigate conflicts transforming into disputes.

No respondent felt that the adversarial nature between conflicting parties will improve with the DRB members settling conflicts quickly whilst the job is in progress when the liability can be determined as the notion of liability is subjective. Thirty percent of the respondents expected the project manager to be able to identify any risks which may develop into a dispute.

Ninety five percent of the respondents felt that the DRB member's fee of 0.05%-0.25% of the total project costs was too high to be factored into the overall construction cost planning budget. However, one respondent believed that a lump sum would be viable.

Eighty percent of the respondents feel that the DRB will enhance cooperation among the project manager, the owner and the contractor as all parties have the intention to abide by the board’s ability to make decisions and investigate any unreasonable behaviour when the board is formed at the start of the project. However, the preservation of relationships is not a strong enough incentive for most respondents to implement the DRB at the current cost structure. Thirty percent of the respondents argued that certain small matters can inflate unnecessary with the existence of the DRB whereas before, the matter could have been resolved through private negotiation. All the respondents felt positive that the use lawyer is discouraged.

7.2 Performance of Dispute Resolution Methods on the 10 criteria

Results from the analysis of the Relative Performance Indices (RPI) are displayed in table 7.1
Table 7.1 Performance of any dispute resolution method in relation DRB on each criterion

<table>
<thead>
<tr>
<th>Dispute Resolution Methods</th>
<th>Cost</th>
<th>Open and Fairness</th>
<th>Speed</th>
<th>Privacy and Confidentiality</th>
<th>Outcome</th>
<th>Enforceability</th>
<th>Relationships</th>
<th>Flexibility</th>
<th>Creative remedies</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPI*</td>
<td>Rank*</td>
<td>RPI</td>
<td>Rank</td>
<td>RPI</td>
<td>Rank</td>
<td>RPI</td>
<td>Rank</td>
<td>RPI</td>
<td>Rank</td>
<td>RPI</td>
</tr>
<tr>
<td>Mediation</td>
<td>0.562</td>
<td>5</td>
<td>0.676</td>
<td>5</td>
<td>0.676</td>
<td>5</td>
<td>0.686</td>
<td>5</td>
<td>0.676</td>
<td>3</td>
</tr>
<tr>
<td>Conciliation</td>
<td>0.562</td>
<td>5</td>
<td>0.676</td>
<td>5</td>
<td>0.676</td>
<td>5</td>
<td>0.686</td>
<td>5</td>
<td>0.676</td>
<td>3</td>
</tr>
<tr>
<td>Mini-Trail</td>
<td>0.591</td>
<td>3</td>
<td>0.714</td>
<td>3</td>
<td>0.714</td>
<td>4</td>
<td>0.705</td>
<td>3</td>
<td>0.657</td>
<td>6</td>
</tr>
<tr>
<td>Expert Determination</td>
<td>0.581</td>
<td>4</td>
<td>0.705</td>
<td>4</td>
<td>0.724</td>
<td>3</td>
<td>0.7143</td>
<td>4</td>
<td>0.676</td>
<td>3</td>
</tr>
<tr>
<td>Litigation</td>
<td>0.752</td>
<td>1</td>
<td>0.752</td>
<td>1</td>
<td>0.752</td>
<td>1</td>
<td>0.8</td>
<td>1</td>
<td>0.695</td>
<td>1</td>
</tr>
<tr>
<td>Arbitration</td>
<td>0.752</td>
<td>1</td>
<td>0.752</td>
<td>1</td>
<td>0.752</td>
<td>1</td>
<td>0.8</td>
<td>1</td>
<td>0.695</td>
<td>1</td>
</tr>
<tr>
<td>Partnering (Procurement Method)</td>
<td>0.552</td>
<td>7</td>
<td>0.638</td>
<td>8</td>
<td>0.552</td>
<td>7</td>
<td>0.629</td>
<td>7</td>
<td>0.6</td>
<td>7</td>
</tr>
<tr>
<td>Negotiation</td>
<td>0.391</td>
<td>8</td>
<td>0.676</td>
<td>7</td>
<td>0.448</td>
<td>8</td>
<td>0.6</td>
<td>8</td>
<td>0.572</td>
<td>8</td>
</tr>
</tbody>
</table>

*RPI= Relative Performance Index factors. *Rank=The higher the ranking, the higher the DRB has comparative advantage over other dispute resolution methods on the criterion.
Results from the RPI demonstrate that for the criterion of cost, the DRB was perceived to have comparative advantage over litigation and arbitration, followed by mini-trial and expert determination. However, when compared with negotiation, the DRB was perceived to have no comparative advantage.

For the criterion of open and fairness, the DRB was perceived to have a comparative advantage over litigation and arbitration, followed by mini-trial and expert determination. But when compared with partnering, the DRB was perceived to have no comparative advantage.

For the criterion of speed, the DRB was perceived to have a comparative advantage over litigation and arbitration, followed by mini-trial and expert determination. Again when compared with negotiation, the DRB was perceived to have no comparative advantage.

For the criterion of outcome, the DRB was perceived to have a comparative advantage over expert determination, litigation and arbitration but have no comparative advantage over negotiation and partnering.

For the criterion of enforceability, DRB has no comparative advantage over litigation and arbitration but when compared with expert determination, followed by mini-trial and mediation and conciliation the DRB has a comparative advantage. The non-binding nature of DRB was perceived to be similar to the non-binding nature of mediation and conciliation but preservation of relationships was perceived to have a higher comparative advantage in DRB than mediation and conciliation.

For the criterion of privacy and confidentiality the DRB was perceived to have a comparative advantage over litigation and arbitration but no comparative advantage over mediation, conciliation, negotiation and partnering.

For the criterion of creative remedies the DRB was perceived to have a comparative advantage over litigation, arbitration, conciliation and mediation but no comparative advantage over partnering, negotiation followed by mini-trial. Mini-trial allows parties to get an insight into the potential outcome which might be generated if the case progressed into a real litigious trial which may explain why the DRB was perceived to have no comparative advantage.

For the criterion of degree of control, the DRB was perceived to have a comparative advantage over litigation, arbitration, mini-trial, expert determination, as well as mediation and conciliation but have no comparative advantage over negotiation and partnering. This is due to the perception that board members are agreed by both parties upon the appointment of the board. However negotiation and partnership is a private process where there are no set rules, process and outcome of dispute resolution therefore 80% of respondents still feel more in control in the _muddy pool_ of negotiation.

For the criterion of relationships, the DRB was perceived to have a comparative advantage when compared with litigation, arbitration, mediation and conciliation. This demonstrates that resolving issues on site is perceived to enhance the cooperation between parties to settle issues quicker than resorting to an external third party.

For the criterion of flexibility, the DRB was perceived to have a comparative advantage over litigation, arbitration, followed by expert determination, mediation, conciliation and mini-trial but no comparative advantage over negotiation and partnering. This result confirms that the DRB can act as a flexible panel acting as an advisor which will facilitate the negotiation process more than the current ADR methods which can only act as a neutral facilitator as with mediation or act to make a judgement of a technical issue as with expert determination. Litigation and arbitration are the least flexible methods as it is only interested in the issue which relate to a point of law and does not take into account of any other factors.

For the ten criteria, there is a pattern that the DRB has no comparative advantage over negotiation and partnering but has a comparative advantage over litigation, arbitration and mini trial. The pattern demonstrates that the respondents still perceive the conflict management mechanisms of negotiation and partnering potentially performing a better dispute resolution using all ten criteria excluding enforceability.
7.3 Attractiveness of DRB when compared with other dispute resolution methods.

Results from the analysis of the Relative Attractiveness (RA) of each ADR methods are displayed in table 7.2

<table>
<thead>
<tr>
<th>Dispute Resolution Methods</th>
<th>Cost RA</th>
<th>Open and Fairness RA</th>
<th>Speed RA</th>
<th>Privacy and Confidentiality RA</th>
<th>Outcome RA</th>
<th>Enforceability RA</th>
<th>Relationships RA</th>
<th>Flexibility RA</th>
<th>Creative remedies RA</th>
<th>Control RA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediation</td>
<td>2.24</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>1.699</td>
<td>5</td>
<td>2.52</td>
<td>3</td>
<td>1.744</td>
<td>3</td>
</tr>
<tr>
<td>Conciliation</td>
<td>2.24</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>1.699</td>
<td>5</td>
<td>2.52</td>
<td>3</td>
<td>1.744</td>
<td>3</td>
</tr>
<tr>
<td>Mini-Trail</td>
<td>2.36</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>1.746</td>
<td>4</td>
<td>2.45</td>
<td>6</td>
<td>1.773</td>
<td>2</td>
</tr>
<tr>
<td>Expert Determination</td>
<td>2.32</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>1.768</td>
<td>3</td>
<td>2.52</td>
<td>3</td>
<td>1.896</td>
<td>3</td>
</tr>
<tr>
<td>Litigation</td>
<td>3.00</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>2.801</td>
<td>7</td>
<td>1.981</td>
<td>1</td>
<td>2.59</td>
<td>4</td>
</tr>
<tr>
<td>Arbitration</td>
<td>3.00</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>2.801</td>
<td>7</td>
<td>1.981</td>
<td>1</td>
<td>2.59</td>
<td>4</td>
</tr>
<tr>
<td>Partnering (Procurement Method)</td>
<td>2.20</td>
<td>8</td>
<td>7</td>
<td>8</td>
<td>2.538</td>
<td>9</td>
<td>1.558</td>
<td>7</td>
<td>2.23</td>
<td>9</td>
</tr>
<tr>
<td>Negotiation</td>
<td>1.56</td>
<td>4</td>
<td>8</td>
<td>5</td>
<td>1.716</td>
<td>5</td>
<td>2.13</td>
<td>8</td>
<td>1.05</td>
<td>4</td>
</tr>
</tbody>
</table>

*RA= Relative Attractiveness of factors

Results from RA indicates that for the criteria of cost, open and fairness, speed, privacy and confidentiality and outcome, respondents perceived the DRB as relatively more attractive when compared with litigation, arbitration, followed by mini-trial and expert determination. But for the criteria of negotiation and partnering, the DRB has no comparative advantage in terms of attractiveness of preference.

For the criterion of enforceability the DRB was perceived as relatively more attractive when compared with expert determination, mini-trial, mediation and conciliation but have no comparative advantage over litigation, arbitration, partnering and negotiation.

For the criteria of creative remedies and degree of control the DRB was perceived as relatively more attractive when compared with litigation, arbitration, expert determination, mediation and conciliation but have no comparative advantage over mini-trial, negotiation and partnering.

Results combining the RPI and RII together demonstrated a perception of the respondents’ preference in the selection of dispute resolution methods.

8 Conclusion

The results from the analysis of interview responses and questionnaire survey demonstrates that when compared with litigation and arbitration the DRB is perceived to have a comparative advantage in 9 out of 10 criteria which are namely cost, open and fairness, speed, privacy and confidentiality, outcome, relationships, flexibility, creative and control. The DRB is perceived to have a comparative advantage in the capacity to maintain relationships when compared with mediation and conciliation. This indicates that the building professionals feel that on site resolution
of issues improves communication and cooperation between parties. When compared with negotiation and partnering the DRB was perceived to perform have no comparative advantage indicating that informal negotiation is still the preferred method of dispute resolution in Melbourne. The concerns which building professionals in Melbourne have regarding the use of DRB arise from the high costs of employing DRB members, a lack of faith in the board's ability to achieve qualities of neutrality and impartiality in the selection of board members resulting from the perception that Melbourne construction industry is so reliant on networks and relationship, and as well as the general attitude of resistance to change in the adversarial construction industry.

If DRB is to be implemented successful in the Melbourne construction industry, site managers and site foreman will need to be directly involved in the process of decision making for dispute resolution to effectively resolve issues on site. The advantage is that they understand the subcontractors as a large proportion have a trade background in their training. This will improve the adversarial climate between conflict parties as lot of subcontractors do not like to deal with office personnel but will communicate with the site managers because they feel that site managers are the only ones who understand how a building is physically built.

The DRB will not be very effective if the project manager with the power of decision making and reporting obligations only found out about an arising conflict at the same time the DRB was informed to investigate an issue. This may involve an adjustment in the organisational structure of decision making and consequently, pose challenges for the project managers to accept a partial proportion of their decision making power to be shared by site managers.

Industry bodies such as Masters Builder Association Victoria (MBAV) and the Housing Institute of Australia (HIA) need to get involved to convince the government to initiate a DRB project. The DRB may have some impact to how the union currently operates in construction. Any potential conflict of interest in power will require legislation to resolve any potential clash.

9 References

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Barriers to Alternative Dispute Resolution in the Construction Industry - the Kuwaiti experience

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Abstract:

Litigation as a formal way of dispute resolution is time consuming, costly, adversarial and damages, if not destroys, relationships and reputations. There are many alternative forms to litigation and arbitration, also in Kuwait different organisations prepared regulations for different forms of alternative dispute resolution. These forms have been rarely used due to cultural difficulties and to lack of awareness of these forms of dispute resolution.

In addition to exploring the advantages of using the alternative dispute resolution forms with construction projects disputes, this paper presents the findings of what alternative dispute resolution strategies are currently been implemented by different organisations in Kuwait. These finding are reinforced by interviews conducted in Kuwait, with workers in the construction industry, to identify the main reasons, in terms of culture and awareness aspects, for not adopting ADR in construction disputes. The barriers to use mediation are found to be, mainly, lack of awareness and another six cultural aspects. However, elimination instruments to the barriers were revealed in this study.

Keywords:
alternative dispute resolution ADR, awareness, Kuwait construction industry KCI, culture, mediation

1 Introduction

Although two forms of alternative dispute resolution ADR (mediation and conciliation) exist in two different documents produced by two bodies in Kuwait, these ADR guidance are rarely been used because of some barriers. A two-stage interview survey was conducted in Kuwait to investigate the need for ADR in the construction industry and the preferred form of ADR by industry and the reasons of preferring the named form. Furthermore, the causes of the delay of employing the existing forms of ADR in construction industry were under focus.

The cultural and knowledge barriers to employing different ADR forms in Kuwait were explored during the conducted interviews. Different themes from the open ended questions were found. In addition, several suggestions to eliminate these barriers were recommended from the interviewees. As a part of an ongoing PhD which explores the possibility of implementing different forms of ADR to settle construction disputes in Kuwait, this study highlights the barriers to employing the existing forms of ADR in settling construction disputes. In particular, barriers to the use of mediation were researched through two sets of interviews conducted in Kuwait with 27 specialists in the construction industry of Kuwait from different sectors. The interviewees’ perspectives provide a representation view and were picked randomly. All 27 interviewees, in both stages, were chosen randomly from different sectors based on their experience in the construction industry as well as their familiarity with construction disputes in the private sector.

Briefly, findings of this study can be summarised under two main headings: lack of awareness in mediation; and cultural concerns to use mediation. These matters were found to be the main barriers
to the employment of mediation in order to resolve construction disputes in Kuwait. Afterwards, the resolutions to these barriers to mediation were indicated in this brief study.

1.1 Aim and objectives of this study

This paper arises out of a PhD study seeking to improve dispute resolution in the Kuwaiti construction industry. The main aim of the paper is to explore the barriers to ADR in the Kuwaiti construction industry, which has been achieved through the following objectives are as follows.

To explore the requirements of Kuwaiti construction industry (KCI) in terms of resolving construction disputes in Kuwait.

To identify the barriers to ADR in KCI.

To recognise ways to overcome the identified barriers.

To identify and explore good practice and the role of ADR (mediation).

The mentioned objectives, of this paper, are the vital objectives of the whole PhD research, which are concentrating on the data collection and analysis chapters of the mentioned PhD.

1.2 Research limitations/difficulties

Respondents to such studies are difficult to be found, particularly in Kuwait, where the culture makes them keep their conflicts and disputes to the highest level of confidentiality. In which, small number of respondents who have got the desire to be interviewed replied to both interview stages’ calls. Some respondents, because of confidentiality, have not answered every question that was asked in the interview. Some other interviewees declined to mention their project’s titles, furthermore, some wished to remain anonymous. All respondents and the company names have thus remained confidential in this study, due to the commercial sensitivity of the subject.

Because of the low level of knowledge and lack of awareness in ADR, a preliminary session for the actual interviewees was used to ensure that they understood the concept and principles of ADR and the aim of the whole session was to ensure non-bias and reliable data to eliminate the possibilities of unreliable outcomes. To ensure true judgement of the outcomes after the explanation session which was based on literature and been given before each interview, both interviews’ questions and the above mentioned session was prepared by the authors and translated, from English to Arabic, with the assistant of independent expert. Additionally, during the transcription and analysis periods, translation (from Arabic to English) was a must. Translation in the transcription period was conducted directly by the authors and was checked by an independent body.

2 ADR forms in Kuwait

A review of the literature in Kuwait, in depth, proved that there are amicable alternative dispute resolution ADR regulations already in existence. These were prepared by: Kuwait Chamber of Commerce and Industry (KCCI) issued a document called (Nedham Al-Tawfeeq w Al-Tahkeem Al-Tejari: Conciliation and Commercial Arbitration System); and Kuwait Lawyers Association (KBAR) issued (Al-La’eha Al-Ejra’eyah w Al-Nedham Al-Asasi: The Procedural List and The Basic System). In addition, Kuwait Society of Engineers (KSE) which established a department called ‘Kuwait Mediation and International Arbitration Chamber - under construction’ they are preparing to issue a document called (Qawaed Al-Wasatta w Al-Tahkim Al-Ekhteyari fi Al-Masharie Al-Handasia: Regulations of Mediation and Optional Arbitration in Engineering Projects).

2.1 Conciliation

The Arabic translation of conciliation is –Al-Tawfeeq”. Conciliation, as a commercial alternative dispute resolution in Kuwait has been provided by Kuwait Commercial Arbitration Centre which was established on the 14th of November 2000 as an accredited centre in KCCI. Although this document does not give the conciliator(s) in Kuwait the right to produce binding decisions, conciliator(s) can contribute towards convergence of views. To have the ability to consult
Kuwait Commercial Arbitration Centre, to use conciliation as a type of alternative dispute resolution, there needs to be the following clause included in the contract.

Any dispute arises upon this contract to be referred to the conciliation in accordance to the provisions contained in the Conciliation and commercial arbitration system of Kuwait commercial arbitration centre.

In addition to having this clause in the contract, to resort to conciliation, the disputants should have the desire to settle their dispute amicably and agree about conciliation. Agreeing to participate in the ADR processes is the most important movement towards choosing conciliation. This was found to be the main reason to why the usage of this and other types of ADR was poor. This conclusion was based on the interviews which will be discussed soon. The procedure of ‘conciliation’ in Kuwait is found to apply the conciliation regulations of the United Nations Commission on International Trade Law (UNCITRAL). The board of the centre forms an executive committee out of five members, which nominates the conciliation body in accordance with clause 14 of the previously mentioned document. The conciliation body contains either one member or more, who can be selected from the committee itself or externally, to conciliate in the dispute.

Clause 18 of the document states that the party who has the desire in conciliation submits a request to the secretariat of the centre. The request must include a list of the dispute’s facts together with the applicant's point of view reinforced by supporting documents. From their side, the centre’s secretariat informs the other party about the conciliation request within seven days from the submission day, the other party should reply within fifteen days from the date they were informed, expressing their point of view about the dispute.

The conciliation body studies the case and then invites the disputants for a hearing; the body's main mission is convergence of views, if they agreed about the final version of settlement, then this agreement should be signed. The conciliation body must finalise its mission within three months after their first meeting, extendable to another three months (if needed) by the committee’s decision. In the case of a conciliation failure, the disputant’s rights would not be affected with any shown or written during the conciliation processes. Finally, the centre provides the disputants, based on their request, with a certificate which describes how the centre viewed this dispute, the reasons why the conciliation trial was failed to settle it, without expressing any comments or views about the dispute.

2.2 Mediation

A role of mediation has been provided, on January 2004, by Kuwait Lawyer’s Association Arbitration Centre which is a centre at the KBAR. In the introduction of their document, the general manager of the Centre, approved that ‘employing ADR is not ware or brand that we should mention its advantages anymore but it is a must which been imposed by the reality of today’s international commercial’.

Opposite to conciliation, the mediator is not contributing to the decision, nor are they pushing any of the disputants towards a settlement. Based on the previously mentioned documents, the main role of the mediator is to neutrally propose the effective procedure(s) towards an effective settlement for the dispute, as if they could do with resorting to expert determination in some points or to resort to arbitration in others. Resorting to Al-Wasatta, which is the Arabic translation of mediation, should be agreed by disputant parties of any contract. Again the following clause has been proposed by the general manager of the Kuwait Lawyer’s Association Arbitration Centre.

In case of a conflict between parties upon explanation, application or implementation of this contract to be referred to the mediation process of the Lawyer’s Association Arbitration Centre in the State of Kuwait in accordance to the procedural list and the basic system of the centre.

Another future role of mediation is under preparation and will be provided by The Kuwait Mediation and International Arbitration Chamber which was established on September 2010 by
KSE. The main purpose of this chamber is to initiate roles of mediation and arbitration in construction disputes of Kuwait. Similar to conciliation, resorting to mediation should be agreed between parties in all cases, which can face different types of barriers although the role of mediation exists and useful. The barriers to mediation will be discussed in details derived from interviews held in Kuwait with workers in the construction industry who had experience in solved and unsolved disputes.

2.2.1 Regulations of mediation at Kuwait society of engineers

By late 2010, the KSE had established a department called The Kuwait Mediation and International Arbitration Chamber which is still under construction, this department is aiming to issue a document called (Qawaed Al-Wasatta w Al-Tahkim Al-Ekhteyari fi Al-Masharie Al-Handasia: Regulations of Mediation and Optional Arbitration in Engineering Projects) which should be concerning the dispute resolution in construction projects in specific and all types of engineering projects in general.

The Kuwait Mediation and International Arbitration Chamber's chief revealed that the main purpose of establishing this chamber under the society of engineers in Kuwait is to decrease resorting to litigation in order to resolve construction disputes. As they have found that litigation is an impediment to a project’s progress and growth, they are intending to adapt the spirit of UNCITRAL regulations to be consistent with the Kuwaiti Civil Code. By then they will be ready to mediate in construction disputes. He added that the chamber will train mediators in the future to fill the needs of the construction industry in Kuwait.

2.2.2 Doubts to mediators

Brooker (2007) suggests that when a mediator gives advice or offers opinions for any party in the dispute, this will affect the credibility of the mediator in which risks alienating the whole process. Apparently, this is the case in the Kuwaiti culture, since it is a small community, which makes finding mediators without any type of relationships with one or both parties rare, if not impossible. In this regards, interviewees in Kuwait have been asked about the mechanism of trusting a third party while resolving construction disputes in Kuwait in terms of culture.

2.3 Section 2 in brief

The above recent findings gave the PhD research a new direction, since these regulations are not well-known and not been used regularly in resolving construction disputes. The essential issue of this study is that for some reasons the above detailed forms of ADR are not widespread, however, causes of this shortage were asked in the second stage of the interviews. It is always easier to resort to either mediation or conciliation if it is printed in the contract on the bases of previous agreement between parties, however, resorting to any amicable method of ADR (e.g. mediation and/or conciliation) is always voluntary for all disputants and it is all about the conformity between parties. In fact, it is all about agreement between parties either before the occurrence of dispute, during the contracting phase, or yet after the dispute occurred between parties. In both cases, before or after the occurrence of dispute, the construction parties are always faced with existing barriers towards ADR. Although some interviewees preferred arbitration, just because it has a binding decision, most interviewees preferred mediation as an alternative dispute resolution in construction disputes. This suits the traditional Kuwaiti culture. For this reason, in this research, barriers to mediation in construction disputes will be considered only.

3 Methodology

A set of 11 qualitative interviews, furthermore, another set of 16 qualitative interviews were conducted in Kuwait with workers in the construction industry during October to December 2009 (1st set) and November to December 2010 (2nd set). Interviewees were selected based on their
experience in construction disputes based on preliminary interviews conducted in Kuwait during December 2008 to February 2009 (Sayed-Gharib et al., 2010). Face-to-face interviews are the most suitable method to collect data in Kuwait, for the sole reason that culture and the social environment in Kuwait depend on eye contact and direct conversation. That is why another stage with more detailed questions has been conducted latter on.

The first set of interviewees was selected randomly on the basis of their professionalism in construction projects and familiarity with construction disputes, regardless the sector that they were working for. Consequently, interviewees in this stage were selected from different sectors. For this reason, this stage of interviews was broad and open not as specific as the next stage of interviews, however, in the second set of interviews, all interviewees were selected for experience in construction disputes in the Private Sector. Finding interviewees, who had had experience in construction disputes, was with the help of the KSE and the KBAR in which these two organisations have got data of different types of workers in the construction industry who have been involved in disputes previously. The interviewees, in this stage, ought to be categorised as follows: three were reported as investors in construction projects; four consultants in construction field; and a further four experienced contractors in construction projects. Others were: three lawyers experienced in construction disputes; and two experts who act as third parties (i.e. mediators, conciliators and adjudicators) in construction disputes.

The data of the interview revealed that most workers in the construction industry believe that mediation gives a better deal, compromises a solution, shows neutrality, has a non-binding agreement unless signed, is a non-adversarial method, takes a shorter time, is a confidential process, is a flexible procedure, maintains relationships and it is a voluntary process.

Although most of the interviewees agreed that mediation offers massive amounts of benefits, participants commented on the barriers to workability of mediation in construction disputes in Kuwait. The data analysis established an approach to improve employing mediation against the mentioned barriers which frustrated the implementation of mediation in spite its existence in different industries institutes of Kuwait.

3.1 Data analysis
Both sets of interview data were analysed manually by taking matching themes from interviewees’ responses. Considering that different words have different synonyms, and sometimes different synonyms have got different meanings. Nonetheless, translating the data from Arabic to English, added a difficulty of different translations. (See ‘Research limitations/difficulties’ section below).

3.2 Broad-spectrum of the outcomes

3.2.1 First stage of interviews
Signs of preference of mediation. During identifying the requirements of KCI found that there is a cultural problem and lack of understanding of ADR.
Justification of focusing on construction disputes resolution in private sector.

3.2.2 Second stage of qualitative interviews
Poor usage of the existing ADR forms. Having a preference of mediation rather than any other ADR, in order to resolve construction disputes.
Suffers of Lack of awareness in the amicable alternative dispute resolution (mediation). People in Kuwait need edification of ADR and the benefits of ADR.
Not only workers in the construction industry but the whole public of Kuwait need this type of education, because each individual will be involved in construction of at least their own house.
Important concerns (based on culture) for instance: trust and integrity of "ordinary" third party dispute resolution process.
Specific data analysis, detailed outcomes description and discussion are specified soon, just after the research limitations/difficulties and literature review.

4 ADR not litigation or arbitration

Six interviewees, out of 27 interviews with professionals in construction industry, preferred not to resort to ADR in case of dispute in construction projects and keep the existing applicable route (five interviewees preferred arbitration and only one interviewee preferred litigation). The interviewee (a senior lawyer) who preferred litigation had doubts about the workability of voluntary nature of ADR in Kuwait, as people there do not have the will to use such process and they have got used to adversarial forms of dispute resolution. In addition, the interviewee praised the dignity, integrity and impartiality of the judicial authorities. He added “middle eastern culture trusts judicial authorities, and believes in their integrity and impartiality which makes it too difficult to trust neither a third party nor accepting the idea of ordinary person”. Finally, because this respondent was interviewed in the second stage, he shared some barriers to ADR with other interviewees, which will be discussed later (see barriers to mediation below).

The other 5 interviewees, who preferred arbitration, have not refused ADR because they are not good alternatives to litigation and/or arbitration; their key reason was in preferring arbitration that “it is binding”. In other words, they have got doubts to the success of the non-binding processes. However, they have all shown their disapproval towards the high amount of arbitrators’ fees and the long time procedure of arbitration (minimum six months) in Kuwait, which is longer than litigation in some cases. Since (82%) of interviewees agreed on ADR and as the objectives of this paper are to explore and study the barriers to ADR (mediation), so the interviewees who refused resorting to ADR in construction disputes will be neglected for now.

5 Mediation in Kuwait

The 15 interviewees out of 27 (71%) who agreed on ADR, preferred mediation as an alternative to litigation and/or arbitration in construction disputes, which suits the situation in Kuwait due to different reasons (will be discussed soon). Nevertheless, they mentioned some barriers to mediation, which will be revealed later. Another 11 interviewees (29%) were distributed as follows: only one (5%) selected conciliation whereas another five (24%) had no clue what to choose, notwithstanding they have agreed about ADR. However, the five interviewees who did not decide what ADR to choose, they were not able to make a decision because of their lack of knowledge in ADR (see barriers to mediation below).

5.1 Conciliation in Kuwait

Only one expert interviewee selected conciliation because of the involvement of the third party in terms of advising the disputants, this interviewee (a lawyer/ex-consultant) had real concerns about the neutrality of the third party. In which the interviewee preferred to give the opportunity for the independent third party to express their views frankly, so both disputants can discover whether the third party is neutral or not, that was why he have not chosen mediation as the best practice. Furthermore, all interviewees have agreed about the barriers to ADR and they do believe in the same barriers to mediation with believers of mediation. The next section demonstrates the ‘raison d’être’ of mediation which was presented in the literature reinforced by the interviewees perspectives.

5.2 Why mediation?

Although mediation was preferable in both stages of interviews, detailed reasons of preferring mediation were asked during the second stage of interviews only. That is why only twelve interviewees out of sixteen (who decided that ADR is more convenient than litigation and/or
arbitration in the second stage of interviews) will be taking into account for this section. Out of 12 interviewees only nine insisted that mediation is the most suitable form of ADR for construction dispute resolution, one preferred conciliation and two interviewees have not had any clue what sort of ADR to choose. Different factors have been argued by the interviewees (i.e. duration and cost of dispute resolution, different effects of the settlement and the nature of the process and the third party in between).

5.2.1 **Shorter time**

All respondents insisted that mediation saves parties’ time which can be wasted through long process and routine of litigation. Two interviewees, a contractor and a consultant, declared that “actually we are looking for shorter process to settle our disputes”, whilst other interviewees’ opinion was not far away from that. Four interviewees (an investor, two contractors and an expert) agreed about that arbitration did not achieve the purpose that it was found for. Arbitration was found to make process shorter and faster, contrary it made it longer, slower and more expensive (the cost will be discussed below).

5.2.2 **Cheaper/cost effective**

Disputants are always seeking for lower costs to resolve their disputes. An investor confirmed that “Gaining money is what we are working for, and thus there is no reason to waste it in courts”. Although the court’s fees are very cheap comparing with the claim’s amount (0.01% in best cases), the cost of lawyers are too high (50-60% of the claimed amount). In the words of an interviewed contractor “lawyers cost is an extortion”. Two out of three interviewed lawyers objected about the high cost of lawyers and demonstrated that “lawyers can be in long-term contract with firms, so they take their disputes with no extra fees, it is just the yearly agreed payment!” On the other hand, when arbitration produced to be an alternative to litigation, it was meant to be cheaper and faster as mentioned above, but in fact it became approximately equivalent to litigation in terms of cost if not more expensive, however, lawyers agreed with other respondents (100%) about the effective cost of mediation.

5.2.3 **Maintaining relationships**

Relationships are always an issue in any kind of conflicts. To maintain relationship (either social or business) disputants must show tolerance and forgiveness toward each other and the conflicted case in between. Nine interviewees (all contractors, consultants and investors) have had the potential to waive their rights in the sake of maintaining their relationships with other parties furthermore their reputation in the market, since it is small community. Definitely, lawyers and mediators have not had an opinion in this part simply because they have not got a right to be waived. Yet, all respondents thought that resorting to mediation offered an advantage to the construction industry, in which it keeps the favourable relations between the parties. Moreover, the mediation option preserves the disputants’ reputation between other workers in the industry. Also, mediation can improve the reputation of the parties in some cases, in the sense of they are flexible in emulation to conflicts and do not go extreme in antagonism.

5.2.4 **Compromising better deals/flexibility**

Negotiating around a dispute most likely gives a better deal, whether parties reached an agreement or they have not. Richbell (2008) insisted that “mediation provides the opportunity for the whole story to be told” wherein disputants will have the chance to listen to each other rather than facing each other in the court or arbitration process. The best deal can be reached while going through litigation process is (Win/Lose) situation, and most likely its (Lose/Lose) situation (Sayed-Gharib et.al. 2010). However, because mediation is not a legal argument, both/all parties can be winners, (Win/Win) situation, since in mediation all of the disputants have to agree and say YES to the deal.
Nine interviewees, who agreed about mediation, concurred that having the negotiation opportunity with other parties, with the attendance of a neutral third party, always gives them more comfortable and stronger position in their standpoint. In addition to that, mediation process could reveal for them their own mistakes, if any.

All interviewees, even the ones who did not prefer mediation as ADR to construction disputes, believed in dealing with the dispute by mediation, definitely, results (Win/Win) situation. Not only money wise, but maintain relationships and keeping reputation can be accounted as winning matters in the case of mediation succeeding. This confirms that, the interviewees who did not agree about mediation, either did not accept as true that mediation is booming, or they did not understand what is mediation and how does it work.

Parties resort to dispute resolution in order to defend their possessions and rights. Aiming to get hold of the whole rights might cause losses in other sides of the projects itself or parts of the whole organisation. Disputants can share the (Win/Win) position by compromising a solution, assuming that achieving hundred percent solution, (Win/Lose) situation, is impossible by confrontation. 8 of the interviewees granted that mediation is all about compromising a suitable solution, which might not fit most of the disputants' desires, but it is a fair agreed solution.

5.2.5 Non-adversarial

“Move away from adversarial methods” (Ilter and Dikbas 2009) because adversarial schemes in dispute resolution irritated parties in terms of their stability in the market and relationships with other parties. Eleven interviewees believed that their organisations definitely will be effected if they had a case in the court, one of the interviewees described being in court as “a headache”. Additionally, number of interviewees preferred, in previous disputes, to neglect their rights rather than going through litigation procedures.

5.2.6 Confidential

Confidentiality is very important issue in construction disputes, since it reflects on the parties' reputations and relations with others. Reputation in construction industry is case sensitive; it can be affected by having many cases in the court, and “in fact libellous nature of litigation may perhaps damage anybody's reputation” said by an interviewed investor in construction projects. Protecting parties' reputation is all about confidentiality of the dispute resolution process. Eight respondents agreed that mediation provides the meant confidential process.

5.2.7 Non-binding

The mediation’s agreement is not binding for disputants, unless they have signed an agreement, which allows the disputants to resort to litigation during the process or even after the decision was made (before signing the agreement). The non-binding nature has encouraged six respondents to prefer mediation as a trial to settle their dispute before falling into arbitration/litigation routine. Yes, some interviewees argued that this opportunity can be misused (i.e. to delay the opponent and/or to decrease their chances of winning) but mediation worth trying in which it can save massive efforts.

5.2.8 Voluntary

Although mediation is known as a voluntary process, it has been addressed as an advantage to mediation by only four interviewees in Kuwaiti construction industry. The humble percentage indicates lack of acceptance of voluntary mediation and they do prefer mandatory mediation instead which will be revealed soon.

5.2.9 Neutrality

The neutrality of an ordinary third party, not judicial body, is always a question, however, barely two of interviewees accepted that a well trained third party (mediator) is trustworthy, and these two were mediators no doubt. The low percentage can be considered as a deciding factor to mediation.
There is a significant percentage of interviewees show doubt on neutrality of mediators (read doubts on neutrality below).

5.2.10 Summary

Nine deciding factors to mediation (see Figure 1) have been agreed by interviewees, the level of agreement varies due to lack of awareness on mediation, however, the short illustration brief sessions were enough for the interviewees to recognise the appropriateness of using mediation to resolve construction disputes. The deciding factors to mediation in this study were picked up from the general speech with the interviewees as themes, with consistency to the advantages of mediation in the literature. The last three factors, which had results of 50 per cent and less, were faced with some disagreement by number of interviewees. The disagreement will be discussed below as ‘difficulties to use mediation’.

![Figure 1: Deciding factors to mediation (advantages)](image)

5.3 Recognition of appropriateness

A huge percentage of interviewees (71 per cent) agreed about the appropriateness of mediation, but due to lack of awareness about it, the usage of mediation was poor in construction disputes. The above mentioned documents conditioned resorting to ADR by certain clauses should be in the contract. Richbell (2008) concluded that ‘just because the contract does not specify mediation, it does not mean parties cannot use it’ parties can always agree to resolve their dispute in any form of dispute resolution, however, mediation or any other sort of ADR must be agreed in due course before it is too late. On the other hand, respondents consented that resorting to mediation, initially, sounds like an easy choice and a smooth process but in fact it is not. There are other difficulties to employ mediation in Kuwaiti construction disputes, these difficulties will be called barriers to mediation. The following sections demonstrate the Kuwaiti perspective upon the barriers to mediation in construction disputes from the interviewees’ experience.

5.4 Difficulties to use mediation

Although the last three (above mentioned) advantages of mediation are common in the literature, and agreed by small percentage of the interviewees but they led the authors to a significant problem toward employing mediation. The data provided indications of difficulties to use mediation. Authors have recognised lack of approval towards ADR due to the lack of acceptance of the said advantages as advantages from large percentage of interviewees, furthermore, some other difficulties to use mediation found during the second stage of the data collection period.
5.4.1 Binding vs. Non-binding

Half of the interviewees were encouraged to prefer mediation to its non-binding nature. Despite the fact that 33 per cent claimed that the decision after mediation trail must be binding once disputants agreed to resort to mediation, no doubt, they do not know enough about mediation. Disputants always, not only workers in the construction industry, have got concerns of their opponents' intentions. The rest of the 17 per cent did not have any clue in this regards because of their lack of awareness.

In addition to the above mentioned 33 per cent of the twelve interviewees who agreed about mediation but not it is non-binding nature, there are the interviewees who have chosen arbitration for this reason which rises that percentage to 47 per cent out of the whole set of interviewees. This high percentage puts a question mark in front the non-binding nature of mediation, however, Richbell (2008) insisted that is dangerous to give the mediator the chance to recommend a binding decision for many reasons; the mediator may use or reveal confidential information given by parties, it can destroy the mediator's neutrality for one of the parties or both, and by binding decision of mediator parties abdicate the opportunity of having a (Win/Win) situation because any third party’s decision can be, often, (Win/Lose) to one of the parties.

5.4.2 Mandatory vs. Voluntary

Only 33 per cent considered the voluntary nature as an advantage to mediation, while 67 per cent thought making ADR compulsory by obligating disputants to go through ADR forms before resorting to litigation/arbitration was important, however, from this huge percentage it seems that ADR got to be a mandatory clause in the contract, not an optional choice, in case of dispute, and this could be one of the causes of limited spread of mediation so far.

5.4.3 Doubts on neutrality

Nearly 17 per cent of the interviewees (mediators only) believed in the neutrality of an independent and well trained third party. Surprisingly, 42 per cent of interviewees did show lack of trust in the third party's neutrality neither integrity, on the grounds of that this third party is an ordinary person not judicial body, in addition to that Kuwait is a small country and the opportunities of knowing each other are very high. The rest of the interviewees (41%) did not comment on this part as they are not aware of the situation.

The three above revealed difficulties pave the way for barriers to mediation's widespread in resolving construction disputes of Kuwait. The early findings (barriers to mediation) will be discussed below, in details, in order to diagnose the situation and limitations of employing mediation in the construction disputes.

BARRIERS TO MEDIATION IN KUWAITI CONSTRUCTION DISPUTES FROM INTERVIEWEES PERSPECTIVE

During the second stage of interviews and after discovering, from the first stage of interviews, that the existing ADR process' in Kuwait are rarely used, number of disincentives of implementing ADR were revealed by interviewees in the second stage. The themes of disincentives were categorised based on the redundancy. Two main barriers to employing ADR were shaped; lack of awareness and cultural aspects. Moreover, six different barriers were classified under cultural barriers as the mentioned barriers are well related to the culture.

6 Lack of awareness in ADR (mediation)

6.1 Level of knowledge

Ilter (2009) pointed to the level of knowledge on mediation in the Turkish construction industry, she explored that there is a severe lack of knowledge upon mediation. Although level of knowledge is an important issue, authors discovered from the preliminary interviews that there is major lack of
awareness of mediation in the Kuwaiti construction industry. All interviewees, in both stages, were asked about their knowledge or awareness of mediation. None of their responses were out of the following choices:
Don’t know about mediation, and need brief explanation about it.
Know about mediation, but not in detail.
Know about mediation fairly, but not used it.
Know about mediation very well, and used it.
They have answered this question as follows in Table (1):

<table>
<thead>
<tr>
<th>Respond</th>
<th>Frequently</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t know about mediation (needed brief explanation session before the interview)</td>
<td>10</td>
<td>37 %</td>
</tr>
<tr>
<td>Aware about mediation, but not in detail (procedure and process)</td>
<td>8</td>
<td>30 %</td>
</tr>
<tr>
<td>Know about mediation fairly (but never used it yet)</td>
<td>5</td>
<td>18 %</td>
</tr>
<tr>
<td>Know about mediation very well (used it at least once)</td>
<td>4</td>
<td>15 %</td>
</tr>
</tbody>
</table>

Although 30 per cent designates the low level of knowledge on mediation, 37 per cent is a significant indicator of lack of awareness of mediation.

6.2 Interest of improving the knowledge and usage

Sixteen interviewees, during the second stage of interviews, were asked about their need and desire to learn more about mediation. The asked questions and detailed answers are discussed below.

Q: If there is an opportunity to learn more about mediation will they go through it? Answers (in Table 2) indicate that 75 per cent have got the desire to improve their knowledge in mediation, which identify the lack of understanding of the mediation mechanism.

<table>
<thead>
<tr>
<th>Respond</th>
<th>Frequently</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>12</td>
<td>75 %</td>
</tr>
<tr>
<td>Maybe, if needed</td>
<td>2</td>
<td>13 %</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td>Do not know</td>
<td>1</td>
<td>6 %</td>
</tr>
</tbody>
</table>

6.3 Interest of using mediation

Another question was asked to the respondents about their consideration of using mediation in resolving future disputes. The results are presented in Table 3 which shows that 63 per cent confirmed resorting to mediation in order to settle their construction disputes in future.

<table>
<thead>
<tr>
<th>Respond</th>
<th>Frequently</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely</td>
<td>10</td>
<td>63 %</td>
</tr>
<tr>
<td>Maybe, if needed</td>
<td>3</td>
<td>19 %</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td>Do not know</td>
<td>2</td>
<td>12 %</td>
</tr>
</tbody>
</table>

7 Different cultural aspects

All interviewees, in the second stage interviews, agreed about six cultural barriers to ADR (mediation in specific). Certainly, the respondents revealed on signs of the following six barriers
(Figure 2 below) while answering about the advantages of mediation. In fact, views are always vary from place to place, there are some factors which can be addressed as advantages somewhere and can be disadvantages somewhere else, it depends on many aspects (i.e. Culture). So, what can be a deciding factor to use mediation in UK (for instance) can be a barrier to mediation in Kuwait. Below a brief discussion of cultural barriers which revealed by the sixteen interviewees in the second stage:

![Figure 2: Cultural barriers to mediation](image)

7.1 **Personalising**

One of the cultural aspects in construction disputes is taking projects' conflicts personally, in which this conflict turns into a personal conflict. Some interviewees found such an incident as normal human being phenomenon. Ninety three per cent of respondents thought that disputants always take their disputes as personal issues due to the prevailing adversarial methods of dispute resolution. A lawyer suggested that “people always think of revenge if they did not get hold of their desired rights”. Disputants always seek justice in addition to the ‘winner’ feeling, so it is all about righteousness. Mediation can provide the two above mentioned criteria ‘justice and feeling’. Yes it might not be the feeling of ‘winner’ but it is the feeling of ‘satisfied’, an investor declared “why should I take it personally if we had a smooth resolution”. However, mediation is not widespread actually most people never tried it or even heard about it, they never seen a result to be able to judge on the process abilities. An expert suggested ‘Successful practice by influencing famous bodies to be revealed to public’ by then people may accept to change their view towards taking disputes as personal issues.

7.2 **Signs of weakness**

The existing contracts do not contain clauses for ADR which shows proposing mediation, or any other form of ADR, as a sign of weakness. Proposing mediation gives, indirectly, feeling of defeat/victory for both parties. In this case, who offers mediation? This is an important question at the beginning of every dispute. In fact offering mediation in due course is a vital, however, none of the disputants have got the potential to offer resorting to mediation due to their prestige. Precisely, 75 per cent of interviewees agreed that offering mediation shows signs of weakness to their opponents, it is a common thought. The only found solution for this barrier is to articulate mediation in the contract at the beginning, so mediation will not be an optional choice any more it will become a compulsory in case of dispute.
7.3 **Parties’ intransigence**

Intransigence is a cultural matter; parties in Kuwaiti construction industry sometimes do have the desire to break their opponent. Sixty two per cent admitted that they had this feeling during disputes and thought they could do it by litigation, however, professionals with their long experience have discovered the impossibility of such a desire, elderly and experts suggested this barrier can be eliminated by obligating parties to resort to mediation.

7.4 **Concerns of the final decision’s effectiveness**

While the mediator's decision is not binding for parties, unless an agreement has been signed, parties have doubts of the reaction of their opponent. Fifty nine per cent of the interviewees noticed their concerns of the finality of the decision, a consultant stated “what if we agreed upon a settlement then the opponent felt uncomfortable and took their actions the next day”. Clearly, this is can be addressed as misunderstanding (or low level of knowledge) of mediation. In fact the decision, of mediation, is binding after signing the settlement agreement; indeed nobody signs such an agreement timidly.

7.5 **Concerns of trusting non-judicial bodies**

Forty two per cent had doubt in ensuring the neutrality of the third party if s/he was not a judicial body. Three interviewees shared the same sentence “we do trust a judicial third party but not an ordinary third party”. Hesitations towards the fairness of a third party came on surface because: low level of knowledge of the mediation process, lack of trained mediators and essential reason is Kuwaiti judicial body’s Impartiality, as a lawyer in construction disputes insisted. Finding trusted, experienced and well trained mediators is definitely the perfect solution.

7.6 **Fear of change**

There are always fears of trying something new. Litigation and arbitration are readily available, even if these procedures are not convenient, smooth, slow and expensive. But they feel that they know these procedures very well, there is an old Arabic saying says “what you know is always better than what you do not know”. Even though the fear of change between workers in the construction industry is 40 per cent and this percentage is not as high as other barriers (see Figure 2) but it should be improved. It seems that the fear came on top almost due to the lack of awareness in mediation, some interviewees suggested helpful solution (i.e. edification and training courses). Although solutions to eliminate barriers are beyond the target of this study but some suggested solution will be discussed below.

8 **How to eliminate the mentioned barriers to mediation**

As a result, this study paved the way for further studies. Wherein some interviewees suggested new directions for supplementary studies; to eliminate the above mentioned barriers to mediation, and to improve the employment of the existing ADR in Kuwaiti construction industry’s disputes:

8.1 **Suggested instruments of cultural improvement and edification:**

The interviewees suggested different ways to demolish the mentioned barriers. Some of these tools were revealed by other researchers:
- Education: (Schools or Illiteracy Centres);
- Training courses: (Academic or Coaching) trainings for (Long or Short) periods;
- Information: (Books, Booklets, Leaflets, Brochures, Electronics or Internet);
- Media: (TV, Radio, Newspapers or Internet);
- Practice: (by famous organisations and influential people); and
- Events: (Conferences, Workshops or Seminars).
These instruments have the ability to influence the culture and people’s awareness.

8.2 Other suggestions to improve the employment of ADR in KCI’s disputes

Thirty four per cent of the interviewees agreed that the government must obligate projects’ parties to add clauses to the construction contracts in order to force disputants to go through ADR by law. Obligating parties towards ADR was discussed in the literature in different countries. Some researchers found that this approach might affect the voluntary nature of ADR in which does not achieve the goal of ADR (i.e. flexibility), and some other researchers found it as a must for construction contracts due to the massive cost of litigation and/or arbitration and the time overrun in adversarial types of construction dispute resolution.

9 Further discussions and Conclusions

9.1 Mediation in Kuwaiti construction industry and barriers

Although it is not specially designed for construction disputes, a role of mediation exists in Kuwait (see Table 4). Future role(s) of mediation in Kuwaiti construction industry can be considered in further studies. Particularly, while this study focused on the barriers to employing mediation, expectations of exploring future role(s) of mediation would be easier and available.

<table>
<thead>
<tr>
<th>Document name (English)</th>
<th>Provided by Under (Institute)</th>
<th>Methods discussed</th>
<th>Issued (year)</th>
<th>Usage (based on interviews)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conciliation and Commercial Arbitration System</td>
<td>Kuwait Commercial Arbitration Centre</td>
<td>Kuwait Chamber of Commerce and Industry KCCI</td>
<td>Conciliation and commercial arbitration</td>
<td>2000</td>
</tr>
<tr>
<td>The Procedural List and The Basic System</td>
<td>Kuwait Lawyer’s Association Arbitration Centre</td>
<td>Kuwait Lawyer’s Association KBAR</td>
<td>Mediation and arbitration</td>
<td>2004</td>
</tr>
<tr>
<td>Regulations of Mediation and Optional Arbitration in Engineering Projects</td>
<td>Kuwait Mediation and International Arbitration Chamber - under construction</td>
<td>Kuwait Society of Engineers KSE</td>
<td>Should be mediation and optional arbitration</td>
<td>Under preparation expected late 2011</td>
</tr>
</tbody>
</table>

This is an in progress research which aims to substantiate the effectively of mediation to resolve construction disputes amicably, neutrally, cost effectively and within shorter duration than litigation. A settlement which keeps reputation of disputants, maintains their social and future business relationships. The above mentioned advantages of mediation were described, by the interviewees, as the deciding factors to mediation.

On the other hand, the interviewees highlighted the lack of awareness and the cultural barriers to use mediation in the construction disputes (i.e. personalising, signs of weaknesses, parties’ intransigence, concerns of the final decision’s effectiveness, concerns of trusting non-judicial bodies and the fear of change)
9.2 Barriers elimination vs. mediation implementation

Technically, in order to employ mediation as a trail to resolve construction disputes, parties should have agreed to resort to mediation in the case of dispute. The main reason of the pre-agreement is that disputants always feel weakness if they have offered mediation during dispute phase, which makes the agreement upon mediation as dispute resolution process is a must to be articulated as a clause in the contract. Other barriers can be eliminated partially; however, reducing the effect of the mentioned barriers could take long time especially the cultural aspects. Changing culture considered to be impracticable in short time periods. This ongoing research is intending to discover new ways of removing the barriers to mediation, in sequence to implement mediation in construction dispute.

10 Acknowledgements

This study faced two main limitations; low level of knowledge and lack of awareness on ADR; and the need for independent translation and editing. The authors of this article thank the interviewees for their time and efforts, and the _society of engineers‘ and the _society of lawyers‘ for facilitates finding respondents. The authors also are grateful for the anonymous translator and editor of both stages of interviews and the short sessions‘ notes, her efforts in both stages are appreciated. Finally, special regards to the proof reader, who finished his task quickly in a record time.

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Resolution Of Disputes Arising From Major Infrastructure Projects In Developing Countries

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Abstract:
Multilateral Development Banks including the World Bank have identified infrastructure development as a crucial component of any poverty alleviation strategy in developing countries. The last two decades have seen tremendous increase in the percentage of resources developing countries have invested in infrastructure development. About £755 million was committed to private-public infrastructure development in the developing world between 1990 and 2001. Unfortunately, as exemplified by the Dam Construction Project in Lesotho, disputes often arise from major infrastructure projects in the developing world that are resolved at great cost by courts and arbitral tribunals constituted from the most expensive legal professionals in the developed world. This research presents a critical review of the literature on the experience of such disputes and the methods used in resolving them. It derives from the preliminary phase of a study aimed at developing the knowledge and understanding necessary for more cost effective resolution of such disputes. The key findings of the review so far are as follows. What literature exists is limited largely to resolution by international commercial arbitration. As to be expected of the size of these projects, governments or state entities are often parties to the underlying contract and, therefore, the disputes from the projects. In the overwhelming majority cases, the parties from developing countries are often the respondents and rarely the claimants. There is a perception that developing countries are always at a considerable disadvantage in the conduct of arbitration proceedings, which is a source of disaffection with the process on the part of these States. However, what is most remarkable about the literature is that, although there is a rapidly growing use of alternative dispute resolution (ADR) methods other than arbitration to resolve similar disputes in the developed world, the literature is silent on the use of such methods on projects in developing countries. The paper also considers the implications of the findings of the review for the design of the study.

Keywords:
case study research, developing countries, disputes resolution, infrastructure, international

1 Introduction

In 2000, when one hundred and forty-seven heads of States met at the United Nations (UN) Millennium Summit, poverty reduction was high on the agenda (Sachs and McArthur, 2005). Among the goals agreed was to halve those surviving on a dollar a day by 2015. Many of the world’s poor are in the developing countries. The International Bank for Reconstruction and Development (the World Bank) and the other Multilateral Development Banks (MDBs) have identified infrastructure development (road, water treatment, plants, power generation/transmission plants and irrigation projects) as a essential part of any effective strategy for alleviating poverty in the developing world (World Bank, 1994; Briceno-Garmendia et al., 2004). At the heart of

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1 Developing countries as used here refers to all countries classified by the World Bank as developing economies (low income and middle income economies). More information on the World Bank’s classification of economies is available at: http://data.worldbank.org/about/country-classifications.
infrastructure development in developing countries are the major construction projects, often dominated by foreign contractors with the State as the main client (Chen et al, 2007). It is usually the case that these projects are funded by MDBs such as the World Bank, and the various regional development banks (African Development Bank (AfDB), Asian Development Bank (AsDB), European Bank for Reconstruction and Development (EBRD) and Inter-American Development Bank (IDB)). The parties involved, the specific economic and political context and the peculiar features of major construction projects make disputes inevitable. Often, disputes arise from these projects that are resolved by arbitral bodies outside the jurisdictions of these developing countries at great cost and expense to the respective States. It is rather worrying that the citizens of these impoverished states have to bear the brunt of expensive arbitral processes with the concomitant effect of project delivery delays and increased project cost. This research presents a critical review of the literature on the experience of such disputes and the methods used in resolving them. It reports on the early stages of an on-going study aimed at developing the needed knowledge and understanding for efficient and more cost-effective resolution of such disputes. The review is organised into three main sections. The first section briefly examines recent trends in infrastructure development in developing countries and its relationship with the construction industry. This is followed by a critical review of the literature on the resolution of disputes arising from major projects in developing countries. The final section examines the implications of the outcome of the review on the design of the rest of the study.

2 Infrastructure Development and Construction in Developing Countries

2.1 Characteristics of Infrastructure Projects

Infrastructure, in the broader sense of the word, means more than a physical project. It has been defined as comprising the physical facilities, institutions and organizational structures, or the social and economic foundations, for the operation of a society (UNCTAD, 2008). In this research the definition of infrastructure focuses on physical infrastructure. The World Bank (2004) defines infrastructure, in economic terms; as public utilities (power, telecommunications, piped water supply, sanitation and sewerage, solid waste collection and disposal, and piped gas), public works (roads and major dam and canal works for irrigation and drainage) and transport facilities (urban and inter-urban railways, urban transport, ports and waterways, and airports). The World Bank's definition however is steeped in the historical view of infrastructure as “public utilities” and/or “public works”. This characteristic of infrastructure is not all-encompassing as there are many infrastructure projects today which do not fit the “public” tag. However, one can agree with the World Bank on the examples of infrastructure projects which were cited in the definition above. Many authors such as Prud’homme (2004) and Kessides (1993) provide similar definitions of infrastructure projects. Facilities such as roads, irrigation projects, dams, power generation plants, transport (airports and seaports) share some common characteristics as infrastructure. The United Nations Conference on Trade and Development (UNCTAD) (2008) list five characteristics of infrastructure. Firstly, they are capital-intensive. Secondly, they often involve physical networks. They also are major determinants of the competitiveness of an economy. Fourthly, in many societies, services associated with infrastructure are thorny social and political issues. Finally, infrastructure projects are relevant to economic development and global integration. Prud’homme (2004) adds that infrastructure projects are capital goods in themselves; they are often “lumpy” and not “incremental”; they are long-lasting and space-specific. He concludes that they often benefit both enterprise and households. To the above, one may add disputes; these projects are often laden with all kinds of disputes which may occur some time between the commencement of the project and its commissioning or even thereafter (Cheung and Yiu, 2007).
2.2 Investments in Infrastructure Projects

As a consequence of their importance and the huge investment required, infrastructure projects have historically been the preserve of States (World Bank, 1994; UNCTAD, 2008; Briceno-Garmendia et al., 2004). As of 1994, developing countries were investing about two hundred billion United States dollars ($200 billion), amounting to about four per cent (4%) of their national output and a fifth of their total investment in infrastructure development (Kessides, 1993; World Bank, 1994). In spite of efforts by States, much has not changed in terms of the percentage of resources they commit to infrastructure development over the years. UNCTAD maintains that States will need to spend between seven per cent (7%) and nine percent (9%) of their national output on infrastructure if the huge infrastructure gap is to be bridged (UNCTAD, 2008).

In response, many developing countries have opened up the sector, which once was the preserve of the State, to the private sector. Since the 1980s, there has been an increase in private sector participation in infrastructure development across the globe (World Bank, 1994; UNCTAD, 2008). Indeed it is said that with the trend of public-private participation in infrastructure development on the ascendency, about 2500 infrastructure projects in developing countries attracted private sector investment commitment of more than $755 billion between 1990 and 2001 (Harris, 2003; Kirkpatrick et al., 2006). The increase in private sector involvement in the provision of infrastructure has been attributed to the retrenchment of the State from infrastructure development as a result of inefficiency and inability to expand to meet rapidly growing demands (Harris, 2003). From twenty-one projects involving an amount of about $11, 787 million between 1984 and 1987, private sector investment in infrastructure projects in East Asia and the Pacific rose to 871 projects with total investment amounting to $ 135.5 billion between 2000 and 2009 (World Bank, 2010). These projects in addition to investments in existing projects in the region brought the total for the region to $181 billion constituting 36% of the total investment in infrastructure with private participation for the period 2000-2009 in developing countries (Park, 2010). According to the World Bank, forty-three out of forty-eight Sub-Saharan African Countries implemented 238 infrastructure Projects between 2000 and 2009 with private participation (PPI) and a total investment commitment of $ 47.6 billion (Izaguirre, 2010). Added to existing investment, the total for this region was $79 billion, accounting for about 10% of total investment in infrastructure in developing countries for the period (Izaguirre, 2010). Eight developing countries in the South Asian region implemented 361 infrastructure projects with PPI during the last decade. This constituted 15% of the total PPI investment in developing countries with a total investment of $174.4 billion (Jett, 2010).

Compared to the relatively negligible investment in the 1980s, PPI have seen astronomical increase over the past two decades. Figure 1 shows the global distribution of PPI investment commitment to infrastructure in developing countries by region from 1990 to 2008.

![Figure 1: Total investment commitments to infrastructure projects with private participation in developing countries, by region, 1990–2008. (Source: World Bank and PPIAF, PPI Project Database)](image-url)

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From the discussions on infrastructure development so far, some trends can be observed. Firstly, States still remain the primary providers of infrastructure development. Secondly, States since the early 1990s have been more willing to allow private sector participation. This has resulted in billions of dollars of investment commitments in infrastructure development in developing countries. Even with the involvement of the private sector, States still maintain some share or interest in such developments. Where States divest themselves of interest in projects, they still retain regulatory oversight (Kirkpatrick et al., 2004; Kirkpatrick et al., 2006). Finally, the past two decades has seen phenomenal increase in investment in infrastructure by States and the private sector in developing countries.

The reason for the increased investment is, in part, attributable to the perceived impact of infrastructure development on economic development. Many authors have acknowledged the fact that infrastructure development is crucial to economic development (Canning and Pedroni, 1999; Kessides, 1993; Kirkpatrick et al., 2006; Harris, 2003; Briceno-Garmendia et al., 2004; World Bank, 1994; UNCTAD, 2008; Calderón and Serven, 2010). Research examining the relationship between infrastructure development and economic development identifies a correlation between the two (Sanchez Robles, 1998; Canning and Pedroni, 1999; Tan, 2002; Briceno-Garmendia et al., 2004; Giang and Sui Pheng, 2011). Kessides and Prud’homme have argued that much of the literature on the relationship has been focused on infrastructure capital and not services. To them, infrastructure services should be the main measure of impact of infrastructure development. Kessides argues further that whilst most of these studies are fixated on economic growth, not much is explained about the impact on the welfare of people. Prud’homme asserts, in agreement, that impact of infrastructure development affects both enterprises (economic growth) and households (welfare of the people). His explanation of the linkages is illustrated by him as shown in Figure 2. below.

![Figure 2: How infrastructure contributes to development. (Source: Prud’homme (2004).)](image)

The provision of infrastructure for potable water, electricity, health and sanitation will directly and dramatically benefit and improve the welfare of households and thereby impact poverty reduction (Briceno-Garmendia et al., 2004). The importance attached to infrastructure makes the process by which they are developed a matter of utmost importance.
2.3 Infrastructure Development and Construction: The Relationship

At the heart of the ever expanding infrastructure in developing countries is the international construction industry. Whether it involves building from the scratch or rehabilitation, infrastructure development involves construction. As a result of the huge capital outlay required many infrastructure projects have been awarded to foreign construction companies and experts who have the capacity to execute these projects (Chan, 2005). In Africa, for instance, many American, European and Asian construction companies have been involved in infrastructure project construction for decades. A table compiled from Engineering News Record by Chen et al (2007) spanning the period 2001-2005 reveals that American contractors had 15.42% market share of construction projects on the African continent in 2005. Whilst British firms had 5.04% of the share of the market, European contracting firms collectively had 49.33% of the construction market share. In recent years many Chinese construction companies have joined the competition for construction projects on the African continent (Chen et al., 2007). A study conducted into the operations of Chinese construction firms in Africa found that there is a huge increase in the number of Chinese construction firms operating in the region. From the building of soccer stadia and dams in Ghana to the construction of roads in Zambia, the influence of the Asian construction companies is being felt. The Chinese construction firms as of 2005 controlled 21.36% percent of the market (Chen et al., 2007).

The involvement of international construction firms in infrastructure development in developing countries is a global phenomenon not limited to Africa. This has resulted in the emergence of a huge international construction industry with implications for inter alia law and dispute resolution. Disputes often arise as a result of land acquisition for the projects, re-settlement of communities affected by projects, employment and labour concerns, health and safety issues or indeed shareholding challenges. In this research however, the focus is on construction disputes and their resolution.

3 Resolution of Construction Disputes Relating to Major Projects

3.1 International Construction Disputes

By the very nature of infrastructure projects as outlined earlier, and the peculiarities of the construction industry whether domestic or international, disputes are bound to occur (Hibberd and Newman, 1999; Gaitskell, 2006). Dispute may arise between clients (who are often States) and designers of the project, in respect of unsatisfactory or poor quality designs; between Clients and main contractors for instance in relation to excess works, unforeseen works or subsequent works (Matijevic, 2008). Issues of quantity and quality, extension of time and claim payment are often associated with such projects. From the ICSID Caseload Statistics for 2011(ICSID, 2011) geographic distribution of new ICSID Cases registered in 2010 by State Party involved are as follows: Eastern Europe and Central Asia, 27%; Sub-Saharan Africa, 27%; South America, 31%; South and East Asia and the Pacific, 8%; and Central America and the Caribbean, 7%. The sectors affected by these disputes included power generation, transport and construction. These statistics give an indication that many disputes relating to projects involving developing countries are being submitted to international arbitration.

Currently, the perception is that developing countries are spending huge sums of money in dispute resolution across the arbitration centres of this world. Disputes can have very devastating consequences for the contractors and more importantly the clients, whether it is a State or both a State and an investor in a joint venture. Delays can occasion huge cost overruns and retard the progress of other economic activities. It has been found through analyses of large engineering projects that in the areas of arms, petrochemical, energy and power projects cost overruns range between 30% to 700% (Miller and Lessard, 2000). Whilst these overruns may be attributed to several factors, inflation, and poorly defined contract terms are also cited as causes of such overruns (Merrow et al., 1988 in Miller and Lessard, 2000). The impact may reach far beyond the parties.
involved. Resource constraint has always been an issue with the developing world. For developing countries, an effective system of resolving such disputes is indispensable. What then are the experiences of developing countries regarding how dispute from major infrastructure projects are resolved?

3.2 Developing Countries and Construction Dispute Resolution

Disputes arising from transactions within a State fall within the jurisdiction of the State and are often tried by national courts. However, with the upsurge of cross-border and international commercial activities, national courts in developing countries have lost their appeal as the preferred choice for settling disputes arising from such transactions (Leahy and Pierce, 1985-86). Domestic litigation has been costly and time-consuming (McLaughlin, 1979). Undeveloped laws, political risk, perceived bias against foreign parties, over-crowded national courts, lack of familiarity of foreign parties to local procedure, lack of confidentiality, forum-shopping, conflict of law complications and issues of enforcement of foreign judgments (Leahy and Pierce, 1985-86; Perloff, 1992; McLaughlin, 1979) are but a few of the reasons which have been advanced in support of a system which can render fair, effective, efficient and final decisions in cross-border transactions (Leahy and Pierce, 1985-86).

International Commercial Arbitration has emerged as a preferred mechanism for dispute resolution in international commercial transactions globally (Ehrenhaft, 1977; McLaughlin, 1979; Al-Baharna, 1994; Leahy and Pierce, 1985-86; Perloff, 1992; Blackaby et al., 2009; Fowler et al., 1980; Cotran et al., 1996). The word “commercial” is often defined to include construction transactions. Features of ICA such as jurisdictional neutrality, its consensual nature, flexibility in procedure and process generally, confidentiality (Ehrenhaft, 1977), reduced cost, speed and party autonomy have made it suitable for the emerging global system of commerce which have parties from different countries, cultures and legal systems (McLaughlin, 1979; Perloff, 1992).

The development of ICA in developing countries can be examined from two perspectives; legal developments and institutional developments. In respect of the former, two international instruments have been crucial; the Convention on the Recognition and Enforcement of Foreign Arbitral Awards, 1958 (the New York Convention) and the United Nations Commission on International Trade Law (UNCITRAL) Model Law on ICA. The main objective of the New York Convention has been to commit States who signed on to it to give effect to agreements to arbitrate and to enforce within their territories foreign arbitral awards which satisfy certain agreed criteria for validity and legitimacy. The possibility of enforcement of a binding arbitral award not just at the seat of the arbitration but also internationally has endeared ICA to the international business community. Currently, 145 countries are parties to this treaty. Even in Latin America, a region noted for its support of the Calvo doctrine, it is reported that all countries within the region have signed on to the Convention as of 2003 (Bernal, 2009). The UNCITRAL Model Law on International Commercial Arbitration, 1985 (as amended in 2006) on its part, aims at eliminating the inadequacies of national laws and disparities between them. To this end it sets out special procedural regime for international commercial arbitration. Currently, about sixty countries, many of them developing nations, have adopted local arbitration legislations based on the UNCITRAL model.

1 See the notes accompanying the United Nations Commission on International Trade Law (UNCITRAL) Model Law on International Commercial Arbitration, 1985 (as amended in 2006). It suggests that the word “commercial” be interpreted broadly to include all matters arising from relationships of commercial nature. The list provided as part of the note include construction of works, consulting, engineering, and investment.

2 See Article III of the New York Convention, 1958.


4 This doctrine essentially insists on “the non-intervention and absolute equality of foreigners with nationals” in dealings by States with foreign nationals.

5 See notes accompanying the UNCITRAL Model Law, 1985 (as amended in 2006).
Beyond these global efforts, there have been regional efforts to develop the law on international arbitration. For example, the Organization for the Harmonization of Business Law in Africa (OHADA), an international organization set up by treaty in 1993, with sixteen mainly West and Central African francophone member States, aims at harmonizing business laws among member States. As part of its activities it has adopted a uniform Arbitration Act, set up a court, and developed its own arbitration procedures.

International arbitral institutions in Europe have served as venues for ICA between many developing countries and foreign entities. The role of national courts in international commercial arbitration has been ancillary. Arbitral institutions such as the International Court of Arbitration of the International Chamber of Commerce, the London Court of International Arbitration, and the International Centre for Settlement of Investment Disputes (ICSID) in particular, have arbitrated hundreds of cases between private entities, States and private entities and between States for several decades. In relatively recent times, other arbitral institutions have been set up in Hong Kong, Singapore, China, Dubai, Cairo and Nigeria to serve Asia and Africa. The African-Asian Legal Consultative Committee (AALCC) has been very instrumental in the effort to ‘regionalise’ arbitration centres (Asouzu, 2001; Asouzu, 2006; Sempasa, 1992). AALCC’s efforts led to the setting up of the regional centres in Cairo and Nigeria in Africa and in Kuala Lumpur and Tehran in Asia. The rationale is to bring ICA closer to countries in Asia and Africa.

Generally, very little exists by way of literature on ICA in developing countries as compared to the developed world. The little literature relating to developing countries identified so far have revealed that ICA remains the dominant resolution mechanism in all commercial transactions (Cotran et al., 1996; Asouzu, 2001; Blackaby et al., 2009; Tiewul and Tsegah, 1975; Sempasa, 1992). Virtually all standard form contracts governing construction transactions in developing countries, notably those published by the International Federation of Consulting Engineers (FIDIC) contain provisions on ICA (Tackaberry and Marriott, 2003). It is stated that the dominance of the use of ICA has created —ade facto— universality of it as the normal method of dispute settlement and parties sometimes choose it without much thought as to its suitability to the circumstance”. (Tackaberry and Marriott, 2003). For Latin America however, ICA has not been the popular choice. Many Latin American countries until recently have insisted on subjecting international transactions taking place within their jurisdictions to national judiciaries. This practice, deeply ingrained in their constitutional practices, take its roots from the Calvo doctrine (Bernal, 2009). However, the trend is gradually shifting to international commercial arbitration (Bernal, 2009).

What literature exist thus deals generally with ICA without any specific treatment of how it operates in the context of international construction disputes relating to major projects. The focus of the literature has been on the challenges posed by ICA to developing countries (Yelpaala, 2006; Asante, 1993; Asouzu, 2001; Sempasa, 1992). These challenges can be divided into the generic and the peculiar. Key issues under the generic category are cost and delays (Asouzu, 2001). Regarding cost, disputes arising from major infrastructure projects are often resolved at great cost to developing countries whose citizens are made to bear such expenditure eventually. A good example of this is the case relating to the construction of the Katse Dam in Lesotho. The facts of the case are aptly set out in the opinion of the English Supreme Court (then, the House of Lords) in Lesotho Highlands Development Authority (Respondents) v. Impregilo SpA and Others.1 In 1991 (after a sixty year preparatory period), the Lesotho Highlands Development Authority engaged a consortium of seven companies from the United Kingdom, South Africa, Italy, Germany and France to construct the Katse Dam in Lesotho. The contract was made on 15 February 1991 under standard FIDIC Conditions of Contract (4th edition) with terms and additions. The contract was governed by the law of Lesotho. After the conclusion of the project in 1998, the Contractors made a claim for reimbursement of increased costs and for upwards adjustments to prices and rates. The dispute was eventually referred to Arbitration in London under International Chamber of Commerce (ICC) rules as provided for by the contract after the Engineer’s decisions on the claims were rejected. The decision of the arbitrators was also appealed to the Supreme Court.

1 [2005] UKHL 43
The focus of this reference is not on the substance of the claims. What is worrying however, is the fact that Lesotho, a small landlocked developing country with human development index ranking in 2007/2008 of 138 out of 177\(^1\) had to spend resources on registration fees, administrative expenses, counsel's fees, arbitrator's fees and expenses, witnesses expenses, court, travelling, accommodation and feeding expenses for local representatives and lawyers to pursue the above-described dispute. For a developed economy, the impact of the cost may be negligible. The situation with a developing economy is however different. It may be argued that such cost may be recovered eventually if the State wins the “contest”. This however is not always the case as parties often do not recover their entire cost.

UNCTAD, in a related study on the issue of cost in investor-State arbitrations (UNCTAD, 2010) has found that the cost of arbitration generally has increased drastically. Whilst legal fees constitute about 60% of the expenses, the arbitrators' fees, the administration fees of arbitral centres, expenses of witnesses and experts also constitute substantial cost. Referring to previous UNCTAD reports (UNCTAD 2005b, 2006a, 2008a and 2009) the report cited four cases as examples. In *Plama Consortium v. Bulgaria*\(^2\), the legal cost for the claimant amounted to US$4.6 million whilst that of the respondent amounted to US$ 13.2 million. In the second example cited, the claimant legal cost in *Pey Casado v. Chile*\(^3\) relating to the jurisdictional and merit phases of the arbitration amounted to US$ 11 million, whilst that of the respondent amounted to US$ 4.3 million. In *ADC Affiliate Limited and ADC & ADMC Management Limited v. The Republic of Hungary*\(^4\) the respondent country had to pay US$7.6 million in legal cost. Finally, in *Waguih Elie George Siag and Clorinda Vecchi v. The Arab Republic of Egypt*\(^5\), the respondent was obliged to pay an amount of $6 million as legal costs, expert and other expenses.

Though relating to investment, these examples are not far-fetched. Many international investment agreements define investment to include, “claims to money and claims under a contract having a financial value”\(^(UNCTAD, 2011)\). Indeed, international construction transactions and disputes share some common features with Foreign Direct Investment (FDI) and investment disputes. Firstly, the clients involved in international construction transactions in developing countries are often Sovereign States. The decisions which may be challenged by an international construction firm are decisions taken by the State or its agencies. Often, whilst the State will prefer that its courts resolve disputes arising, the Contractor on the other hand will be wary to have a matter involving the State tried before its own courts. The amounts involved in these transactions are huge. FDIs and investment disputes share these attributes. The issue of the rising cost of ICA is a common attribute. The confidentiality of these arbitral processes sometimes make it difficult to obtain figures on cost. However, for both developed and developing countries and indeed even investors (UNCTAD, 2008), cost of arbitration has been an issue.

Regarding delays, ICA was reputed for its swiftness (Ehrenhaft, 1977). However, this feature of ICA has been questioned as cases take more time to resolve (UNCTAD, 2010). Indeed, one author has described ICA as a highly complex commercial litigation (Oh, 1981). Though this description is dated, it remains true. Nearly all the procedural complexities associated with a court proceeding can be found in most arbitral hearings involving huge projects. The consequences of these are delays. The impact of delays on project delivery and increased project cost is hackneyed, and particularly severe on developing countries.

The second category of concerns with ICA relate to those peculiar to developing countries. Asouzu (2001) draws attention to some factors in the current international regime for dispute resolution which are causing serious disaffections in the developing world. He mentions that there is a perceived bias against African States and by extension, other countries in the developing world in the international dispute resolution process, enforced by the relationship between the World Bank, a major lending institution for most of them, and the International Centre for the Settlement of


\(^2\) ICSID Case Number. ARB/03/24.

\(^3\) ICSID Case Number. ARB/98/2

\(^4\) ICSID Case Number ARB/03/16

\(^5\) ICSID Case No. ARB/05/15
Investment Disputes (ICSID). This perception, he asserts, is further fuelled by the following factors: absence of African arbitrators on arbitration panels in the West; the fact that in nearly all cases involving African States or companies, they often are the respondents and hardly the appellants; the choice of American and European venues or arbitration centres over equally well established ones in Africa, for example those in Cairo and Lagos; and the long-standing arguments of lack of judicial infrastructure, qualified personnel and fair hearing which are still maintained without any basis. He concludes on the note that whiles staying the current course, African arbitration centres and governments need to publicize the current wave of change in the industry in Africa (English, 2002).

Asouzu’s recommendations focused on regionalizing arbitral centres and awareness creation, but were relatively passive and bland in relation to the development of alternatives such as mediation, dispute boards and establishment of dispute early resolution systems, which may be crucial to the international construction industry especially at the initial stages of a conflict. On the absence of African arbitrators on arbitration panels, articles 12 to 16 of the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (ICSID Convention), 1966, for example, provide that member States are allowed to designate four qualified persons to be part of its panel of arbitrators and panel of conciliators respectively. Beyond the ICSID situation, most Arbitration Rules permit parties to nominate an arbitrator, whether the requirement is for one or three arbitrators. Again it may be argued that often, developing countries end up selecting arbitrators from the developed world, and thus can not probably turn around and raise concerns about their own choices (Asouzu, 2006). The reality on the ground however, as conveyed by the ICSID case load statistics (ICSID, 2011), is that Africa and many developing countries still have a lean presence on the ICSID arbitration and conciliation panels.

Characteristically, the existing literature focus generally on ICA with no specific attention paid to the construction industry per se. This is so whether at the national (Cotran et al., 1996) or regional level (Asouzu, 2001), with the exception of a few from the Asian region where some efforts are being made to examine international construction disputes distinctively (Cheung and Suen, 2002; Chau, 2007; Chan and Chan, 2002; Chan, 2005a; Chan and Suen, 2005; Chan, 2006; Chan, 2005b). Two conclusions have emerged from the literature so far. First, the literature existing on resolution of infrastructure disputes in the developing world are generic in nature and deal with international commercial arbitration generally. There is dearth of literature dealing specifically with construction disputes arising from major infrastructure projects and the processes involved in their resolution. Secondly, there is a huge knowledge gap in relation to what transpires immediately a dispute arises and when formal ICA process commences. Whilst one may look up to the dispute clauses in the various standard form Construction contracts for an answer, those answers are merely theoretical as what pertains in practice may differ drastically. No empirical evidence has been found on the issue.

As the story of Adjudication in England has shown, good early dispute mechanism(s) of interim or permanent nature, prior to arbitration may be useful for the construction industry in developing countries. Incipient disputes may be nipped in the bud should there be a clearly existing system which parties can resort to prior to International arbitration. Further, the materials so far reviewed do not consider in detail the viability and the role that alternative dispute resolution mechanisms can play in resolving such disputes. These emerging conclusions have implications for the design of the research as next discussed.

4 Research Design

What type of research approach will be suitable for the kind of enquiry envisaged? It is submitted that a qualitative / an interpretivist approach is best suited for this kind of research for several reasons. Firstly, the subject-matter of the research- dispute resolution- is a social phenomenon which occurs in a real world setting. Secondly, the views of participants in major infrastructure projects are crucial to our understanding of the complexities associated with the extant dispute resolution mechanisms. Thirdly, apart from being heavily context-based, the phenomenon under study has not been explored. Further, the appropriate instruments required in studying complex
human interactions such as efforts parties make or steps they take pending ICA proceedings must be those which offer some flexibility in terms of administration on the field. This accords with the social constructivists or the interpretivist view of research (Berger and Luckmann, 1967; Lincoln and Guba, 2000). Most of the major treatises on research design, such as the *Handbook of Qualitative Research* (Denzin and Lincoln, 2005), point towards a qualitative research approach being most appropriate for research with the types of features outlined above.

Qualitative research offers various approaches for data collection and analysis. Ethnography, Phenomenology, Grounded theory (Corbin et al., 2008), the biographical method, Narrative Research(Creswell, 2009) and Case Study (Yin, 2009; Stake in Denzin&Lincoln,1998; Flick,2006) are all qualitative strategies of enquiry. It has been stated that where there is a need for an in-depth investigation into a contemporary phenomenon in its natural context, Case study may be the appropriate strategy of enquiry (Yin, 2009). Yin adds further that case study research is useful where the aim of the research, among other things, is to explain, explore, or describe an intervention in its natural setting. He argues that in making a choice between case study and other social science strategies, consideration should be given to the research questions to be investigated and the type of study envisaged. If the enquiry is about “how” and “why” some social phenomenon works, and extensive and in-depth study envisaged, then case study will be a good choice of strategy.

An in-depth study of the extant dispute resolution system for disputes arising from major projects, the gaps in the system and possible remedial strategies for all developing countries is not feasible in this research. However, an in-depth study of the situation in a typical developing country sharing common attributes with the rest will make vital contribution to knowledge, which *mutatis mutandi* will be informative and useful to the others (Flyvbjerg, 2006; Yin, 2009). This type of study raises a number of challenges; sample or case(s) selection, the theoretical implications of a context-based study, issues of verification and generalizability. The subject of the choice of a case(s) and the complexities that go with such a venture have been discussed by authors (Eckstein, 1975; Achen & Snidal, 1989; Flyvbjerg, 2006; Gerring, 2007; Collier and Mahoney, 1996; Stake, 1995; Seawright and Gerring, 2008; Yin, 2009). It is expected that this research will examine these challenges and their impact on the plausibility of the research design envisaged.

### 5 Conclusion

The importance of infrastructure development to poverty reduction and economic growth in developing countries cannot be over-emphasised. Substantial resources are currently being invested in projects in developing countries by both States and the private sector. Crucial to the provision of infrastructure is the international construction industry. With its peculiar features of multiple parties, varied works, quality and quantity of work and issues relating to payment among others, disputes are bound to occur. The literature related to developing countries point to international commercial arbitration generally as the main dispute resolution mechanism. Gaps have been identified in respect of; (1) the absence of specific study relating to resolution of construction disputes arising from major projects; and (2) the absence of empirical evidence on what transpires between the time disputes arise and when the processes of international commercial arbitration commence. The phenomenon to be studied is context-based and to fully appreciate it, the views of participants are required. Due to lack of previous exploration of the field, an in-depth study will be more useful. This makes qualitative study the preferred approach and case study, the preferred strategy of enquiry. However, other research approaches are likely to be considered for their suitability as new evidence emerges. It is expected that the outcome of the study will be useful not only to the case studied but also other developing countries.

### 6 References


UNCTAD (2011) Scope and Definition of Investment


A Review of Mediation in the Irish Construction Industry: Critical Success Factors in Competencies and Processes

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Abstract:
The construction industry notoriously excels at dispute creation – both in Ireland and world wide. This paper exams mediation in the Irish construction industry based around critical success factors in the competencies and processes required by mediators operating in the construction industry. Through conducting the relevant analysis, it was possible to extract and outline the resulting critical success factors in process and competencies of mediators in the Irish construction industry. This was achieved through a review of the literature, followed by detailed interviews from industry experts to elicit and highlight the core competencies required. To aid in the study, qualitative analysis using mind mapping software was adopted, thus assisting the identification of the key factors. Following analysis, facilitative mediation was identified as best suited for the industry in question; recommendations and experience were key for mediator selection and five and six factors were identified for mediator skills and mediation critical success factors respectively. The results returned are similar to those determined by authors in other countries and provide a good reference point for the development the industry. By following the findings of this report mediators and parties in dispute can improve processes and be more successful in outcomes. In this study the author shows that mediation is an effective and appropriate method of resolving disputes within the Irish construction industry.

Keywords: alternative dispute resolution, core competencies, critical success factors, Irish construction industry, mediation

1 Introduction

While mediation is not a new form of dispute resolution, having been in existence in ancient Greece (Folberg, 1983), it has more recently been adapted as an effective method of resolving construction disputes in different countries around the world (Bradbeer, 2006). It is gathering momentum as a successful process in the Irish construction industry, gaining in popularity when the Construction Industry Federation (CIF) introduced it into their construction sub-contracts (Eccles, 2008; Stowe, 2008). They named mediation as the mandatory first step, in the dispute resolution process, to those working with this type of contract. Mediation is widely acknowledged as a beneficial form of dispute resolution (Cheung, 1999; Goodkind, 1988), thus must be acknowledged as so and embraced by all concerned.

Given that mediation in the Irish Construction Industry is developing quickly (Pentony, 2010) it is necessary to investigate what makes for a successful mediator or a successful mediation process, particularly in the field of Irish construction mediation. The Mediators Institute of Ireland has published a list of competencies which they require from their associates, depending on the level of membership they wish to secure. However, while this list is complex, it is directed at all mediators, regardless of which industry they choose to work. It is important to determine which of these
competencies is important for those working as mediators within the Irish construction industry and to identify core factors attributable to mediators operating in this field. Bucklow (2007) carried out research into mediator competencies, however, again, this research is focused on mediators in general, and is carried out in the United Kingdom, so while it provides an informative overview and can be used to draw comparisons, it is not specific to the details of mediators working in the Irish environment, and also, working in the realm of the construction industry. Other research on the subject, (Suter, 2009; Sweet and Maxwell, 2009; Andre-Dumont; 2009; Sheils, 2008; Harmon, 2003) all discuss various aspects of mediation such as which form is best, it’s effectiveness in the construction industry and the potential impact of the European Directive on mediation on construction disputes. There is no research undertaken or published on critical success factors in competencies specific to the Irish Construction Industry, hence the emergence of this research topic. Based on the results of this research, construction mediators operating in the Irish construction industry can consult the findings and where applicable, adopt the core competencies, as discussed, to further aid their mediation skills, resulting in providing a better service to all concerned.

2 The Mediation Process, the Mediator and Critical Success Factors for Mediation

2.1 Mediation Process

When examining the mediation process it is essential to understand that there is no specific structure identified that must be followed when conducting mediation. Each mediator will decide individually how the mediation process will proceed, based on the characteristics of the case in question. Stowe, (2008) indicates one of the key approaches adopted in the mediation process in that there is no standard form for a mediator should take “as scope should always be left for the parties and their mediator to tailor a format to suit the circumstances”. Stowe (2008) consolidates the mediation process identifying the following common procedure that could be applied to most mediation processes, regardless of form, dispute or mediator involved.

i. Before the formal mediation case proceeds, it is often beneficial for the parties involved to conduct preliminary private meetings between the mediator and the parties involved. The purpose of these preliminary meetings is to portray the details of the case to all the parties, including the mediator. It is common practice for this process to be undertaken with the parties separately to avoid conflict and to remove the possibility of dispute among the parties with regards the details being discussed.

ii. On the day of the mediation, the mediator would greet the parties and ensure they are comfortable and settled.

iii. It is suggested that an initial joint meeting should take place where the mediator will outline the proceedings for the day, to ensure that the parties to the mediation are in acceptance and understand the format proposed, including the rules and regulations imposed on the mediation proceedings, as enforced by the mediator. Once all of the parties to the mediation are in acceptance, a representative for each of the parties in dispute would present their case, outlining the key aspects of the dispute.

iv. This next stage is generally where the mediation process varies. There can be private confidential meetings between the mediator and each party separately to:

- Examine the important issues and needs of each party. In this context the mediator will likely encourage openness about weaknesses as well as strengths”
- Discuss different possibilities for solution and settlement.
These private meetings can be mixed and interchanged with meetings where the parties congregate and discuss the case in unison, including:

- A discussion of the various parties understanding of the facts in the dispute, particularly where arguments differ or where their experts’ opinions do not correlate.
- Provide more information or an explanation for a particular point
- Re-evaluate the agenda
- Discuss options for solutions
- Negotiate directly without proceedings getting heated.

This framework discussed by Stowe, (2008) reflects the broad structure advocated in respect of mediation”. But it is also noted that it should be borne in mind that there is no one method of running the process. Every mediator is likely to have his own idea and a differing approach.”

2.2 Skills of a mediator

The skills required of different mediators in various industries are often discussed in general terms and are mostly immeasurable. Brown and Mariott, (1993) documents and defines the skills of a mediator in more quantifiable terms by splitting the topic into three parts

2.2.1 The mediator’s roles and functions

This encompasses discusses the functions that the mediator needs to undertake. However most of the roles subsequently identified by the authors are again ambiguous in nature. Because of this, it is necessary to continue to define this topic by carrying out specific research into exactly what are the important skills for a mediator working in the construction industry to possess.

2.2.2 The mediator's attributes

These are the inherent traits and qualities which the mediator possesses, rather than the skills which are specifically employed in the mediation process. Among these key qualities list are; understanding, judgement, intuition, creativity, trustworthiness, authority, empathy, constructiveness, flexibility and independence.

2.2.3 The mediator’s skills

These skills are the more general personal skills required to successfully run a mediation process. Treanor, (2009) states that these attributes are generally recognised as being skills which improve communication, negotiation and problem solving and should incorporate; Listening to all arguments, Interpreting what the parties are trying to say, Clearly identifying the issues to be resolved, Reframing positions so they are better understood, Observing body language, Questioning to reveal further information, Acknowledging feelings, Summarising details, Managing the session and Lateral thinking”

2.3 Critical Success Factors for Mediation

There is little published information available on what makes a mediation process successful. Richbell (2009) discusses “How to win at mediation” and this is the best starting point for determining critical success factors for a successful mediation. The core points noted in the research advises that the parties should;

2.3.1 Prepare Well

Due to the nature of the mediation process, it is essential that all parties prepare well in advance of the meeting to ensure that all of the information required is fully understood by the parties and
available for the mediator, should they be requested. Jackson, (2009) further this point by arguing that all parties need to enter the mediation process with confidence on the facts pertaining to the case along with having a thorough understanding of the overall mediation process and the policies within.

2.3.2 Mediator Selection

Richbell, (2009) indicates that the selection of an appropriate mediator is fundamental to the overall mediation process and the benefit of all parties concerned. The parties selecting the mediator must ensure that the individual selected is competent, knowledgeable and suitable for the successful execution of the mediation process, whether selected by the parties in dispute, the parties’ advisors or by an independent nominating body, acting on behalf of the disputing parties.

2.3.3 Get the best out of the opening joint session

The opening joint session is fundamental to the overall mediation process and must be maximised by all parties to the dispute. Through using the initial joint opening session, each of the parties concerned can convey their case to their disputing party coupled with acknowledging the case provided by the apposing side, thus providing a holistic overview of the facts of the case to all of the parties involved. Treanor, (2009) furthers this point by indicating that the opening session can be used to dissipate tension among the parties and provide a basis in which the process can begin to move forward.

2.3.4 Co-operate

Mediation is a pointless exercise if parties are unwilling to participate and cooperate during the process. Treanor, (2009) outlines that if all parties are genuinely committed to the process and are determined to come to an amicable resolution to the issues through mediation, resulting in a higher probability of success through the mediation process.

Through conducting further research on the topic, it is proposed that further insight be provided on the subject of the critical success factors attributable to construction mediators in the field of mediation in Ireland.

3 Methodology

In order to collect relevant data, successfully achieve the research aims and satisfy the basis of the research, a number of steps were conducted to illicit the resulting information. To begin with, a detailed review of the literature was undertaken to identify and catalogue the various factors, as perceived by a variety of authors from the field. To aid in the validation of the factors identified in the literature along with exhausting the list of all possible factors worthy of consideration, four detailed industry based interviews were undertaken. As a result, a comprehensive list of factors was established and catalogued, based on the perceptions of the four interviewees questioned and the literature reviewed. The interviews were of a semi-structured nature with key professionals working in a variety of disciplines within the construction industry and having an average of fifteen years mediation experience.

Through the use of mind mapping software called Banxia’s Decision Explorer, it was possible to graphically illustrate each of the interviews in isolation and also to combine the overall results and graphically portray the findings, based on the perceptions of those interviewed.

As a result, it was possible to deduct the core competencies and processes of mediators operating in the Irish construction market, as perceived by the interviewees consulted. To aid in the validation of the results highlighted, further industry professionals from the mediation profession were consulted and their opinions noted with regards the core findings achieved. In addition, the previous participants to the research were also revisited to confirm the validity and overall importance of the key findings deducted from the interviews.
Based on these key findings, it is feasible to derive conclusions and implication for the industry based on the perceptions of the various mediators in the field of construction mediation, particularly in Ireland.

4 Qualitative Research

The basis of the research is conducted around four semi-structured interviews from individuals directly linked to the construction industry and the mediation profession in Ireland. Nachmias, et al., (2007) identifies that the interview process is a significant technique used in the collection of both factual information as well as opinions of individuals.

While the interview process is not always a suitable method for gathering data in research reports it was decided that it was suitable in this case as the circumstances in this report satisfy the findings as identified by Naoum (2006).

The type of interview structure adopted in this case was semi-structured, due to the frequency of use in the field, the high return rate of usable data, the positive experience created between the interviewee and the interviewer along with the overall ease at which the interview can be conducted and altered based on the responses provided by the interviewee (Hove and Anda, 2005). In addition, the semi-structured interview process is more formal, aiding the interviewer to concentrate on the core topics requiring discussion but also allows the interview to deviate, where applicable (Naoum, 2006). Merton and Kendal (1946) identify four key factors for semi-structured interviews:

- It takes place with respondents known to have been involved in a particular experience.
- It refers to situations that have been analysed prior to the interview
- It precedes on the basis of an interview guide specifying topics related to the research hypotheses.
- It is focused on the respondents’ experiences regarding the situations under study”.

4.1 Interviews

Each of the interviews were conducted in isolation, analysed and mapped using Banxia’s™ Decision Explorer™ software to graphically convey the core concepts discussed and highlighted by the interviewees questioned. The following images graphically illustrate the results of the four interviews, depicting the factors outlined during the discussions. To aid the overall transparency and aid the coherency of the maps, each of the key research areas are segregated and the relevant data combined, relating to that particular research area, from the different interviews. Each individual cluster is then subsequently discussed, and the resulting data viewed and examined in further detail.
4.1.1 *Skills of a Mediator*

The thirteen factors in this cluster identify the key skills that the respondents felt were necessary for a mediator, working in the construction industry in Ireland, to possess. They range between behavioural, technical and intellectual skills and provided; such as in the case of Mediators’ Institute of Ireland member competencies, direction on where to discover a more definitive list of capabilities. This recommendation was explored further when selecting factors for further discussion.

4.1.2 *Critical factors for a Successful Mediation Process*

This cluster graphically displays the seventeen critical factors for a successful mediation, as identified through the interview process. These factors can be split and attributed to different parties or phases such as the overall process, actions of the mediator or actions of the parties in dispute.
5  Findings and Discussion

Based on the interviews and resulting analysis, the various factors illustrated can be consolidated to summarise the critical success factors of mediators operating in the Irish construction industry, as follows;

5.1  Ensure the parties see the process as a means to resolving the dispute and repairing their relationship

The first factor identified as being critical to the success of a mediation process is that the mediator needs to ensure that the parties see the process as a means to resolving the dispute and repairing their relationship. The parties need to be fully committed to the process and willing to actively participate in the mediation process with a view to resolving the dispute.

If the parties do not see that mediation is an effective way to resolve their dispute, or if they are not dedicated to resolving the dispute at all, then there is little chance that the mediation process will be successful. They should be an intention between the parties to settle the issues at hand; they should enter into the process with an open mind and show consideration for the other parties’ feelings and emotions (Treanor, 2009).

In practice this can be done once the parties agree to mediate. The pre mediation discussions are vitally important to the outcome of the process as they allow the mediator to gauge the parties’ commitment to the process. It is at this stage that the parties establish the boundaries for the mediation, and it also at this stage that the mediator can have a honest discussion with each party to advise them of the level of commitment and participation required of them if they are to continue with the mediation process.

5.2  Create a supportive atmosphere to facilitate sharing, trust and negotiation among the parties

It is the responsibility of the mediator to ensure that the parties are comfortable throughout the mediation. The mediator needs to ensure that negotiations do not deteriorate to the point where the parties trade statements or opinions which are not constructive towards the mediation procedure. It is important that the parties are able to express themselves but also that they allow the opposing body the same courtesy. They need to actively listen to each party and not interrupt the speaker (Jackson, 2009).

In practice, problems often arise where the dispute is fresh and the emotions raw, the parties may not be ready to hear each other or even interested in coming together to work towards resolution. A skilled mediator will be able to take this scenario and ease the tension, perhaps by rephrasing the issues or by having an open discussion, dictating a party's position. Treanor, (2009) stated, “It is all too easy for somebody to get caught up in their experience and feelings when a breakdown in a relationship occurs. When it comes to mediation they are free to express these feelings and experiences, which can be cathartic in and of itself, but they also need to determine and focus on what it is that they want to get out of the process. If they can do this, they will get more out of the process and be able to move past the dispute.”

5.3  Ensure clarity in both the stages of the process and the writing of the agreement.

The mediation process needs to be clear and transparent throughout, this includes in writing up the agreement. The mediator needs to go through, in detail, the outline structure of what will happen on the day of the mediation. This can be discussed and agreed with the parties prior to the mediation. In terms of drafting the agreement, once the parties have developed a strategy for resolution, the mediator needs to ensure that the decision they have come to is sufficiently reality tested, to ensure that it is a viable, practical resolution. In addition, the mediator needs to illustrate what is to happen, how it is to happen and any relevant deadlines, to ensure that the agreement among the parties is enforced. They also need to consider what will happen if the parties do not follow through on the
agreement that they have made during the mediation session (Treanor, 2009). If everybody involved can implement these steps, the mediation process can be closed out with a successful resolution to the dispute achieved.

5.4 **The process should remain fair, logical and command respect throughout in order to allow the parties the best attempt at resolving their dispute.**

In order for a mediation to be successful the process needs to be fair, and more importantly appear to be fair, to all of those involved. If a party feels that the mediator or the mediation is biased in favour of the other side they may refuse to participate fully in the negotiations and ultimately dispute the overall resolution if not in their favour.

The mediation itself should follow a logical procedure, and the parties should be clear as to what is involved and what is expected of them. This will aid the parties involved in being more comfortable and prepared for what is to come. The mediator also needs to ensure that the parties continue to respect the process throughout, making certain that they don’t lose faith in the desired outcome. In practice this will require the mediator to treat all parties equally; to show empathy but not agreement; to be clear and concise in instructions and to address coherently, all reservations and uncertainties that arise throughout the course of the mediation.

5.5 **Parties have a clear understanding of their requirements and participating in an effective feedback process.**

The parties need to be clear on what they want to walk away from the process with, at an absolute minimum. If they have established this in advance then they are free to participate in negotiations with the reassurance of knowing what their minimum requirements from the mediation process. This can be shared with the mediator, confidentially, and this will allow the mediator to determine how far apart the parties are from coming to an amicable resolution.

In practice what the parties want from the process can be very different and they can go a long way towards resolution by making conciliatory gestures on issues that are not important to them, as a party, but may be a fundamental condition of the other side. It is suggested that the mediator ask the parties to give feedback anonymously, based on their experience and opinion of the process and the mediator. This will help the mediator to improve their procedure, practice and ability to interact with the parties (Treanor, 2009).

5.6 **Acknowledge efforts towards achieving resolution and assist parties to voice apologies and repentance for transgressions.**

When the parties make a gesture to help the dispute move towards resolution, the mediator should draw attention to this gesture and ensure that the mediator and the other party, acknowledge the effort being made. It may be that the mediator, being aware of the key requirements of both sides and can match up major and minor needs, and start the parties on the road to resolution and negotiations that will help the resolve the larger more complicated issues (Richbell, 2009).

The parties should also feel free to express apologies and regret if they feel it appropriate. Sometimes, when the parties come together to express their experience of the dispute it can completely reframe the dispute in the minds of the other party. Apologies and admissions of fault can help in the preservation of relationships which, in practice, can be one of the key reasons why the parties participate in mediation in the first instance.

6 **Conclusion and Further Research**

The research identified that recommendations and proven experience are what drives people in their selection of mediators. This is beneficial for the registration bodies who recommend mediators from lists they have established, based on several predetermined facets. It illustrates that they utilise the appropriate methods in assisting their members to resolve disputes and promoting the use of
mediation as an effective method of dispute resolution within the construction industry in Ireland. Based on the overall research, the core competencies and processes required from mediators working in the Irish construction industry may be summarised as follows;

- Ensure the parties see the process as a means to resolving the dispute and repairing their relationship
- Create a supportive atmosphere to facilitate sharing, trust and negotiation among the parties
- Ensure clarity in both the stages of the process and the writing of the agreement.
- The process should remain fair, logical and command respect throughout in order to allow the parties the best attempt at resolving their dispute.
- Parties have a clear understanding of their requirements and participating in an effective feedback process.
- Acknowledge efforts towards achieving resolution and assist parties to voice apologies and repentance for transgressions.

Throughout the course of the research it was determined that the key skills of a mediator in the Irish Construction Industry were similar to those of mediators working in other industries. The key skills for a mediator are easily transferable and a good mediator will be able to work in any industry that is required of them. The data has showed what people working with the Irish Construction Industry feel are the key factors for success in mediation. If parties in dispute, which have agreed to mediate, implement these conclusions then they can feel more confident in the process and feel even more hopeful of achieving resolution.

It is recommended, based on the research and the opinions voiced by the interviewees, all of which were experienced mediation practitioners, all suggested that registration bodies in both mediation and construction in Ireland to work together to broaden and promote the rise of mediation as a successful and effective method of resolving disputes in the industry. It is suggested that additional information be provided to the industry about what would be involved or expected of the industry in such an environment along with why mediation should be chosen.

Given the current economic downturn it is inevitable that the number of disputes in the Irish construction industry will increase. Mediation may provide an alternative route towards settling many of these disputes in a proactive, timely and cost effective manner, while still aiding in maintaining a working relationship among the parties in dispute.

Furthermore, based on the key findings of this research, it is worth noting that additional research is suggested in the field of mediation in the Irish construction industry. It is suggested that a review of the overall impact of mediation as an alternative dispute resolution technique adopted in the construction industry in Ireland, with the possibility of benefiting the development of the dispute resolution process and the mediation procedure as adopted in the Irish construction industry. Such research would result in further benefits for the Irish construction industry through illustrating the importance and benefit if such a procedure in the overall dispute resolution process.

7 References


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Building Regulation And Control
Local Authority Liability in New Zealand for Defective Homes

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Abstract:
The liability of local authorities in New Zealand for the issue of building consents and inspection, in respect of domestic homes where the dwellinghouse or home unit is later proved to be faulty, is assessed. The law in this respect differs from that in the U.K. In Invercargill City Council v Hamlin (1996) the Privy Council accepted that the decision of the House of Lords in Murphy v Brentwood District Council (1991) declining to impose liability for economic loss did not apply in NZ. But the NZ courts have not extended the duty of care on councils to apply to buildings used for commercial purposes. Recently the Supreme Court of NZ in North Shore City Council v Body Corporate 188529 (Sunset Terraces & Byron Avenue), has confirmed that local authorities owe a duty of care to the owners of multi-unit dwellings in the issue of building permits, supervision, and code compliance certificates. The duty is owed to both existing and future home owners, but may be reduced by contributory negligence. A 10 year logstop from council approvals applies to claims. In the last decade, problems with leaky homes, through the use of untreated timber and monolithic wall cladding systems, poor design and workmanship, have given rise to a substantial number of claims against local authorities. The provision for claimants of a formal mediation service and adjudication process is assessed. A recent proposal by the Government to assume liability for 25 percent of repair costs, with local councils accepting a further 25 percent, is considered. Conclusions are drawn as to the legal and practical outcomes.

Keywords:
building, consents, council, liability, mediation

1 Introduction

This paper sets out the legal position in New Zealand in 2011 concerning the liability of territorial local authorities (city and district councils) for defective homes.¹ The defects may arise from inadequate foundations and water leaks and other causes. The paper considers the history of the determination by courts of liability, issues relating to the limitation period for claims, and the divergence of New Zealand law from U.K. law.² The question of liability for other buildings used for commercial purposes, such as hotels and motels is considered. The question of central government responsibility is addressed. The most recent decisions of the Supreme Court of New Zealand in the Byron Avenue and Sunset Terraces cases (2010) are discussed.³ Finally, the systems

¹ Local Government Act 2002 (NZ), s 5 (definition territorial authorities). The LGA establishes the governance structure under which district and city councils are consent authorities for urban building work under the Building Act 2004. Regional councils have limited functions in respect of dam construction. In the Auckland region, the former seven local authorities were amalgamated to form a single Auckland Council (super city) from 1 November 2010: Local Government (Auckland Council) Act 2009. As a unitary authority the Auckland Council is the consent authority for all building work in the region. It has inherited liabilities of the former local authorities.

² Until the Supreme Court Act 2003 (NZ), the Privy Council (UK) was the highest appellate body in the New Zealand judicial system. The Supreme Court of New Zealand replaced the Privy Council.

³ North Shore City Council v Body Corporate 188529 (Sunset Terraces) [2010] NZSC 158, [2011] 2 NZLR 289 (incorporating Bryon Avenue decision).
available for mediating and determining liability under the Weathertight Homes Resolution Services Act are considered, together with a current proposal of government to share in the burden of repair costs.¹

2  History of Local Authority Liability for Defective Homes

In 1972, in *Dutton v Bognor Regis Urban District Council*² the English Court of Appeal determined that a builder could owe a duty of care in tort law to a subsequent purchaser of a property which had defective foundations. The builder could be liable even though there was no immediate contractual relationship with the subsequent purchaser. More significantly, the Court determined that the local authority could also owe a duty of care to the subsequent purchaser for failing to carry out inspections with reasonable care. The council could be liable in negligence for this failure of duty. Assuming the builder remained solvent, the question of apportionment of liability between the builder and the local authority could be determined having regard to the degree of responsibility for the damage. Lord Denning, Master of the Rolls, was a driving force in the *Dutton* decision. Within a short period, the *Dutton* decision was followed by the New Zealand Courts. In *Gabolinscy v Hamilton City*³ the council was found to be liable to the purchaser of a dwelling erected on a former council refuse tip, for subsidence damage occurring ten years after construction. The property foundations were not adequate for the ground conditions. The validity of the common law in the U.K. came before the House of Lords in *Anns v Merton London Borough Council*⁴ being another case involving a claim for faulty foundations and subsidence damage. The Lords considered that on principle negligence liability should be approached in two stages. First, a question arose whether there was a sufficient relationship of proximity between the alleged wrongdoer and the person suffering damage, and secondly, if that proximity existed, it was necessary to consider whether or not there was a reason to exclude liability. This approach containing a presumption of liability advanced the scope of responsibility to a significant level where damage arose. Returning to New Zealand, the *Anns* decision was followed by the Court of Appeal in *Mount Albert Borough Council v Johnson*.⁵ The Court considered the liability of a builder and the council in respect of a block of flats which had been erected on a former refuse tip site. The foundations were inadequate, the dwellings subsided, and the claim was made. The Court held the defendants were jointly and severally liable, and apportioned the damages award at 80 per cent against the builder and 20 per cent against the council. This ratio of apportionment has been commonly adopted in the later decisions. Where the builder is insolvent and recovery cannot be made, under the law the council may be liable to pay the full damages award, and to seek any remedy for recovery of the balance against the insolvent builder.

3  Divergence of New Zealand Law following Murphy decision

In 1984, the House of Lords in the *Peabody Donation Fund* case⁶ reconsidered the principled approach to liability enunciated in the *Anns* decision. The Peabody Group was developing a housing estate through a building firm and permits had been obtained from the Lambeth London Borough Council. An error was made in respect of the use of rigid drainage connections. The Lords declined to find any liability against the local authority holding that in determining whether or not a duty of care was incumbent, it was material to take into consideration whether it was just

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¹ Weathertight Homes Resolution Services Act 2006.
² *Dutton v Bognor Regis Urban District Council* [1972] 1 QB 373.
³ *Gabolinscy v Hamilton City* [1975] 1 NZLR 150.
⁵ *Mount Albert Borough Council v Johnson* [1979] 2 NZLR 234.
and reasonable that a duty should arise. Further, the Lords considered that as the loss was essentially economic, and not related to personal injury, that would be a ground for not imposing any duty of care. Subsequently in *Murphy v Brentwood District Council*, another claim relating to defective foundations and economic loss came before the House of Lords. On this occasion, the Lords determined that the loss was purely economic and the council owed no duty of care in exercise of its statutory building bylaw functions. A duty could only arise in respect of foreseeable harm in the nature of injury to health or safety. Furthermore, liability in torts should be established on an incremental basis, and the statements in the *Anns* decision were generally disapproved.

With this background, in 1994 the New Zealand Court of Appeal was faced with conflicting authorities in the case of *Invercargill City Council v Hamlin*. A dwelling had been constructed in 1972 on a boggy site. The depth of foundations was approved by the council but found to be inadequate for the site conditions. Within a short period cracks appeared. Finally in 1989, with the doors sticking, a claim was brought against the local authority for negligence in approving the shallow foundations on the plans and also in failing to carry out proper supervision under the bylaws. The Court noted the differing views expressed by the House of Lords in the *Murphy* decision, as against the earlier *Anns* decision. Cooke P stated —While the disharmony may be regrettable, it is inevitable now that the Commonwealth jurisdictions have gone on their own paths without taking English decisions as the invariable starting point. The ideal of a uniform common law has proved as unobtainable as any ideal of a uniform civil law*. The Judge noted that New Zealand did not have any equivalent of the Latent Damage Act 1986 (U.K.), and in 1991, a longstop claim limitation of 10 years from the approval of plans or supervision by the local authority had been introduced for future claims. That particular limitation did not apply to the *Hamlin* facts where the claim was brought before the enactment of the statutory limitation. Another member of the Court, Richardson J, stated there were six distinct and longstanding features of the New Zealand housing scene which justified a duty of care being owed by the local authorities. First was the high proportion of occupier-owned housing. The second reason was that much of the housing construction was undertaken by small scale cottage builders for individual purchasers and these builders may require some supervision. The third reason was the nature and extent of government support for private home ownership with provision of low interest loans. The fourth ground was the surge in house building construction. The fifth ground was the wider central and local government support for private home building, through model bylaws and close supervision. The sixth reason was that there has never been a common practice for new house buyers, to commission engineering and architectural examinations or surveys of the building or proposed building before purchase. The Judge summed up that the question of whether it was just and equitable for the local authority to be under a wider duty of care had to be considered against this background which was special to New Zealand. The Court held the duty of care could apply to pure economic loss and the council was liable for the cost of repairs. Because the building company had gone out of business and was insolvent, the council would be obliged to meet the full damages award.

That decision of the Court of Appeal then proceeded to the Privy Council. In *Invercargill City Council v Hamlin*, the Privy Council was faced with a relatively unique situation as to whether it should follow the decision of the House of Lords in *Murphy*, or affirm the traditional approach asserted by the New Zealand Court of Appeal. In giving judgment, Lord Lloyd of Berwick, noted that 17 years had passed between the construction of the dwelling and the later determination that the subsidence problems were due to the inadequate foundations. His Lordship

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5. *Invercargill City Council v Hamlin* [1994] 3 NZLR 513 at 524-525.
noted the change to New Zealand law in 1991 imposing a longstop on claims of this nature.\(^1\) It was acknowledged that the New Zealand judges were in a better position to decide on the appropriate divergence of the common law. It was also acknowledged that as the loss was economic loss, that no loss occurred until the defect was discovered or was so obvious to a reasonable owner that they would take action. On the facts, the claim was not time barred applying the claim period of 6 years from discovery of the cause of action. This important decision, accepting that in New Zealand a local authority could be liable for negligence in issuing a building permit, and in any failure of the inspection duty, has remained the legal position, but with an exclusion of liability in respect of commercial premises.

4 Limitation Period for Claims

An aspect of several of the earlier claims was the significant time between the construction of the faulty dwelling, and the possible visibility of the damage from subsidence. In the case of *Askin v Knox*, a dwelling was built in 1963 over an old creek bed with approval of inadequate foundations, and a successful claim was made against the council in 1986.\(^2\) Similarly, in the *Hamlin* case, the claim was made 17 years after construction.

Following the *Askin* case, the variable bylaw standards applied by local authorities in respect of building permits, were replaced by a uniform building code for the whole country under the Building Act 1991. The existence of this Act was acknowledged in the *Hamlin* decisions, as being consistent with local authority liability for negligent inspections, and providing an assurance that the scope of liability would in time be capped by virtue of a longstop provision for all claims. Section 91 provided that in any proceedings arising from the construction, alteration, demolition of a building or the carrying out of supervisory functions, civil proceedings could not be brought against any person 10 years or more after the issue of the building consent or a building inspection or issue of a code compliance certificate upon completion. It may noted that had that longstop applied in the earlier *Hamlin* action, the case could not have succeeded.

That longstop provision has remained part of the law, and has been repeated in the replacement Building Act 2004\(^3\). The existence of that section can be taken as a statutory acknowledgment that civil proceedings are contemplated to be taken against a local authority, and this is a confirmation of the appropriateness of the *Hamlin* determination in the New Zealand context. Furthermore, under the Building Act 2004, a new provision imposes implied statutory warranties for building work in relation to household units.\(^4\) A household unit is defined to mean a building or group of buildings that is used or intended to be used only or mainly for residential purposes and to be used exclusively as the home or residence of not more than one household but does not include a hostel, boarding house, or other specialised accommodation.\(^5\)

The implied warranties state that the building work will be carried out in a proper and competent manner, in accordance with the plans and specifications of the contract, and in accordance with the relevant building consent; the materials used will be suitable for the purpose and will be new unless otherwise stated; the building work will be carried out in accordance with applicable laws and standards; the work will be carried out with reasonable care and skill; and the household unit will be suitable for occupation on completion. The owner of the building or land may take proceedings for breach of the warranties as if the owner were a party to the original building contract, and no provision in an agreement may take away the benefit of the warranty.\(^6\) No time limit applies to the warranties but it would be expected the normal 6 year limitation period would apply.\(^7\)

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1 Building Act 1991 (NZ), s 91.
2 *Askin v Knox* [1989] 1 NZLR 248 (CA) (liability found for approval of faulty foundations).
3 Building Act 2004, s 393.
4 Building Act 2004, s 397.
5 Building Act 2004, s 7 (definition household unit).
6 Building Act 2004, s 396-399.
7 Limitation Act 2010.
Local Authority Liability for Commercial Buildings

In Three Meade Street Ltd v Rotorua District Council, the High Court was required to determine whether the council owed a duty of care to the purchaser of a motel which was found to have various construction defects in the building. Venning J considered the application of the Hamlin ruling and also the decisions in Australia, Canada, and in Murphy v Brentwood District Council. The judge concluded that although there may have been a proximity between the council and the defects in the building relating to inspections, there were policy considerations which determined that the council did not owe a duty of care in respect of ownership of a commercial building or work done on the building. The purchaser company should be able to protect itself by contractual arrangements with the developers, and in any purchase contract if being a subsequent owner. The Building Act should not be construed to give rise to any statutory cause of action. The council did not owe a duty of care to the shareholder of the ownership company.

The Three Meade decision came before the Court of Appeal in Te Mata Properties Ltd v Hastings District Council. In this case, the appellants were purchasers of two motels, and discovered that each suffered from the leaky building syndrome. The owner claimed against various parties including the district council for the cost of remedial works, the loss of value of the property, consequential losses and general damages. Allegations were made of negligence in granting the building permits, inspection of construction, and issue of certificating compliance. The Court of Appeal held that the earlier Hamlin decision did not extend beyond domestic dwellings and did not support the claim. A possible basis for liability could arise if health and safety issues had been pleaded, but the claim was for purely economic loss. The test of purpose of the building was the purpose stated in the building permit. Motels were not included as household units under the Building Act. Baragwanath J stated "So Parliament has treated owners of "household units" and "dwellinghouses" as deserving special treatment: protection in respect of building quality, privacy and procedures for dealing with leaky building claims."

After traversing the earlier decisions going back to Dutton, Anns, Baragwanath J observed "There are obvious policy reasons for confining tort liability to home owners on account of the special and distinctive value of the home in any society as giving effect to the basic right to shelter." The Judge stated "I am satisfied at this stage there is no justification for extending the Hamlin cause of action, based as it is on economic loss, beyond the specific limits of private dwellings." The claim against the council was struck out.

In a subsequent decision Queenstown Lakes District Council v Charterhall Trustees Ltd, the issue concerned a chimney fault which caused a fire and damage to a luxury lodge. A claim was brought against the council for negligence in approval of the building plans and for failure of adequate inspection. On this occasion, a differently constituted Court of Appeal held the council did not owe a duty of care to the owner of a commercial building to prevent defects, including defects that affected the health and safety of occupants. Owners of commercial buildings were not vulnerable and dependent on councils to protect their interests but were able to engage their own advisers and manage risks through contractual arrangements. The claim was for financial loss. The Court held "In the result we accept ...the Building Act does not seek to protect the value of buildings, or income streams from them, for commercial investors." The Court noted again that the imposition of a duty of care in the context of commercial buildings had been rejected in the U.K. following Murphy.

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1 Three Meade Street Ltd v Rotorua District Council [2005] 1 NZLR 504.
2 Te Mata Properties Ltd v Hastings District Council [2009] 1 NZLR 460 (CA).
3 Te Mata Properties Ltd v Hastings District Council [2009] 1 NZLR 460 (CA) at [12].
4 Te Mata Properties Ltd v Hastings District Council [2009] 1 NZLR 460 (CA) at [36].
5 Te Mata Properties Ltd v Hastings District Council [2009] 1 NZLR 460 (CA) at [73].
6 Queenstown Lakes District Council v Charterhall Trustees Ltd [2009] 3 NZLR 786 (CA).
7 Queenstown Lakes District Council v Charterhall Trustees Ltd [2009] 3 NZLR 786 at [44].
The conclusion is clear, that the liability of local authorities does not extend to defects in non-residential buildings or to residential type properties established as a commercial venture such as hotels, guest houses and motels.

6 Leaky Home Liability

In the past decade in New Zealand, a major problem has arisen from the construction of buildings which suffer from the "leaky home syndrome". This problem is distinct from the question of faulty or inadequate foundations, and relates to a combination of approval of inadequate building methods through the former Building Industry Authority under the Building Act 1991, together with design changes and poor workmanship. The major causes of the property leaks have been the use of untreated timber for structural framing, the use monolithic wall cladding systems, with both standards formerly being approved by the Building Industry Authority. A design trend by architects or property developers of dwellings with flat roofs, and no overhanding eaves, has further contributed to the problems with building leaks. In addition, poor workmanship in failing to install flashings around metal windows and other joinery, and widespread use of plastic sealants which break down, have resulted in ingress of water. Further design changes removing any air separation space between the building framing and outside cladding, partly due to insulation requirements, have exacerbated the rotting of wooden framing where water has penetrated the structure. The mould problems and costs of remediation of leaky homes has affected thousands of dwellings and other buildings, and has affected the health and wellbeing of many residents.\(^1\)

In principle, the question of liability of a local authority has been determined by the *Hamlin* decision, namely that a duty of care is owed in respect of residential properties in relation to building consents, inspections, and the issue of code compliance certificates. The liability of local authorities has been confirmed in two recent decisions by both the Court of Appeal and the Supreme Court. The decisions known as *Sunset Terraces* and *Byron Avenue*, involved the owners of two multi-unit developments which were affected by water tightness issues and suffered significant damage from water ingress.\(^2\) The claims against the local authority, the North Shore City Council, were substantial, to the extent that claims against other parties and the apportionment of liability, including the building developers, architects and subcontractors, would not necessarily be met due to insolvency.

In the *Byron Avenue* case, involving a 14 unit block of residential apartments, the council carried out nearly 100 inspections of the property, but within 4 years, water ingress was occurring around windows and causing structural damage. The High Court had found the council had been negligent in carrying out the inspections, and there was a need to repair and re-clad the units. The fact that some of the owners may not have obtained a "land information memorandum" from the council (prior to purchasing the unit) was not a bar to an individual claim, but could be relevant to a reduction in the award of say 25 per cent for contributory negligence. The Body Corporate would be treated as agent for the unit owners in respect of the common property, and could represent the owners in a collective action. In respect of *Sunset Terraces* case, the fact that the ownership structure of some property owners was through a company or trust would not affect the plaintiff’s right to claim for what were essentially economic losses. The Court of Appeal upheld the liability of the council.\(^3\)

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\(^1\) In *North Shore City Council v Body Corporate 188529 [Sunset Terraces]* [2010] 3 NZLR 486 (CA), at [64], Baragwanath J refers to research that estimates that 80,000 houses built with monolithic cladding in the 1990s had leaked or would leak. The reference is to Howden-Chapman P, Bennett J, Siebers R (eds), *Do Damp and Mould Matter? Health Impacts of Leaky Homes* (Steele Roberts, Wellington, 2009).

\(^2\) *North Shore City Council v Body Corporate 188529 (Sunset Terraces); North Shore City Council v Body Corporate 189855 (Byron Avenue)* [2010] NZSC 158, [2011] 2 NZLR 289 (SC). Affirming *O’Hagen v Body Corporate 189855 (Byron Avenue)* [2010] 3 NZLR 445 (CA); *North Shore City Council v Body Corporate 188529 (Sunset Terraces)* [2010] 3 NZLR 486 (CA).

\(^3\) *O’Hagen v Body Corporate 189855 (Byron Avenue)* [2010] 3 NZLR 445 (CA); *North Shore City Council v Body Corporate 188529 (Sunset Terraces)* [2010] 3 NZLR 486 (CA).
On further appeal, the Supreme Court (in a judgment in December 2010) affirmed the divergence of New Zealand law in the *Hamlin* decision from the U.K. position. Elias CJ stated that she did not consider it would be principled to introduce restrictions on the liability of territorial authorities according to the form of ownership, the type of residence, or the value of the building". The council argued that the *Hamlin* decision should no longer apply, but the remaining four Judges of the Court stated —Hundreds, if not thousands, of people must in the meantime have relied upon the proposition that the 1991 Act had not affected the common law position. For this Court to defeat that reliance retrospectively by holding that the true position was otherwise would represent an inappropriate use of our ability to depart from a previous decision of the Privy Council".

The Court further stated —The duty affirmed in *Hamlin* is, in any event, a soundly and firmly based principle of New Zealand law. There are good policy reasons for it." In response to a submission from the council that the duty should apply to single owner-occupied dwellings alone, and not multi-unit apartments that could be rented out to tenants, the Court stated —The duty affirmed in *Hamlin* is designed to protect the interest citizens have in their homes. As a matter of principle and logic that duty should extend to all homes, whatever form the home takes. Distinctions based on the ownership structure, size, configuration, value or other facets of premises intended to be used as a home are apt to produce arbitrary consequences. Furthermore the *Hamlin* duty must be capable of reasonably clear and consistent administration".

The Court concluded —For these reasons we agree with the Court of Appeal that a building’s intended use, in accordance with the plans lodged with the council, is the most appropriate determinant of the scope of the *Hamlin* duty. Councils owe a duty of care, in their inspection role, to owners, both original and subsequent, of premises designed to be used as homes".

The fact that with reference to the *Byron Avenue* building, the council had not issued a code compliance certificate, did not negate the duty of care in respect of acts and omissions prior to that point in time. The Court observed that the term —inspection‖ was defined under the former Building Act to mean —the taking of all reasonable steps to ensure that any building work is being done in accordance with the building permit‖.

Regarding a liability issue that could arise where a claim had been brought and determined, and then the property had been sold, the Court considered a number of situations. The potential for an accrual bar was born out and reduced by the longstop 10 year limitation. It was held the duty owed to a first owner would not be transferred to the second owner on sale nor would the loss. The duty would be independently owed to the second owner and in principle that owner should be able to recover loss in respect to any breach of duty owed to that person independently of the first owner’s position.

Where there was a reasonable possibility of intermediate examination by a purchaser, the omission to carry out an inspection could be relevant to a question of contributory negligence or failure to mitigate, but would not defeat the claim. Further, the law provides for a prospective owner to request a land information memorandum (LIM report) from the local authority which could possibly include information as to the property being a leaky home. Where a report was not obtained in this situation, the failure to obtain the report could amount to contributory negligence.

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1 *North Shore City Council v Body Corporate 188529 (Sunset Terraces); North Shore City Council v Body Corporate 189855 (Byron Avenue)* [2010] NZSC 158, [2011] 2 NZLR 289 (SC) at [7].
2 *North Shore City Council v Body Corporate 188529 (Sunset Terraces); North Shore City Council v Body Corporate 189855 (Byron Avenue)* [2010] NZSC 158, [2011] 2 NZLR 289 (SC) at [23].
3 *North Shore City Council v Body Corporate 188529 (Sunset Terraces); North Shore City Council v Body Corporate 189855 (Byron Avenue)* [2010] NZSC 158, [2011] 2 NZLR 289 (SC) at [26].
4 *North Shore City Council v Body Corporate 188529 (Sunset Terraces); North Shore City Council v Body Corporate 189855 (Byron Avenue)* [2010] NZSC 158, [2011] 2 NZLR 289 (SC) at [49].
5 *North Shore City Council v Body Corporate 188529 (Sunset Terraces); North Shore City Council v Body Corporate 189855 (Byron Avenue)* [2010] NZSC 158, [2011] 2 NZLR 289 (SC) at [51]. The Court left open for later decisions application of the duties of care to particular premises.
7 *North Shore City Council v Body Corporate 188529 (Sunset Terraces); North Shore City Council v Body Corporate 189855 (Byron Avenue)* [2010] NZSC 158, [2011] 2 NZLR 289 (SC) at [72].
and reduce the liability. A council may be liable for negligent errors or omissions in the content of a LIM report.

In summary, the Court confirmed that the Hamlin decision was correctly made; councils owe a duty of care in their inspection role to owners, both original and subsequent, of premises designed to be used as homes; subsequent purchasers of such premises are not barred from claiming for breach of the duty owed to them solely by reason of a cause of action having accrued to a predecessor in title.

As noted, the duty of care is owed in respect of a property erected as a residential property or home (including a unit rented out or leased), but does not extend to a property erected for a commercial purpose, such as a hotel, motel, school, or industrial purpose.

7 Liability for Actions of Independent Certifiers

The former Building Act 1991 (repealed 2004) provided for developers a choice to use independent certifiers for approval of building plans, inspections, and the issue of a code compliance certificate. A limited number of private companies or persons were approved as certifiers for this purpose. A condition was that the certifier should have adequate insurance cover for public liability claims. The Building Industry Authority was empowered to approve the use of the independent building certifiers, in place of a local authority. Where the certifier approved building plans, carried out the building inspections, and issued a code compliance certificate, the local authority had no discretion to reject the approvals.

In all cases where a local authority is the building consent body, involving a defective building or leaky home syndrome, the local authority would be one of the primary defendants, as the local authority would have sufficient resources to pay the full amount of any damages award. However, where a private certifier is involved in the whole approval and inspection process, the local authority has no legal liability or responsibility. That outcome has been upheld in the Court of Appeal. Consequently, where the certifier has gone into liquidation and the builder is also insolvent (being a not uncommon feature), a property owner may be unable to succeed on a claim or recover any damages awarded.

8 Liability of Central Government (Crown)

Under the Building Act 1991, the Building Industry Authority was constituted with the function of making determinations on the accreditation of building products and processes, to the effect that where an accredited process was used, that standard would be the maximum standard required under the building code. Where the standard applied, a local authority was not entitled to impose a higher standard. The use of untreated pine timber for framing was part of an approval issued by the Building Industry Authority, together with the use of fixed faced monolithic cladding systems over the untreated timber. It became common ground from 1998 that this approval, given in 1995, was the basis of the growing leaky building syndrome complaints. Further, the approval of an independent certifier by the Building Industry Authority required the latter body to be satisfied that the certifier carried reasonable insurance cover in case of any liability. With this background, the liability of the Crown for the actions of the Building Industry Authority itself became important, especially in a situation where an independent certifier had been employed but was insolvent, and the builder might also be insolvent.

1 North Shore City Council v Body Corporate 188529 (Sunset Terraces); North Shore City Council v Body Corporate 189855 (Byron Avenue) [2010] NZSC 158, [2011] 2 NZLR 289 (SC) at [76]-[84]. See also Local Government Official Information and Meetings Act 1987, s 44A (provision to obtain LIM report from council as to factors affecting a property).
2 Vining Realty Group Ltd v Moorhouse [2010] NZCA 104 (error in recording water permit for rural property).
3 Building Act 1991, ss 51-57. The system was a partial privatisation objective of the government. The Building Act 2004 has omitted the provision for private certifiers.
4 Auckland City Council v McNamara [2010] 3 NZLR 848 (local authority under no liability for actions of independent certifier). Independent certifiers had a minor share of the building consent process.
In Attorney-General v Body Corporate 200200\(^1\) the body corporate representing the 153 unit owners of the Sacramento complex claimed damages against the Building Industry Authority, together with other defendants, for damages for repairs estimated at approximately $20m (10m pounds). The Attorney-General, on behalf of the Crown and the Building Industry Authority moved to strike out the cause of action against the BIA. The Court of Appeal noted the background causes of the leaky building syndrome which applied to the Sacramento complex, and considered the issue of principle as to whether the BIA could owe a duty of care to the building owners in addition to a duty of care owed by the building certifier company. The Court determined that policy considerations pointed against a duty of care, namely that the roles of the BIA were of a quasi-judicial or legislative nature, and where building certifiers were involved their certificates were conclusive.\(^2\) Imposing a duty on the BIA would have significant resource implications for the BIA and its management of the Building Act 1991. The Court stated that maladministration by a public body was not in itself a ground for awarding damages. Importantly, proximity considerations pointed against any situation or duty to the building owner.

Likewise, the Court could not find that any duty of care would be owed to the building owner in the approval of a private building certifier, who subsequently went into liquidation and would be unable to meet any damages claim. The Court concluded that the relationship between the BIA and the building owners was extremely limited and matters of proximity and remoteness and causation were not able to be established. The claim against the BIA (and the Crown) was struck out.\(^3\)

In considering the justice of this decision, it may be noted that, having regard to the earlier decisions and criticisms of the inadequacies of the Building Act 1991, the government moved to reform the law and practice by enacting the comprehensive Building Act 2004.\(^4\) The Building Industry Authority was disestablished and replaced by an approval system under a new Department of Building and Housing. The provision for independent certifiers was abolished. A system of licensed building practitioners is established to improve the quality of specified work.\(^5\)

Although the Crown is presently under no liability directly for the leaky home crisis, the Crown is offering a partial grant of up to 25 percent of repair costs (without any admission of liability) under pending legislation (considered below).\(^6\)

The present situation remains that the local authority will continue to be the building consent authority, and potentially liable for negligence in the approval of building plans, inspections, and issue of code compliance certificates, in respect of residential properties. Further, to the extent that in many claims the original architects, builders, subcontractors and other persons who may have a primary or secondary liability, may no longer be solvent or able to undertake remedial work, the local authority will be the “last man standing” and may be liable for the whole of the losses and damages established.

9 Weathertight Homes Resolution Services

Recognising the major and serious problems with the substantial number of leaky home claims arising, and the fact that ordinary household insurance policies do not usually cover losses arising from building deterioration or water ingress from normal rainfall, the government enacted the Weathertight Homes Resolution Services Act 2002. The Act established a process whereby a claim could be made to the Service for an assessment of the remediation costs, and for mediation if

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\(^{1}\) Attorney-General v Body Corporate 200200 [2007] 1 NZLR 95 (CA) (Sacramento complex).
\(^{2}\) Attorney-General v Body Corporate 200200 [2007] 1 NZLR 95 (CA) at [62]-[69].
\(^{3}\) See also Attorney-General v North Shore City Council [2010] NZCA 324 (The Grange) (further claim by council of duty of care owed by BIA struck out).
\(^{5}\) The Building Act 2004, part 4 (system of licensed building practitioners to undertake or supervise specified works).
\(^{6}\) Weathertight Homes Resolution Services (Financial Assistance Package) Amendment Act 2011.
possible of the liability. Due to the volume of claims and increasing complexity of issues, the Act was replaced in 2006.

The Weathertight Homes Resolution Services Act 2006 states the purpose, namely —The purpose of this Act is to provide owners of dwellinghouses that are leaky buildings with access to speedy, flexible, and cost-effective procedures for assessment and resolution of claims relating to those buildings.¹

Several types of claim are stipulated. A dwellinghouse claim relates to a property built before 1 January 2012, and within a period of 10 years. The claimant must own the house and the claim can be brought where —water has penetrated it because of some aspect of its design, construction, or alteration, or of materials used in its construction or alteration; and the penetration of water has caused damage to it”. Provision is also made for claims in respect of single dwellings in a multi-unit complex, and a multi-unit complex, and common area only claims, in respect of a complex.²

Provision is made for common representation in respect of multi-unit complexes. The procedures apply to a dwellinghouse which is leaking, and by definition, a dwellinghouse includes an apartment, flat, or unit and any attached garage or shed, but —does not include a hospital, hostel, hotel, motel, rest home, or other institution.³

Where a dwellinghouse owner has an eligible claim, the Resolution Services will arrange for an assessment to be made of the extent of the claim and estimated cost of remediation of the damage.⁴

That assessment can then be taken to mediation with limited cost to the applicant. The mediators have powers to require other responsible parties to join in the procedure.⁵

Where a settlement is reached, and the local authority is the consent authority, it will probably be required to contribute to the award, in a proportion in the vicinity of 20-30 per cent responsibility. Where other parties found to liable default, the local authority may be required to meet a greater share of the liability.

If mediation is not successful, the parties may take the matter to the Weathertight Homes Tribunal for compulsory adjudication. The Tribunal has the powers of a court to act in an appropriate manner in finding responsibility and apportioning liability. The claim may be for any remedy available in a court of law, and may include a claim for general damages to cover mental distress. A determination can be the subject of an appeal to the High Court.⁶

Local authorities (and their insurers) have continued to be concerned about assuming the principal financial burden for the ongoing liability under leaky homes claims. In 2010, after consultation, the Government agreed, despite being not technically liable, to contribute towards claims by a qualifying claimant. The Weathertight Homes Resolution Services (Financial Assistance Package) Amendment Act 2011 provides that the Crown and the participating territorial authority will each provide 25 per cent direct payment for agreed repair costs. Where the territorial authority was not the consent authority but an independent certifier was used (pre 2004), the territorial authority will not be liable but the Crown will continue its offer of 25 per cent. If the home owner accepts the offer, the home owner must agree not to claim further against the territorial authority (or the Crown), but will be able to pursue legal action against other parties for the remaining 50 per cent of the remediation costs. Where the scheme applies, the third parties will not be able to claim back against the territorial authority for any additional contribution.⁷

This Financial Assistance Package has been enacted into law in 2011. In effect, central government accepts a moral responsibility for part of the leaky home problem. An advantage to local authorities

¹ Weathertight Homes Resolution Services Act 2006, s 3. The WHRSA is administered by the Department of Building and Housing.


³ Weathertight Homes Resolution Services Act 2006, s 8.

⁴ Weathertight Homes Resolution Services Act 2006, ss 31-51.

⁵ Weathertight Homes Resolution Services Act 2006, ss 77-88.

⁶ Weathertight Homes Resolution Services Act 2006, ss 57-76, 89-96, part 2, sch 3 (procedure). For lower value claims, the proceedings may minimise the use of lawyers. For an appeal, see Findlay and Sandelin v Auckland City Council, HC, Auckland CIV-2009-404-6497, 16 September 2010 (Ellis J) (damages apportioned 80:20 between builder and council – general damages of $25,000 for mental distress, reduced to $17,000 for contributory negligence).

⁷ Weathertight Homes Resolution Services (Financial Assistance Package) Amendment Act 2011. The Minister may, on behalf of the Crown, give a guarantee or indemnity for a loan to meet the balance of the repair costs, and may recover any debt arising.
of a contribution agreement is that their share will be pegged to 25 per cent with no risk of paying a higher amount if other parties are liable but do not pay respective contributions. In relation to all real estate valuations and transactions, much greater awareness is acknowledged throughout the country as to the need to obtain checks before purchasing houses and apartments.

10 Conclusion and further research

The history of legal liability in New Zealand of local authorities in respect of defective properties illustrates the adaptability of the common law to local circumstances. The liability is limited to residential properties, and does not extend to commercial properties. A 10 year longstop for claims applies from the date of approvals and actions of local authorities. The recent offer by central government to provide up to 25 per cent contribution towards the repair costs of leaky homes, in conjunction with a matching offer from local authorities, is regarded by local authorities and the wider community as a reasonable outcome. In the longer term, further research to achieve improvements in design and building standards should reduce the scale of claims for defective residential premises. The demarcation for liability between a commercial building and a residential building remains problematic.
Affordable housing in Portugal and São Paulo Municipality:
Comparison of space standards and socio-economic indicators

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Abstract:
This paper compares the space standards set for affordable housing in Portugal and in São Paulo Municipality (Brazil), and seeks explanations for differences in the socio-economic context of each territory. The Controlled Cost Housing (CCH) in Portugal and the housing built within the program My Home My Life (MHML) in São Paulo Municipality are studied. Three research questions are addressed: Which program has more demanding space standards? Which social-economic conditions explain the differences in space standards? How different space standards influence the users' satisfaction? To answer these questions, space standards, socio-economic indicators and the users' satisfaction are compared. Space standards compared the number and type of rooms, the internal floor area of dwellings, the size of rooms, and the size of furniture and equipment. The study has shown that space standards set for CCH are more demanding than those set for MHML program. For instance, a CCH dwelling has almost two times the gross area of a MHML dwelling with the same number of rooms. The housing deficit, the low income of poor households and the option to sell highly subsidized affordable housing are reasons that justify the low space standards in São Paulo Municipality when compared to Portugal. Although affordable houses are substantially smaller in São Paulo Municipality, the satisfaction level of dwellers with the size of dwellings is higher. Therefore, a direct link between space standards and users' satisfaction cannot be set. We conclude that different political options on how to provide housing to low income households directly influence the space standards set for dwellings.

Keywords:
Brazil, Portugal, affordable housing, space standards

1 Introduction

In Portugal and Brazil, it is generally accepted that the main goal of housing policy is to ensure decent housing for all households. This can be achieved by facilitating access to property, by providing access to a rented house or by ensuring minimum conditions of habitability in existing housing.

Both to enable access to property and to create a housing rental stock, the State may support the construction of housing, usually called affordable housing. Its main objective is to provide decent housing at affordable prices for low income households. Therefore, minimum parameters are set to ensure that dwellings have a quality level suitable to meet, at least, the basic needs of dwellers within the lifespan of the construction. Maximum parameters can also be set to guarantee that
housing cost is compatible with the economic capacity of low income households, as well as to guarantee a good use of funds invested.

The general requirements for adequate or decent housing have been internationally accepted (UN-Habitat, 1996): it should provide a safe, healthy, comfortable and functional environment, at an affordable cost. However, the performance demanded for each requirement often varies from country to country according to the prevailing cultural, social, environmental, technological and economic conditions.

To ensure functionality, a dwelling shall be large enough to meet user’s needs in terms of living, cooking, dining, sleeping, bathing and storing household goods. Space standards set the conditions to fulfil these objectives and usually specify the overall area, size and dimensions of rooms, ceiling height and layout of dwellings.

This paper compares space standards set for the construction of affordable housing in Portugal and in São Paulo Municipality, and seeks explanations for differences in the socio-economic context of each territory. The case studies consist of the Controlled Cost Housing (CCH), in Portugal, and the housing built within the program My Home My Life (MHML), in São Paulo Municipality. The three research questions addressed are as follows:

1) Which program has more demanding space standards?
2) Which social-economic conditions explain the differences in space standards?
3) How different space standards influence users’ satisfaction?

The following section explains the research methodology and Section 3 describes the two case studies. Section 4 compares the socio-economic indicators and Section 5 presents the results of the comparison between space standards. The results are discussed in Section 6.

2 Research methodology

The study was developed according to the following methodology:

1) Identification of the problem and definition of concepts;
2) Characterization of case studies;
3) Comparison of socio-economic indicators;
4) Comparison of space standards set by building regulations;
5) Cross analysis of socio-economic indicators and space standards;
6) Summary of key findings and discussion of results.

3 Case studies

3.1 Controlled Cost Housing

In Portugal, affordable housing is called Controlled Cost Housing. The State supports financially the construction of CCH through the Instituto da Habitação e da Reabilitação Urbana (Housing and Urban Rehabilitation Institute). CCH can be promoted by municipalities, housing cooperatives or private companies.

The main objective of CCH is to optimize the relation between cost and quality: dwellings should meet the occupants’ needs and have a reduced cost, which is assessed from a long term perspective (construction, use and maintenance) (Portugal, 1985).

When completed, CCH may be sold or rented. There are no limitations of income to households buying or renting CCH, but a sold dwelling is subject to special rules determining the conditions of transferability for a period of five years.
The CCH construction program was created in 1983 (Portugal, 1983). Between 1984 and 2004, about 126,000 dwellings were built, with an average of 6,300 dwellings per year (Coelho, 2006). In later years, the construction of CCH decreased. In 2008, only 1,500 dwellings were completed (OHRU, 2009).

A CCH development shall comply with all the legislation applicable within the location where it is built and shall also comply with specific building regulations for CCH (Portugal, 1985; Portugal, 1997).

### 3.2 Program My Home My Life

In São Paulo Municipality, there are several programs to support the construction of affordable housing. The program "My house my life" was launched in 2009 by the Federal Government of Brazil. This program is run by Caixa Econômica Federal (Federal Bank) and the developments can be implemented by public or private bodies, or in partnership.

The MHML program aims to reduce the housing deficit in Brazil. The initial goal was to build one million houses, and therefore facilitate the access to housing for low income households. In 2010, the initial objective was increased to three million houses. The priority of this program is to provide houses for households earning no more than 3 minimum wages, but, within this program, houses for households with incomes not exceeding 10 minimum wages are also to be built (Brasil, 2009).
The MHML program supports the construction of new buildings. When completed, houses are sold to households listed by local governments. Households have to meet the requirements of the program to apply for a dwelling, including having an income within a certain range (Brasil, 2009). A housing development built under the program MHML shall comply with all the legislation applicable within the location where it is built and shall also comply with additional conditions set by the program (ABNT, 2000; CEF, 2009a; CEF, 2009b).

4 Comparison of social-economic indicators

4.1 Population and territory

Although the total population of São Paulo Municipality and Portugal is similar, the territory is quite different. In São Paulo Municipality, almost all the population is concentrated in a vast urban area. The area occupied by the São Paulo Municipality is about sixty times smaller than that of the Portuguese territory, and therefore the population density is about sixty times higher. The rate of annual population growth is also higher in São Paulo (Table 1).
Table 1. Population and territory indicators  
(Source: INE, 2002; INE, 2008; GESP, 2009b; INE, 2009; IBGE, 2009)

<table>
<thead>
<tr>
<th>Year</th>
<th>Portugal</th>
<th>São Paulo Municipality</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2001/2000</td>
<td>10.36</td>
<td>10.43</td>
<td>millions of inhabitants</td>
</tr>
<tr>
<td>2008</td>
<td>10.60</td>
<td>10.99</td>
<td></td>
</tr>
<tr>
<td>Rate of annual population growth</td>
<td>2008</td>
<td>0.17</td>
<td>0.95</td>
</tr>
<tr>
<td>Number of families</td>
<td>2001/2000</td>
<td>3.65</td>
<td>3.13</td>
</tr>
<tr>
<td>Size of the families</td>
<td>2001/2000</td>
<td>2.84</td>
<td>3.51</td>
</tr>
<tr>
<td>Area of territory</td>
<td>92,094</td>
<td>1,509</td>
<td>sq km</td>
</tr>
<tr>
<td>Population density</td>
<td>2008</td>
<td>115</td>
<td>7,283</td>
</tr>
</tbody>
</table>

4.2 Housing stock

In 2000/2001, the housing stock of São Paulo Municipality was about 55% of the housing stock in Portugal. There was a small deficit of housing per family in São Paulo Municipality and a surplus in Portugal. The number of dwellings per 1000 inhabitants and the number of dwellings per family was higher in Portugal than in São Paulo Municipality. The housing tenure was very similar in both territories (Table 2).

Table 2. Housing stock indicators  
(Source: INE, 2002; IBGE, 2009; GESP, 2009b)

<table>
<thead>
<tr>
<th>Year</th>
<th>Portugal</th>
<th>São Paulo Municipality</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing stock</td>
<td>2001/2000</td>
<td>5.02</td>
<td>3.39</td>
</tr>
<tr>
<td>Dwellings per 1000 inhabitants</td>
<td>2001/2000</td>
<td>485</td>
<td>286</td>
</tr>
<tr>
<td>Dwellings per family</td>
<td>2001/2000</td>
<td>1.37</td>
<td>0.95</td>
</tr>
<tr>
<td>Housing tenure:</td>
<td>2001/2000</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>- owner occupied</td>
<td>75.7</td>
<td>69.4</td>
<td>%</td>
</tr>
<tr>
<td>- rented</td>
<td>20.8</td>
<td>21.6</td>
<td>%</td>
</tr>
<tr>
<td>- other</td>
<td>3.5</td>
<td>9.0</td>
<td>%</td>
</tr>
</tbody>
</table>

4.3 Housing demand

In 2000/2001, the housing deficit in São Paulo Municipality doubled the one in Portugal. The number of unoccupied dwellings in Portugal was 30% higher than in São Paulo. In both territories, the unoccupied dwellings were enough to cope with the housing deficit, although they might not have the location or be suitable to meet the housing demand (Table 3). The housing deficit in São Paulo is probably undervalued given that the number of dwellings per family is less than 1 (see 4.2).

Table 3. Housing shortage  
(Source: INE, 2002; Fundação João Pinheiro, 2005)

<table>
<thead>
<tr>
<th>Year</th>
<th>Portugal</th>
<th>São Paulo Municipality</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing deficit</td>
<td>2001/2000</td>
<td>100</td>
<td>203</td>
</tr>
<tr>
<td>Unoccupied dwellings</td>
<td>2001/2000</td>
<td>543</td>
<td>420</td>
</tr>
</tbody>
</table>

Also in 2000/2001, the main deficiency of the Portuguese housing stock was its poor maintenance condition (Guerra et al, 2007; INE, 2002). In São Paulo Municipality, the poor urban planning, the
lack of urban infrastructures and overcrowded dwellings were the main deficiencies (Fundação João Pinheiro, 2005).

4.4 Housing price

The price per square meter in the MHML program is about 40 % of the same value in CCH. Due to differences in price per square meter and in the overall area of dwellings, the price of a two-bedroom MHML dwelling is about 20 % of the same dwelling in CCH. The prices for flats and single family houses are different in the MHML program (Table 4).

<table>
<thead>
<tr>
<th>Year</th>
<th>CCH</th>
<th>MHML Flat</th>
<th>MHML House</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>20,124</td>
<td>18,576</td>
</tr>
<tr>
<td>Price of two bedroom dwellings</td>
<td>2009</td>
<td>102,102</td>
<td></td>
</tr>
<tr>
<td>Price per square meter</td>
<td>2009</td>
<td>1,201</td>
<td>479</td>
</tr>
</tbody>
</table>

4.5 Family income

The gross domestic product (GDP) per capita of São Paulo Municipality is approximately 74 % of the same value in Portugal. The minimum wage in the State of São Paulo is approximately 45 % of the same value in Portugal. The annual income of the 20 % of the population of São Paulo Municipality with lower income is 12.7 % of the same value in Portugal. The annual income of the 20 % of the population of São Paulo Municipality with a higher income is 68.9 % of same value in Portugal. The percentage of the population below the poverty line is not comparable since the threshold adopted in Portugal is 2.59 times higher than in Brazil (including São Paulo Municipality) (Table 5).

<table>
<thead>
<tr>
<th>Year</th>
<th>Portugal</th>
<th>São Paulo Municipality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual GDP per capita</td>
<td>2007</td>
<td>15,400</td>
</tr>
<tr>
<td>Monthly minimum wage</td>
<td>2009</td>
<td>450</td>
</tr>
<tr>
<td>Annual income per person:</td>
<td>2007</td>
<td>3,667</td>
</tr>
<tr>
<td>- average of 20 % of the population with lower income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- average of 20 % of the population with higher income</td>
<td>2007</td>
<td>22,310</td>
</tr>
<tr>
<td>Poverty line</td>
<td>2007</td>
<td>406</td>
</tr>
</tbody>
</table>

4.6 Housing affordability

In the MHML program, the monthly mortgage is 10 % of the gross household income, with a minimum value of € 19.35. The amortization period is 10 years (Table 6). In CCH, households can buy a dwelling with their own savings and/or obtain financing (a loan) from a financial institution. Each household negotiates the loan conditions and the monthly mortgage varies according to their options. Alternatively, a household can choose to rent a dwelling. In the Social Renting Regime, the rent is estimated based on the household income and composition. For households with an income below 3 minimum wages, the rent is less than 20 % of their income (Table 6).
4.7 Housing satisfaction

To compare dwellers' satisfaction with affordable housing, two studies of post occupancy evaluation were used. The study for Portugal was carried out in 2004. Sixteen CCH developments comprising 1,283 dwellings, distributed by the Portuguese territory and representing different types of promoters, were assessed. Data on dwellers' satisfaction level was obtained by questionnaire. From the total of questionnaires placed in the post-boxes, 304 of them were received back (Menezes and Martins, 2005).

In São Paulo, there is still no information on dwellers’ satisfaction with their homes from MCMV program, since this program started in March 2009. Therefore, the results of a post-occupancy evaluation study of a housing development with identical spatial characteristics were used. The Jardim São Luiz comprises 2,301 housing units, but to assess dwellers’ satisfaction a sample of 81 dwellings was chosen. Data on dwellers’ satisfaction was collected, in the second half of 1997, with questionnaires being conducted by students (Romero and Ornstein, 2003).

Both studies assess dwellers’ satisfaction in a four level scale (i.e., completely satisfied, mostly satisfied, mostly dissatisfied, and completely dissatisfied). Among the several questions asked on dwellers’ satisfaction, both questionnaires include a specific question about the satisfaction level with the size of the dwelling.

According to studies analysed, there are many similarities in the way dwellers of affordable housing in Portugal and in São Paulo assess the spatial characteristics of their dwellings. Dwellers positively evaluate the size of the dwelling as a whole and the organization of rooms. However, their assessment is negative for the size of the kitchen and service areas. The level of satisfaction with the size of the dwelling expressed by dwellers of affordable housing in São Paulo Municipality is higher than that expressed by dwellers of affordable housing in Portugal (Table 7).

Table 7. Dwellers’ satisfaction
(Source: Menezes and Martins, 2005; Romero and Ornstein, 2003)

<table>
<thead>
<tr>
<th>Year</th>
<th>Portugal</th>
<th>Jardim São Luíz</th>
</tr>
</thead>
</table>

5 Comparison of space standards

5.1 Number and type of rooms

The number of bedrooms of a dwelling is different between CCH and MHML programs. CCH dwellings can have from no bedroom up to five bedrooms (Portugal, 1951; Portugal, 1997). All MHML dwellings must have two bedrooms (CEF, 2009a). In both programs a dwelling must also have a kitchen, a living room and a bathroom.
5.2 Area of dwellings

Floor area of CCH dwellings must be within a range set by minimum and maximum parameters. The floor area of flats set in MHML program is 71% of the minimum floor area and 61% of the maximum floor area set for CCH. The gross area of flats set in MHML program is 63% of the minimum gross area and 53% of the maximum gross area set for CCH (Table 8). In MHML program, flats are slightly larger than single family houses because they cannot be enlarged.

Table 8. Area of two bedroom dwellings
(Source: Portugal, 1951; Portugal, 1997; CEF, 2009a)

<table>
<thead>
<tr>
<th></th>
<th>CCH</th>
<th>MHML</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor area</td>
<td>Min. 52</td>
<td>Max. 61</td>
</tr>
<tr>
<td>Gross area</td>
<td>Min. 67</td>
<td>Max. 79</td>
</tr>
<tr>
<td>Floor area</td>
<td>32</td>
<td>37</td>
</tr>
<tr>
<td>Gross area</td>
<td>35</td>
<td>42</td>
</tr>
</tbody>
</table>

Naturally, the dwelling floor area per occupant set in MHML program is also substantially less than that set for CCH (Table 9). This parameter is calculated by dividing the floor area of a dwelling by the maximum or probable number of occupants.

Table 9. Floor area per occupant for a two bedroom dwelling
(Source: Portugal, 1951; Portugal, 1997; CEF, 2009a)

<table>
<thead>
<tr>
<th>Number of occupants</th>
<th>CCH</th>
<th>MHML</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum</td>
<td>4</td>
<td>13.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.3</td>
</tr>
<tr>
<td>Probable</td>
<td>3</td>
<td>17.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12.3</td>
</tr>
</tbody>
</table>

For MHML program, the floor area per occupant is 8.0 or 10.7 square meters depending on the number of occupants. It is important to take into account that in dwellings with less than 8.0 square meters of floor space per occupant the prevalence of pathological situations tends to increase. In dwellings with 8.0 to 14.0 square meters of floor space per occupant, dwellers' satisfaction tends to be negative (Pedro, 1999).

Figure 3 and Figure 4 present two-bedroom flats and houses from CCH and MHML program. Plans are at the same scale. Figure 5 shows the furniture and equipment included in each dwelling. The standard physical and use dimensions of furniture and equipment are as defined in Figure 6.

5.3 Ceiling height

For most rooms, the minimum ceiling height set by MHML program is higher by 0.10 m or 0.20 m than that set for CCH (Table 10). This difference seems appropriate since it makes possible to partly compensate for the less floor area of rooms in MHML program and to obtain an internal volume that is not too low.
5.4 Size and area of rooms

The floor area of bedrooms in MHML program is 82% of that set for CCH. The floor area of the living room, kitchen and laundry in MHML program is 60% of that set for CCH. The floor area of the bathroom in MHML program is 44% of that set for CCH. No area is set in MHML program for storage and circulation (Table 11).

![Table 11. Floor area of rooms for two bedroom dwellings](Source: Portugal, 1951; Portugal, 1997; Portugal, 2006; ABNT, 2000; CEF, 2009a; CEF, 2009b)

<table>
<thead>
<tr>
<th></th>
<th>Living room</th>
<th>Bedroom</th>
<th>Kitchen</th>
<th>Laundry</th>
<th>Bathroom</th>
<th>Circulation</th>
<th>Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCH</td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
<td>2.2</td>
<td>2.2</td>
<td>2.2</td>
<td>2.2 m²</td>
</tr>
<tr>
<td>MHML</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
<td>2.5 m²</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>A&gt;2.5 m²</th>
<th>A≤2.5 m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHML</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.5 Furniture and equipment

The furniture and equipment that must be possible to include in a dwelling of MHML program is less than the one that must be possible to include in CCH (Figure 5) (Portugal, 1951; Portugal, 1985; Portugal, 2006; MSP, 1992; ABNT, 2000; CEF, 2009).

The standard physical and use dimensions of furniture and equipment set for MHML program are the same as or smaller than those set for CCH (Figure 6) (Portugal, 1985; Pedro et al., 2006; Pedro et al., 2011; ABNT, 2000; CEF, 2002; CEF, 2009b). The most significant differences consist of the furniture for the living room and the clear floor space for the kitchen, bathroom and foyer. In CCH, the clear floor space is larger to ensure the accessibility of disabled persons. It should be pointed that previous studies concluded that standard size of furniture set for affordable housing in São Paulo Municipality were smaller than furniture for sale in shops (Boueri, 2008).
Figure 9. Plans of two bedroom flats

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Portugal - CCH
Location: Barreiro/Matosinhos
Developer: Cooperative Keral
Year of construction: 1993
Designer: ENGL

Floor area
- Master bedroom: 10,8
- Twin bedroom: 9,8
- Living room: 18,2
- Kitchen: 7,4
- Service area: 2,4
- Bathroom: 4,0
- Storage: 1,4
- Entrance: 3,3
- Hall: 4,2
- Dwelling: 61,5

Gross area
- Dwelling: 75,0
- Common spaces: 7,4
- Total: 82,4

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São Paulo - MHML
Location: Base design
Year of design: 2009
Designer: CFF

Floor area
- Master bedroom: 7,8
- Twin bedroom: 5,6
- Living room: 12,2
- Kitchen: 3,9
- Service area: 2,0
- Bathroom: 2,5
- Hall: 1,2
- Dwelling: 36,2

Gross area
- Dwelling: 42,0
- Common spaces: 4,2
- Total: 46,2

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0 1 2 3 4 (m) 5
Figure 10. Plans of two bedroom houses
Figure 11. Furniture and equipment for a two bedroom dwelling
Figure 12. Physical and use dimensions of furniture and equipment
6 Conclusions and discussion

6.1 Results

Which program has more demanding space standards?
The space standards set for construction of CCH housing in Portugal are more demanding than those set for MHML Program in São Paulo Municipality.

Which social-economic conditions explain the differences in space standards?
Three main reasons explain the differences in space standards.
1. The housing deficit is still a problem in São Paulo Municipality, contrary to Portugal where there is a surplus. A greater demand for housing in São Paulo Municipality contributes to the acceptance of low space standards.
2. The income of poor population in São Paulo Municipality is substantially less than the income of poor population in Portugal. Therefore, low space standards of MHML program are a way to make the price of dwellings affordable for low income households in São Paulo Municipality.
3. The policy approach to provide housing to low income households is different. In MHML program, low income households buy highly subsidized housing. The non refundable investment of the Federal Government is more than half of the dwelling’s price. In order to increase the number of households covered by MHML program, the cost of dwellings is minimized and, as a result, space standards are necessarily low. In Portugal, low income households may either buy or rent CCH. If households choose to rent affordable housing, the rent is estimated taking into account their income. Hence, the aim of affordable housing is to ensure adequate living conditions for dwellers throughout the lifespan of buildings.

How different space standards influence users’ satisfaction?
Affordable housing in São Paulo Municipality has almost half the area of affordable housing in Portugal. However, according to studies analyzed, dwellers express a higher level of satisfaction with the size of dwellings in São Paulo Municipality. Therefore, a direct link between space standards and users’ satisfaction cannot be set. The results suggest that dwellers of CCH in Portugal have higher expectations or different lifestyles than dwellers of affordable housing in São Paulo.

6.2 Discussion

The following paragraphs present an analysis of the relationship between space standards of MHML program and the main policy options for affordable housing in São Paulo Municipality.
1. The main aim of affordable housing policy is to ensure adequate housing for all households. Therefore, setting minimum requirements for housing should be based on a technical study of the occupants’ physical, social and cultural characteristics. The following criteria should be used with decreasing order: current population needs, foreseeable evolution in these needs and limitations determined by economic viability. In MHML program, it appears that political motivations and economic constraints led space standards to fall below the current population needs and their foreseeable evolution.
2. It is widely accepted that overcrowding can affect residents’ mental and physical health (Wren et al., 2000; Sheridan, 2003; Carmona et al., 2010). The pressures arising from situations of overcrowding may lead to psychological distress, mental disorders and less ability to concentrate. Crowded conditions are also linked with increased interpersonal aggression, sexually deviant behaviour, as well as hygiene and accidents risks. Furthermore, cramped homes, which do not fulfil the occupants’ needs, may lead to social cohesion issues (e.g. children who have no space at home to study and/or to play, hang around communal areas and housing estates) and to negative social behaviours (e.g. poor social control of children may give rise to violence and/or vandalism). These health and social problems have medium and long term costs for society. It can be argued that these costs may outweigh the additional public funding that would be needed to support the construction of better housing in MHML program.
3. Given the similarities between Portugal and São Paulo Municipality regarding how dwellings are used, the differences in space standards raise the following question: are space standards too
demanding in Portugal or excessively lenient in São Paulo Municipality? To answer this question we should take into account that space standards specified for Portugal are similar to those set in several European countries, such as Spain and France (Pedro, 2009). Whereas the floor area per inhabitant set in MHML program is near the critical threshold below which the incidence of pathological conditions tends to increase. Therefore, we may argue that space standards set in MHML program only take into account the basic needs of present daily life.

4. MHML program sets the maximum selling price and the generic technical characteristics of housing (CEF, 2009a). The design of affordable housing in this program raises the challenge of finding solutions that, within the limit price, maximize the conditions offered to dwellers. Savings in construction costs could compensate for dwellings with larger areas. To reduce the construction costs various strategies can be adopted, such as: streamlining the design (e.g., minimize the water and sewage facilities), using more efficient construction procedures (e.g., modular dimensions and standardized components) or adopting more economical types of promotion (e.g., self built housing or evolutionary housing).

5. The booklet that sets the conditions for the application of MHML program includes, as an example, plans of a house and a flat. These examples can steer developers to pre-established solutions that are not adequate to the site conditions, population needs or local culture. For each development, a new design should be prepared taking into account the physical environment of the site and the social characteristics of the population. Beyond a proper integration, the research into new designs encourages diversity and innovation in architecture and construction.

6. A building has a long lifespan lasting in some cases for generations. It is not easy to foresee the change in users’ needs. The flexibility of a dwelling facilitates its adaptation to the evolving occupants’ needs, but strongly depends on its spatial characteristics. Very small dwellings have reduced flexibility. The space standards of MHML program only take into account the basic needs of present daily life. A desirable improvement in the quality of life of São Paulo’s population may mean that, in the sort or medium-term, the dwellings presently being built will become obsolete.

7. MHML program defines the requirements to be met in dwellings. However, no requirements are set regarding the building and the neighbourhood, except for one specification about minimum distance between buildings. The urban plot is driven only by the spatial planning instruments applicable to the location, if any. Therefore, the quality of the urban plot may not be guaranteed.

8. In the MHML program, only two bedroom dwellings are planned to be built. This type of dwelling is adequate for a nuclear family with one child or two children, but it is not suitable for other types of families such as single persons, childless couples, families with more than two children and extended families. If dwellings fall short of households’ needs, they tend to modify their environments in an attempt to minimize the shortcomings. These changes, when performed without the supervision of the authorities, may endanger the building’s safety and compromise the building’s image.

9. The Brazilian media reported that in several States of Brazil applicants interested in acquiring a dwelling within MHML program formed long queues at registration offices. According to some reports, some applicants spent the night in queues to ensure their position (Diário Popular, 2010). Other reports refer to queues with more than 1,500 applicants (Tribuna do Norte online, 2009). These reports prove the population’s adherence to MHML program. For households with an income not exceeding 3 times the minimum wage, the conditions to buy a dwelling within the MHML program are very attractive. The monthly mortgage is 10 % of the household income during an amortization period of 10 years. After this period, the household owns a dwelling having paid, depending on its income, between 13.3 % and 39.8 % of the property value. However, the MHML program requires a non refundable investment by the Federal Government of more than 60 % of the selling price of the building. Without enough return of the initial public investment it is difficult to have funds to continue building new developments. MHML program will probably fail to provide housing for all low income households, being thus debatable if it is a fair and efficient application of public resources.
10. Taking into account the previous paragraphs (indicated between brackets), the following improvements in MHML program were recommended (Pedro and Boueri, 2010):
- Increasing the total floor area of dwellings to include larger bedrooms, living room, and toilet, as well as to provide storage space (paragraphs 1, 2, 3);
- Counterbalancing the possible rise of dwellings cost, due to the increased area, with strategies to reduce the construction cost per square meter or the monthly mortgage (paragraph 4);
- Promoting and rewarding developments that achieve high quality and innovation (paragraph 5);
- Encouraging innovative spatial and construction solutions that are economic and adequate to the dwellers’ needs (paragraph 6);
- Setting requirements on the quality of the neighbourhood that address parking spaces, accessibility, urban facilities and services, public spaces and green areas (paragraph 7);
- Enabling the construction of dwellings with one, two, three or four bedrooms and adjusting the program of each development to local needs (paragraph 8);
- Increasing the return on public investment with other economic models (e.g., subsidized rents, self built housing, evolutionary housing or by simply expanding the amortization period) (paragraph 9).

11. In view of constraints imposed by the MHML program, building houses rather than flats may be a better option. In houses, it is easier to design solutions that start with an initial core, where the essential functions take place, and evolve with the progressive addition of new rooms. Evolutionary housing may be a path towards building decent housing, adjusted to the dwellers’ needs at a reasonable initial cost.

6.3 Limitations of the study
When analyzing the results it is important to consider the limitations of the methodology listed below.
1. Only space standards that apply to the dwelling were compared. There can be some compensation of space between the exterior and the interior of dwellings (e.g., the lack of enough leisure space within the dwelling may be counterbalanced by a large private outdoor space).
2. To compare the satisfaction level of dwellers, studies of post-occupancy evaluation of housing developments in Portugal and in São Paulo Municipality were used. The methodology used in both studies was identical, which enabled the comparison of results. In the study for Portugal sixteen developments were assessed. In the study for São Paulo Municipality only one development was assessed. This development is similar to other affordable housing developments in São Paulo Municipality, but results about the satisfaction level of dwellers may not be representative.
3. MHML program is meant to be applied in municipalities all over the Brazilian territory. The São Paulo Municipality has different characteristics from most other municipalities. Some inconsistencies detected in the regulatory framework governing MHML program in São Paulo Municipality may result from the specificity of the territory examined. The urban parameters of MHML program may be undefined due to the need of extending its implementation to the whole Brazilian territory.

6.4 Future developments
Only space standards were compared. To enable a more complete understanding of the quality level of affordable housing it is important to compare other requirements, such as safety, health and comfort.
Designers and developers of affordable housing have a practical knowledge resulting from designing, building and sometimes dealing with dwellers. It is important to know their opinion about space standards presently enforced in both territories.
Besides MHML program, other programs are being implemented in São Paulo Municipality to support the construction of affordable housing. As MHML program, these programs have manuals.
containing requirements or guidelines for housing developments (CDHU, 2008). The requirements for these programs may be compared to understand how the new MHML program situates in the affordable housing being constructed in São Paulo Municipality.

A comparison of the affordable housing in Portugal and Brazil is particularly interesting since both countries share a common language and culture. However, extending this comparison to other countries could contribute to put the findings in the context of a more comprehensive framework.

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Abstract:
The new enforcement strategies in business operation have challenged the control by regulatory mechanism where it evidences the emergence of self-regulation as a new enforcement mechanism in doing business. This recent trend is seen as the response to the critics that bureaucracy and laws limit businesses’ freedom and autonomy. Construction industry is also one of which that receive the imperative handling of self-regulation and one that manifests this, is the formulation of code of ethics for the contractors within this industry. Code of ethics for the contractors is viewed as crucial given that the level of disputes involving them in construction project are high and their profession is often tainted with the reputation of involving in unethical behaviours or at least highly seen as such by the community. However, the impact of implementation of the codes at times is debatable due to its self-regulatory status. This paper will discuss the code of ethics for the contractor as a mechanism for the self-regulation in the perspective of Malaysian construction industry with special reference to the practices of good ethics for the contractors as highlighted in Malaysian standard form of contracts.

Keywords:
self-regulation, construction, code of ethics, standard form of contracts, Malaysia.

1 Introduction

1.1 Background of study
It is generally accepted that self-regulation brings the benefit to various industries in terms of its flexibility in the mechanisms adopted by particular specific industries or associations. Nevertheless, some perceive it as only a myth and are sceptical on its enforcement (Mustapha Kamil, 2009). Construction industry, being very complex and integrated by many aspects and institutions; which is commonly subject to various disputes is seen to benefit a lot from this self-regulation approach if it is enforced efficiently. The business industries in most countries approach self-regulation voluntarily, even though under certain circumstances and methods, it is backed by legislative sanctions. This allows the industry to accommodate its own types and operation in preparing mechanism for self-regulation for example, the Code of Ethics. However, as a result, the industry tends to be lackadaisical in its enforcement. Therefore, this paper is aimed to examine the Code of Ethics as a mechanism for self-regulation in Malaysian construction industry and determine what can be the legal pressures for the Code of Ethics to be enforced. Data analysis has been made by reviewing the contents of literature on self-regulation and code of ethics. Interview also has been performed to obtain practical insights of Code of Ethics enforcement. This study is hoped to pave the way for further researches regarding the Code's enforcement in Malaysian construction industry.
1.2 Construction Industry in Malaysia and Self-Regulation

Construction industry has become among the major concerns for Malaysia in recent decades. For example, in 2011, the Government has intensified Public-Private Partnership through implementation of several projects with the allocation of RM1 billion from the Facilitation Fund which amounted to GBP206 million. Such projects for example are construction of more highways, power plant in Kimanis, Sabah, health academic centre and facilities project such as International Islamic University Malaysia Teaching Hospital, Women and Children's Hospital and Integrated Health Research Institute Complex. Government's commitment in development is further observed in the implementation of growth corridors development such as Iskandar Malaysia, North Corridor Economic Region (NCER), East Coast Economic Region (ECER), Sarawak Corridor of Renewable Energy (SCORE) and Sabah Development Corridor (SDC). For the development expenditure of the corridors in the Midterm Review of the 9th Malaysian Plan, RM6 billion is provided in the 2009 Budget which amounted to GBP 1.2 billion. Major construction projects are involved to deliver these growth corridors. This is further accelerated in 2011 where RM850 million has been allocated for their infrastructure support which amounted to GBP175 million.

The move towards self-regulation in construction industry is treated as significant in Malaysia. The Malaysian Construction Industry Master Plan 2006-2015 (CIMP) developed seven strategic thrust envisioned to place the Malaysian construction industry as a world-class, innovative and knowledgeable global solution provider. The second strategic thrust of CIMP is to strengthen the construction industry image that had been criticised for many weaknesses such as abandonment of government projects, shoddy work, discriminatory awarding of contracts, not being environmentally-conscious and others (Construction Industry Development Board Malaysia.(2006). Thus, self-regulation is recommended to achieve this thrust. Among the key initiatives are professional bodies and association self regulating, tightening the particular schemes and licences as well as establishing code of ethics by construction-related associations. Malaysia goes further by providing 'Strategic Recommendations For Improving Environmental Practices in Construction Industry' and promotes self-regulation as one of its recommendation.

Various parties are involved in the construction industry. The owner (employer), the designer (design professional) and the contractor are the key players in a construction project. Meanwhile, the authorities (regulators), subcontractors, material vendors and others are the supporting players. These players are governed by various legislations, guidelines and policies for example the Town and Country Planning Act 1972, the Street, Drainage and Building Act 1974, the Uniform Building By-Laws 1984 and the Environment Quality Act 1974. An important institution, Construction Industry Development Board has been established under Malaysian Construction Industry Development Board Act 1994 (CIDB) whereby the Act establishes a Board to promote, stimulate, improve and expand the construction industry. Various tasks have been undertaken by this Board for instance, carrying out research, providing consultancy research, accrediting and registering the contractors (Natkunasingham I. et al, 1999). This Board is also responsible in regulating the conduct of the contractors by providing many seminars, trainings as well as developing Code of Ethics as guidance for the contractors.

Other important institutions are such as Malaysian Institute of Architects that controls, promotes and organizes in the matters of architecture, Board of Architects Malaysia which is a statutory authority responsible for the enforcement of the Architects Act 1967, Board of Engineers as well as the Board of Quantity Surveyor in Malaysia which operates similar functions. As the key players in

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the construction industry, these institutions play important role in promoting self-regulation by being given the tasks to develop schemes and incentives as well as various codes of ethics to increase construction performance.

2 Self-Regulation as a New Mode of Governance in Industries

The emergence of self-regulation as a mode to govern the industries is due to many reasons as can be seen today. It can be legal, political, social and economic reasons for the industries to self-regulate. Mainly, it is due to the perceived shortcomings in the enforcement of legislation, seen by
the industrial community as a barrier to efficacy. The rapid growth of global economy creates many emerging complex modes of transactions, administrations and leaves huge venues for disputes in the markets. Many are skeptical to the sufficiency and ability of the legal infrastructures to cope with these market explosions where for an instance, they are perceived as ‘too-slow, cumbersome, and complicated (and hence too costly)...’ (Hadfield, 2010, as cited in Sorsa, 2010). The expansion of companies’ businesses globally especially in countries with a weaker regulatory systems also demands that the industries need to be governed with the private regulator’s hand rather than ‘old-fashioned’ legal infrastructure. In some developing countries, self-regulatory chances put up by the government in their unwillingness to regulate, might become incentives for the multinational corporations that are attracted to their weak regulatory systems to invest in these countries. (Haufler, 2001 as cited in Graham and Woods, 2006). Thus, it is submitted here that self-regulation emerges in these countries, politically motivated in the need of changes in their economy as a mechanism for the country’s growth.

Self-regulation also emerges as response from the industries to the pressure from the society members such as consumers, activists and NGO. (Graham and Woods, 2006). Strikes, boycotts and campaigns adversarial to the companies which involve in particular unethical practices are commonplace. Hence, many standards, schemes, management systems or codes are being developed or complied with to avert criticisms by public.

Public regulations normally involve some lengthy process of formalities than private self-regulation. Thus, more time is involved, higher costs are required and more expenses as regard to the technicalities as well as expertise also need to be spent. In contrast, costs of formulation, preparation and enforcement within the self-regulation mechanisms are much lower since these activities are mostly centralized around the experts within the industries themselves. Williams, (2004) suggests that ‘the emergence of self-regulatory regimes within selected industries is a rational response to external pressures in the marketplace and the broader societies in which firm operates’.

3 Self-Regulation and Code of Ethics for the Contractors

The construction industry has familiarly associated with the image of being "Dirty, Dangerous and Difficult". Many problems have been associated with construction industry. For examples, according to the statistic released by the Ministry of Housing and Local Government, until 31 December 2009, the construction of 281 housing projects in the country were categorized as sick projects, involving 40,686 buyers meanwhile 148 projects were abandoned projects involving 31,824 buyers. Meanwhile, a survey regarding how professional ethics including by the contractors impact on construction quality demonstrates that ‘ethical standard in Malaysian construction industry is considered lower’, while ‘quality-related issues are found to have correlation with unethical conducts of the construction players’. (Abdul Rahman, et al 2010). It is thus pertinent to transform this perception in order to ensure the sustainability of construction industry and self-regulation is seen as significant in changing the way business is done. Obviously, it departs from the usual approach since through self-regulation, industry is more flexible in the enforcement frameworks within its own sphere.

Self-regulation can be enforced through various tools. Among them are the codes of conduct, reporting activities, environmental, social and sustainable management systems, certification schemes, CSR values, labelling schemes, transparency and disclosure guidelines as well as stakeholder engagement and dialogue and rating agencies. (Albareda, 2008). Reviews on the literature on the subject of code of ethics somewhat found out that in many occasions, the term of 1 n 1 above.

For example, Anon. (2003) refers corporate codes of behavior as ‘corporate codes of ethics, corporate codes of conduct, or less frequently, as standards of a corporation’. Meanwhile, Langlois and Schlegelmilch, (1990) as cited in Mcdonald, (2009) describe that codes of ethics as ‘a statement laying down corporate principles, ethics, rules of conduct, code of practice or company philosophy, concerning responsibilities to employees, shareholders, consumers, the environment and society’ and they expand the discussion of ‘code of ethics’ to include ethical guidelines, ethical policy, codes of conduct and governance directions. Further, their study highlights the difference between corporate code of ethics and professional codes whereby the former affects within the particular organization and the latter works within members of a professional body.

To achieve second strategic thrust of Malaysian CIMP 2006-2015, namely through self-regulation in addressing construction problems, the Government is aware of the necessity to have a specific code of ethics for the contractors. Based on the resolution of the Forum on Integrity in the Construction Industry in September 2005, CIDB has been given the task to develop this code and the Code of Ethics for Contractors (The Code) became effective on 1 March 2008. It outlines six key principles regarding the contractor’s ethical practices as below:

Principle 1: Honesty in carrying out responsibilities.
Principle 2: Compliance with the laws and regulations.
Principle 3: Respect for individual and community
Principle 4: Importance of quality, skills and standards.
Principle 5: Importance of safety and health.
Principle 6: Importance of environmental preservation.

The Code is accepted and adopted by all building contractors in Malaysia, whether local or foreign contractors, in accordance with the definitions in Act 520 (Construction Industry Development Board Act, 1994 whereby all contractors are obligated to abide by this Code of Ethics. (Clause 1.2 (i) and (ii), Code of Ethics For Contractors, 2009). The wordings in the Code itself are thus unclear as regard to its compliance and enforcement and it has to be studied further to look at these issues. Stevens, (1994) illustrates that the intent behind an application of a corporate code of ethics can be determined based on the following issues such as the manner of how the codes are communicated to employees and the extent of how the code is enforced as well as the impact of violation. These can lead to the answer whether the intent is ‘self-protection, an attempt at promoting ethical leadership or management of a public image’. In this study, review of several corporate codes of ethics studies has been made and it shows that most codes are having little information on the issue of how they are communicated in the companies. Meanwhile as regard to enforcement, it discloses that the degree of code’s enforcement varies for these companies where some codes did not have enforcement and implications mechanism while the others do have them for examples, requirement to sign affidavit of compliance (Cressey and Moore, 1983 as cited in Stevens, 1994), termination on code’s violation (Pitt and Groskaufmanis, 1990 as cited in Stevens, 1994) and even some minority are having discussion as to legal prosecution (Matthews, 1987 as cited in Stevens, 1994). Regarding this, Sandersen and Varner, (1984 as cited in Stevens, 1994) appeared to conclude that the codes of ethics in their study were not effective given the general and non-descriptive language in the code regarding enforcement.

This study can be explored in comparing the Malaysian code of ethics for the contractors where focus should be made to look on how the Code is applied and enforced against these construction companies. As mentioned above, all building contractors including foreign contractors under the definition in Act 520 are required to accept and adopt the Code under clause 1.2. However, it provides for the application in general as no wording such as ‘shall’ has been used. The Code also outlines all obligations by using the word ‘must’, Nevertheless, there is nothing in the Code that provides for the implication in the event any violation arises albeit clause 1.2 (ii) that provides for the obligation of all contractors to abide by the Code. It also appears that no method of application
is provided in the adoption of the Code. Thus it is not clear whether the construction companies have to adopt the Code in their policy framework or not for the purpose of application. Likewise, the Code also does not provide for the administrative procedures for the handling of any violation. In the absence of such provisions, it can be deemed that the compliance of the Code on its wordings is very much voluntary in nature. Based on the language of the Code regarding enforcement and application, it can be assumed that the Code is a collection of mere guiding principles for the contractors to ensure their ethical behaviours that have no binding effect.

To inculcate the ethical principles among contractors, CIDB in practice has nevertheless taken steps for examples, mandatorily requiring the contractors to attend integrity courses in applying or renewing licenses. Even though, there is no specific monitoring Board has been set up under the Code presently, however at internal level, an informal enforcement team will be put up by CIDB that functions to provide advices for the contractors if any unethical case has been reported against them. Practically, the contractors will normally alert on this step since they have the reputation to be taken care of with CIDB as their regulatory body. (Ahmad Mahyadin, personal communication, June 21, 2011). In addition, the registration of contractors is also subject to specific conditions that also include ethical aspects where the registration can be cancelled, suspended or revoked if they involve in any fraud or misrepresentation in obtaining the certification or fail to execute any work unreasonably. However, it is submitted that these ad-hoc based actions should be completed with a formal task-force enforcement mechanism.

4 Application of general law against the Code of Ethics

The above analysis shows that there is no mandatory requirement for the construction companies to implement the Code of Ethics as a self-regulatory mechanism for contractors. The question thus arises as to how does compliance to ethical practices could be safeguarded? It is noted that self-regulation operates within the backdrop of the law. Therefore, it is necessary to examine construction contract as mechanism of ethics compliance in construction industry and some principles of general law to look at their applicability as background legal redress for non-compliance of self-regulatory mechanisms. In fact, some ethical practices for the contractors have been found mandated but are scattered throughout various pieces of legal mechanism.

The rights and obligations of construction key players are guarded by the construction contract they entered into. To date, the main construction contracts applicable in Malaysia are Standard Forms such as Public Works Department 203A (PWD 203A) (Revised 2007) which is applicable to government projects and Persatuan Arkitek Malaysia (PAM) Contract 2006 which is applicable to the private projects. As the main tool that controls the relationship between these players which includes contractors, it should also be an important mandating mechanism for ethics implementation pertaining to contractors. Therefore, some important express and implied terms of the Standard Forms should be analysed.

4.1 Express terms in Standard Forms of Construction Contracts

4.1.1 Performance of the Contract.

There are many obligations of the contractors that reflect the required ethical practices. Nevertheless, there are some important obligations that must be carried out for example, in the PWD 203A where bills of quantities form part of the contract, clause 9.2 (a) provides that the contractor undertakes that it shall comply with all requirements, statutory or otherwise, regulating or relating to the conduct, trade, business or profession of a contractor, and the contractor shall be fully and solely liable for all costs incurred thereby. This clause is thus arguably refers to all requirements including the Code of Ethics which is not statutory that regulating the conduct of

1 CIDB Malaysia, Contractor Registration Certificate.
contractors. Based on this clause, any breach of Code of Ethics should be treated as breach of this contract.

In clause 10.1(b) of PWD 203A, it is provided that the contractor shall perform the works in a proper manner and in accordance with good management practice and to the best advantage of the Government and clause (d) provides among others that the performance shall be done with the exercise of professional judgment and practice, requisite skill, care and diligence.

PAM 2006 Contract also provides that the employer may determine the employment of the contractor if the contractor fails to proceed with the works regularly and diligently under clause 25.1(c). These in fact imply that the contractor shall take the responsibility and use the skill, care and diligence to exercise construction activities that is more responsible towards the stakeholders. These clauses are thus reflecting the principle 4 outlined by the Code of Ethics where the contractors must uphold quality, skills and standard in their works.

4.1.2 Compliance with the Law

The contractor also shall comply with the relevant laws. This is provided in clause 21.1 of PWD 203A whereby it states that the contractor shall comply with any law, regulation or by-law, or any order or directive issued by any public authority or public service company relating to the works or in the case of public authority or public service company, with those systems the same are or will be connected. Government also should be indemnified against all penalties and liabilities if the contractor breaches any such statutory requirements.

Similar obligation can be found in clause for of PAM 2006 Contract whereby clause 4.1 provides that the contractor shall comply with and submit all notices required by any laws, regulations, by-laws, terms and conditions of any appropriate authority and service provider in respect of the execution of the works and all temporary works. Meanwhile, PAM 2006 Contracts clearly by clause 4.4, places liability against the contractor to pay and indemnify the employer in respect of any fees, levies and charges including any penalties which may arise from the contractor’s non-compliance with any law, regulations, by-laws, terms and conditions.

These obligations are in line with second principle of the Code of Ethics, namely compliance with the laws and regulations. There are many legislations or rules involved in the procedures and process of construction projects. For example, the Environmental Quality Act 1974 imposes prohibition and restriction on main pollution activities into a specific environmental medium. Here, it implies the ethical practices as required in sixth principle of the Code, whereby all contractors must preserve the environment in carrying out their works.

Regarding the workmen, the contractor also shall comply with the Employment Act 1955, Employee's Provident Fund Act 1951 and the Industrial Relations Act 1967. For instance, clause 17.1 of PWD 203A provides for duty of the contractor to register local employees that includes permanent resident workers under the Employee's Social Security Scheme in accordance with the Employee's Social Security Act 1969. In the default to comply this, the government or the superintending officer may withhold an amount from any money which would otherwise be due to the contractor and which in the opinion of the superintending officer will satisfy any claim for compensation by workmen that would have been borne by the scheme had the default was not occurred. The Government may also pay for such contributions which are due and unpaid and deduct it from the amount due to the contractor by the Government.

PAM 2006 Contract provides similar obligation in clause 19. Since foreign workers are allowed to be engaged in private projects unlike the government projects, it further provides for the duty of the contractor to take out and maintain insurance policy for these workers. These reflects the fifth principle of the Code where among others, ‗the contractors must pay attention to the welfare of their workers on humanitarian grounds in all circumstances throughout the period of their services as required by law‘.1

1 CIDB, Code of Ethics for Contractors.
4.2 Implied Terms in Construction Contracts

The implication of terms into contract is one of the important elements in contract law. In many occasions, courts are required to determine these by implying the terms into the contract necessary to give effect to the contract apart from its express terms. In The Moorcook case (1899) 14 P.D. CA., Bowen LJ explained that the implication made was derived from the presumed intention of the parties, with the object of giving business efficacy to the transaction that should have been intended by the parties. The construction contract is similar to the other types of contract in its application of common law rules. Courts will imply terms in construction contract to make the contract works. This study submits that implied terms that applicable in construction contracts which underlie the notion of ethics are as follows:

4.2.1 Workmanship.

The contractor must use proper skill and care in carrying out his obligation under the contract, which means one of workmanlike standard. The workmanship exercised by the contractor is the ordinary skill and care that can be expected from a reasonably competent contractor. It has been suggested that this is a continuing duty during construction process, not only upon completion (Furst and Ramsey, 2001). Thus, as the ethical competent contractors, in performing the construction works, all measures should have been reasonably observed to ensure a socially safe built environment. Construction companies should ethically control and monitor many aspects in their works, for example construction waste management, where they need to professionally scheduled the minimization and recycle of waste program that affect the soil, water and air largely, especially in major projects. Those in fact are the ethical practices within the scope of contractors’ works.

4.2.2 Duty of Good Faith

The application of the duty of good faith, has received different treatment in commercial world. The courts in England hardly acknowledge this duty but on the other hand, other common law countries such as Australia and New Zealand are willing to accept this duty while US recognizes it in contracting. Even though no unanimous definition of good faith has been upheld, nonetheless, the concepts such as fairness, honesty and reasonableness have been associated with the proposition to acknowledge the duty. There are three notions which embrace the doctrine of good faith as suggested by Sir Anthony Mason. Firstly, an obligation on the parties to co-operate in achieving the contractual objects (loyalty to the promise itself), compliance with honest standards of conduct and compliance with standards of conduct which are reasonable having regard to the interests of parties. (Peden, 2003). It is viewed that this duty can be strongly held as the basis for ethical compliance. Construction companies and the employers should be responsible, reasonable and honest in their works. They should govern their relationship ethically to give effect to win-win situation including to the other stakeholders. Good ethical governance thus is reflected through the duty of good faith owed by them towards each other.

4.3 Law Relating to Criminal Offences

In self-regulatory method, nothing should be tolerated if any law has been offended, for example as regard to corporate crime. Corporate crime is defined as “the offences committed by corporate officials for their corporation and the offences of the corporation itself” (Clinard and Quinney, 1973 as cited in Shuan, ca 2011). As an example, it is an ethical practice that the contractors should be honest as provided by the Code, thus they have to abide by the rules of proper tendering process. In the event of non-compliance, this may trigger fraudulent and unfair transaction and if the contractors involve in unscrupulous acts that are against these rules, the criminal law can be used
for example by using the Penal Code.\(^1\) If any issue of bribery is involved, then anti-corruption legislations could also be invoked.\(^2\) This shows that the autonomy given to the self-regulation is always safeguarded by the laws, particularly if it involves serious breach or misconduct.

5 Conclusion

It is obvious that where the Code comprises a broader context of stakeholders where ethical practices should be upheld, the construction contract merely binds and covers the parties in the contract. Therefore, problem will arise where unethical practices are being complained against the contractors by parties outside the contract (Ahmad Mahyadin, personal communication, June 21, 2011).

Tay, (2009) views that implementation of code of ethics should be made compulsory for the companies where instead of being mere guidance, it should be made rules to follow. Meanwhile, Jenkins, (2001) views that to have real impact, it is significant that provisions should be made for the implementation of a particular code and effective monitoring. In addition, there is a suggestion by Judge Thornton that relevant parts of ethical code of Society of Construction Law, UK could be incorporated into among others, standard forms of contract (Uff, 2005). Comparatively, code of ethics for the contractors should be made compulsory for the construction companies to implement. It can also be part of our Standard Form of Contract. This can ensure that the Code does not serve as a mere window-dressing. It is also viewed that the Code can play the role as an important tool for self-regulation in construction industry, but needs to be mandated. Additionally, it is argued that even though no mandatory requirement has been provided regarding the Code, application of general law comes in hand to safeguard the compliance of ethical practices among contractors. However, to secure effective compliance, express provision mandating it should be in place.

The debates regarding the mandatory and voluntary nature of implementation of ethics in construction industry might never ends. The types of self-regulation as discussed above also illustrate that intervention of government regulation is required regardless of how and at what stage it is needed. Even for the voluntary self-regulation, the enforcement should also depend on the principles of general law as its background. The advantages of having mandatory ethical practices in fact are beyond doubt. By having these mandated, the construction companies will have ethical obligations to preserve and liabilities to answer. Even if Code of Ethics is practiced by construction companies, lackadaisical enforcement is expected due to its voluntary nature. Thus, it is possible to examine the situation in the construction contracts since the contracts govern the relationship between the construction players. It is submitted that clauses in construction contracts regarding the performance and compliance of law by the contractor as well as the implied terms of workmanship and good faith are the basis of ethics in the construction contracts, thus placing ethics on the mandatory nature in these contracts. However, this is insufficient as other stakeholders outside the contract will not be safeguarded against unethical practices of contractors. This study is limited in its scope to look at the impact of the Code of Ethics for the Malaysian contractors. In a nutshell, emphasis should be given to extend future researches on how this Code is adopted, communicated and complied within the construction companies since they involve complex issues that provide prolific grounds for discussions. It seems that in near future, this self-regulatory mechanism should not be treated as a mere catalyst in its functions anymore but rather the weaponry substance for the construction businesses to succeed in their _business battlefield_.

\(^1\) Under Malaysian Penal Code ( Act 574) Cheating is provided under section 415 ;Whoever by deceiving any person, whether or not such deception was the sole or main inducement,—(a) fraudulently or dishonestly induces the person so deceived to deliver any property to any person, or to consent that any person shall retain any property; or (b) intentionally induces the person so deceived to do or omit to do anything which he would not do or omit to do if he were not so deceived and which act or omission causes or is likely to cause damage or harm to any person in body, mind, reputation, or property, is said to “cheat”.

\(^2\) Anti Corruption Act 1997 (Act 575) provides for anti-corruption offences including bribery.
6 Acknowledgement

The authors wish to thank Encik Mohd Nazli Ahmad Mahyadin, Director, CIDB Kedah/Perlis for his valuable insights of the Code and the authors are also remain responsible for any error of omission or fact in the views expressed.

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Problems arise in complaints of unethical practices against the contractors by parties outside the contract according to Mohd Nazli Ahmad Mahyadin (personal communication, June 21, 2011). Steps taken by CIDB for unethical practices complained against the contractor despite no specific monitoring board according to Mohd Nazli Ahmad Mahyadin (personal communication, June 21, 2011).

8 Appendix

Problems arise in complaints of unethical practices against the contractors by parties outside the contract according to Mohd Nazli Ahmad Mahyadin (personal communication, June 21, 2011). Steps taken by CIDB for unethical practices complained against the contractor despite no specific monitoring board according to Mohd Nazli Ahmad Mahyadin (personal communication, June 21, 2011).
En route to a knowledge based Building Regulation and Control that interlinks societal requirements, scientific knowledge, education and building practice

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Abstract:
The regulatory system in the Netherlands was one of the first performance based systems. Successful as it was, there are still many problems with its practical application. Research by the Dutch ERB indicates that most of these can be attributed to a poorly functioning knowledge system in which regulations should be embedded.

Building regulations can be considered as a manifestation of knowledge and political decisions that enable practitioners to design and build such that minimal key societal needs will be met. It enables also owners and users to demonstrate that in the existing stock minimal key requirements are fulfilled. They are part of a knowledge cycle that involves all actors in the construction value chain. The actual goal of regulations is essentially to protect the public (general) interests of the end user and/or final owner. The end user / owner, however not part of the system, is remarkably enough legally liable in the case of default.

With this understanding as a basis, it is possible to reconsider structure and content of the regulatory system. Instead of being a tool for disputes, it should be a purposeful tool for actors in the construction value chain. This paper presents an innovative approach to the regulatory system. It comprises three levels for plan evaluation or judging of existing works. Processes and responsibilities are reconsidered, as well as education and roles of actors. The envisioned new approach stipulates better and more economical buildings, avoidance of unnecessary summons, and substantial cost savings in control.

Keywords:
building regulations, enforcement, knowledge system

1 Introduction

The Dutch Building Decree has been under discussion for decades. Excellent building rules and regulations form an important, even an essential link between building practice and society, aiming primarily at the availability of safe, healthy, usable and sustainable buildings. How effective building rules and regulations are, depends largely on their practical applicability, costs and the extent in which they provide for building innovations.

With its Building Decree 1992 Dutch legislation took an important first step en route to renewal of the system. As opposed to the traditional building regulations, the Building Decree does not prescribe in detail how to build, but indicates, by means of performance requirements, which objectives a construction or construction unit will have to meet. This system leaves space for the application of fresh, innovative solutions.

Now, almost twenty years later, it is time to evaluate the concept. Although the Building Decree has emerged to be successful in many aspects, various problems have also been noted which appear to be structural in origin.
The Expertisecentrum Regelgeving Bouw (Expert centre Regulations in Building-ERB) published its first, overall analysis in 2008 (Scholten et al., 2008). One of its conclusions was that the end user – who, as the owner of a building, is legally accountable for it to meet the rules and regulations set – is represented too feebly in the building process, and often does not even play any role at all in the decision-making. Because of this, the end user could become the loser. As a result ERB assigned a group of experts and scientists to further investigate this issue and to come with a solution to this undesirable situation.

Other conclusions were that in the public and private sectors two separate courses of knowledge development took place, and that the building regulations in their present form insufficiently warrant that societal objectives are realised.

2 The present system

As a reaction to the abominably bad housing of city immigrants in the second half of the 19th century The Netherlands created the Housing Act in 1901. From then on the municipalities were responsible for the drawing up and enforcement of regulations in the form of local building codes. In the 20s and 30s of the 20th century, the Housing Act advanced the construction of good - and still attractive - dwellings.

After World War II building contractors began to operate more and more nationwide. They were confronted by masses of different and inconsistent local regulations. In order to be able to rationalise the building process, countrywide uniformity was required. In the first instance the answer were the Modelbouwverordening (the Model Building Bylaw), issued by the Vereniging Nederlandse Gemeenten (the Association of Dutch Municipalities). Because many municipalities stuck to their own building regulations, the call for countrywide uniform legislation became increasingly louder.

In 1982 the Lubbers-1 cabinet took the initiative that finally resulted in the 1992 Building Decree. The Housing Act determined that from then on municipalities, fire brigades and utility companies were no longer allowed to issue regulations supplementary to or deviating from the Building Decree.

This first Building Decree had a completely different structure of directives from what people were used to. In the old system, the building regulations described specific solutions to many regularly occurring construction problems; innovative solutions were not allowed. As the Building Decree starts from the performance, required of complete buildings, constructors could from then on apply both standard and new, equivalent – or better - solutions.

Between 1992 and 1998 the government worked on the second round of the Building Decree which was never enforced. In the year 2003, the presentation form of the Building Decree was changed at the request of the market: the so-called table’s legislation. However, the Dutch government simultaneously introduced a new modelling principle of works which did not link up with the experience of either the construction partners or citizens.

Since its publication in 1991, the Building Decree has been changed 29 times. The Building Decree does not cover the whole spectrum of regulations relevant to building. For fire safe use the Decree on fire safe use of structures holds. For the demolition and the use of a building, municipalities still determine the contents of the regulations by local building bylaw. For specific buildings and safe and healthy work, specialised ministries published their own technical regulations.

Besides these, EU regulations for construction products were introduced, due to the free movement of goods.

In order to reduce the burden of too many regulations and organisational fragmentation the Dutch government recently decided to opt for four important measures:

(a) one _environmental counter_ for the dealing with _environmental_ related permits (the Wabo = General Physical Environmental Rights Act ).
(b) bundle any knowledge at the enforcement level by combining the responsible local services at regional level; on the advice of the Mans Committee (Report Committee Mans, 2008).
(c) organise the fire departments regionally (Wet op de veiligheidsregio’s = Act on Safety Regions).
(d) skip 25 per cent of the content of the Building Decree, ‘de regulation’, and combine: the Building Decree 2003, the Decree on fire safe use of structures, the demolition regulations and other works relates regulations of the building bylaws and the Besluit aanvullende regels veiligheid weg tunnels (BARVW) = supplementary rules and regulations on the safety of tunnels, in the Building Decree 2012; intended to become in force on January 1st, 2012. The Dekker Committee (2008) advised to research whether - a substantial part of - preventive public enforcement of the building regulations could be evaded in case the private sector would take responsibility for compliance (Report Committee Dekker, 2008)

3 A necessary review of the system

The four recent measures are administrative and organisational answers to problems that are rooted deeper. Both, the public legislation and privately developed system of Standards form part of a knowledge system we need in order to realise and manage safe, healthy and sustainable buildings. That system must therefore function properly, which is not the case at present. Regulation becomes the more effective, the better it complies with this knowledge system. In other words: everybody involved in building and its management, must be able to properly understand, interpret and apply the regulations.
This knowledge should also lead to possible adaptations and the development of new regulations. Of course, these regulations should comply with the practice of design, construction and use. Lessons from practice should in turn lead to research and improved regulation. So, attention must be paid to the transfer of knowledge as well as to the restructuring of the regulations and the way in which regulation is affected.

3.1 The cycle of knowledge

The skill of designing and constructing good and reliable buildings is rooted in building science. This in its turn has largely developed empirically and is continually developed further. With a view to practical applications, scientific knowledge has been incorporated in design regulations, governmental rules and regulations and Standards. We may assume that buildings are sufficiently safe, healthy and sustainable when architects adhere to these regulations. Naturally, the same holds good for owners and users when managing and running their real estate. Should they not do so, we ought to change the regulations or stimulate people's adherence to the regulations. Occasionally, or in case of technological innovations, people should be able to deviate from the details in the regulations without necessarily endangering safety, health or sustainability. We have depicted the process outlined here as a circle of knowledge (see figure 1):
The public learning track (green): societal requirements are translated into rules and regulations through legislation, enforced according to public law by means of a licensing system, general terms and conditions, or sanctions recorded in the Housing Act, Gemeentewet (Municipalities Act) and the Algemene wet Bestuursrecht (provisions of administrative law); The private learning track (red) runs from research and science, through technical specifications and known solutions which are transferred in training programs, leading to professional practice. Some of these specifications and agreements have been laid down in Standards and assessment guidelines.

Figure 1. Knowledge circle  
(Source: Scholten et al., 2010)

Building regulations combine the two tracks to become a crossroads. Knowledge of Standards and their background is also essential for enforcement, and knowledge of rules and regulations is just as important for education and training programs. On the basis of the ideal model we are able to clearly illustrate the practice related hitches.

Figure 2 charts these hitches.

Figure 2. Hitches in the knowledge circle  
(Source: Scholten et al., 2010)

The first general problem is that the various actors in the private-law circle of learning work totally independently from each other. Universities, research institutes, schools for professional training, commissioning clients, designers, engineering consultants, building contractors, fitters, suppliers and consumer representatives, they all adhere their own policies, focusing specifically on their direct self-interests, and without much mutual coherence.
The next problem is caused by both a highly fragmented sector and the fact that not a single party individually obtains a competitive advantage from investing in the development of communication systems and therefore does not do so, however these systems are necessary to structure and improve mutual understanding in such a fragmented sector. Centralised communication systems are no-one’s priority, and no ‘central market superintendent’ exists who could organise this.

And then there are other factors. We refer to the characters in the black circles of figure 2.

In order to make public-law rules and regulations and private-law agreements match, the two learning tracks on the left-hand side should be linked up with each other. At present there is no interaction whatsoever.

Standardisation must be based on research. The performance requirements must be based on measurement, determination or calculation methods. At present, unfortunately, many terms and conditions, and Standards are insufficiently founded by science. Due to the lack of proper financing, universities have little interest in the methodology and modeling necessary to formulate rules and regulations. The large technological institutions such as TNO (Netherlands Organization for Applied Scientific Research) largely depend on occasional commissions from the government and industries. This is the reason why they miss the long-term stamina necessary for the development of scientifically sound rules and regulations or Standards.

The knowledge on which the development of regulations and Standards is based has been insufficiently recorded and managed in the present system. After the successful completion of a regulatory project, everybody should be able to easily find the relevant background information with a view to an unambiguous interpretation, and support of the equivalence of possible, fresh solutions. Now, this knowledge seems to ebb away to such an extent that even the responsible bodies themselves do not always understand their regulations.

Individual private-law regulations, such as Standards, have been drawn up based on different disciplinary backgrounds, for instance: by constructors, experts in fire safety, and those in building physics or materials specialists; so these regulations do not match nicely. One result is a differing and inconsistent use of language. As the Building Decree (2003) refers to such regulations, unavoidable inconsistencies develop in legislation. The legislator’s language use is not that of the standardisation commissions, while neither speak the language of the man on the building site (shop floor). The performance approach requires a level of abstract thinking which is not used on the shop floor; specialists with secondary education only understand problems by means of practical solutions. Would regulation be consistent and in shop floor language, the correct application of regulations would improve greatly.

The scope of application of building regulations should probably be extended. According to the original Housing Act, building rules and regulations were meant for the safety and health of the users of a building. Later, as an effect of these, regulations were added with a view to its usability and energy efficiency, later followed by accessibility and sustainability. Up to now, economic and cultural aspects and the prevention of criminality have been included only to a small degree. However, the regulations which have to promote the well-being of construction and aid-workers, such as firemen, have been laid down in the Arbowet (Law on Conditions at the Workplace); one can only find them implicitly in building regulations. Although the construction industry is one of the most dangerous, unhealthy and energy-consuming economic sectors. Presently, the building regulations pay very little attention to maintenance, renovation, and demolition. Surely, a building application or process should not only meet the building regulations, but also satisfy the Warenwet, (the Commodities Act: elevators and appliances), the Wet milieubeheer (Environmental Management Act), the Kernenergiewet (Nuclear Power Act: ionisation alarm), Politiewet (Police Act), Archiefwet (Records Act) and the Law on Conditions at the Workplace. With such complexity it is not surprising that people experience regulations related stress.

Rules and regulations only form a minor part of the curricula in secondary and tertiary professional education and universities. This creates an important lacuna in knowledge both within industries and law enforcement organizations of the government. It seems as if people no longer see how closely the administrative and building laws as well as technical regulations are connected.
Preventive assessment governed by public law is done only on the design stage of a building. So, one cannot even be sure that buildings realized actually comply with the relevant regulations. In today’s building processes the end user, often the owner (to be) of a building, hardly plays a role. As the end users often are parties differing from the commissioners of buildings, their individual interests will generally be insufficiently represented according to private-law in the design and construction stages, so they will have to be able to rely on the public rules and regulations to sufficiently protect their interests. Many commissioners completely ignore all kinds of aspects that, for a society, are desirable and beneficial in the long run – think of the accessibility of buildings for persons with functional limitations, or the adaptability to various purposes of a building. If these requirements have been carefully dealt with in their design and construction, the layout of buildings will need to be converted less often, they will have a lower risk of vacancy, and early demolition due to their being unfit for purpose, will be their fate less often. The only way in which to realise this societal interest is for the government to list minimum regulations and enforce them.

4 A suggestion for improvement

Starting point is the enforcement of regulations whose societal usefulness have been proven. To diminish the burden of overregulation we can classify building plans on three different levels of argumentation per assessment aspect.

A first level is meant for easy assessment of ‘standard solutions’. We assume that possibly 80% of the building plans or existing buildings are or consist mainly of ‘standard solutions’.

The middle level more or less resembles the present Building Decree 2003 that focuses on performance.

The third level we propose, concerns building works in which unconventional and innovative solutions are to be implemented, using a probabilistic approach.

Should an applicant and the law enforcement organisation differ in opinion on whether a proposal meets the level of the standard solutions or the level of the ordinary assessment according to the performance requirements of the Building Decree, the third level would then provide the possibility of assessment according to the societal objectives regarding safety, health, usefulness, energy efficiency and sustainability. In that way discussions as regards technical content need not end in legal disputes.

For many people the introduction of these two new levels will substantially diminish the overregulation burden. At the levels of building and standard solutions assessment of the existing stock, one could then implement the greatly simplified regulations instead of those of the Building Decree 2003. While, at the third level, one can judge innovations according to societal objectives which present regulation does not provide for.

It is in no-one’s interest to enforce regulations that are understood insufficiently. The supplements suggested greatly increase the practical usefulness of the regulations and they enhance the legislator’s actual objective - the enforcement of safety, health, usefulness, energy efficiency and sustainability. That is why regulation is linked with objectives. The guarding of different, but coherent, assessment levels can thus be solved methodically.

We propose also to improve the process of securing regulation related knowledge. Assessment of building plans by local authorities contributes far too little to this end. Together with all those involved in the building process - from science, knowledge institutes, education, architects and engineering consultants, to and including the actual builders and the real estate sector - we must try and form a secure chain of knowledge with properly linked up sub processes. Only with a properly functioning knowledge system can we rely on the building sector to realise of its own accord the societal objectives which we may expect from it.

Procedural innovations are required. We need to attune the three assessment levels. The accepted standard solutions will be assessed according to the performance requirements as laid down in the second category and the question whether the performance requirements themselves meet the
objectives set, is answered by means of the risks approach which we will apply in the third category.
The elements which the three levels have in common, we have to establish at a generic level: objectives, risks models, user models, functional models and performance requirements. The general structure of rules and regulations as presented below, in figure 3, has been depicted in the form of a grey triangle. This part of the structure ensures that the system remains consistent, also when societal objectives change and renewals are introduced. The parts relevant to applicants and assessors are in blue.

Figure 3. Vision on a durable anchoring of development of building regulations
(Source: Scholten et al, 2010)
Table 1. Explanation of captions used in figure 3
(Source: Scholten et al., 2010)

<table>
<thead>
<tr>
<th>Objectives.</th>
<th>Regulations must follow from a single coherent system of societal objectives. It is best to record these in a separate part of the regulatory system.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risks models.</td>
<td>Absolute guaranties for safety, health and sustainability cannot be given. Objectives always deal with possibilities and risks. They deal with the possibility of collapse, the risk of permanent physical injury or death, and the possibility of environmental damage. The present regulations often provide strict limit values for these possibilities and risks. Does exceeding these limit values immediately lead to unsafe and unhealthy situations or limited sustainability? Depending on varying circumstances or the use expected, a building may still, in an acceptable measure, meet the objectives laid down. That is why we will again have to standardize the whole system of regulations, standards and limit values according to the objectives by means of risks models and theory of probability. These models must become an integral part of the regulatory system. This too would greatly simplify regulation.</td>
</tr>
<tr>
<td>User models.</td>
<td>We can only translate objectives into specifications for buildings if we also know how these are going to be used and who their end users will be. Models are necessary because of the variation of use in practice. That is why there is a need for realistic rules and regulations user models. By projecting these user models onto the model of a building, in terms of floors, working spaces and partitioning elements, we can then list functional and performance requirements.</td>
</tr>
<tr>
<td>Functional and performance requirements.</td>
<td>Functional requirements describe the requirements of a building in a functional sense. The performance requirements we set for a building and its parts depend on their function and use.</td>
</tr>
<tr>
<td>Modifiability.</td>
<td>Naturally, the rules and regulations system reacts to ever changing societal opinions. In the past decade, for instance terrorism, climate change and sustainability took top positions in agendas. Undoubtedly, new requirements and objectives will be added in the coming decades which cannot be foreseen for the moment. One should be able to change the rules and regulations as easily as possible, with minimum economic effects for users and real estate managers, while retaining previously acquired rights.</td>
</tr>
<tr>
<td>Knowledge.</td>
<td>Many rules are clear-cut. But it is not always clear why certain rules exist or why others don’t, or why specific terms are used. Often, the persons involved have stored this background knowledge in their minds, but it is not at all or hardly available to third parties. That is why this knowledge has to be publicly recorded so everybody will be able to properly interpret and apply them.</td>
</tr>
</tbody>
</table>

Methodical aspects also deserve attention. One can formulate regulations in such a way that computers can interpret them. This can then be linked up with the latest generation of computer assisted methods and systems already used by the industry. Methodology renewal is also essential to keep the increasingly complex law-making system manageable.

The government wishes to withdraw from markets that might just as well be left to trade and industry, as underlined in the report of the Dekker Committee ‘Privaat wat kan, publiek wat moet’ (private whenever possible, public whenever required). Differing from most of the other industrial sectors, the knowledge process in the building sector is highly dispersed, as has been shown earlier and depicted in figure 2. Most of the parties only take responsibility for their own part in the process; nobody feels any overall responsibility.

The system of regulations and Standards forms an essential link in the knowledge process, so we should continue to invest in it for further development and maintenance. However, that does not happen sufficiently.

In figure 4 we have indicated several points of improvement in the knowledge cycle. The question now arises: should the government leave all this to the market?
Another option is: a combined public/private system. The present public system of assessment against building regulations is directed at the granting of an Omgevingsvergunning (environmental permit). Moreover, the insurance industry could develop a generally acknowledged private assessment system, covering everything, including conveyance. In this scenario insurers should only be willing to insure risks after a commissioning client has first performed such an assessment. This reduces risks for the insurer and increases guarantees on quality delivered for consumers. For simple construction works, built according to the solutions method, such a guarantee is not required; in which case the client can choose for building with or without a guarantee. The private system proposed is also suitable for matters concerning labour conditions. Should contractors construct buildings with such a guarantee, the authorities could then reduce their administrative charges, or they could even decide to drop the public law assessment altogether. In any case, this solution would require less public law inspection on the spot. In the same way an insured guaranty at the sale of a building can prevent claims of insufficient performance.

In an organisational sense, acknowledgement should be organised for independent technical-legal arbitration, so that for applicants which have a conflict with authorities on technical points, the dispute can quickly be settled on technical-legal arguments. The formal road of objection and appeal according to the Algemene Wet Bestuursrecht (General Administrative Law) is much too cumbersome for this. Furthermore, the knowledge should become easily accessible and actively promoted through training, publication, the internet and knowledge systems – and transferred to - professionals in - the building chain as well as the law enforcement organisations.
Moreover, emphasis could shift from design to process assessment, and possibly to process certification. That is to cover the complete process from design to the building process, including quality management and guarantee after conveyance. This quality related thinking (ISO 9001) has been accepted in many sections of industry, but what would this mean for the organisationally strongly fragmented building sector? The ultimate test in quality related thinking is customer satisfaction, but as already stated, the actual customer, the end user, generally, takes not part in the Dutch building process. Besides, designers, contractors, suppliers, and authorities have shared responsibilities: nobody feels accountable for the whole process. Although integrated contracts are becoming increasingly popular -owing to the need of integral accountability -they still only constitute a tiny part in the present market.

Furthermore, we now see the development of computer-interpretable provisions and regulations and knowledge based rules as well as methods of numerical analysis; thus everybody can automatically assess a design according to BIM, building information models, before applying for a permit (Gielingh et al., 2010). Naturally, the applicant and law enforcing organisation ultimately remain accountable for the integrated design. Only when builders and applicants do have the overall knowledge, buildings will be realised that not only actually meet the regulations on paper but also in practice.

Moreover, with a coherent approach also methodical improvements can be implemented and monitored leading to consistency that, by means of reference, forms part of the same chain of knowledge.

5 Economic and societal relevance

Structural regulation fulfils a key role in the translation of essential societal needs regarding the built environment. As we are all regular users of that built environment, whether it be living, working, recreating or travelling, that regulation is of essential societal significance. However, everything has its price. When we look specifically at the development, learning, applying, enforcing and implementation of the rules and regulations – which we have symbolically represented with the two knowledge circles in figures 2 and 4 – then this refers to a process which involves thousands of specialists on a daily basis. There are no exact figures on the commitment of people and costs. Also, the construction, management and maintenance of real estate involve substantial amounts of money. Some expenses directly contribute to the quality of the built environment; other expenses are needed solely to apply regulations, so at the best they contribute indirectly to the safety, health and sustainability of buildings. The latter expenses are probably partly unnecessary and too high.

Moreover, costs arise when a design or existing works does not meet the regulations set, because the applicant simply knows them insufficiently and/or due to limitations in the enforcement system. At present, enforcement takes place mainly by means of random checks based on paper building plans. Enforcement should take place much more on the basis of buildings actually constructed, specifically with a view to the real risks for which these regulations have been written.

According to some estimates tens of millions of euro could be saved with our proposals for renewal of the system as a whole. When the knowledge circle is ignored there is a risk of needless costs for society. The unnecessary costs to renew the existing building stock in case of Building Decree 2012, developed with the only goals to diminish the volume of regulations to get less administrative burden, are estimated ad € 5 mld and the administrative burden will still be the same. On the other hand a lot of interpretative discussions are expected and technical insufficiencies are not solved. The reason for more than 170 questions of the Parliament to the Government.

How much the improvements we propose will actually yield, cannot be estimated accurately, but with a conservative estimate we set it at 10-20% of the direct costs; with an estimated annual regulatory effort of € 1.2 – 1.6 billion and a building production of about € 60 billion, this would lead to an annual cost reduction of € 120-240 million for local authorities and trade and industry (Scholten et al., 2010). We have here excluded the societal and economic advantages for the
building sector, management and use of real estate, but these advantages will as estimated also be very high, expressed in money: hundreds of millions of Euros per year.

6 References


Energy saving goals require reform of building regulations and control

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Abstract:
The energy saving potential of the building stock is large and considered to be the most cost efficient sector to contribute to the CO2 reduction ambitions. As long as the price of renewable energy is still not competitive with fossil energy, the energy saving goals can only be reached supported by severe governmental policies. In Europe the Energy Performance of Buildings Directive is a driving force for member states to develop and strengthen energy performance regulations for new buildings and energy certificates for the building stock. The goals are to build net zero energy buildings in 2020 and to reach a neutral energy situation in the whole stock by 2050. Research delivers signals that, although technically feasible, actual results of the policies and regulations are not as expected. Theoretical energy use calculated on base of the design standard for newly built houses and assessment standards for energy certificates of existing dwellings differ largely from the measured actual energy use. The potential of the existing building stock is even higher, but harder to harvest. The paper will present findings of several research projects providing evidence of malfunctioning of current approaches. Based on this, the paper will present some ideas of innovations in the regulatory and control systems and suggestions for research to support alternative solutions.

Keywords:
energy saving, energy performance, building regulations, building control

1 Introduction

The European building sector is responsible for about 40% of the total primary energy consumption. To reduce this share, the European Commission (EC) has introduced the Energy Performance of Buildings Directive, the EPBD (2010/31/EC). This framework requires member states to develop energy performance requirements for new buildings and a system of energy performance certificates for all buildings. It also requires member states to develop policies that require to built only ‘low energy or Passive Houses’ by 2020. More and more countries, but also regions or municipalities, formulate ambitions for net zero energy or carbon neutral houses also on the shorter term.

Most savings can be realised in the existing stock. National and local governments have formulated ambitions, stimulation and subsidy programmes to stimulate large scale renovations. Formulating ambitions and sharpening regulations is relatively easy to do. Technical solutions are currently available to realize the passive house standard in building projects. There is quite some evidence however that the mainstream of building processes do not lead to the pre-defined quality. Traditionally the municipal departments of building control in most countries had an important role in assuring that building plans and construction processes would lead to buildings that meet the minimum required quality levels. There is a tendency to put more emphasis on the responsibilities of owners and private parties to ensure quality. This means that the private parties will have to
improve their working process and will have to learn to handle performance guarantees. Owners will require guarantees from the designers and building companies for the quality of their property. Certification and accreditation of parties, processes and products will become more important for building processes in general. For the realization of high energy performance standards, a reliable quality assurance system will be very important. In most countries that have some experiences with passive houses some form of performance guarantee and associated quality assurance scheme exists. It is important to study these examples.

In this paper some developments in building regulations and building practice will be described to highlight the role of building regulation and building control in the context of the increasing energy saving target for new as well as for existing dwellings. We start in section 2 with an elaboration on the trends in regulations and building control. In section 3 the results of a study on the relation between the levels of energy performance regulations and the actual energy use in newly built houses are presented. In section 4 we show the example of certification of passive houses as a valuable contribution. In section 5 the situation of the development of policies for the existing dwellings is described. Section 6 presents some conclusions. Finally section 7 introduces the goals and working programme of the CIB-TG79 task group „Building Regulations and Control in the face of Climate Change“, which addresses all these issues.

2 Developments in systems of building regulations and building control

Building regulations are the subject of an ongoing debate between, on the one hand, those in favour of deregulation and reducing the administrative burden and, on the other hand, new quality demands that require government intervention. Energy and climate change concerns belong to the core of policy developments of the European Union and lead to directives that demand member states to develop regulations and enforcements schemes that ensure very energy efficient new buildings and instruments that stimulate the improvement of the existing stock. So, although the general development in European countries leads to less government intervention in the building sector, in the field of energy efficiency the number of regulations increases and become more stringent.

Currently in the Netherlands, both sides of this debate appear to be gaining in importance. The desire for deregulation is leading to the opinion that greater emphasis should be placed on the responsibility of property owners, which could lead to less government intervention. However, the existing forms of quality control for private actors in the Dutch building industry seem to be of quite a low standard. Accidents occur and physical quality does not appear to be sufficiently important. As the CO\textsubscript{2} and energy targets increase, stronger regulations and accurate building control become a priority. In the past ten years, it has become increasingly clear that the quantity and quality of assessments carried out by many municipal authorities leave something to be desired (VROM Inspectorate, 2007).

In this context we should remember that the client and the parties who engage for the design and construction stages have primary responsibility for complying with regulations. When a building permit is granted, this suggests that the plan has been shown to comply with all the regulations. But this is not the case. In practice, a permit is granted because, during the checking process, the plan was not found to deviate from the regulations.

We will now return to the continuing call by politicians for greater deregulation and easing of the administrative burden. In 1997 we contributed to the building-regulations project as part of the MDW (Market Forces, Deregulation & Legislative Quality) programme of the Ministry of Economic Affairs. The purpose of our research was to formulate deregulation proposals on the basis of examples from other European countries (Visscher, 1997). Notably, in those countries, many private-sector parties are involved in assessment and inspection. We have studied (Visscher, 2000) how the responsibility for these tasks could be transferred to the private sector in the Netherlands too, primarily through the certification instrument. The Ministry of Housing, Spatial Planning and
the Environment (VROM) also took up this idea. Since the end of the 1990s, it has been developing a process certificate for assessing building plans against the requirements of the Building Decree. In current government is aiming to drastically reduce the administrative burden. Again, the field of building regulation is seen to have a great deal of potential in this regard. A few years ago, the government appointed the Construction Sector Fundamental Review Committee (Commissie Fundamentele Verkenning Bouw) chaired by Sybilla Dekker, a former Minister, to draw up proposals for the far-reaching simplification of building regulations. The committee recommended the abolition of preventive assessment of building plans by local authorities. The client should be responsible for complying with the regulations and should also ensure that sufficient checks are in place. It can engage a certified body to do this, but there may be alternatives. The role of the municipal authorities will shift towards that of process auditing, i.e. supervising the checks. The question is then: how this can be put into practice?

In many countries there are problems with a lack of compliance with building regulations, and this often serves as a stimulus for reviewing and improving the system of building control. The considerable pressure to deregulate in the Netherlands has parallels in other countries. There is a clear trend towards increasing the role of private parties. In many countries, the role of local authorities in carrying out assessments and implementation inspections has virtually disappeared. Therefore it is interesting to study innovative ways in which quality is guaranteed by private parties. The certification of passive houses is a field that requires building actors to transform the usual building process into a performance based approach and to learn by doing. In section 4 we illustrate quality assurance processes for passive houses that exist in some countries. First in the next section the need for more quality assurance will be illustrated.

3 The realisation of required energy performances in building processes

In 1995 energy performance regulations were introduced in the national building regulations. It consists of a calculation method laid down in a national standard EPN (energy performance norm) and a limit value, the EPC (energy performance co-efficient). Since the introduction the EPC was sharpened several times. It started at 1.5 in 1995 and since the 1st of January 2011 it is now on the level of 0.6. The EPC is a non dimensional digit. All building characteristics and building services that affect the energy demand for space and hot water heating, ventilation and lighting are incorporated in the calculation of the energy index (EI), which is the basis for the EPC. After more than 15 years of Energy performance regulations in the Netherlands, only few representative statistical studies were conducted to assess the effect of the regulation on the actual energy use. The samples were of limited size. In two of these samples, no statistical correlation was found between the EPC-level and actual energy use per dwelling or per square meter. In the analysis of the WoON survey, carried out on behalf of the Ministry for Housing, Planning and the Environment in 2006 and which is representative for the Dutch housing stock, no correlation was found between the different levels of the EI and the actual energy use per dwelling and per square meter.

We found that building characteristics (including heating and ventilation equipment) were responsible for 19 to 23% of the variation in energy used in the recent building stock. Household characteristics and occupant behaviour seem to be responsible for 3 to 15% of the total variance. Neither our study nor the studies found in the literature allow to state that building characteristics, household characteristics and occupant behaviour altogether are responsible for more than 38% of the variation on energy consumption of dwellings built after 1995. Therefore at least 62% of the variation in energy use is unexplained yet.

There are indications from literature that the explanation for this remaining part could be related to buildings being realized differently than written in official documents and to HVAC services running under very different conditions than assumed on paper. A report by Nieman (2007) showed that in a sample of 154 dwellings, 25% did not meet the EPC requirements: the EPC was incorrectly calculated; nevertheless the building permit was issued. In 50% of the dwellings, the realization was
not in accordance with the data used to calculate the EPC. Gommans (2007) monitored for 17 years the energy performances of energy efficient buildings. 40% of solar boilers appeared to function poorly. Only 25% of the heat pumps reached the expected efficiency. This was essentially due to realization faults, lack of control and lack of continuous monitoring. Another study by Elkhuizen e.a. (2006) in office buildings showed that up to 28% energy could be saved by better monitoring. Taking into account the fact that tightening the EPC did not lead to less energy use for heating and that 62% of the variation in energy use is still unexplained, it seems legitimate to be careful about a further tightening of the EPC and to search if there are more efficient means to really decrease the energy consumption of newly built dwellings. This could be done by ensuring a correct realization and monitoring of the calculated performances, putting attention on the knowledge needed by contractors and on an effective building control process.

4 Certification of passive houses

According to the EPBD recast before 2020 all newly built buildings will be at the level of nearly zero energy buildings. In section 3 we have seen that in the Dutch practice current required levels of energy use are not met and it is not likely that the European targets will be realised by only putting the regulations at a higher level. In this respect it is useful to look to examples of quality assurance of passive houses that exist in some countries.

Quality assurance of passive houses, and associated technologies, has its origin in the verification and prediction of a restricted energy demand. Passive house project certification is not focused on issues like stability, safety, or more general environmental performance. Guaranteeing an energy performance is a relative new issue in building processes, requiring a shift in general thinking from means contracting to performance contracting. The urgency of the energy issue requires a swift implementation of (energy) performance contracting in the construction sector. In this paper passive house certification is regarded as an innovation in building processes to provide better building quality in general. Related to the introduction of passive house certification schemes the issue was raised how such initiatives can also upgrade knowledge in the construction sector.

Different European countries show a different embedding phase and related market penetration of passive houses and quality assurance of passive houses. Some countries like the UK, Ireland and the Netherlands are still starting up initiatives, while others like Germany, Austria, Switzerland, Belgium, France, and so on, provide a framework for grants and/or tax reductions and associated quality control procedures. In Western Europe the passive house standard is still a voluntary standard, while regions in Central Europe are already developing initiatives to include the passive house standard as a legal instrument and/or obligation for new constructions. Existing voluntary certification initiatives are different in different countries. Some harmonization between the different national initiatives might be interesting. Especially countries with no certification can already duplicate the most successful initiatives. Early adaptor countries have developed financial aid for passive houses, as well as a performance oriented quality approach for the design and construction process of passive houses. Control of quality of the design process, the construction process and the post construction inspection and testing of passive houses is considered as an essential feature, before stimulating the dissemination of information considering best practice demonstration projects.

Since the implementation of the European Directive 2002/91/EC and since the introduction of project related energy performance requirements and e.g. the passive house concept, problems about guaranteeing (energy) performances and information flow among building partners and quality control have become more significant. The EPBD and the passive house certification are being used to improve product and process modelling in commissioning for existing and new buildings as they are accompanied by a process of certification. EPBD calculation procedures are in many countries still not adapted to specific passive house technologies. This means that in many countries for passive house projects both PHPP and EPBD calculations have to be performed. The cost of an extra certification next to the legal energy performance certificate is considered to be a bottleneck.
As part of the process of demonstrating compliance with required energy performance, assessment of the energy performance of design of new dwellings is becoming mandatory in many countries and regions. For most buildings with a building permit, requirements are set for the energy performance as a consequence of the implementation of the EPBD, but also aspects of indoor climate and ecological criteria are sometimes introduced at the same time. It is generally perceived that a good energy requirement does not necessarily bring thermal comfort and good indoor air. Especially summer comfort can be a critical issue to be included in passive house certification as well as the proper working of balanced ventilation systems. In many cases the existing structures for energy performance evaluation, developed in the framework of the EPBD, are not sufficient to guarantee the quality and definition of the passive house.

PHPP software is mostly used as a basis for certification of passive houses. Its main advantage compared to other design and evaluation tools is that it has been specifically created as a design and certification tool for passive houses and that it regularly takes up new research results in its calculation procedures. Certification of passive houses usually also includes an air tightness test. In some cases, also the functioning of technical systems and its effect on indoor climate is directly, or indirectly through evaluation by PHPP, considered. Some countries express the need to include, besides the PHPP calculations, comfort criteria (e.g. Belgium) or health criteria (e.g. UK, Austria). A differentiation in standard including low energy definitions, like in the Klimahaus CasaClima programme, can contribute to success of widespread certification.

In most advanced countries educational programmes for specific target groups were introduced, accompanying the introduction of certification systems. Experiences in Germany, Austria, Switzerland, Belgium and Italy illustrate that quality assurance of passive houses is necessarily related to the provision of passive house education initiatives. New fields like non-residential buildings and renovations require for the further development of more specific quality assurance procedures. It is not clear if the strict passive house definition can or should be maintained, especially since it is sometimes difficult to achieve for small houses or renovations. Also, PHPP calculation procedures in themselves are often not sufficient to evaluate the design of, for example, technical systems in office and school buildings.

5 Policies and instruments for energy reduction in existing dwellings

The largest energy saving potential is in the existing building stock. National and local governments have formulated ambitions, programmes policies and instruments to stimulate the improvement of the energy performance of the existing stock. The most important policy tool required by the EPBD in the European member states, is the issuing of Energy Performance Certificates. In most countries it is current practice to produce an energy label for a building at the moment it is sold or re-rented. In the Netherlands the labels are also mandatory for all dwellings of social housing associations. The label indicates the energy demand for heating and cooling. It is a communicative instrument and there are no obligations to improve buildings as a consequence of a low label, but the labels are used as a basis for recommendations of improvement. Subsidy schemes are more and more related or combined with the labels. And there are some signs that a better label affects the price of houses. The label data bases already cover a reasonable share of the housing stock in the Netherlands. They form a basis to monitor the progress of the renovation practices. Besides this it is also useful to study the effect of improving energy labels on the reduction of the actual energy use. Later in 2011 accurate figures and insight can be produced by the OTB Research Institute of the Build Environment of Delft University of Technology. As for now already some expectations can be formulated.

The progress of renovations and energy upgrading measures stays far behind expectations and formulated ambitions in 2008 when most of the policies, covenants and improvement programmes were set up. The social sector in the Netherlands is still relatively large (35%), well organised and relatively ridge. A few years ago the sector formulated ambitious programmes, but these are nowadays scaled down because of several reasons. The economic crises reduced the financial
position of the housing associations. The housing market also dramatically slowed down which also affected the funding for renovations because this largely depends on the sales of property. Also it proved to be difficult to get improvement of tenant for renovations that require an increase of the rents (70% of the tenants have to agree). It is hard to assure the saving of energy costs resulting of the improvement of the dwellings. The actual energy use is largely influenced by the use and behaviour of the tenants. The aforementioned study of OTB will provide good insight in this relation, but there are already some preliminary figures that demonstrate the difficulty in _forcing_ reduced energy use by improvements of dwellings. The dwellings with the worst energy label (G) in practise use far less energy as expected, while the most advanced dwellings (A) use much more. This can be explained by a combination of the rebound effect and an increase in comfort level of the dwellings.

In the home owner sector the issuing of energy labels stays yet far behind. Although they were mandatory, until now there has not been an enforcement system. From 2012 on a label will be required for each property transaction and this will be checked by the notary in the Netherlands. Energy labels will become common practice and affect the sales price. Still there are no obligations foreseen to make improvements and higher labels mandatory. It is hard to require investments and property rights are probably an obstruction. Still there are some ideas for taxation measures. Bad labels could be punished with higher transaction taxes or higher property taxes than good labels. Such measures were suggested by the Platform for Energy Transition in the Build Environment. It is not likely that these measures will be adopted by the government on a short term however. But if the saving potential of the existing stock is taken seriously it seems that firm policies and regulations will be needed.

6 Conclusions

The necessity to drastically reduce fossil fuels seems without any doubts these days. The built environment offers a large potential of savings. Severe insulation and product innovations can reduce the energy demand for heating and cooling for a large part. The remaining energy demand can be delivered by renewables like sunlight and heat, district heating, heat pumps etc. The remaining electricity demand for appliance's can in the first place be reduced by further product innovation and then be provided by photo voltaic panels. Solutions are there. There are no reasons not to apply this in new buildings at a large scale on the short term. However, a successful transition requires a lot from the designers, engineers, installers and builders. They will have to use new techniques and improve the quality and accuracy of the work. Solutions have to be found that are robust. Solutions that are vulnerable for the application in practice and/or for the unpredictable use of the occupants should be avoided. Evaluations of the current practice show that there is still a large world to win. The building regulations should set demanding targets, but what is surely needed is a better quality control in the whole process. This control should be carried out by the building practitioners themselves. They are the experts! But this will only start working if it is demanded and supported by regulations for certification of people and processes. Although the potential is higher, the existing stock will be harder to tackle. Experiences show that it is hard to increase the numbers of severe renovations. And even more that the savings in renovated dwellings stay behind expectations because of rebound effects. There are many barriers: renovations are expensive, occupants mostly do not want the trouble and sometimes aesthetics make a change of the facade unwanted or impossible. On the other hand a large share of the current existing stock will have a very long life span, just because the replacement grade by new dwellings will simply be too low to provide enough new dwellings. In this perspective, there will always be a large need for renovations to expand the life span and this provides possibilities to improve the energetic quality. The fear however is that this _normal_ process goes to slowly. Maybe there is still a need for further smart product innovations to develop solutions that have a high contribution to the reduction of energy demand, are cheap, easy to apply and do not cause trouble to the occupants. The fast decrease of the price of PV cells is promising. The markets needs to be stimulated by regulations. It
is especially hard to persuade homeowners to invest in energy saving measures. Besides that more insight has to be developed in the effect of behaviour on the actual energy use. Possibly the pricing of energy could contribute to more consciousness use.

7 CIB Taskgroup 79

Since a few years the attention for building regulatory systems and enforcement procedures is growing. Various developments in society, politics and the construction industry have influenced changes in the systems of building control in the last 20 years. The influence of climate change and the related demands on buildings will have a very strong impact of further transformations in this field. Therefore CIB has established Task group 79, Building Regulations and Control in the Face Climate Change. It will be useful to compare developments of the systems of building control in countries worldwide. How do the various countries deal with the demand of deregulation and privatization of enforcement tasks? What are the effectiveness and efficiency of the systems? Could green promotion incentives be incorporated to improve the systems? How do the public regulations and enforcement systems contribute to the basic quality of buildings? Are the current systems suitable to ensure that buildings will have a very low energy demand and are comfortable, healthy and safe at the same time? What are the ideas to improve or change the systems? And what will be the impact on these systems from climate adaptation measures in the longer run?

The task group will make an original contribution to the CIB Sustainable Construction priority theme. The majority of research on sustainable construction addresses the development of innovative techniques. However, there is now awareness that it is equally important that mechanisms are developed which can effectively implement the new techniques on a large scale. These will include building regulations which incorporate appropriate incentives for the promotion of the green agenda and which therefore stimulate the use of new techniques. Equally, systems of building control will also be required which are capable of monitoring the effective and accurate design and construction of the buildings. These and similar issues will be addressed by the proposed task group.

7.1 Working programme

The core interest of TG79 is: new alternative visions on the role, the system, the formulation, the content, the organization of building regulations and building control because of the changing circumstances of climate change.

The changing circumstance leads to research to address:

The balance between command and control regulations versus incentives;

The balance between the role of public and private parties in carrying out the tasks of control;

The new role of control and supervision: form a strong focus on control of the design to more monitoring of the building process and testing of the quality of the final building and post occupancy monitoring.

The role of regulations for existing buildings and adaptive re-use of buildings.

Alternative approaches to reduce the gap between level of energy regulations and level of actual energy use?

Contributions of members of the task group can be various and will report about recent research findings from different countries worldwide that lead to new insight in these matters.

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Abstract:
There are two main types of land ownership in China – state owned land, and land owned by village communes. During the rapid urbanization of China in the past 30 years, state owned lands were sold and developed into high densities apartments. These apartments were built literally surrounding existing rural villages. Village lands were, however, not allowed to be developed because of its rural history. But when the villagers saw the profits of development, they simply build new apartments illegally at rates and densities even higher than those on state owned lands. By now, the political problems of these illegal developments are too large to be handled by local city governments. Hence, as we now see, there are high density apartments built by villagers right inside city centres. Very often these apartments are poorer in qualities. This paper traces the history of this development, and tries to induce property right implications on excessive land exploitation, in the absence of effective building regulation and control.

Keywords: building regulation and control, property rights, state owned land, urban villages, village communes.

1 Historical background

In mainland China, there was basically a feudal land system before the Chinese Revolution in 1911. After 1911, a system of private land ownership was still, by and large, enforced by the Chinese Nationalist Party. The Communist Land Reform started in 1946. Basically in this reform, land and other properties of landlords were expropriated and redistributed. And after the Peoples’ Communes and the Great Leap Forward in the 1950s, collective agricultural land ownership was established. Starting in 1978, these collective lands were assigned to individual families under Household Responsibility Contracts.

By now, there are basically three types of land ownership in China: (a) land for family village-houses (宅基地); (b) Collectives’ land (集体所有土地); and (c) state owned land (国有土地). Except for a small portion of land on which family village-houses were built, lands in China were basically non-privately owned.

In December 1987, land use rights were first auctioned in Shenzhen. State-ownership rights on land were then separated from use rights; thus allowing private ownership of land use rights for a given number of years, to be bought and sold.

After 1989, the rights to develop land were decentralized - down to the local – xian” level governments. Xians in China should not be confused with counties in the west. Xians are much smaller: there are altogether 2,860 xians in China. Each is, on average, 3,000 square kilometers in area; and 0.45 million in population.

The tax sharing reform in 1994 allowed the Chinese central government a much larger share of the total national tax revenues than that of xians. But on land sales revenues, the xians share much more. In order to make up the loss, local governments started selling much more land.
The actual shares are as follow. Xians can sell land development rights to prospective developers and industrialists; and share 75% of the land sales proceeds; and the remaining 25% goes to Beijing and higher level governments. On the other hand, xians share 25% of the valued-added taxes, which are levied at 17% on any production on the land sold upon development. Xians rely on these incomes to build infra-structures and other facilities to attract even more investors. See Cheung (2009). Under this xian system, land sales income, plus subsequent value-added taxes, are the keys to government finance; and hence there is a financial dependence on land sales.

Cheung (2009) argued that the introduction of the xian economic system was the most influential economic institution contributing to China's economic success over the past twenty years. It took just 30 years for the urbanization rate to grow, from less than 20% in the early eighties, to 46% in 2009. Urban population in China is now 0.622 billion. See United Nations Statistics (2007). Together with the corresponding growth in income, house prices had increased tremendously, while cities had sprawled into rural areas.

Given this background of rapid urbanisation, the demand for housing in the cities is so large that villagers are more than willing to give up farming entirely, and start thinking of development on their farmlands. Local xian governments were able to acquire many of these farmlands and legally covert them into state-owned land on which land use rights were sold for the purpose of development. Seeing the huge profits themselves, many villagers simply refuse acquisition offers, and start planning high rises for themselves.

2 Urban villages

Urban village is a special phenomenon in the mainland of China. In the amended version of Constitution in 1988 (The National People's Congress, 1988), a clear statement was made saying that, “land use can be transferred according to the law”, but apparently rural collective lands were excluded as exceptional. Originated from the rural collective land system, urban villages can then be distinguished from other non-village urban regions for their incomplete nature of property rights. Compare to state-owned urban lands, the incomplete property rights in urban villages are also called the “small” property rights, for buildings on rural lands together with the land parcels themselves are not allowed to be transferred.

Previous studies on urban villages are mostly in Chinese. There are two categories, one is focusing on the urban villages as a small society and tries to discuss it using a sociological perspective, the other is focusing on economic analysis, especially on benefits/costs analysis. The former includes the new society issue by Lan (2003), and the self-help housing issue for temporary migrants by Chan, Yao, and Zhao (2003). The latter includes the institutional change analysis by Li and Meng (2004), the public interest analysis by Wang and Ren (2009), the urban village renewal analysis by Liang and Cai (2009), the property rights analysis by Jiang and Wang (2002), and a general economic analysis by Zhou (2007). The only paper with a topic close this study is by Gu and Zou (2002). In their study, they calculated the total rent receivable for urban villages in Guangzhou and their nearby non-villages estate. The comparison shows that urban villages are less efficient for the reason of rent dissipation. However, a fatal defect of their study is that the comparison was between total rents, instead of per floor rents. Since urban villages are much lower in terms of height, such comparison is simply imprecise. Nevertheless, even using their data, the comparison of per floor rents still supports the argument.

3 High densities in urban villages

The urban village case provides a rare example demonstrating both a production change and a possible contract change induced by incomplete rights. The land use pattern in urban villages is completely different from nearby non-village estates in terms of the higher densities, measured by the site coverage (SC), and the lower rents. The higher densities indicate a possible overdevelopment problem and the lower rents indicate possible rent dissipations. Table.1 shows the
site coverage values and the estimated per square foot rent per month for six urban villages in
Shenzhen in comparison with nearby non-village residential estates (TR--Total Rent).
Non-village estates are normally under site coverage controls, for example, \( \leq 0.25 \) for multiple
floor residential buildings in Shenzhen (Shenzhen Land and Planning Council, 1997, 2004, and
2007). It is normally believed that such regulations, if set right, can confer property rights and
reduce transaction costs. However, if set inappropriately, certain rent losses can be induced. In
Shenzhen’s case, planning regulations are set as unified metrics, regardless of location difference,
which implies that a possible underrate problem, especially for locations in urban centres. However,
the total rent collectable psf of land for most urban villages is still lower than non-village estates,
showing that, except for a few central locations, more severe rental losses can be expected for urban
villages. The planning regulations are thus playing a controversial role similar to a double-edged
sword. Once, as a first element, rights are delineated, voluntary exchange can resolve externalities,
if and only if there is no or minimum transaction cost. Furthermore, rules and laws specifying
detailed metrics based on theoretical deduction or empirical analyses or both can be set as
secondary tools to reduce disputes and smooth transactions. Hence, planning regulations can be so
classed as facilitators, but only if such metrics--site coverage or plot ratio--can be set properly
across each location. Without the initial rights setup, it seems no way to specify any detailed rules
and accordingly, marked case 1, there must be unavoidable excessive land exploitation and value
losses, as we have seen in urban villages. However, if the metrics are set inappropriately for all or
some locations even with well set initial rights, they may still put unnecessary restrictions on
profitable development and thus value losses, which can be even worse than case 1, as we have
observed in a few central locations, marked case 2. If the metrics can be set properly for each
location with initial rights well set (case 3), then as we have observed, non-village estates can bring
more rental income not only in terms of total collectable rent, but also in terms of rent per floor unit
of land, thereby surely more superb than the other two cases.
Similar patterns can also be found in Guangzhou and Xi’an, which represent the other two main
cities with large amount of urban villages. Table. 2 shows the situation for five urban villages in
Guangzhou and Table. 3 shows the situation for Xi’an. The density pattern can be clearly identified using satellite images (free online). Map.1 is an example showing the difference between Gangsha in Shenzhen and its nearby non-village estates.

4 The cost of assembly

Land owned by village collectives can be viewed as a common property which, in theory, is subject
to common exploitation and therefore rent dissipation. See Gordon (1954 ) and Cheung (1974). It is,
however, not conclusive that the profits per square foot of the site area in urban villages are higher
or lower. That will depend on a number of other factors including: the height of the buildings
constructed, and the cost of construction. In Tables 1, 2, and 3, comparable examples of similar
building heights and qualities are chosen to simplify the analysis.
Comparing to nearby housing developments, it is, however, clearly observed that (a) the densities
of urban villages (SC) are much higher; and (b) the rent collected per square foot built floor area are
much lower. However, comparing the two columns labelled as Total Rent (TR psf) in each Table,
there is rental dissipation but not distinctive. The differentials in rent depends more on the densities
allowable by law.
An alternative view is to include the cost of assembly as a substantial entrance fee to develop the
land legally. A typical village may consist of hundreds of families. Getting them all to agree to a
scheme of acquisition offered by the local government is an enormous task. More often, the price
offered to acquire a piece of farmland is often far too low compared to the potential profits to
development the site.
According to the Alchian-Allen Theorem (see Umbeck 1980), imposing a substantial entrance fee to
the consumption of a good would result in either the consumer (a) not paying the entrance fee at all;
or (b) paying the entrance fee but consumes a much better quality product. In cases of the urban
villages, apparently the costs of assembly are too high compared to the foreseeable profits of selling the site to the local government or to developers. Given a high cost of assembly, it would also be very costly for one villager to negotiate with all his neighbouring villagers to agree that everybody would build less, thus enabling a better environment. An agreement of this kind is hardly enforceable. Hence, despite of the risk for being prosecuted, villagers may build up to the highest possible density, leaving minimum common spaces in between, and thus resulting in much lower rentals. This situation could be dealt with using game theories, but for the time being, the high cost of enforcing a low density agreement is sufficient for our purpose.

A testable implication of this view, of assembly cost, is that individual blocks within the urban village development were owned and sub-divided by village families even before construction. The urban village constructed as a whole can be viewed merely as a means to enjoy economies of scale by hiring one a single contractor. Such subdivisions are largely consistent with the facts of ownership, although the legality of such ownership is questionable.

5 Figures and Tables

Table.1 Comparison between six urban villages and nearby estates in Shenzhen

<table>
<thead>
<tr>
<th>Urban Village</th>
<th>SC Rent psf</th>
<th>T R psf</th>
<th>Compare to</th>
<th>SC Rent psf</th>
<th>T R psf</th>
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</thead>
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<td>1.27</td>
<td>World Garden</td>
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<td>Haojing Haoyuan</td>
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Table.2 Comparison between five urban villages and nearby estates in Guangzhou

<table>
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<tr>
<th>Urban Village</th>
<th>SC Rent psf</th>
<th>T R psf</th>
<th>Compare to</th>
<th>SC Rent psf</th>
<th>T R psf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tianhe</td>
<td>0.61</td>
<td>2.4154</td>
<td>1.48</td>
<td>Shanghe Estate</td>
<td>0.35</td>
</tr>
<tr>
<td>Shipai</td>
<td>0.57</td>
<td>1.858</td>
<td>1.06</td>
<td>Donyuan</td>
<td>0.33</td>
</tr>
<tr>
<td>Pingan</td>
<td>0.60</td>
<td>1.1148</td>
<td>0.67</td>
<td>Pingan Street</td>
<td>0.34</td>
</tr>
<tr>
<td>Luo</td>
<td>0.52</td>
<td>1.1148</td>
<td>0.58</td>
<td>Longzhu Garden</td>
<td>0.32</td>
</tr>
<tr>
<td>Datang</td>
<td>0.55</td>
<td>0.929</td>
<td>0.52</td>
<td>Jude</td>
<td>0.23</td>
</tr>
</tbody>
</table>

Table.3 Comparison between five urban villages and nearby estates in Xi’an

<table>
<thead>
<tr>
<th>Urban Village</th>
<th>SC Rent psf</th>
<th>T R psf</th>
<th>Compare to</th>
<th>SC Rent psf</th>
<th>T R psf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changlepo</td>
<td>0.61</td>
<td>0.4645</td>
<td>0.28</td>
<td>Rongde Garden</td>
<td>0.20</td>
</tr>
<tr>
<td>Dengjiapo</td>
<td>0.69</td>
<td>NA</td>
<td>NA</td>
<td>Yangguang</td>
<td>0.33</td>
</tr>
<tr>
<td>Tangjia</td>
<td>0.66</td>
<td>NA</td>
<td>NA</td>
<td>Xijing Residence</td>
<td>0.29</td>
</tr>
<tr>
<td>Zaoyuan</td>
<td>0.75</td>
<td>0.58063</td>
<td>0.43</td>
<td>Zaoyuan Estate</td>
<td>0.27</td>
</tr>
<tr>
<td>Jiangjiawan</td>
<td>0.70</td>
<td>NA</td>
<td>NA</td>
<td>Huaqing Garden</td>
<td>0.27</td>
</tr>
</tbody>
</table>
6 Conclusions

In this paper, we had introduced the background for urban villages in China. We also observed that these villages are often built in higher densities, but rented out for much lesser incomes. Further studies are needed to determine the level of rent dissipation under common ownerships. We also find that assembly cost and the risk of being prosecuted are key factors in determining whether villagers would develop the land illegally for rental incomes. Detailed data on rental and project data are necessary for the verifications of alternate hypotheses explaining the high development densities in urban villages.

7 References

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Building regulations and control in the face of climate change: Overview of the Portuguese situation

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Abstract:
This paper presents an analysis of the main initiatives implemented in Portugal aimed at improving the environmental performance of buildings. The study is focused on the building regulatory system. However, to describe its framework a wider context is analysed for the following reasons: a) strategies and plans on environment and energy establish main goals and actions to minimize the production of greenhouse gases and to prepare for the challenges of climate change; b) building regulations and their control system set and enforce mandatory minimum requirements for the building stock; c) voluntary certification and labelling set requirements above regulatory minimums and prove their enforcement; d) incentive programs and tax benefits give financial support to change the characteristics of the building stock; e) training and technical information increase the capacity of professionals, and finally, f) sensitization campaigns raise public awareness among consumers and contribute to changes in their behaviour. The results are that there is a coordinated set of initiatives to improve environmental performance of buildings. The initiatives to improve environmental performance of buildings are intended to: change the characteristics of the existing building stock, improve the performance level set for new buildings, and encourage more responsible environmental behaviours. Energy is the resource on which more initiatives were focused. Some initiatives set mandatory command and control regulations but most of them are incentives for voluntary improvements. Despite the numerous initiatives to improve environmental performance of buildings, their actual implementation and effectiveness must be assessed.

Keywords: building regulations, Portugal, climate change

1 Introduction

Climate change has been recognized as one of the greatest environmental, social and economic threats that the planet and humanity face today. The answer to this problem represents a double challenge: to adopt measures that minimize causes of the problem derived from human activities (mitigate climate change) and to prepare society to deal with the biophysical and social-economic impacts of climate change (adapt to climate change).

It is well-known that buildings are of great importance in the consumption of environmental resources and in the production of greenhouse gases (GHG). Therefore in compliance with international commitments, several legal initiatives to improve environmental performance of buildings were adopted in Portugal, in recent years. The construction sector has also developed initiatives complementary to official ones. As a result, the set of regulations, certification systems,
tax exemptions, incentive programs, training courses, technical information, knowledge dissemination and awareness campaigns aimed at contributing to improve the environmental performance of buildings is particularly complex.

This paper presents an analysis of the main initiatives implemented in Portugal to improve the environmental performance of buildings construction and operation. In this context the research questions addressed are as follows:

1) What are the guidelines set by national and local strategies and plans?
2) What are the environmental provisions set in the regulatory framework?
3) What are the voluntary certification systems oriented to construction products and buildings?
4) What are the incentive programs and tax benefits?
5) What were the recent training programs and awareness initiatives?

Answering these questions provides an overview of the modifications carried out in the Portuguese building regulations and control due to the challenges of climate change. The results may be useful for decision takers, stakeholders, technicians and the general public.

The following section explains the research methodology. The results are presented in sections 3 to 7, which deal with plans and strategies, regulatory and control instruments, voluntary certification and labelling, incentive programs, tax benefits and, finally, support and information. Section 8 describes and discusses the conclusions.

2 Research methodology

Key documents with provisions relating to environmental performance of buildings were collected. Summaries presented for each topic were based on the analysis of information collected. Final conclusions bring together and discuss the partial results.

The study addressed the building regulatory system, though a wider context was analysed in order to describe its framework. The following types of documents were considered relevant to the study due to the reasons mentioned hereafter:

1) Strategies and plans on environment and energy set guidelines for the production and review of the regulatory framework.
2) Building regulations set minimum quality requirements and the building control system guarantees the enforcement of these requirements.
3) Voluntary evaluation and certification systems of the environmental performance of buildings are intended to guarantee levels above the minimums set by building regulations.
4) Incentive programs and tax benefits support the implementation of some provisions set by technical building regulations.
5) Training courses provide competencies to technicians who apply the building regulations and awareness campaigns raise society’s consciousness to environmental problems and thus foster willingness to comply with building regulations.

Environmental resources analysed were energy, water, materials and waste. These resources were selected due to the impact that, in Portugal, construction and use of buildings has on their production and consumption, as described below:

1) Buildings account for 30% of total primary energy consumption and for 62% of power consumption. Therefore, the reduction in energy consumption and use of energy from renewable sources in the building sector are measures to reduce both the energy dependency of Portugal from foreign sources and the emission of GHG (Isolani, 2008).
2) The urban sector accounts for 9% of total water consumption (industry for 5% and agriculture for the remaining 86%), but represents 46% of the associated cost. In the urban sector, domestic consumption accounts for 45%, commercial consumption for 9% and public consumption for 6%. The remaining 40% are losses due to inefficiency of the system. As water is a limited, structural and strategic natural resource, to reduce consumption through efficient use and the minimization of waste, particularly in the urban
sector, are measures with environmental and economic gains for the country (INAG, 2010).

3) It is estimated that the construction sector is responsible for more than 50% of waste generated. The flow of waste from construction and demolition has special features which hamper its management, in particular, the heterogeneous constitution with fractions of different sizes and different levels of dangerousness. In addition, construction activity presents itself some specifics, such as, it is geographically dispersed and the works have a temporary nature, which make it difficult to control and monitor the environmental performance of industry (PCS, 2011).

3 Plans and strategies

Portuguese national policies on environment and energy are closely articulated and both are integrated in the national strategy for sustainable development. These policies are formalized in a set of national strategies and plans for various areas. The main changes in the buildings regulatory system introduced to improve the environmental performance of buildings arise from guidelines and actions set in these strategies and plans. Therefore, in this section, we present a summary of the main strategies and plans that enclose guidelines and actions for buildings.

The "National Strategy for Adaptation to Climate Change" sets guidelines to prepare Portugal for the challenges of climate change. At the level of urban planning, the protection of buildings against extreme climatic conditions is identified as a priority. The measures set out in the "National Programme for Climate Change" for buildings focus on improving energy efficiency as a way to reduce GHG emissions.

The "National Strategy for Energy 2020" aims to reduce dependence on foreign energy as well as to cut GHG emissions. The priorities set for buildings are to improve their energy efficiency and to increase the decentralized energy production from renewable sources. Urban regeneration is seen as an opportunity to improve the energy efficiency of the existing building stock. The "National Action Plan for Energy Efficiency" sets actions to enforce the priorities set by the national strategy, including actions to increase energy efficiency and production from renewable sources in buildings. To promote the implementation of these actions, the action plan establishes the creation of incentive programs, tax benefits and awareness campaigns.

The "National Water Plan" sets guidelines for integrated water management. Although specific guidelines for buildings are not included, some general actions aimed at raising public awareness about the environment and water and to promote users participation are set. The "National Programme for the Efficient Use of Water" includes 50 actions applicable to the urban sector, but the 12 actions selected to be implemented in a first phase do not directly apply to buildings.

The "General System for Waste Management" provides the framework for waste management and aims to ensure an adequate prevention, recycling and recovery. Specific plans are being enforced for managing specific types of waste, but no plan applies specifically to buildings. However, the "Solid Waste Strategic Plan" sets actions for public awareness, for support of research and for certification of recycled products. The "National allocation plan of emissions" limits GHG emissions from facilities producing some types of building materials used in buildings.

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1 Resolution of the Council of Ministers no. 24/2010. OJ (PT) no. 64, 1 April 2010.
3 Resolution of the Council of Ministers no. 29/2010. OJ (PT) no. 73, 15 April 2010.
In September 2009, 118 municipalities and 21 parishes in Portugal had a Local Agenda 21 (GEA, 2011). The local agendas are an action strategy for sustainable development. Though resulting from the community participation, in general the local agendas apply at a local level most of the guidelines set out by national strategies for environment and energy. In this sense, the actions set out in local agendas, which apply to buildings, regard mainly energy.

In May 2011, 59 Portuguese municipalities had joined the "Covenant of Mayors" and 6 of these had submitted a sustainable energy "Action Plan" (CMO, 2011). The action plan outlines how a municipality intends to reach its CO₂ reduction target by 2020. Most actions are aimed at increasing energy efficiency and use of renewable energy sources. The actions that apply to buildings can be grouped into: renovating buildings, tax incentives, awareness campaigns, counselling services, awards and certification of performance (Cascais Energia, 2010; CMA & AGENEAL, 2010; Vieira et al., 2010). The action plans of Lisbon and Porto, the two major cities, were based on local energy matrixes and also include actions relating to water, materials and waste (Lisboa E-nova, 2008; AdEPoro, 2009).

4 Building regulations and control

In every European Union (EU) country there is a building regulatory system encompassing the building regulations and the building control system. Building regulations set minimum quality requirements to ensure that buildings are safe, healthy, energy-efficient and accessible to everyone who lives and works in and around them. Building control aims to guarantee the application and enforcement of these minimum requirements. In this section, we present a summary of the main building regulations with provisions on the environmental performance of buildings and an analysis of the relevant building control systems.

4.1 General building Code

In Portugal, there is no single Building Act that serves as a legal basis for building regulations and procedures, and defines duties and responsibilities of parties involved in construction. The "General Building Regulation" is the main national building regulation, but there are more than 45 national building regulations and other regulatory documents that focus on specific requirements. There are also local building regulations that complement national ones.

The "General Building Code" has been in force since 1951 and, despite several amendments, no fundamental revision has been approved. This regulation sets out general provisions for building, regarding construction, health, safety and aesthetics. No demands concerning energy saving or environmental protection are included. The 2006 proposal to review the "General Building Code" included general requirements on energy saving and environmental protection. However, the proposal was not implemented.

4.2 Energy

The "Regulation of the Thermal Behaviour Characteristics in Buildings" sets provisions so that: a) requirements of thermal comfort and ventilation, as well as hot water needs, can be met without excessive consumption of energy, and b) pathological situations in building components caused by either surface or internal condensation are minimized. This regulation applies to design of new residential buildings and office buildings without centralized climate control systems. It also applies to major alterations of existing buildings (i.e., alterations that amount to more than a quarter of the value of an identical model building).

The "Regulation of Energy Systems and Air Conditioning of Buildings" sets rules for designing office and residential buildings with centralized climate control systems, which, in addition to

1 Decree-Law no. 3838. OJ (PT) no. 166, 7 August 1951.
2 Decree-Law no. 80/2006. OJ (PT) no. 67, 4 March 2006.
3 Decree-Law no. 79/2006. OJ (PT) no. 67, 4 March 2006.
requirements related to the built envelope and the limitation of energy consumption, also covers the efficiency and maintenance of those systems.

A special management system has been set for facilities that have an intensive consumption of energy. Its aim is to promote energy efficiency and monitor energy consumption.¹

### 4.3 Water

The "Regime of Design, Installation and Operation of Public and Building Systems of Water Distribution and Sewerage"² sets general principles to be met by these systems and aims to ensure their proper overall functioning, preserving the safety, public health and users convenience. The "General Regulation of Public and Building Systems of Water Distribution and Sewerage"³, sets the technical standards to be met by the design, construction and operation of these systems, and their standards of hygiene and safety.

None of these regulations include provisions to promote the efficient use of water. On the contrary, the regulation prohibits the existence of distribution networks in dwellings of non-drinking water, which inhibits the use of rainwater and the reuse of domestic wastewater (Pedroso, 2009).

### 4.4 Types of materials and waste

Portuguese legislation on waste is highly complex and is frequently updated. The main legislation in force and applicable to buildings is the following:

1) The "Regime of Construction and Demolition Waste Management"⁴ sets rules for the management of waste resulting from construction or demolition of buildings, including its prevention and reuse, as well as the collecting, transporting, storing, sorting, treatment, valorisation, recovery and disposal operations.

2) There are "Limitations on Marketing and Use of Dangerous Substances and Preparations"⁵ that safeguard human health and the environment. Several materials used in buildings are covered by these limitations.

3) There are procedures for "Removal of Asbestos in Public Buildings and Facilities"⁶ and rules for "Protection of workers from the risks of exposure to asbestos during work"⁷.

4) There are rules for the disposal of used PCBs in order to ensure their complete destruction.⁸ PCBs are present in some building materials (e.g. plastic inks, hydraulic fluids and climate control systems, adhesives and wood treatment products).

5) The "Trading System for Greenhouse Gas Emissions within the European Union"⁹ limits GHG emissions of each facility for the 2008-2012 period. Some industrial facilities that produce building materials are listed. These facilities belong to the following sectors: ferrous metals; cement; lime; glass; bricks, roof-tiles & accessories; and wall & floor tiles.

Complementary, to inform consumers, there are mandatory rules for the labelling of products that have an impact on energy consumption.¹⁰ The labels and technical specifications provide information on the consumption of energy and other essential resources.

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¹ Decree-Law no. 71/2008. OJ (PT) no. 74, 15 April 2008.
² Decree-Law no. 207/94. OJ (PT) no. 181, 6 August 1994.
⁵ Decree-Law no. 264/98. OJ (PT) no. 28, 9 February 2011.
4.5 **Bylaws**

Local authorities can approve building regulations and set fees on construction works. These regulations contain additional provisions to national ones and deal with subjects of municipal competence and local traditions and uses. Some local building regulations set bylaws with requirements concerning energy saving and environmental protection (e.g., Lisboa, Almada and Cascais municipalities).

4.6 **Building control**

The "Regime of urbanization and construction"\(^1\) sets the rules of public control over construction works in order to ensure the public interests. According to their category, construction works can either be exempted from building permit procedures or follow a building notice procedure or a regular procedure. Since it has been in force, this regime has been amended 10 times drawing on experience gained by its application to date.

In the sixth amendment, the compliance with the "Regime of Construction and Demolition Waste Management" became compulsory.\(^2\) In the tenth amendment, the installation of photovoltaic solar panels, wind generators and solar heating panels for domestic hot water was exempt from building permit procedures, for simplification purpose. These construction works are not exempt in listed buildings.\(^3\)

The "National System of Energy Certification and Indoor Air Quality in Buildings"\(^4\) aims to: a) enforce the building regulations on energy performance, b) certify the energy performance and indoor air quality in buildings, and c) identify corrective action or performance improvements for buildings and their energy systems with regard to energy performance and indoor air quality. Within this system:

1) A central public agency qualifies and supervises private experts, and approves certificates issued by them.

2) Private experts declare the compliance of designs with the regulations for building permit purposes, assess and certify the energetic and indoor air quality performance before the use permit is granted, and analyse and certify the energetic and indoor air quality performance in periodical audits.

3) The central government supervises the system.

Since 2007 more than 300,000 certificates of energetic and indoor air quality performance have been granted in the scope of the national system of energy certification.

The "Regulation of the Thermal Behaviour Characteristics in Buildings"\(^5\), the "Regulation of Energy Systems and Air Conditioning of Buildings"\(^6\) and the "National System of Energy Certification and Indoor Air Quality in Buildings"\(^7\) partially transpose into the Portuguese legislation the European Directive on the Energy Performance of Buildings (EPBD) adopted in 2002.\(^8\) Presently, these regulations and the system are under revision and will probably include the objectives set by the EPBD recast.\(^9\)

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2. Law no. 60/2007. OJ (PT) no. 170, 4 September 2007.
5 Voluntary certification and labelling

Consumers are becoming more concerned about the environment. Therefore, they want to play an active role in the protection of the environment by choosing products that inflict less damage upon it. However, they are bewildered by and sometimes sceptical about the environmental claims made by manufacturers and retailers for their products. Eco-labels are ‘brands’ placed on certain products that help consumers to choose products, which have been recognised as less harmful to the environment. Eco-labels are voluntary schemes based on specific environmental criteria.

In several countries, specific eco-labels have been developed for buildings. Green building assessment and certification systems comprise a set of criteria, organized in categories, which assess different environmental aspects of buildings. Certification is granted, usually by levels, if certain performance thresholds are reached. Existing systems are voluntary since the belief is that construction sector adherence will be due to environmental commitment or to ensure buildings competitiveness and differentiation.

In this section, we present a summary of the certification and labelling systems available in Portugal for environmental performance of construction materials and buildings.

5.1 Eco-labels

Several eco-label systems are used in Portugal for construction products. The water efficiency of products that consume water (e.g. toilets, showers and taps) may be certified by the ANQIP system (ANQIP, 2011). The certification of solar thermal equipment by the Portuguese Quality System (Certified Product or Solar Keymark), is a necessary condition for State incentives being granted (ADENE et al., 2003-2011). There is the Portuguese system for certification of sustainable forest management, which is recognized by PEFC International (PEFC, 2010). Some products bear the EU Ecolabel, in particular products that fall into the following categories: hard floor coverings, heat pumps, paints & varnishes, and lightbulbs (Eco-label, 2002). Several products and construction materials sold in Portugal have marks awarded by international certification systems.

5.2 LiderA

"LiderA" is an assessment and acknowledgement system of buildings and built environment sustainability (LiderA, 2011). The system was originally developed in the framework of a Ph.D. in Environmental Engineering. The first version was presented in 2005 and the first certifications were issued in 2007. Based on experience gained with its implementation, a second version was presented in 2009.

The system can be used to assess and certify developments for different uses (e.g. residential, commercial, office and tourism) and applied at different phases, including planning, design, construction, operation and renewal. The evaluation is divided into 6 categories and 22 areas:

1) Site and integration: soil, natural ecosystems, and landscape and Heritage;
2) Resources: energy, water, materials and food production;
3) Environmental loadings: wastewater, atmospheric emissions, waste, noise emissions, and thermal and light pollution;
4) Environmental comfort: air quality, thermal comfort, and lighting and acoustics;
5) Socioeconomic experience: access for all, economic diversity, amenities and social interaction, control and participation, and life cycle costs;
6) Sustainable use: environmental management, and innovation.

Results of LiderA are presented in a seven level scale (A to G), in which level E is the common practice. There are also classes for developments that undertake structural improvements (A+ and A ++) or are regenerative (Class A+++). If the result is above level D, the building or built environment may be certified. Less than 20 developments have been recognized (design phase) or certified (work and operation phase) by LiderA until 2011, but they cover various types of developments: houses, apartment buildings, residential developments, resorts, schools, hotels, office
buildings and commercial buildings. Buildings certified by LiderA are granted tax benefits or fee reductions, by some local authorities.

5.3 SBTool<sup>PT</sup>

"SBTool<sup>PT</sup>" is a system intended to assess and certify the sustainable performance of buildings and projects (SBTOOL-PT, 2011). It is based on the international system SBTool (Sustainable Building Tool) developed by iiSBE (International Initiative for the Sustainable Built Environment) in collaboration with a consortium of teams from over 20 countries (Europe, Asia and America). The SBTool<sup>PT</sup> was adapted to Portuguese context by iiSBE Portugal in collaboration with University of Minho and Ecochoice.

The system can be used to assess different types of buildings (e.g. office, residential, or other). It is divided into 3 dimensions, which cover 9 categories and 30 parameters. The 3 dimensions are subdivided into the following categories:

1) Environmental dimension: climate change and outdoor air quality, biodiversity, energy, material use and solid waste, and use of water and wastewater;
2) Social dimension: comfort and health of occupants, accessibility, and awareness and education for sustainability;

The values of each parameter are converted into a scale with six steps from "E" (conventional practice) to "A+" (best practice). The combination of partial results is done by a weighted average of the values of each parameter. The results are presented on two levels: a profile with the performance of the solution in different categories and an overall score of sustainability. With the exception of two case studies, the information available about the system does not report its application to other developments.

5.4 DomusNatura

"DomusNatura" is a system intended to certify the sustainable performance of developments. It was developed by SGS Portugal and presented in 2008 (SGS SA, 1997-2011). This system aims to combine quality, environment and effective management of resources. The goal is to increase comfort and reduce running costs.

The DomusNatura includes a quality certification entitled DomusQual, which aims to monitor compliance with all legal requirements, regulations and the regulatory compliance and quality construction technique applicable to the project. DomusNature combines the quality factor of DomusQual with good environmental, social and economic performance. DomusNatura system is divided into 6 categories and 127 parameters, of which 21 belong to DomusQual. The 6 categories are:

1) sustainable location and safety;
2) rational use of water;
3) energy and air pollution;
4) materials and resources;
5) quality and comfort;
6) innovation and ecology.

Buildings that meet a certain environmental, social and economic performance are granted a certificate. The level of the certificate is determined according to scores achieved in various parameters. The information available indicates that this system has not been applied up to 2011.

5.5 BREEAM, LEED and Bilan Carbone

Some consulting firms on environmental sustainability are qualified or certified to implement the international environmental certification systems BREEAM, LEED and Bilan Carbone. According to available information, the application of these systems in Portugal is uncommon.
6 Incentive programs and tax benefits

In order to reduce consumption and improve environmental performance it is necessary to change the characteristics of the building stock, whether through interventions in the physical envelope of buildings or through the acquisition of more efficient equipment. These changes require a financial investment that it is important to encourage. Incentive programs and tax benefits can be used for this purpose. In this section we present a summary of the main incentive and programs tax benefits used in Portugal to help improving the environmental performance of buildings.

There are several specific incentive programs to promote the efficient use of energy, to decentralize power production using renewable sources,\(^1\) and to encourage the use of solar energy to heat water (ADENE et al., 2003-2011). Other programs pursue these objectives specifically in residential buildings (RE.NEW.ABLE et al., 2011), in buildings from small companies (QREN, 2010), and in non-profit private organizations (InAlentejo, 2010). Some general programs that give financial support to residential buildings renovation can also be used to finance construction works for improving the environmental performance of buildings.\(^2\) Within these programs, subsidized loans or non-repayable funds are granted. Incentives for buildings renovation contribute, indirectly, to a reduction of materials consumption and waste production. If energy is produced by privates individuals, the public network will take the energy (up to a defined limit) at a guaranteed and advantageous sale price.\(^3\)

There are funds to support projects that contribute to the efficient use of energy\(^4\) and to the reduction of GHG emissions.\(^5\) Funds are financed with state budget allocations and revenues from fees and fines on energy issues. Tax reductions are granted for the purchase of properties with high energy efficiency (i.e. 10% increase in the tax deduction for costs with housing loans, if the house is awarded an energy class A or A+ by the national system of energy certification)\(^6\) and of equipment to produce thermal and electric energy from renewable energy sources (i.e. VAT at an intermediate rate of 13%)\(^7\). To counterbalance the impact of energy inefficient light bulbs on the environment, there is an additional tax on these light bulbs.\(^8\)

Some local authorities adopt measures similar to those identified at national level, including tax benefits (e.g., reduction in property tax and reduction in fees over construction works) and funds to support local projects (e.g., municipal energy efficiency fund).

7 Training, information and public awareness

To improve the environmental performance of buildings, it is not only necessary to adopt effective policies in terms of regulations and investment, but also to promote a change in consumer behaviour, increase the technical capacity of professionals and stimulate the update and progress of scientific knowledge. In this section, we present a summary of the main actions regarding support and information carried out in Portugal to help improving the environmental performance of buildings.

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2 Decree-Law no. 34/2011. OJ (PT) no. 47, 8 March 2011.
7 Ordinance no. 26/2011. OJ (PT) no. 6, 10 January 2011.
Public sector plays an active role by adopting measures to improve the environmental performance of buildings. For example, a "Strategy for the green public procurement"\(^1\), a "Program for energy efficiency in public administration"\(^2\) and a "Regime for public procurement of energy services"\(^3\) have been approved.

There are training programs on sustainable construction for the different agents in the construction sector. For example, universities and professional associations organize postgraduate courses on sustainable construction for designers, training on building regulations concerning of energy performance of buildings is mandatory to experts qualified under the "National System of Energy Certification and Indoor Air Quality in Buildings", and there are training courses for installers of renewable energy and water use equipment.

Demonstration buildings have been built to show both the potential and the feasibility of new architectonic, technological and construction solutions, which improve the environmental performance of buildings (e.g. *Aveiro Domus*\(^4\), *Solar XXI*\(^5\)). The buildings are also used to study and monitor the performance of new systems and products.

Frequently, campaigns to raise public awareness for environmental challenges are conducted. The campaigns are promoted by central authorities, local authorities, service providers and non-governmental organizations (NGO’s). Some consumer protection and nature conservation NGO’s develop information and public awareness projects to encourage a more moderate consumption of resources and to demonstrate how to make daily consumption more efficient (e.g. *Ecocasa*\(^6\), *Biosfera*\(^7\)).

Some local authorities have counselling services for citizens on methods to reduce consumption on a daily basis and on construction works to improve the performance of buildings. Several simulation tools are available online that enable users to characterize their home and lifestyle, to assess the environmental impacts and to learn from the suggestions made by the system. Such tools are usually provided by NGOs (e.g. *DECO*\(^8\), *Quercus*\(^9\)) or service providers (e.g. *EDP*\(^10\), *EP AL*\(^11\)).

Abundant technical documentation on sustainable construction adapted to the Portuguese context has been published. Some manuals on sustainable construction are geared towards technicians and others to consumers. To update knowledge of professionals, technical magazines are regularly published on sustainable construction as a whole or on specific aspects. On the Internet, some sites are dedicated solely to disseminate information on good practices in sustainable construction and rehabilitation. In addition, sustainable construction is an issue that arises repeatedly in the general technical documentation of the construction sector.

National Awards are granted to recognize buildings for their sustainability performance, and companies for their energy efficiency practices.

Meetings on sustainable construction are held frequently, and there are numerous research and development projects on sustainable construction.

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8 Conclusions and discussion

8.1 Synthesis of results

8.1.1 Guidelines set by national and local strategies and plans

Strategies and plans set goals and actions for an adequate management of energy, water, materials and waste in the context of climate change and sustainable development. The actions established in national strategies and plans that apply to buildings are mainly focused on increasing energy efficiency and energy production from renewable sources. The strategies and plans also include measures aimed at raising awareness and mobilizing citizens to adopt a more responsible environmental behaviour, including moderating or reducing the consumption of water and energy and promoting recycling. Almost 40% of Portuguese municipalities have a Local Agenda 21 for sustainable development and 20% of them joined the "Covenant of Mayors". These figures reflect a growing commitment of local governments with the implementation of the EU and national policy for environment and energy. Although the commitment of municipalities is voluntary it is framed and encouraged by EU policies aimed to the local level.

8.1.2 Environmental provisions set in the regulatory framework

The "General Building Code" does not set the general requirements on energy saving and environmental protection. There was a positive development in building regulations on energy efficiency and indoor air quality. The national system of energy certification has contributed to a better compliance with energy regulations. Building regulations do not include provisions on efficient use of water. Several separate building regulations set provisions on use of dangerous substances, waste from construction or demolition and labelling of products that have an impact on energy consumption. No changes were introduced in the building regulations in order to meet the need to increase protection against extreme weather conditions. Most changes in the building regulations regarding energy and materials were due to the transposition of European directives into the Portuguese legislation.

8.1.3 Voluntary certification systems available for construction products and buildings

There are Portuguese eco-label certification systems for some products and materials (e.g. products that consume water, wooden products, and solar thermal equipment). The EU Ecolabel is also being used for other products. Several products and construction materials sold in Portugal have marks awarded by international certification systems.

There are three systems of green building assessment and certification especially adapted to the Portuguese context, but only one has had some minor applications. International systems of green building assessment and certification can also be used in Portugal, but their implementation is also insignificant. Therefore, adherence to date of the construction sector to green building assessment and certification systems is reduced. Even the tax benefits and fee reductions granted by local authorities seem to be insufficient to boost the application of these systems.

8.1.4 Incentive programs and tax benefits

Although all measures foreseen by plans and strategies were not implemented, there is a wide range of incentive programs to encourage rational use of energy in new and existing buildings. These programs cover up the main types of private buildings: residential, small companies, and non-profit private organizations. Renewal of public buildings is being supported by other programs. No incentive programs to promote a better use of water, materials and waste in buildings were identified. However, incentives for buildings renovation contribute indirectly to reduction in material consumption and waste production.
8.1.5 Training and awareness initiatives

There are many initiatives about sustainable construction in order to: ensure the training of professionals (postgraduate and professional courses), raise awareness among consumers (campaigns, counselling, demonstration buildings), produce and disseminate knowledge (research projects, meetings, books, magazines and sites), recognize best practices (awards), and lead change by example (public leadership programs).

8.2 Discussion

As described, in Portugal there is a set of initiatives to improve environmental performance of buildings. These initiatives pursue the objectives set by the policies on environment and energy and are coordinated in plans and strategies organized by resources (energy, water, materials & waste). The initiatives that have been carried out cover the main domains (Table 1): building regulations and control; certification and labelling; incentive programs and tax benefits; as well as training, information and public awareness.

The initiatives to improve environmental performance of buildings aim to: change the characteristics of the existing building stock, improve the performance level set for new buildings, and encourage more responsible environmental behaviours. Thus, some of these initiatives set mandatory command and control regulations (e.g. building regulations and control) but most of them are incentives for voluntary improvements (e.g. some certification and labelling schemes; incentive programs and tax benefits; as well as training, information and public awareness).

Table 12. Initiatives to improve environmental performance of buildings

<table>
<thead>
<tr>
<th></th>
<th>Energy</th>
<th>Water</th>
<th>Materials &amp; waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plans and strategies</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Building regulations and control</td>
<td>✓</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Certification and labelling: Products</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Certification and labelling: Buildings</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Incentive programs and tax benefits</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Training, information and public awareness</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Energy is the resource on which more initiatives are focused. The enforcement of building regulations on energy performance is ensured by the participation of private experts who check designs compliance and carry out site inspections. Certificates and permits are still granted by central authorities.

Despite the numerous initiatives to improve environmental performance of buildings, questions arise about their actual effectiveness. Therefore, in future studies we intend to analyse the effectiveness and efficiency of these initiatives. Other developments will be the analysis of initiatives concerning the use of soil and the comparison of initiatives carried out in Portugal with the developments operated in other European countries.

9 Acknowledgments

The input of António Cabaço, Joana Mourão, Jorge Saraiva and Rodrigo Rodrigues during the development of the study is gratefully acknowledged.

10 References

Comparison of building permit procedures in European Union countries

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Abstract:
Building regulations set minimum requirements for safe, healthy, energy-efficient and accessible buildings. To guarantee that these requirements are applied, a building control system is indispensable. The trend towards a common market for construction products and services justifies gaining a better insight into the building control systems in the European Union (EU). This paper presents a comparison of the building permit procedures adopted in the 27 EU countries. To collect the necessary information, a questionnaire on building regulatory systems was distributed to national experts in each country and the major legal documents were reviewed. The information was organized in thematic tables containing all the countries. The main conclusion is that the organization of a regular building permit procedure is similar in the EU countries. No major differences were found concerning the several steps it takes to get a building permit and to carry out a construction work: pre-consultation, possibility of phasing, submission demands, checks carried out and maximum procedure time for plan approval, possibility and moment to object to a building permit being issued, start of construction works, frequency and moment of site inspections, fees, and completion of construction works. The main differences concern detail aspects in several of these steps. There is one basic type of building permit procedure in countries from continental Europe. The United Kingdom countries are those presenting more deviations from the common pattern. These deviations aim to reduce the burden of administrative aspects, while ensuring good levels of compliance. In the last 10 to 15 years, the dominant trends identified in the building permit procedure were a decrease in the types of construction works submitted to building authorities’ control during plan approval, and the reduction in the maximum building permit procedure times. Building authorities’ control during the construction phase has remained unchanged. Altogether, there is a movement towards simpler and faster building permit procedures. For the near future, no major changes are expected in the building permit procedures.

Keywords: building control system, building permit procedure, comparative study, European Union

1 Introduction

In every European country, there is a building regulatory system encompassing the building regulations and the building control system. Building regulations set minimum quality requirements to ensure that buildings are safe, healthy, energy-efficient and accessible to everyone who lives and works in and around them. Building control aims to guarantee the application and enforcement of these minimum requirements.
The general characteristics of the building control system in European countries are similar. Designs must be prepared and submitted to an authority that approves its compliance with zoning demands and building regulations. During construction, site inspections guarantee that the structure is built according to design and that it complies with the building regulations. Once construction is complete, a final check is conducted and a completion certificate or a use permit is issued. However, there are many differences among countries regarding procedural aspects of building control. The purpose of this paper is to compare the building permit procedures in the European Union countries. The three research questions addressed are as follows: What are the main differences and similarities? What are the main types of building control systems? What are the main trends and developments?

Studying the building control systems adopted by EU countries is important for three main reasons. Differences among the building control systems of EU countries represent a barrier to the freedom of movement of services in the construction industry. In recent years, there has been a trend towards the gradual privatization of building control in the EU countries, but the extent and the way each country has implemented reforms varied. There are more specialized building regulations and less public resources available for their enforcement, and therefore, more efficient and effective building control systems are required.

The following section explains the research methodology and Section 3 presents the results of the comparative analysis. Section 4 describes and discusses the conclusions of the comparison.

2 Methodology

The research presented in this paper was conducted as part of a European comparative research project currently underway at OTB Research Institute for Housing, Urban and Mobility Studies (Meijer and Visscher, 2008). The project aims to describe and compare the building regulation systems of 34 European countries. The main subjects addressed are as follows: organization and formulation of technical building regulations, tasks and responsibilities of agents involved in building control, technical and administrative aspects of the building permit procedure and quality demands imposed on building control bodies.

The analytical framework of the research project was based on a previous study about building regulations in Europe (Meijer, Visscher and Sheridan, 2002). The development of the research project was divided into two phases. In the first phase, the aim was to describe the building regulation systems of the European countries. Hence, to collect information, questionnaires were sent to national experts in each country. This information was complemented with the analysis of major legal documents. As a result, a draft of a monograph was written for each country. For some countries, the draft was revised by a second national expert. In the second phase of the project, the aim was to compare the building regulation systems of the various European countries in order to identify trends and developments. For this purpose, the information was organized in thematic tables that containing all the countries.

The questionnaire sent to national experts focused on three subjects:

1) The scope of technical building regulations that regulate the minimum quality level for buildings (e.g. subjects regulated, formulation of regulations, ministries responsible).
2) The building permit procedures: administrative procedures (e.g. categorization of construction works in relation to permit procedures, time limits, phasing of procedures, tasks and responsibilities of actors).
3) The quality demands on building control bodies (e.g. education of staff, working methods, traceability).

It is an elaborate questionnaire that addresses technical and procedural issues of the building regulatory system of each country. Therefore experts could skip questions if they were not able to answer then. But, in this case, questionnaires were sent to other experts that were able to provide
information for the unanswered questions, until all the required information was gathered. To date, about 50 national experts answered the questionnaire or revised country monographs. This paper presents results from the second phase of the research project. It is focused on the technical building regulations. The analysis is restricted to the 27 European Union countries. Due to the federal structures of Austria, Germany and Belgium, analyses of each of these countries focuses on a single state, province or region. With regard to the United Kingdom, information was collected for England & Wales, Northern Ireland and Scotland. Within the second phase of the research project, the tasks and responsibilities assigned to both public and private parties enforcing the building control systems in EU countries, as well as the organization and formulation of technical building regulations in EU countries have already been compared. The results were presented in previous papers (Pedro, Meijer and Visscher, 2009 & 2010).

The conclusions presented in this paper are not definitive, as the necessary information has not yet been gathered and validated for all countries.

3 Comparative analysis

3.1 Types of procedures

According to their category, construction works can be exempted from or follow a building permit procedure, as described below:

1) Exemptions: construction works that have to meet the planning demands and the technical requirements but are exempt from the permit procedure.
2) Building notice: construction works that have to be notified to the building authority but can be carried out without a building permit.
3) Light procedure: construction works that require a building permit but compliance of building design with building regulations is only ensured for part of the technical requirements.
4) Regular procedure: construction works that require a building permit and compliance of building design with building regulations is ensured for all the technical requirements.
5) Regularization: construction works that have been built without the required building permit or contrary to the terms and conditions specified in the building permit, but may be legalised.

In all EU countries, there is a regular procedure and there are construction works exempt from permit procedure. Building notice and light procedure only exist in some countries. The following combinations of procedures were identified (Table 4):

1) Exemptions and regular procedure (e.g. Belgium, Cyprus, Hungary, Romania and Scotland).
2) Exemptions, building notice and regular procedure (e.g. Austria, Bulgaria, Czech Republic, France, Italy, Luxembourg, Malta, Portugal, Slovenia, Sweden, Northern Ireland and England & Wales).
3) Exemptions, light procedure and regular procedure (e.g. Germany, Lithuania, the Netherlands and Spain).
4) Exemptions, building notice, light procedure and regular procedure (e.g. Estonia, Ireland and Slovakia).

If we consider "building notice" and "light procedure" as an identical "simplified procedure", then the combination "exemptions", "simplified procedure" and "regular procedure" is the dominant approach in the EU countries. In some EU countries, there is a specific procedure for the regularization of construction works (e.g. Poland, Northern Ireland and England & Wales).
Table 4. Which types of permit procedures are defined?

<table>
<thead>
<tr>
<th>Exemptions</th>
<th>Building notice</th>
<th>Light procedure</th>
<th>Regular procedure</th>
<th>Regularization</th>
<th>No information</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

In Germany, a type approval may be asked for structures built according to the same design at different places (e.g. prefabricated houses). This implies testing the structural stability as well as sound-, thermal-, damp- and fire-proofing, among other tests. Type approval by one federal state is recognized by all the others, so local building authorities are exempt to check, as part of the permit procedure, whether the structure meets the requirements relating to the type approval functions.

In England & Wales, type approval can be granted for all types of construction features that are subject to Building Regulations. It applies to "building types", which is suitable for complete building designs and for standard building modules repeated in different areas, and to "building systems", which is suitable for systems capable of producing a variety of different buildings using standard components and construction details. Type approval covers compliance with the Building Regulations. A design can be submitted for type approval by local building authorities, in conjunction with either a building notice (if applicable) or the regular procedure. Type approval can also be awarded by approved inspectors. Once the application has been passed, the type approved design is registered with the Local Authorities National Type Approval Confederation (LANTAC). This register enables the local authority building control officers to look up and check design approvals. Having a building type or a building system approved means that it can be used without the plan approval happening repetitively all over the country at each site. Only site specific details such as foundation and drainage need local approval.

During the last 10 to 15 years, in the majority of the EU countries, there has been an increase in the number of construction works exempt from control and an increase in the number of construction works that shifted from a regular procedure to a light or building notice procedure (Table 5). In few countries, no developments were reported (e.g. Cyprus, Denmark, Estonia, Ireland and Romania) or developments were contrary to the general tendency (e.g. Bulgaria, France and Germany). For the near future, no changes are expected in this respect in the majority of the EU countries, but in some EU countries the previous developments are expected to continue.
Table 5. What were the developments regarding the categorization of construction works? What changes are expected in this respect?

<table>
<thead>
<tr>
<th>Past 10/15 years</th>
<th>Near future</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No developments</strong></td>
<td>Cyprus, Denmark, Estonia, Ireland, Romania, Slovenia</td>
</tr>
<tr>
<td><strong>Increasing number of construction works exempt from control</strong></td>
<td>Belgium, Czech Republic, Italy, Latvia, Lithuania, the Netherlands, Poland, Portugal, Slovakia, Sweden, Northern Ireland, Scotland, England &amp; Wales</td>
</tr>
<tr>
<td><strong>Decreasing number of construction works exempt from control</strong></td>
<td>Bulgaria, France, Germany</td>
</tr>
<tr>
<td><strong>Increasing number of construction works that shift from a regular procedure to a light or building notice procedure</strong></td>
<td>Austria, Belgium, Czech Republic, Germany, Latvia, Lithuania, Portugal, Slovakia, Northern Ireland, England &amp; Wales</td>
</tr>
<tr>
<td><strong>No information</strong></td>
<td>Finland, Greece, Hungary, Luxembourg, Malta, Spain</td>
</tr>
</tbody>
</table>

3.2 Pre-consultation

During pre-consultation, an applicant for a building permit can address the building authority to discuss the intended construction work and ask for information about specific demands that should be taken into account when further developing the building design (e.g. possible use of the lot, allowable building lines, admissible heights, maximum building mass, admissible derogation from rules). Pre-consultation provides designers with thorough information to develop a building at a particular plot and may give developers the certainty that planning demands will remain unchanged during a certain period.

In almost all EU countries, pre-consultation is voluntarily (Table 6). It is regulated by law, takes place frequently, and the tasks and responsibilities of parties involved, the planning demands, as well as the aesthetics and technical requirements are usually discussed. Only in Bulgaria it is obligatory to ask for detailed planning information for certain types of construction works.

In some EU countries, local authorities are bond to agreements or information provided during pre-consultation (e.g. Belgium Cyprus, Hungary, Italy, Latvia, Portugal and Sweden). In other EU countries, information provided during pre-consultation is accurate and objective. Although advice and opinions about the merits of a proposal are given in good faith, they are not binding to the local authority or the applicant (e.g. Austria, Denmark, France, Malta, the Netherlands and England & Wales).

Usually, pre-consultation is requested to the building authority by the owner of a land parcel or a person authorized by him. However, in some EU countries, someone other than the owner may request a pre-consultation (e.g. Portugal). In such cases, the building authority notifies the owner and other persons with legal rights over the land parcel.
Table 6. What is the status of pre-consultation?

<table>
<thead>
<tr>
<th></th>
<th>Austria</th>
<th>Belgium</th>
<th>Bulgaria</th>
<th>Cyprus</th>
<th>Czech Republic</th>
<th>Denmark</th>
<th>Estonia</th>
<th>Finland</th>
<th>France</th>
<th>Germany</th>
<th>Greece</th>
<th>Hungary</th>
<th>Ireland</th>
<th>Italy</th>
<th>Latvia</th>
<th>Lithuania</th>
<th>Luxembourg</th>
<th>Malta</th>
<th>Netherlands</th>
<th>Poland</th>
<th>Portugal</th>
<th>Romania</th>
<th>Slovakia</th>
<th>Slovenia</th>
<th>Spain</th>
<th>Sweden</th>
<th>UK - Northern Ireland</th>
<th>UK - Scotland</th>
<th>UK - England &amp; Wales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntarily</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>Obligatory</td>
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<tr>
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</table>

3.3 Planning permit procedure

Control of planning demands (i.e. aspects linked to the use and location of construction works) and technical requirements of the building and the plot may be done in separate or combined procedures. If there is a separate procedure, a distinction between the planning permit and the building permit is usually made.

In approximately half of the EU countries, there is a combined permit procedure for planning demands and technical requirements (Table 7). In these countries, a planning permit is not required before applying for a building permit. Pre-consultation and phasing the procedures can be used to get detailed planning information and reach informal agreements.

In the other half of the EU countries, there is a separate permit procedure for planning demands and technical requirements. A planning permit is the basis for the development of a design, but it does not bind the building authority to grant a building permit, since it only states that designs presented at this phase are in compliance with the planning demands. The planning permit does not authorise the beginning of construction works.

In several countries, some particular situations were found:

1) Both a planning permit and a building permit are required, but for certain type of construction works it is possible to combine the permits into one administrative procedure (e.g. Czech Republic).
2) A planning permit and a building permit are only required for certain types of construction works (e.g. Hungary and Luxembourg).
3) The applicant can voluntarily apply for a planning permit using pre-consultation (e.g. Bulgaria and France).
|                      | Austria | Belgium | Bulgaria | Cyprus | Czech Republic | Denmark | Estonia | Finland | France | Germany | Greece | Hungary | Ireland | Italy | Latvia | Lithuania | Luxembourg | Malta | Netherlands | Poland | Portugal | Romania | Slovakia | Slovenia | Spain | Sweden | UK - Northern Ireland | UK - Scotland | UK - England & Wales |
|----------------------|---------|---------|----------|--------|----------------|---------|---------|---------|--------|--------|--------|---------|---------|---------|--------|---------|-----------|-----------|-------|-------------|---------|----------|---------|----------|----------|-------|--------|---------------------|-------------|---------------------|
| Separate             | ❌      | ❌      | ❌       | ❌     | ❌              | ❌       | ❌      | ❌       | ❌      | ❌      | ❌      | ❌       | ❌       | ❌      | ❌       | ❌         | ❌         | ❌     | ❌          | ❌       | ❌        | ❌       | ❌        | ❌        | ❌     | ❌      | ❌                   | ❌           | ❌                   |
| Combined             | ❌      | ❌      | ❌       | ❌     | ❌              | ❌       | ❌      | ❌       | ❌      | ❌      | ❌      | ❌       | ❌       | ❌      | ❌       | ❌         | ❌         | ❌     | ❌          | ❌       | ❌        | ❌       | ❌        | ❌        | ❌     | ❌      | ❌                   | ❌           | ❌                   |
| No information       | ❌      | ❌      | ❌       | ❌     | ❌              | ❌       | ❌      | ❌       | ❌      | ❌      | ❌      | ❌       | ❌       | ❌      | ❌       | ❌         | ❌         | ❌     | ❌          | ❌       | ❌        | ❌       | ❌        | ❌        | ❌     | ❌      | ❌                   | ❌           | ❌                   |

### 3.4 Phasing

Phasing the building permit means the possibility to divide the building permit application into phases. This possibility can be particularly useful for complex construction works, since it avoids developing a fully worked out design before the preliminary design has been checked and approved. In half of the EU countries, it is not possible to apply for a regular permit in several phases (Table 8). In these countries, the division between planning and building permit and a voluntary pre-consultation can be used to phase procedures. Another way to make up for the lack of phasing is the building authority requesting the applicant to send additional information or to carry out small modifications in the building design (e.g. France, Italy, Malta and Sweden). Additional documentation may be delivered within a certain period. This possibility avoids rejecting the application due to lack of documents or simple deficiencies in the design. In France, Romania, Slovenia and Sweden it is logical that phasing the building permit procedure is not foreseen since building authorities do not check technical requirements of a building permit application.

In the countries where phasing is possible, phases concern three different stages of design development:

1) Intended use of the lot, zoning aspects and layout of the building (preliminary design).
2) Technical requirements (technical design).
3) Detailed drawings to be used during construction (construction drawings).

Phase 1) does not apply to countries where there is a separate procedure for a planning permit and a building permit. Depending on the complexity of each particular building work, the building authority, the applicant, or both, can decide to combine phases.
Table 8. Is it possible to apply for a regular building permit in phases?

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes</th>
<th>No</th>
<th>No information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>✔️</td>
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<td></td>
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<tr>
<td>Belgium</td>
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<tr>
<td>Cyprus</td>
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<tr>
<td>Netherlands</td>
<td>✔️</td>
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<tr>
<td>Poland</td>
<td>✔️</td>
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<tr>
<td>Romania</td>
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<tr>
<td>Slovakia</td>
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<tr>
<td>Sweden</td>
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<tr>
<td>UK - Northern Ireland</td>
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<tr>
<td>UK - Scotland</td>
<td>✔️</td>
<td></td>
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<tr>
<td>UK - England &amp; Wales</td>
<td>✔️</td>
<td></td>
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</tr>
</tbody>
</table>

In almost all EU countries there have been no developments regarding the phasing of the regular building permit procedure during the last 10 to 15 years (Table 9). Only in Czech Republic, Latvia, the Netherlands, Slovakia, Scotland there was an increase in the number of phases. For the near future, no changes are expected changes in this respect in the EU countries.

Table 9. What were the developments regarding the phasing of the regular building permit? What changes are expected in this respect?

<table>
<thead>
<tr>
<th>Past 10/15 years</th>
<th>Near future</th>
</tr>
</thead>
<tbody>
<tr>
<td>No developments</td>
<td>Belgium, Bulgaria, Czech Republic, Cyprus, Denmark, France, Germany, Ireland, Italy, Luxembourg, Malta, Poland, Portugal, Romania, Slovenia, Sweden, Northern Ireland, England &amp; Wales</td>
</tr>
<tr>
<td>Increasing number of phases</td>
<td>Czech Republic, Latvia, the Netherlands, Slovakia, Scotland</td>
</tr>
<tr>
<td>No information</td>
<td>Slovakia</td>
</tr>
<tr>
<td></td>
<td>Greece, Spain</td>
</tr>
</tbody>
</table>

3.5 Submission

Submission demands determine the documentation that must submitted when an application for a building permit is made. In detail, they describe the documents required to process the application and assess the building design (e.g. drawings, specifications, photographs of existing situation, photomontage of proposal, structural calculations and declarations).

In all EU countries, there are statutory submission demands to apply for a building permit (Table 10).
Table 10. Are there statutory submission demands when applying for a building permit?

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes</th>
<th>No</th>
<th>No information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td></td>
<td></td>
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<tr>
<td>Belgium</td>
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<td>Bulgaria</td>
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<td>Cyprus</td>
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<td>Hungary</td>
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<td>Italy</td>
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<tr>
<td>Latvia</td>
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<td>Netherlands</td>
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<td>Portugal</td>
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<td>Romania</td>
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<td>Slovenia</td>
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<tr>
<td>Spain</td>
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<td>UK - Scotland</td>
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<tr>
<td>UK - England &amp; Wales</td>
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</tbody>
</table>

According to data collected in 2008, general information about building regulations and permit procedures is available through the Internet in all EU countries. Codes, brochures and paper forms can also be downloaded from the Internet. In one third of the countries, electronic intake of a building permit application is already possible by some or all building authorities. Full electronic case handling of the building permit is possible or being implemented in some countries (e.g. Malta, the Netherlands, Portugal, Northern Ireland, Scotland and England & Wales).

3.6 Plan approval

During plan approval, the competent building authority scrutinises the application and consults with other authorities, if the applicant has not already done so. A design auditor may conduct an audit to provide a substantiated opinion regarding the extent to which the design conforms to planning demands and technical requirements. If opinions from other authorities and design auditors are favourable, and if the competent building authority is satisfied, a building permit is granted.

In almost all EU countries, during plan approval it is checked the compliance of the building design with submission, planning and aesthetic demands, as well as with technical requirements (Table 11). The following are exceptions to the rule:

1) In Denmark, the technical requirements that the local building authority is required to check depend on the technical complexity of the construction work (e.g. for single family houses only planning demands are checked).

2) In France, the compliance with technical requirements is checked for buildings open to the public and very high buildings, and these checks are limited to fire safety and access for disabled people requirements.

3) In Portugal, only technical requirements regarding space standards are checked. The compliance of the building design with relevant building regulations is attested to by liability declarations of designers.

4) In Slovenia and Sweden, plan approval does not cover the technical requirements of the design.

In some EU countries, it is acknowledged that the level of control depends on several aspects, such as the complexity of construction and the reliability of private actors involved in the application (e.g. the Netherlands).
### Table 11. What is checked during the plan approval phase?

<table>
<thead>
<tr>
<th>Submission demands</th>
<th>Aesthetic demands</th>
<th>Zoning demands</th>
<th>Technical requirements</th>
<th>No information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Belgium</td>
<td>Cyprus</td>
<td>Czech Republic</td>
<td>Denmark</td>
</tr>
<tr>
<td></td>
<td>Estonia</td>
<td>Finland</td>
<td>France</td>
<td>Germany</td>
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<tr>
<td></td>
<td>Hungary</td>
<td>Ireland</td>
<td>Italy</td>
<td>Latvia</td>
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<td>Lithuania</td>
<td>Luxembourg</td>
<td>Malta</td>
<td>Netherlands</td>
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<td></td>
<td>Poland</td>
<td>Portugal</td>
<td>Romania</td>
<td>Slovakia</td>
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<td></td>
<td>Spain</td>
<td>Sweden</td>
<td>UK - Northern Ireland</td>
<td>UK - Scotland</td>
</tr>
<tr>
<td></td>
<td>UK - England &amp; Wales</td>
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<td></td>
</tr>
</tbody>
</table>

In several EU countries, it is explicit that building permit may contain conditions that must be carried out before or during the construction phase (e.g. Cyprus, Germany, Italy, Luxembourg, Malta, Slovakia, Scotland and England & Wales), such as:

1. Submitting some drawings and calculations at a later phase.
2. Notifying the local authority of the various stages of the construction work in order to ensure the opportunity to carry out site inspections as it sees fit.
3. Taking measurements in the completed building to demonstrate compliance with the building regulations.
4. Settling that the building must be connected to the services (i.e. water, drainage, electricity and gas) at the expense of the owner.

In some countries it is also stated that dispensation from the requirements of the building regulations may be granted (e.g. Cyprus, Denmark, Germany, Latvia, the Netherlands and Portugal). For instance, in cases of alteration, renovation or conversion of existing building, provisions on design and layout may be relaxed if the authorities are satisfied that the construction work cannot otherwise be carried out without extensive alterations to the building. This ability to grant dispensations is used for cases where the regulations for the construction of works (usually adapted to new buildings) are considered too severe. The exemptions have to be justified by economic, architectural or other reasons.

### 3.7 Beginning of construction works

In almost all EU countries, construction works can start after the building permit has been granted by the building authorities (Table 12). The following are exceptions to this rule:

1. In Bulgaria and Denmark, construction works may start after granting the building permit. Exceptionally, to allow an early start of the construction, the local authority may grant a partial building permit or special authorization. In this case, the following stages of design are approved as construction progresses, but always before implementing the respective construction work.
2) In Italy, Latvia and Portugal, the situation is identical to 1) but the only early construction works allowed are demolition or excavation and peripheral contention of the soil until the level of the lower floor.

3) In Finland, the piling of a building’s foundations may be carried out before the construction work begins in accordance with the piling plans submitted to the local building authority. Construction works are considered to have commenced when the casting of foundations or the installation of the construction elements of the foundation begins.

4) In Northern Ireland and England & Wales, according to the procedure operated by local authorities, the construction work on site may start soon after application, but to receive the full benefit and protection from the regular procedure it is advisable to start the construction works after the notice of approval is received. If the applicant commences a construction work prior to plan approval, he proceeds entirely at his own risk.

5) In England & Wales, according to the procedure operated by approved inspectors, the work may start as soon as the initial notice is accepted by the local authority, subject to any arrangements agreed with the approved inspector.

<table>
<thead>
<tr>
<th>Table 12. When may construction works start?</th>
</tr>
</thead>
<tbody>
<tr>
<td>After submission of the application</td>
</tr>
<tr>
<td>Austria</td>
</tr>
<tr>
<td>After granting of a partial permit</td>
</tr>
<tr>
<td>Austria</td>
</tr>
<tr>
<td>After granting permit</td>
</tr>
<tr>
<td>Austria</td>
</tr>
<tr>
<td>No information</td>
</tr>
</tbody>
</table>

In several EU countries, the applicant, the contractor or the building surveyor must notify the building authority of his intention to start the construction work (e.g. Denmark, Estonia, France, Germany, Ireland, Sweden and Northern Ireland). Usually, the notification must state who is responsible for the construction work (building surveyor) and who is executing it (contractor). In Malta a notification of start-up is only required for medium and large construction works. In Luxembourg, before the construction work begins the topographic services of the local authority must set the alignment of the construction. If the work is interrupted for a long period, a notification must also be presented.

In all EU countries, a building permit expires if construction work is not started within a certain period or is not completed within a certain time from the date the permit was granted. An application to extend the period to start or to complete the construction work can be submitted to the building authority. Beyond a certain limit, a new building permit must be applied for.
3.8 Site inspections

To ensure that the construction work is carried out in compliance with the approved building plans, the building permit and the building regulations, inspections on the building site are conducted by public or private parties (or a combination).

In about half of the EU countries, a building surveyor, the designer or both carry out site inspections and decide on which phases they are required. Usually, a control plan is agreed with the developer. Building authorities carry out site random inspections to supervise construction works (e.g. Belgium, Cyprus, Estonia, France, Portugal and Romania) or choose key stages of construction works to control them (e.g. Bulgaria, Czech Republic, Denmark, Hungary, Italy, Lithuania and Malta).

In the other half of the EU countries, building authorities are responsible for controlling construction works and decide the level of inspection they intend to carry out. The extent and type of control by the building authorities usually depends on the difficulty of each construction work and on the expertise of private bodies that take part. The following possibilities were identified:

1) Building authorities assign the control of construction to private parties and agree on a control plan (e.g. Finland, Germany and Sweden).
2) Building authorities select key stages to inspect construction works and may undertake any other inspections as deemed necessary (e.g. the Netherlands, Northern Ireland and England & Wales).
3) Building authorities carry out random site inspections (e.g. Poland).

In all EU countries, public building inspectors, from building authorities, have right of access to building sites and are entitled to carry out inspections. They can examine construction works and request explanations and documents. During site inspections, all parts of the construction work can be inspected. Usually, for each examination the public building inspector provides a report. If construction works take place without a building permit or do not comply with the approved design, they can be suspended until the relevant local authority takes a decision regarding demolition or continuation. Should this happen, the developer may be also sanctioned to pay an administrative fine and the relevant indemnities for damages caused.

In most EU countries, major and minor design changes are possible during construction work. Changes that do not concern zoning demands, prescriptions of the building permit or the building’s use are minor and can be declared at the end of construction work. For substantial variations, a formal procedure is required before proceeding with construction work.

In several EU countries, a construction log-book to record daily progress of the construction work is maintained. This book must be accessible at the construction site to public building inspectors.

3.9 Completion

Once the construction work has been completed, the building authorities are usually notified (i.e. completion notification). Several documents may be required for completion, such as, the building design with the works actually carried out; reports of site inspections; the construction log book; and liability declarations by the contractor, building surveyor or designer. In these declarations, signatories attest that the construction work has been carried out in accordance with the approved design and, where applicable, changes comply with the applicable legal and regulatory requirements.

In about half of the EU countries, a final site inspection, conducted by the building authorities and other authorities, is required (e.g. Bulgaria, Cyprus, Czech, Republic Finland, Hungary, Luxembourg, Romania and Spain) (Table 13). The purpose of the final site inspection is to verify whether construction works actually carried out comply with the building regulations, the approved building design and the building permit.

In the other half, the building authorities rely on declarations by the private bodies that conducted the building work or the site inspections and they do not perform a final site inspection (e.g. Austria, Denmark, Ireland, Portugal, Slovenia and Sweden). Even if not required, the building authorities
may decide to carry out a site inspection. It usually happens when there are deficiencies in the
documentation delivered or doubts about the reliability of the agents involved in the construction
work.

### Table 13. Is a final site inspection conducted by building authorities required?

<table>
<thead>
<tr>
<th>Country</th>
<th>Austria</th>
<th>Belgium</th>
<th>Bulgaria</th>
<th>Czech Republic</th>
<th>Denmark</th>
<th>Estonia</th>
<th>Finland</th>
<th>France</th>
<th>Germany</th>
<th>Greece</th>
<th>Hungary</th>
<th>Ireland</th>
<th>Italy</th>
<th>Latvia</th>
<th>Lithuania</th>
<th>Luxembourg</th>
<th>Malta</th>
<th>Netherlands</th>
<th>Poland</th>
<th>Portugal</th>
<th>Romania</th>
<th>Slovakia</th>
<th>Slovenia</th>
<th>Spain</th>
<th>Sweden</th>
<th>UK - Northern Ireland</th>
<th>UK - Scotland</th>
<th>UK - England &amp; Wales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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<td>✔️</td>
</tr>
<tr>
<td>Not required</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td>No information</td>
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<td>✔️</td>
</tr>
</tbody>
</table>

The exception to this division is France, where a final site inspection is only required for buildings open to the public (e.g. hotels, hospitals, housing for the elderly, theatres and shopping centres) and very high buildings (i.e. residential buildings higher than 50 m and all other buildings higher than 28 m).

If satisfied with the final site inspection or with the documentation, which attests that the construction work was carried out in accordance with the approved design, the building authorities may issue or approve a document certifying that the construction work was successfully completed (i.e. a completion certificate) or that it can be used for the intended purpose (i.e. a use permit). In almost all EU countries, it is mandatory to obtain a completion certificate or a use permit after the construction is completed (Table 14). The following are exceptions to this rule:

1. In Belgium, France, the Netherlands and Poland a use permit has to be issued before buildings open to the public can be taken into use.

2. In Ireland, contractors are responsible for issuing the completion certificate at request of the builder/owner.

3. In England & Wales there are two possibilities. In the procedure operated by local building authorities, the applicant may request a completion certificate, provided that the request is submitted with the initial application for plan approval. In the procedure operated by approved inspectors, when the work is completed, the approved inspector must issue a final certificate to the local authority that may reject it.
In almost all EU countries, a building can be taken into use after a use permit or a completion certificate is granted (Table 15). There are some exceptions to this rule:

1) In Austria, the building may be taken into use after a notification of completion has been submitted to the municipal authority.

2) In Denmark, buildings may not be taken into use without a use permit, but small buildings (e.g. single-family houses) are exempt.

3) In France, buildings may be taken into use after notice of the contractor that the construction work is completed, but for buildings open to the public and very high buildings a use permit has to be issued before it can be taken into use.

4) In the Netherlands, a use permit is not required, but buildings open to the public may only be taken into use after a use permit is issued.

5) In Poland, buildings may be taken into use after the building authority is notified of the completion of the work, but in certain cases a use permit must be obtained.
3.10 Fees

In all EU countries, the applicant has to pay a fee to obtain a building permit. However, there is a wide range of variety concerning how the value of fee is determined (Table 16). The following combinations of criteria were identified:

1) Construction cost (e.g. Denmark, France, Italy, Romania, Slovenia and Spain).
2) Construction cost, floor area and type of construction (e.g. Latvia and Lithuania).
3) Cubic meters of construction (e.g. Luxembourg).
4) Floor area and building use (e.g. Austria and Bulgaria).
5) Fixed fee per building use (e.g. Czech Republic, Finland and Poland).
6) Fixed fee plus an additional per floor area (e.g. Estonia).
7) Fixed fee plus an additional per construction cost (e.g. the Netherlands).
8) Fixed fee or floor area, depending on building use (e.g. Ireland).
9) Fixed fee or construction cost, depending on floor area and building use (e.g. Northern Ireland).
10) Fixed fee plus an additional per duration of construction works and floor area, depending on building use (e.g. Portugal).

Beyond the building permit fee, other fees may be required. There is also a wide range of variety in the EU countries weather fees are required for pre-consultation, submitting an application, site inspections or obtaining the use permits. Furthermore, in some EU countries, there is an additional fee if the building is located in an area without an approved land development plan or if construction works to provide urban services must be carried out (e.g. Portugal and Sweden).

One aspect is identical in almost all EU countries: no building permit is granted and no construction work can be carried out, unless and until the appropriate fee or contribution has been paid.
### 3.11 Procedure times

In the majority of the EU countries there are fixed procedure times in which the permit has to be issued (Table 17). The building authorities may extend the maximum procedure time for special situations (e.g. listed buildings, buildings located outside the development boundary of a local plan, complex buildings and major cities) in several countries (e.g. Czech Republic, France, Italy, Malta, Portugal and England & Wales). In other countries the maximum procedure time may be shorter if designs are certified by a design auditor (e.g. Bulgaria) or if the procedure is operated by approved inspectors (e.g. England & Wales).

For most of these countries, the maximum procedure time ranges from 8 to 12 weeks. Some countries are exceptions to this rule, as follows:

1. In Austria, maximum procedure times vary by state.
2. In Bulgaria, maximum procedure time is shorter if designs are certified by a design auditor.
3. In Estonia and Lithuania, maximum procedure times are short (due to phasing all times might not have been added).
4. In Italy and, particularly, in Portugal, maximum procedure times are long, which is a common reason for complaint (one should take into consideration that these are combined procedures) (vd. 3.3).
5. In Malta, maximum procedure time is extended if buildings are located outside the development boundary of a local plan.
6. In England & Wales, according to the procedure operated by local building authorities, the maximum procedure time is short, which is probably due to the separation between planning and building permit.
7. In England & Wales, according to the procedure operated by approved inspectors, the only statutory delays are created by the periods allowed for local authorities to reject the initial notice and the plan certificate.

In the remaining EU countries, no maximum times have been set. The justification for this option is that the time taken can vary considerably depending on the complexity of the construction work, the quality of the application and the use of design auditors.
Table 17. What are the maximum procedure times in which the permit has to be issued?

<table>
<thead>
<tr>
<th>Country</th>
<th>Austria</th>
<th>Belgium</th>
<th>Bulgaria</th>
<th>Cyprus</th>
<th>Czech Republic</th>
<th>Denmark</th>
<th>Estonia</th>
<th>Finland</th>
<th>France</th>
<th>Germany</th>
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<th>Latvia</th>
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<th>Poland</th>
<th>Portugal</th>
<th>Romania</th>
<th>Slovakia</th>
<th>Slovenia</th>
<th>Spain</th>
<th>Sweden</th>
<th>UK - Northern Ireland</th>
<th>UK - Scotland</th>
<th>UK - England &amp; Wales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time is set (in weeks)</td>
<td>8 to 11</td>
<td>4 or 8</td>
<td>3 or 6</td>
<td>3 or 6</td>
<td>3 or 6</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>10 or 12</td>
<td>3</td>
<td>8</td>
<td>12 or 18</td>
<td>9</td>
<td>25 or 31</td>
<td>8</td>
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<td>2 or 8</td>
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</tbody>
</table>

There is not a pattern as to what happens if deadlines are not met (Table 18). The following approaches are adopted in different EU countries:

1) The building permit is automatically granted (e.g. Germany, Lithuania, Romania and Spain).
2) The building permit is automatically refused (e.g. Belgium, Italy, Northern Ireland and Scotland).
3) The applicant can appeal to a higher authority (e.g. Austria, Portugal and Slovenia).
4) The applicant has to wait for the decision (e.g. Czech Republic).
5) The applicant can claim the dispensation (e.g. Ireland).

Table 18. What happens when deadlines are not met? (maximum procedure time is not set in shaded countries – vd. Table 14)

<table>
<thead>
<tr>
<th>Country</th>
<th>Austria</th>
<th>Belgium</th>
<th>Bulgaria</th>
<th>Cyprus</th>
<th>Czech Republic</th>
<th>Denmark</th>
<th>Estonia</th>
<th>Finland</th>
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<th>Hungary</th>
<th>Ireland</th>
<th>Italy</th>
<th>Latvia</th>
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<th>Poland</th>
<th>Portugal</th>
<th>Romania</th>
<th>Slovakia</th>
<th>Slovenia</th>
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<th>Sweden</th>
<th>UK - Northern Ireland</th>
<th>UK - Scotland</th>
<th>UK - England &amp; Wales</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

In France, if the applicant does not receive a response within the maximum procedure time, then the application for the building permit has been approved (i.e. tacit approval). However, in some cases (e.g. building located in a conservation area or a natural park, building subjected to public survey) the applicant cannot assume a tacit approval.

During the last 10 to 15 years, the maximum procedure times have been shortened in several EU countries (e.g. Bulgaria, Czech Republic, France, Germany, Ireland, Lithuania, Portugal and
Slovenia). For the near future, no further changes are expected in this respect in most EU countries, with the exceptions of Czech Republic and Lithuania where the procedure times may be extended due to more complicated procedures. When compared with other EU countries, Czech Republic and Lithuania countries have shorter procedure times.

3.12 Objections

In some EU countries, neighbours and other parties have the legal right to object to a building permit or to a planning permit being granted to a construction work. In other EU countries, third parties do not have an automatic right to object, but can provide the building authorities with information that they feel may have a material effect on the outcome of the application. Objections and information must be based on an objective impairment of legal rights or on an infringement of the planning instruments or building regulations. The building authorities take objections and information into consideration for the final deliberation.

In almost all EU countries, objections and information can be presented to the building authorities during the plan approval phase or before the final permit has been issued. In France the objections must be presented within 2 months after the day when the notice that the building permit was granted is displayed on the property.

To inform third parties, in some EU countries it is mandatory to inform neighbours about an intended construction work (e.g. Belgium and Finland) or to make public the application to a building permit by suitable means (e.g. Italy, Malta, Portugal). In England & Wales, neighbours must only be notified if the construction work is close to or directly affecting the boundary or party wall of a premise. Complementary, in some EU countries a copy of any application for a building permit is available for inspection by the public at the building authorities (e.g. Malta and Portugal) and major construction works may be subjected to a hearing period (e.g. Portugal).

4 Conclusions and discussion

4.1 Main differences and similarities

The organization of a regular building permit procedure is similar in EU countries. The usual procedure includes the following steps:

1) During a voluntary pre-consultation, applicants can discuss with the building authorities planning demands, aesthetics and technical requirements.
2) Phasing the building permit procedure is possible to avoid developing a fully worked out design before the preliminary design has been checked.
3) Statutory submission demands determine the documentation to submit with an application; information about building regulations and permit procedures is available through the Internet.
4) During plan approval, the compliance of the building design with submission, planning and aesthetic demands, as well as with technical requirements is checked; plan approval usually takes 8 to 12 weeks.
5) Neighbours and other parties can raise objections to a building permit being granted during the plan approval phase or before the final permit has been issued.
6) Construction works can begin after the building permit has been granted by the building authorities, but there are strategies to allow an early start of the construction; total or part of the building permit fees must be paid before construction works can be carried out.
7) Building authorities must be notified before construction works start; the building permit expires if construction work is not started within a certain period or is not completed within a certain period since the date it was granted.
8) Site inspections are carried out to ensure the compliance of construction works with the approved building design, the building permit and the building regulations.
9) During construction, minor design changes are possible and can be declared at the end of construction work; for substantial variations a formal procedure is required before proceeding with construction work.

10) Public building inspectors are entitled to carry out inspections and if construction works take place without a building permit or do not comply with the approved design, they can be suspended.

11) Once construction is complete, a final site inspection is conducted and documentation that attest the compliance with the building design is submitted to building authorities.

12) If satisfied, building authorities issue a completion certificate or a use permit; the building can be taken into use after a use permit or a completion certificate is granted.

However, there are several differences between countries concerning detail aspects of the building permit procedure. The following differences were identified:

1) Agreements and information provided during pre-consultation are only binding to building authorities in some countries.

2) There are different levels of implementation of electronic case handling of the building permit.

3) Permit procedures for planning demands and technical requirements may be separated or combined.

4) Phasing the permit procedure is only statutory available in some countries; different strategies are used to divide the building permit procedure in phases.

5) The right to object to a building permit being granted is only laid down by law in some countries.

6) Different criteria are used to allow an early start of construction works.

7) The value of the building permit fee is determined by different criteria.

8) In addition to the building permit fee, other fees may or may not be required.

9) When maximum procedure times are not met by the building authorities different consequences can result.

10) A completion certificate or a use permit issued may not be required when the construction is finished.

4.2 Main types

As described above, the organization of the regular building permit procedure is similar in the different EU countries. No substantial differences were found in continental Europe countries. The United Kingdom countries, and particularly England & Wales, are those that present more deviations from the common pattern. The following distinctive characteristics were identified:

1) There is a specific type approval procedure.

2) Planning permit and building permit are separated, and there is also the possibility to phase the building permit procedure.

3) Full electronic case handling of the building permit is already available.

4) The applicant can choose to have plan approval and site inspections conducted by either building authorities or approved inspectors.

5) Construction works may start soon after submission of the application, not having to wait for plan approval.

6) Maximum procedure times are shorter than the average.

All these characteristics have in common the aim of reducing the burden of administrative aspects, while ensuring good levels of compliance.

4.3 Trends and developments

In the last 10 to 15 years, the dominant trends identified in the building permit procedure were a decrease in the types of construction works submitted to building authorities control during plan
approval, and a reduction of building permit maximum procedure times. Building authorities’ control during the construction phase remains unchanged. Altogether, there is a movement towards simpler and faster building permit procedures. For the near future, no major changes are expected in the building permit procedures.

4.4 Lessons to be learned

The analysis provided a global picture of the building permit procedure of the EU countries. The results can be useful for situating the procedure of each country within the EU panorama, assessing the main trends and developments and guiding strategic choices on possible improvements in each country. A comparative analysis of the EU countries regarding organization and formulation of technical building regulations, tasks and responsibilities in the building control systems and building permit procedure has been accomplished. To complete this comparative study of the regulatory systems of EU countries, an analysis focusing on the quality demands of public and private building-control bodies is still required. Furthermore, the analysis of regulatory systems should proceed with studies about the performance of each type of system in terms of adequacy, efficiency and effectiveness. In an overall analysis, many differences were identified in the building permit procedure of the EU countries. These differences constitute a barrier to the free circulation of people and services. Additional uniformity among building permit procedure would contribute to the establishment and functioning of a single market for services in the construction industry, in which designers, developers and builders are no longer limited to working in national markets.

5 Acknowledgements

Thanks are extended to the national experts of the EU countries that filled in the questionnaire on building regulations.

6 References

Airtightness of Dwellings in Ireland: Design, Workmanship and Control

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Abstract:
The residential sector accounts for 25% of Ireland's total energy consumption, of which 60% is used for space heating. As thermal insulation standards increase, building air tightness is playing an increasing role in both building energy performance and indoor environmental quality. This paper reports on the results of air tightness testing carried out on a small number of dwellings. The paper highlights the paucity of dwelling airtightness data for Ireland. The results are compared to past studies and compliance with the existing standards. While the number of houses tested is small they are broadly representative of urban dwellings in Ireland. The study indicates a misconception that newer buildings are more airtight than older buildings. The paper concludes that good design, attention to detail and rigorous controls throughout construction is vital to delivering air-tight dwellings.

Keywords: airtightness, measurements, standards, workmanship

1 Introduction

Twenty five percent of Ireland's total energy consumption is accounted for by the residential sector, 60% being used for space heating (SEI, 2008). In recent years, improving fabric insulation standards, mechanical efficiencies and a greater understanding of energy use in buildings has augmented the importance of airtightness to building energy performance. Technical Guidance Document Part L (2008) - Conservation of Fuel and Energy (Dwellings) refers to Envelope Air Permeability testing of new dwellings, setting a „reasonable upper limit for air permeability‘ of 10m³/hr/m² at 50Pascals (DEHLG, 2007). This limit is not onerous when compared to standards in other countries, as shown in Table 1 and the increasingly popular PassivHaus standard requiring an n50 of 0.6 air changes per house (ach) (Hodgson and Establishment, 2008). There is a general awareness of the importance of airtightness and Ireland, but inertia to change has left the concept of air-tight dwellings in the doldrums.
Table 1. Airtightness Standards  
(Sourced: Pan, 2010)

<table>
<thead>
<tr>
<th></th>
<th>Max air permeability (m$^3$/hr/m$^2$ at 50Pa)</th>
<th>Max air change rate (ach at 50 Pa)</th>
</tr>
</thead>
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<tr>
<td>Ireland</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>1.8 - 3.6</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>Estonian</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Internationally, dwelling airtightness characteristics have been well researched (see (Sherman, 1987; Stephen, 2000; Pan, 2010), and in particular in the USA where over 70,000 fan pressurisation measurements have been collected and analysed, comparing air tightness in terms of age, size, and construction type (Chan et al., 2005). However, there is a paucity of real data relating to the airtightness characteristics of existing dwellings in Ireland. There is a common perception that newer dwelling airtightness is better than for older buildings, however, in Ireland due to the lack of empirical data this cannot be confirmed. The paper reports on airtightness test results for two sets of houses; 1) 7 single family dwellings completed in early 2008, during Ireland’s building boom, 2) 4 single family dwellings constructed in the 1980’s; two of the houses have been retrofitted.

2 Dwelling Typology

This study focuses on the quantitative data gathered from 11 occupied single family residential semi-detached houses. All dwellings were of similar construction type; each had two-storeys, three bedrooms and load bearing external cavity walls and was naturally ventilated. Ground floors were slab-on-grade with suspended timber first floors. The attic space was of typical cold roof construction with insulation between ceiling joists. The average floor area and volume of the studied houses was 80m$^2$ and 217m$^3$, respectively. Ventilation was provided by passive wall vents designed with closable hit-and-miss or permanently open louvered vent grilles in each room.

2.1 2008 Dwellings

The 2008 dwellings were part of a development of over 60 dwellings. The buildings had brick outer leaf and block inner leaf wall of 100mm cavity wall construction with full fill bonded bead insulation, 200mm of attic insulation, gas fired central heating and double glazing. Mechanical extractor fans were fitted in bathrooms. The houses typically have a draught lobby to the front and WC to the rear of the building.

2.2 1980’s Dwellings

These identical dwellings were part of a large development. The dwellings which had not retrofitting carried out were typical of houses constructed prior to the implementation of minimum insulation standards in Ireland. The buildings had 100mm masonry cavity walls, with no insulation provided at construction, single glazed windows and no central heating. Nominal 100mm fibre attic insulation placed between the joists had degraded over time, providing little insulation value. The retrofitted dwelling were identical to the as built dwellings but were retrofitted with double glazed windows and doors, 100mm bonded-bead cavity wall insulation, 200mm glass fibre insulation between and across joists in the attic, and gas fired central heating.
3 Test Procedure

In accordance with the requirements of Part L of the building regulations, the air tightness testing was carried out in accordance with the Air Tightness Testing and Measurement Association (ATTMA) Technical Standard, which is based on EN 13829:2000 – Thermal performance of buildings: determination of air permeability of buildings: fan pressurisation method. The test determines the air flow rate required to maintain a pressure differential of 50 Pascal between the inside and outside of the building envelope. External doors and windows were closed, chimneys and flues sealed, trickle vents, smoke vents and all passive ventilation systems closed but not artificially sealed and internal doors open throughout testing.

A Retrotec Q46 Automated Blower-Door was used to carry out the testing. Pressure and flow rate were controlled using a laptop, connected to a DM-2A Automatic Micro-manometer, which controlled the fan. In addition to the DM-2 the test this software continuously logged a number of parameters including fan flow, test pressure and the area measurements. Prior to testing, dwellings were surveyed and the internal envelope area ($A_E$) and volume ($V$) accurately calculated. Software presented the air permeability characteristics in two ways:

1) Air Leakage Index - measured as the volume of air passing through each square metre of building envelope in one hour ($m^3/hr/m^2$);
2) Air Leakage Rate - Air flow rate at a reference envelope pressure difference by the gross internal volume of the dwelling. Unit: air changes per hour (ach)

Both pressurisation and depressurisation were carried out on each house. This takes account for the potential 'value effect' where components may be pushed open during pressurisation and closed down tightly generating a seal during depressurisation. The average of both tests is taken as the air permeability of the house. In addition to the blower-door testing a survey and smoke pencil test was carried out on each dwelling.

4 Test Results

The results of the blower door tests are presented in Table 2. The mean air leakage index of the 2008 dwellings ranged from 6.02 – 13.34 $m^3/hr/m^2$, with a mean of 10.4$m^3/hr/m^2$. Figure 1 graphically demonstrates that 5 from 7 exceeded the Part L 'reasonable upper limit' of 10$m^3/hr/m^2$. The average air leakage index for the two retrofitted dwelling was 5.55 $m^3/hr/m^2$, and 12.53$m^3/hr/m^2$ for the as built dwellings. This suggests that retrofitting dwellings can reduce air-permeability of dwellings by over 50%. It may be suggested that cavity wall insulation has a two-fold benefit, a) improving thermal properties of the dwelling and b) sealing the array of cracks and penetrations through the masonry building envelope. Comparing all results the 2008 dataset was not as good as expected and does not correlate well with Pan (2010) and Chan et al. (2005) who found evidence suggesting that airtightness of newer dwellings has increased compared with older dwellings.
Table 2. Dwelling characteristics and test results

<table>
<thead>
<tr>
<th>Dwelling</th>
<th>Year of Construction</th>
<th>Retrofit</th>
<th>Envelope Area (m²)</th>
<th>Internal Volume (m³)</th>
<th>Ave Air Changes @ 50Pa (ACH)</th>
<th>Ave. Air perm @ 50Pa (m³/hr/m²)</th>
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<tbody>
<tr>
<td>A</td>
<td>2008</td>
<td>No</td>
<td>246</td>
<td>224</td>
<td>6.65</td>
<td>6.02</td>
</tr>
<tr>
<td>B</td>
<td>2008</td>
<td>No</td>
<td>246</td>
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<td>9.02</td>
<td>8.60</td>
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<tr>
<td>C</td>
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<td>11.58</td>
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<td>215</td>
<td>205</td>
<td>11.66</td>
<td>10.64</td>
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<td>K</td>
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<td>No</td>
<td>215</td>
<td>205</td>
<td>14.9</td>
<td>14.42</td>
</tr>
</tbody>
</table>

Figure 1. Air Leakage rate comparison with Part L ‘reasonable upper limit’

Smoke pencil test observations correlated well with previous research (Sherman and Chan, 2003; Jaggs and Scivyer, 2006) uncovering an array of different leakage paths. Typical leakage locations were junctions between floor and wall at 1st floor level, gaps around attic hatch, letterbox, and leakage through and around windows and doors, penetrations in envelope for plumbing and electrical installations such as light switches and sockets, fire alarms and around waste pipes. In addition to common leakage paths to all dwellings, the following critical leakage pathways were identified in the 2008 dwellings:

- Service ducts concealing the soil vent and waste pipes, located inside the building envelope extending from the ground floor, into the attic space. The duct also concealed the pipes from the toilet and sink in the bathroom. Joints to internal walls were not sealed and thus provided longitudinal leakage pathways into the attic space.
b) Windows were not sealed correctly to the window openings and in many cases the draught seal was partly detached from the frame, or completely missing.

c) Many of the wall vent covers were not sealed correctly to the walls, thus leakage pathways remain when vent were closed.

This supports Johnston et al. (2004) and Kalamees (2007), findings that workmanship and supervision had a large affect on building airtightness. From the results can clearly be deduced that good design, detailing, specification of materials and construction practice are of fundamental importance when constructing new houses.

5 Conclusions

The field study provides a valuable data set of air tightness measurements for 11 new and 1980's single family dwellings. The outcome of the survey that is summarised below highlights the importance of workmanship and construction detailing in order to achieve the air tightness standards set in current Irish Building Regulations. The field measurements indicate that in the case of retrofitted properties there is a direct link between retrofitting and air tightness.

The key findings are summarised as follows:

The air-permeability of the seven dwellings constructed in 2008 was not as good as expected, with five dwellings exceeding the Part L 'reasonable upper limit' of 10 m$^3$/hr/m$^2$ at 50 Pascal. Surveys attributed the high leakage rates poor design and construction of the internal service duct concealing the soil vent and waste pipes. Draft stripping was partially detached from window frames and in some cases was completely missing. Windows were installed such that leakage paths remained between the window frame and external walls.

The results indicate that retrofitting older dwellings can have a significant impact on airtightness. The two retrofitted houses were in excess of 50% more airtight than the two dwellings that had not been altered. The average air leakage index for retrofitted dwellings was 5.55 m$^3$/hr/m$^2$, far below the 10 m$^3$/hr/m$^2$ target.

Comparing the 2008 and 1980's dwellings results show that new dwellings cannot automatically assumed to be more airtight that older dwellings.

Over the past number of years building regulations have improved and best practice documentation produced, however, in practice there is a lack of will amongst building professionals to adopt new practices to improve dwelling airtightness. To overcome this problem designers and builders must be educated about the importance of building airtightness and trained in best practice approaches for both new and existing dwellings. Workmanship must also be closely controlled with airtightness testing undertaken during and post construction. This paper highlights the lack of practical research in airtightness for new and retrofitted dwellings in Ireland. The study should provoke policy makers to enhance the control requirements of on-site workmanship, and designers to be vigilant about the effect particular details can have on airtightness.

6 References


Exploring the Compliance of the Fire Safety Order 2005 amongst Micro and Small Organisations in England and Wales

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Abstract:
Fire safety in buildings can not be underestimated given the grave losses associated with fire incidences. Legislation has been a useful means of ensuring fire safety in buildings, and in England and Wales, the recent introduction of the Regulatory Reform Fire Safety Order (FSO) 2005 has been mentioned to be a positive progression in fire safety standards. However, since its enactment, compliance with the legislation especially among micro and small organisations continues to trail behind expectation. Given that micro and small organisations constitute an enormous proportion of UK organisations and the success of legislation depends on compliance, it is essential to investigate the reasons behind this low compliance. This research thus sought to explore the potential reasons for this situation by the use of qualitative interviews conducted with key duty-holders of the legislation: the enforcing authority; responsible persons; and competent persons. The study reveals that low awareness of the FSO in micro and small organisations is at the heart of the low compliance. Also the lack of a recognised formal qualification system for competent persons makes it difficult for responsible persons to appoint competent persons. Beyond this, micro and small organisations prefer to conduct in-house fire risk assessments despite the danger of the lack of understanding of construction materials and technical issues of Fire Safety by responsible persons. This preference is due to the financial burden of engaging a competent person. Furthermore, reduced contact between businesses/building owners and the fire service under the FSO could also be undermining its compliance. Although it can be argued that the FSO is fairly new and as such it requires time to be fully grasped by organisations, the insight provided by this study is useful in the early identification of potentially problematic areas for early redressing.

Keywords:
fire safety, interview, legislation

1 Introduction

With the widely acknowledged catastrophic effects of fire outbreaks in buildings (e.g. loss of lives and property), over the years, it has been found necessary to have measures that would prevent fire outbreaks in buildings and measures that would mitigate their adverse effects. Notably among the measures are fire safety regulations or legislative instruments, and in England and Wales, the recent consolidation of an assortment of previous fire safety legislation into one regime that is far more accessible has been hailed as a positive stride in fire safety standards (Alalouff, 2006). This recent legislative instrument, known as the Regulatory Reform Fire Safety Order 2005 (FSO 2005), which came into force in England and Wales in 2006 is considered the most significant overhaul of fire safety legislation for seventy years (Alalouff, 2006).

The FSO 2005 radicalised the fire safety legislation by removing the fire certificate scheme, which was introduced under its repealed predecessor, the Fire Precautions Act 1971. The Reform removed the system of fire certification by the Fire Service, and introduced the notion of self certification or
a self regulated assessment system to be conducted by building owners or employers themselves. Under the FSO 2005, owners or managers of any non domestic premises in England and Wales are therefore mandated to undertake, review and update a suitable and sufficient fire risk assessment and take proactive steps to ensure the safety of those on or in the vicinity of the property. Three years after its coming into force a government review of the FSO 2005 indicates that compliance of the FSO 2005 among micro and small businesses continues to trail behind expectation (see Communities and Local Government, 2009). Micro and small businesses play a key role in the UK economy implying that the success of the FSO 2005 will greatly require their input. This study thus sought to investigate the factors responsible for the trailing compliance of the FSO 2005 among micro and small businesses. In the sections that follow, a review of fire safety legislation in the UK is presented to set the premise for the investigation. This is followed by the research methodology adopted for the study. Subsequently, the findings are presented and discussed followed by concluding remarks.

2 Literature Review: Fire Safety Legislation

The very first indications of UK fire safety standards can be traced back as early as the 12th Century when the Mayor of London laid restrictions on construction materials to prevent the rapid spread of fire through the city. The first tangible piece of enacted legislation, however, was the Fire Prevention (Metropolis) Act 1774. The Act classified building types and stipulated minimum standards in respect to thickness of external and party walls. Importantly, the Act also placed requirements on building owners to provide adequate means of escape; a principle still at the forefront of fire safety standards today (FireNet International, 2009). The 19th Century witnessed a number of further legislative developments for specific building types. The series of new Acts reflected Central Government’s understanding that different properties and the activities that were conducted within them carried unique fire safety considerations and that these should be covered by individual Acts rather than generic regulations. During the 19th Century, the Government introduced sector specific regulations including the Theatres Act 1843 and the Factory and Workshop Act 1885 (amended 1891).

Positively, the Government’s commitment to improving fire safety standards in workplaces and public buildings gained significant momentum through the 20th Century with a key progression being the enactment of the Fire Precautions Act 1971; the fundamental aspect of which was the fire certificate system. As required by the Fire Precautions Act 1971, the Fire Service would conduct periodic inspections of premises providing a service, and subject to compliance, the premises would receive a fire certificate. Cox (2008) supports the Fire Precautions Act 1971 stating that fire certificates were an effective way in achieving compliance as the responsibility lay with experienced fire service personnel who can be considered experts in the field. At the close of the century, the Government passed the Fire Precautions (Workplace) Regulations 1997 (as amended 1999) which placed additional obligations on employers. The requirement for the fire certificate remained under the new Act, but above and beyond this, employers had additional legal duty including: conducting a suitable and sufficient fire risk assessment which is monitored, reviewed and revised as appropriate; informing staff of any known risks; making staff aware of an emergency plan; and providing mandatory training to new employees as well as periodic training for existing employees.

Fire safety legislation through the centuries naturally developed in a fragmented fashion; primarily as the result of serious fires or recognised “near misses” (Edwards, 2006). The natural result of such progression was a cacophony of polices, statutory requirements and guidance dispersed across multiple Acts and Regulations which obviously had compliance implications. Again the fire certification introduced by the Fire Precautions Act 1971 and retained under the Fire Precautions (Workplace) Regulations 1997 received criticism. For instance, Hill and Webster (2006) explained that the process of applying for a fire certificate could take up to two years, potentially leaving a property at risk. In addition, Baker (2009) admits that although the certificate was a useful point of
reference, building owners and employers often hid behind it and conducted no proactive monitoring or reviewing once it had been awarded. Whilst the fire certificate recorded building compliance, it was therefore only a snapshot in time and did not take into account how the property was being used on a day to day basis.

In 2006, the above criticisms of the fire legislative regime yielded the advent of the FSO 2005 which consolidated the previous fire safety legislation into one regime and also removed the fire certification scheme. The FSO 2005 introduced three key elements: the responsible person; the enforcing body; and the competent person. Under the FSO 2005, the “responsible person” is the person responsible for ensuring fire safety standards are met and this is the employer or a person that is in control of the premises i.e. building owner, occupier or landlord. The responsible person is required to undertake a self certification process through periodic risk assessments (including the frequent monitoring and reviewing of such) as well as comprehensive record keeping. The Fire and Rescue Service fulfils the role of the “enforcing body” and they are required to undertake periodic inspections of premises governed by the FSO 2005 to ensure that responsible persons are fulfilling their duty. By removing the previous fire certificate system, the Order has passed the full responsibility, and ultimate accountability, on to the responsible person and the Fire and Rescue Service are now responsible for visiting sites to ensure that the Order is being observed. The Fire and Rescue Service have the power to: issue an enforcement notice whereby the Fire and Rescue Service clearly stipulates the breaches and a timeframe for rectifying them; issue a prohibition notice to restrict/prevent use of the property until the necessary improvements have been undertaken; and to bring prosecutions in the criminal courts.

Under the FSO 2005, where a property is particularly complex in terms of construction or hazardous in terms of use; or where the responsible person has limited fire safety experience and/or knowledge, it shall be necessary for the responsible person to appoint a third party consultant to assist with the fire risk assessment. This third party is the “competent person”, having sufficient training and experience or knowledge and other qualities to enable him to conduct a suitable and sufficient assessment of the premises. The introduction of the FSO 2005 was however not accompanied by the provision of a Government register of accredited fire risk assessors, a situation which could result in inadequate consultancies producing substandard assessments which would ultimately leave the responsible person liable. Under the previous legislation, the competent person was effectively the Fire and Rescue Service.

In spite of the FSO 2005 being hailed for the changes it has introduced to fire safety (cf. Alalouff, 2006; and Communities and Local Government, 2009), a report by Communities and Local Government (2009) indicates low compliance among micro and small organisations, and implicates low awareness of the FSO 2005 among micro and small organisations as being responsible. Undoubtedly, this finding is important to efforts geared towards entrenching the impact of the reform. However, beyond the issue of low awareness there could be other undermining factors or challenges drawing back compliance of the FSO among micro and small businesses. Micro and small businesses play a key role in the UK economy accounting for about 99% of UK private businesses and 48% of UK private sector employment (cf. Department for Business Innovation and Skills, 2009). Clearly the success of the FSO 2005 thus requires their input. It is therefore imperative to explore further any challenges that could be undermining compliance of the Reform among micro and small businesses. Indeed doing this will provide further opportunity for the early identification of problematic areas for early redressing. With this background, this study sought to investigate potential issues responsible for the trailing compliance of the FSO 2005 among micro and small businesses with the key research question being: why is there low compliance of the FSO among micro and small businesses. To answer the posed research question, the following methodology was adopted.
3 Research Methodology

This research had an exploratory and interpretive focus as it sought to investigate the ‘why’ surrounding a phenomenon which in this case is the low compliance of the FSO among micro and small businesses. Such a focus favours the use of a qualitative inquiry as qualitative inquiries are suitable for obtaining meaning and as such are appropriate for answering questions relating to “why” and “how” (cf. Fellows and Lui, 2008). In view of this, qualitative interviews (in the form of semi-structured interviews) were conducted with the three key duty-holders under the FSO: responsible person, competent person and enforcing body.

As there are no organised records/database of particularly responsible persons and competent persons, purposive sampling was used to obtain participants constituting the three target groups. All the participant's organisation were based in the West Midland Region of the UK. For both the responsible persons and competent persons categories, 4 participants each were interviewed and one participant for the enforcing body category. In total 9 participants were therefore interviewed. The interviewees were asked a series of questions relating to the significance of the FSO to fire safety, and also challenges in complying with the FSO among micro and small businesses.

The interviews were audio-taped. For the analysis of the interviews, the recorded interviews were transcribed. The transcripts were analysed systematically through iterative re-reading and coding of the transcripts which enabled the attainment of a profound understanding of each interviewee's viewpoint and hence the extraction of issues relating to the low compliance of the FSO among micro and small businesses (cf. Choudhry and Fang, 2008, Creswell, 2009).

4 Findings and Discussion

Table 1 provides a brief profile of the participants showing their role and experience. Taken together, the Table shows that the participants were in a good position to provide remarks that would yield an understanding of the subject being investigated.

5 Significance of the FSO

There was a general acknowledgement by the participants that the introduction of the FSO was a useful stride in fire safety standards. A theme, which was consistent in all interviews was that the previous legislation invited businesses to rely heavily on their fire certificates. The fire certificate was essentially only a snap shot in time and often businesses did not see any further need for proactive monitoring or undertaking their own regular risk assessments. This was even confirmed by the interviewed responsible persons as none of them had undertaken a fire risk assessment of their premises before the overhaul of the legislation.

“It [fire certificate] was a tick in the audit box, stored in a file and fire safety was given no further thought.” - C4

“[Previously] They’ve [Businesses] got a bit of paper [fire certificate] saying that the property is safe but there was no proactive approach which is what this [Fire Safety Order] is designed to do.” - C3

A further point highlighted by the participants was that the overhaul was necessary as it brought together a great deal of previous ‘fragmented’ legislation, creating one single point of reference. As indicated by the Communities and Local Government (2006), in a bid to reduce death, injury and damage caused by fire, it intended to make the law easier to follow and to comply with. The general consensus revealed by this study is that the FSO has been effective in doing this.
Another view shared by most of the respondents was that by creating the role of responsible persons, and ultimately a single point of accountability, people were encouraged to pay more attention to the legislation. One participant explained that the fear of prosecution prompts him to take the role seriously.

“As I said, I think it crystallises exactly how you should be doing things. And because you know there is a burden of responsibility on everyone I think it makes you more aware. It does make you more aware.” - R1

“I think it scares people. We live in a blame/claim culture and I think that the legislation has created that one point of blame in the responsible person. In a way, I hope it scares people into fulfilling their obligations. I know it would have that effect on me if I was in that position.” - C4

“I am the owner and I always feel the buck stops at me. It is a burden but a burden that comes with being your own boss and being responsible for staff and customers.” - R2

Overall, regarding the significance of the FSO this study like the Communities and Local Government (2009) report indicates that introducing the FSO was a useful overhaul of fire legislation. However, despite this view, one participant (i.e. E1) viewed the Fire Precautions Act 1971 as having performed an effective role in raising fire safety standards and that the FSO is essentially about maintaining those high standards as opposed to vastly improving them.

Table 1: Profile of Participants

<table>
<thead>
<tr>
<th>Participant</th>
<th>Role/Position</th>
<th>Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>Representative of Enforcing Body</td>
<td>35 years working for the Fire Service and now as an assessor at a Local Authority. Retains contacts and relationship with the Fire Service.</td>
</tr>
</tbody>
</table>

Competent Persons

<table>
<thead>
<tr>
<th>Participant</th>
<th>Role/Position</th>
<th>Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Chartered Building Surveyor</td>
<td>5 years on a wide range of properties, types and sizes.</td>
</tr>
<tr>
<td>C2</td>
<td>CDM Coordinator</td>
<td>5 years small, low risk premises only</td>
</tr>
<tr>
<td>C3</td>
<td>Graduate Building Surveyor</td>
<td>3 Years on small/medium sized properties of low/medium risk.</td>
</tr>
<tr>
<td>C4</td>
<td>Graduate Building Surveyor</td>
<td>4 years on small/medium sized properties of low/medium risks.</td>
</tr>
</tbody>
</table>

Responsible Persons

<table>
<thead>
<tr>
<th>Participant</th>
<th>Type of Organisation &amp; Size</th>
<th>Role/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>Doctors Surgery *Small organisation</td>
<td>Reception Manager</td>
</tr>
<tr>
<td>R2</td>
<td>Public House *Small organisation</td>
<td>Owner</td>
</tr>
<tr>
<td>R3</td>
<td>Rugby Club *Micro organisation</td>
<td>Chairman of the Recreational Trust</td>
</tr>
<tr>
<td>R4</td>
<td>Electrical Contracting Firm *Small organisation</td>
<td>Managing Director and also Landlord of multi-occupied premises</td>
</tr>
</tbody>
</table>

* Micro organisation has ≤ 9 employees. Small enterprise has ≤ 49 employees
6 Challenges with compliance of FSO among micro and small businesses

As identified from the interviews, the issues undermining compliance of the FSO among micro and small businesses are as illustrated in Figure 1.

![Figure 1: Issues undermining compliance of FSO among micro and small businesses]

6.1 Low awareness

Although all the interviewed responsible persons are aware of the FSO, the participants were of the view that there is low awareness of the FSO among micro and small organisations, particularly in terms of full understanding of their legal duties and the implications of non-compliance. This finding thus corroborates the Local Government (2009) report which similarly identified low awareness of the FSO among micro and small organisations as being behind the trailing compliance of the FSO among micro and small organisations. Comments by the interviewed competent persons and enforcing body representative pointed to inadequate government publicity of the FSO.

“I don’t think it [FSO] has been well communicated. I have not seen any adverts, TV or radio. That’s not to say that is hasn’t been advertised but I haven’t seen it. I am only aware of it because of the line of work I’m in: working in construction.”- C1

Authors are not advised to use more than three levels of subsections' nesting. The use of too many nesting levels will reduce clarity and may be confusing for the readers of the article.

6.2 Lack of background knowledge of building materials and fire safety by responsible persons

A common view held by the interviewed competent persons was that majority of micro and small organisations are conducting in-house fire risk assessment and that often the responsible persons assessing their own premises do not have the background knowledge of construction materials and the technical issues of fire safety and thus potentially leading to substandard assessments. The financial burden of consultancy fees was mentioned as being the reason for many micro and small businesses not using competent persons/consultants.

Although the competent persons acknowledged the government guidance documents on the FSO as being useful, they considered it as not being absolute and having several grey areas which may prove difficult for a lay person to make a good judgement if they are not experienced in undertaking assessments. However, contrary to the views of the interviewed competent persons, three of the responsible persons felt that with the assistance of the government guidance documents, they were competent enough to complete the fire risk assessment themselves. Not surprising, these three
responsible persons indicated that they had conducted the risk assessment themselves instead of appointing a third party consultant.

—...they [responsible persons] might be using the guidance document for the theoretical approach but do not have good background knowledge of building material i.e. compartments, fire resisting construction or perhaps material that would aid the rapid spread of fire.” – C4

6.3 Lack of a recognised formal qualification system for competent persons.

The introduction of the FSO was not accompanied by a formal qualification system for competent persons and this lack was identified as making appointment of competent persons difficult for responsible persons as responsible persons can not be certain that the competent persons they appoint have sufficient training, experience and knowledge of fire risk assessment. This has consequences for compliance of the FSO (not just for micro and small organisations but also for larger organisations) as there could be substandard assessment for organisations who choose to appoint external assessors. A common view held by the participants was thus the need for the establishment of an independent recognisable qualification for all assessors and an amendment of the FSO to stipulate the qualification as a legal requirement.

—Good fire safety practices can mean the difference between life and death so it is pretty essential that the people assessing those practices are competent to do it. And how do you know they are unless they have been formally assessed by an independent body? I also think it would help responsible persons select an assessor. I wouldn't be surprised if responsible persons are getting sub standards assessments without knowing it.” – C4

6.4 Reduced contact with the Fire Service.

Some of the participants, opined that contact between the fire service and micro and small organisations will be reduced under the FSO as the fire service will be unable to inspect all properties. Two out of four interviewed responsible persons had received a visit from the fire Service since the introduction of the FSO. It was expressed that reducing the fire service’s contact with micro and small organisation was dangerous and could lower fire safety standards.

7 Conclusions and Recommendations

Despite the general acceptance of the FSO as a useful stride in fire safety, its compliance among micro and small businesses has been a challenge as compliance among this category trails behind expectation. Contributing to earlier studies on the FSO, this study has buttressed earlier findings and also yielded further insight into the low compliance of the FSO among micro and small businesses. These have implications for the success of the FSO and as such early consideration should be given to formulating policies and devising measures to address the reasons for the low compliance.

Concerning the issue of awareness, further publicity efforts targeting micro and small organisations at the local level (e.g. councils) would be useful. The publicity could take the form of open days or seminars at local fire service stations. The publicity could also take the form of periodic newsletters (advisably electronic to minimise cost) sent by local fire services to businesses within their locality. In order to assist responsible persons who wish to undertake in-house assessment, these seminars could be made to compliment government guidance documents by also serving the purpose of providing responsible persons with some rudimentary knowledge of building materials and fire risk assessments. The e-newsletters could also be a useful means by which local fire services could disseminate information on recent fires within the locality, the exact causes and advice on preventing similar incidents.
Regarding the lack of a government recognised certification scheme for competent persons, it will be useful if such a mandatory scheme is provided. However, this should be preceded by stakeholder discussions to delineate the operational details of the scheme. Obviously, given the large number of micro and small businesses it will be difficult for the fire services to visit all micro and small businesses. However, the inspection of such businesses, particularly those with premises of high risk could be given greater priority. More importantly micro and small businesses should be encouraged to contact their local fire services for any assistance and advice they may need in complying with their legal obligation under the FSO. Admittedly, the FSO is fairly new and may take some while to be fully grasped by micro and small organisations. This however does not remove the need to take early steps to enable the entrenchment of the benefits of FSO. There still remains room for improvement and it is hoped that the findings of this inquiry and the recommendations together with previous reports on the FSO would be useful in contributing to safer premises amongst micro and small organisations.

8 References

Re-writing local authorities building control regulations to foster energy efficiency in the built environment in South Africa: The case of Ekurhuleni Metropolitan municipality

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Abstract:

Two legacies of South Africa’s past which pose significant challenges to sustainable development are; entrenched economic inequality bequeathed by the apartheid system; and the energy intensive nature of the economy based on cheap coal and natural resources for an industrial competitiveness strategy built on cheap energy. This has made South Africans to take energy for granted and neglect the most cost effective and plentiful form of new energy in the world; Energy Efficiency. Lack of a definitive legal requirement in The National building regulations has been another barrier to EE implementation in buildings up until now. However, Increasing electricity tariffs, the need to reduce GHG emissions, energy security & reliability issues and good public health concerns are the new drivers of the EE agenda in South Africa.

The South African energy efficiency strategy calls for a mandatory regulatory regime, integrated into the National Building Regulations so that local authorities can implement it through their building control regulations. The National Energy Bill became law in October 2008. The proposed SANS 10400XA and SANS 204: Edition 1 Parts 1 – 4 will become mandatory for buildings in the next 12 months once they get promulgated. Local authorities have been readying themselves to implement the proposed new regulations by trying to align their current building control regulations application processes to the proposed law.

This paper investigates practices and processes the Ekurhuleni Metropolitan Municipality in the Greater Johannesburg has initiated to meet the above objective. Significantly, it investigates the process of re-writing building control regulations to achieve energy efficiency in building developments under municipal jurisdictions.

The paper is based on documentary review and structured field interviews carried out between late 2010 and early 2011. The respondents in the field interviews were Building Controls and Approvals Officials (BCAOs) in Ekurhuleni Metro, Key Professional Practitioners (KPPs) in Johannesburg and representatives of Sustainable Construction Interest Groups (SCIGs). It highlights innovative practices and outlines possible recommendations on the applicability of energy efficiency building standards/codes through the building control process in South Africa’s local authorities.

Keywords:
energy efficiency, building regulations, local authorities, buildings, Ekurhuleni Metropolitan Municipality

Introduction

The first South African Energy Efficiency Strategy review of 2008, which drew its mandate from the white paper on energy policy of 1998 aimed at linking energy sector development with National socio-economic development plans (DME 2008). It set out to reduce the necessity for additional

1 EE In this paper means Energy Efficiency
power generation capacity by making energy efficiency an integral part of managing electricity shortage. It recognized the number one barrier to energy efficiency as being the priority level it commanded vis-à-vis other competing needs of the Nation like quality of life and education. However, it singled out energy efficiency as an integral element in providing solutions to the other national problems (DME, 2008).

Further, it showed that specific energy usage could be reduced by up to 35% cost-effectively over a period of 20 years if accompanied by effective policies (DME, 2008). It proposed an overall target final energy demand reduction of 12%. The building sector had final targets of 20% reductions for commercial and public buildings and 10% reduction for residential. For this reduction targets to be achieved, the strategy called upon the minister to invoke the powers bestowed by the act and effect mandatory energy efficiency standards as the key to success.

Additionally, other Studies have shown that developing national regulations and standards for building’s energy efficiency and/or sustainable buildings is one critical way of achieving energy efficiency while reducing GHG emissions and ensuring energy security (du Toit, 2007, Reinink, 2007). It also makes sound economic/financial sense (Bennett, 2001).

Local authorities control land use policies, they determine where buildings and developments should be located, the ensuing mobility needs and the mix of uses that are allowed, which in turn affect energy use (SEA, 2008). They have regulatory influence and responsibility over building codes, which determine the energy efficiency of the building stock.

With challenges of greater energy efficiency within industry, high-income high-energy consuming households, commercial and public buildings; local governments will have to use mechanisms such as stepped up tariffs, information awareness and energy efficiency building regulations and by-laws. Energy efficiency is relatively a new focus area for local authorities in South Africa. Notwithstanding this fact, local authorities have a mandate to act because of energy demand management policy requirements of the national government, sustainable development and climate change. Additionally, the National electricity generation crisis increased awareness around the topic of energy efficiency and the Department of energy started a Municipal energy efficiency Programme (Engineering News, 2009). In the programme, the local authorities have been using the point of new connections authorizations to integrate energy efficiency requirements in new developments; this should eventually become part of their building control regulations standards/codes1 requirements for all developments under their jurisdictions. Local authorities like Ekurhuleni and Johannesburg are revising their building regulations to incorporate energy efficiency requirements while awaiting the enactment of national energy efficiency building regulations/standards.

Whereas the enactment and enforcement of legal instruments alone may not entrench and achieve energy efficiency in buildings, there is no known case where the efforts have succeeded without legislation; as seems to be happening in South Africa (Sebitosi, 2008). It is noted that in South Africa, specific legislation and regulations regarding energy efficiency in buildings does not exist (Reinink, 2007).

1 The rationale for Energy Efficiency regulations in Building standards/codes

In the UK, A survey on architectural design practices to assess the impact of current energy conservation policies and legislation stated that 80% of the surveyed sample indicated that the revision of building regulations Part L: Conservation of Fuel and Power, introducing tighter measures for compliance (compared with government white papers and good practice guides) had the foremost impact on the design of low energy buildings (Adyeye et al., 2007).

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1. The words standard and regulation are used interchangeably and may also refer to codes, criteria, guidelines, norms, laws, protocols, provisions, requirements or rules. Depending on the context, the standard or regulation may be contained in one document, be part of another larger document (such as a National Building Code), or comprise of several documents.
Buildings are typically constructed to be used for many years, sometimes for more than a hundred years. Because of this, the energy efficiency of new buildings determines the building sector’s energy consumption for far longer than other end-use sectors components determine their sectors efficiency (Laustsen, 2008).

The importance of energy efficiency regulations in building standards/codes extends beyond new buildings. Buildings have a relatively long life and major refurbishments do necessarily take place – typically around every 15-20 years for residential buildings. This can be because major parts of the buildings and installations are worn-out and have to be replaced, or because lifestyle and demands for comfort have changed in a modern society. These refurbishments or change of equipment provide an easy opportunity to improve a building’s EE. EE can often be obtained at lower costs when other construction activities take place. Regulations for EE by refurbishment are therefore an important issue that should be included in building standards/codes.

Occasionally, Energy efficiency Building Standards/codes often serve as the efficiency target for refurbishment or other improvements of existing buildings. Buyers and renters of buildings will often compare new and existing buildings. Increased interest for energy efficiency regulations in building codes can therefore spur the demand for refurbishment or general improvements of existing buildings.

The improvement of buildings’ energy efficiency at approvals stage is relatively simple while improvements after their initial construction are much more difficult: decisions made during a building’s approvals phase will determine consumption over much, if not all, of a building’s lifetime. Certain measures to improve energy efficiency may only be possible during construction or by major refurbishment, likely to happen only after several decades. Many such improvements will be very cost effective or maybe even free or at negative costs when implemented at approvals stage, but can be expensive at a later stage.

In South Africa, the need for EE regulations is well stated by the energy efficiency strategy, as evidenced in the excerpt below:

“The historically low unit cost of energy, coupled with limited awareness on energy savings potential, may result in only modest success arising from voluntary measures and other non-legislative instruments. For this reason, regulatory means will be applied to achieve further improvements where necessary. Efficiency standards will have limited impact unless made mandatory, and energy audits should be accompanied by an obligation to implement, for example, all no-cost recommendations identified. The National Energy regulator (NERSA) will contribute to or develop regulatory measures for guiding reporting and compliance”. (Energy Efficiency Strategy of South Africa (DME), 2005)

The South African National Building Regulations and Building Standards Act (Act no 103 of 1977)¹ is administered by local authorities and it is the enabling legislation for the national building regulations (Holden, 2004). It provides in great detail for the process of enforcing the national building regulations by local authorities. Cities, municipalities and local Authorities are therefore mandated to enforce building regulations established by national government (du Toit, 2007). As mentioned earlier in this paper, The South African energy efficiency strategy calls for a regulatory regime, to consolidate the gains made and achieve improvements in the mostly voluntary programmes now in use. The energy efficiency mandate therefore draws from the following documents, the Energy Act of 2008, the South African Constitution; the White Paper on Energy Policy, 1998; the Municipal Systems Act No.32 of 2000; the Electricity Act, No.41of 1987 as amended); the Standards Act; and the Electricity Regulation Act.

2 Energy Efficiency Building Regulation Standards/ Codes

Compared to ordinary building regulation standards/codes, energy efficiency building regulation standards/codes are relatively new in most countries. Energy Efficiency Building Standards/Codes (EEBSCs) are widely considered to be cost-effective government-based regulatory programs that potentially capture substantial energy savings. Four generations of energy codes and standards in the US have produced estimated energy efficiency improvements of about 60% over 30 years (Deringer, 1998; Deringer et al., 2004).

In developing countries, estimates of potential energy savings for first-generation building energy standards/codes range between 20% & 35%. Also, once developed, EEBSCs often act as base case conditions for additional DSM and market transformation programs (e.g., incentive programs, design assistance programs, and demonstration building programs) (Deringer et al., 2004; Janssen, 2005).

It is observed that 21 developing countries (this includes Newly Industrialized Countries (NICs), such as India, China, Mexico, and South Africa) have developed first generation EEBSCs, and 3 more are reported to be developing their first generation codes (Deringer et al., 2004; ICBEC, 2010; UHK, 2010). In some countries the EEBSCs were developed in the late 1980’s or early to mid-1990s, thus providing opportunities for informal assessments of use and effectiveness.

In many of these Countries, EEBSCs do exist on paper. The EEBSC documents have been written; some have been promulgated as voluntary national standards or national energy codes. However, they have not been widely used, and have failed to produce significant energy savings (Deringer et al., 2004). Indeed, there are only isolated cases of buildings in developing countries, either government or private sector, that have been designed and constructed to meet the building energy codes that have been developed.

3 The Common Pathway of Creating EEBSCs in Developing Countries

In developing countries specifically, the institutional framework to effectively use or enforce EEBSCs is lacking. This requires that such an arrangement be put in place first to support the building energy code (Deringer et al., 2004; Laustsen, 2008). This infrastructure includes administrative structures and procedures, compliance forms and procedures, supporting tools, training, and information. Effective use on either a voluntary or mandatory basis requires many of the same supporting infrastructure elements. Thus, the _development_ of an EEBSC is the first of several steps needed in order to have an EEBSC in place that can succeed in saving energy.

These steps are needed so that the supporting institutional framework for the EEBSC can be put into place. Figure 3.1 shows a proposed _comprehensive_ EEBSC development, implementation, and revision program that emphasizes market transformation programs as well as _traditional_ code enforcement approaches.

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1 In this paper, Building standards or building codes is used interchangeably for the same meaning
2 EEBSCs; this means Energy Efficiency Building Standards/Codes.
Traditionally, there are seven key stages to implementing an effective EEBSC (Deringer et al., 2004). This involves Development, Enforcement oriented implementation, Enforcement in government and private buildings & utility hookup and Code Revisions. The application of the seven steps 1, 2, 3 up to 7 is shown in figure 3.1. The first phase involves writing the EEBSC document. The second “implementation” phase is code-enforcement oriented and prepares the infrastructure, administrative structure, procedures and tools needed to permit compliance with the EEBSC in a code setting, prepares the code to be placed into law and to be enforced. The third phase involves using the EEBSC either in a voluntary and/or mandatory enforcement program. The enforcement component has separate paths for private sector buildings, government buildings, and a possible utility hookup enforcement option. The market transformation component has separate paths for demonstration buildings, EEBSC-DSM programs, and green building programs. A seventh phase revises the EEBSC after say 3 to 5 years in order to take advantage of technology advances and improved energy efficiency knowledge by the local building industry (Deringer et al., 2004).
4 EE building Regulation Standards/codes in South Africa

Formulation of Regulations to reduce energy consumption and increase efficiency of use started in 2002. The energy minister asked NERSA to develop a policy to implement energy efficiency and Demand Side Management in the South African electricity industry. Consequently, in May 2004, the NERSA launched a “Regulatory Policy on Energy Efficiency and Demand Side Management (EEDSM) for South African Electricity Industry” (NERSA, 2004). It obliged the electricity industry to implement and finance appropriate measures to meet the energy efficiency targets specified by the NERSA. NERSA went further and put it as a requisite precondition for future approval of tariff increases applications on the part of the electricity utilities. Alongside this, and following from the power outage crisis of 2007/2008, the building industry also started to look at actions to effect energy efficiency in its building regulations.

Subsequently, The Department of Minerals and Energy (DME) mandated the South African bureau of standards (SABS) to develop a South African national standard (SANS) for energy efficiency in buildings. SANS 0204: Energy Standard for Buildings with mechanically assisted ventilation systems’, which was based on the SAEDES1 guideline, was formulated. This standard/code was to ensure that energy efficiency becomes integrated in buildings Standards/codes and would eventually be included in the National Buildings Regulations as proposed in the energy strategy (Reinink 2007).

As stated earlier in this paper, EE building regulation standards/codes in South Africa are still at infancy. In 2007, the SABS 0400 was changed to be SANS 10400 of the National Building regulation and parts X (Environmental Sustainability) and XA (Energy usage in buildings) were added to take into account the energy efficiency standards in buildings (Reynolds, 2007; du Toit, 2007). The draft standard/code for energy efficiency in buildings in South Africa: SANS 204 parts 1, 2, 3, and 4 was unveiled in 2008.

South Africa, like many other countries; has set this New Proposed Energy efficiency requirements for buildings in the National building regulations and Building standards Act (Act 103 of 1977), only a little part of this regulation is envisioned to be in the Occupational Health and Safety Act (Act No.85 of 1993). This has been set in a specific chapter and will be enforced along with the general rules of the building standards/codes. This is in the hope that the building industry is familiar with general requirements in the building standards/codes; therefore integrating energy efficiency requirements will efficiently and easily be implemented. In line with other international standards and specifically like the Australian standard, from which it borrows heavily, this will be a performance standard. The Performance standard overcomes problems of overly rigid rules and inflexible enforcement of the prescriptive standard. Performance standard regulates for results by developing frameworks for action, identifying sources of knowledge (or its insufficiency) and the tools to effect it (May, 2003).

The general rules will appear in the SANS 10400; National Building Regulations part X: Environmental Sustainability, sub-partXA: Energy usage in buildings sections 1, 2, 3, 4 and 5. The specific standard/code containing specific details of calculations and other particulars will be in the SANS 204 Edition 1 Parts 1, 2, 3, and 4 (SABS, 2011)2. These Regulations and Standards/codes are targeted at new buildings. Figure 4.1 below illustrates the process they (regulations and standards) are likely to follow to be legislated before they become operational. The application of the regulations and Standards/codes will be according to the six climatic zones/regions in the Act and as shown in Appendix A.

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1 SAEDES (South African Energy and Demand Efficiency Standard); unveiled in the 1990’s as a guideline by the Department of Minerals and Energy, the document was meant to provide technical guidelines for a framework of performance provisions and environmental acceptability for commercial buildings.

The period for comment on these performance based Regulations and Standards/codes lapsed in early May 2011 and are most likely to be promulgated into law later in 2011.

The published proposed new SANS 10400 XA regulation is expected to legislate on (1) Hot water supply: insulation levels, piping and solar water heaters, (2) thermal performance of the building envelope elements: occupancy, R-values, U-values with tables for each climatic zone, Orientation, walls, floors, fenestration and roofs. Tables 4.1 and 4.2 show examples of the energy demand and consumption respectively per building classification in the various climatic zones, (3) Lighting and ventilation and (4) The Software to be used in the design assumptions to make appropriate calculations to meet the requisite standard for approval. Compliance with this regulation is proposed to extend from the design phase to completion and operation of the building. This means that measures for compliance for energy efficiency can be checked at design stage, as built and as operated.
Figure 4.1: Proposed Legislation Structure for SANS 10400 (Part XA) AND SANS 204
(Adapted from Gann et al, 1998)
Table 4.1: Maximum energy demand per building classification for each climatic zone
(Source: SABS, 2011)

<table>
<thead>
<tr>
<th>Classification of occupancy of building</th>
<th>Description of building</th>
<th>Maximum energy demanda VA/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Climalic zoneb</td>
</tr>
<tr>
<td>A1 Entertainment and public assembly</td>
<td></td>
<td>1 2 3 4 5 6 7 8</td>
</tr>
<tr>
<td>A2 Theatrical and indoor sport</td>
<td></td>
<td>85 80 90 80 80 85</td>
</tr>
<tr>
<td>A3 Places of instruction</td>
<td></td>
<td>80 75 85 75 75 80</td>
</tr>
<tr>
<td>A4 Worship</td>
<td></td>
<td>80 75 85 75 75 80</td>
</tr>
<tr>
<td>F1 Large shop</td>
<td></td>
<td>90 85 95 85 85 90</td>
</tr>
<tr>
<td>G1 Offices</td>
<td></td>
<td>80 75 85 75 75 80</td>
</tr>
<tr>
<td>H1 Hotel</td>
<td></td>
<td>90 85 95 85 85 90</td>
</tr>
</tbody>
</table>

a The maximum demand shall be based on the sum of 12 consecutive monthly maximum demand values per area divided by 12/m² which refers to the net floor
b The climatic zones are given in Annex B.

Table 4.2: Maximum annual consumption per building classification for each climatic zone
(Source: SABS, 2011)

<table>
<thead>
<tr>
<th>Classification of occupancy of building</th>
<th>Description of building</th>
<th>Maximum energy consumption kWh/m²a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Climalic zonea</td>
</tr>
<tr>
<td>A1 Entertainment and public assembly</td>
<td></td>
<td>1 2 3 4 5 6 7 8</td>
</tr>
<tr>
<td>A2 Theatrical and indoor sport</td>
<td></td>
<td>420 400 440 390 400 420</td>
</tr>
<tr>
<td>A3 Places of instruction</td>
<td></td>
<td>420 400 440 390 400 420</td>
</tr>
<tr>
<td>A4 Worship</td>
<td></td>
<td>120 115 125 110 115 120</td>
</tr>
<tr>
<td>F1 Large shop</td>
<td></td>
<td>240 245 260 240 260 255</td>
</tr>
<tr>
<td>G1 Offices</td>
<td></td>
<td>200 190 210 185 190 200</td>
</tr>
<tr>
<td>H1 Hotel</td>
<td></td>
<td>650 600 585 600 620 630</td>
</tr>
</tbody>
</table>

Note 1 the annual consumption per square metre shall be based on the sum of the monthly consumption of 12 consecutive months.

Note 2 Non-Electrical consumption, such as fossil fuels, shall be accounted for on a non-renewable primary energy thermal equivalence basis by converting mega joules to kilowatt hours.

a The climatic zones are given in annex B.

The SANS 204 standard/code contains broad functional requirements and procedural finer details for design and operation of energy efficient buildings with both natural and artificial environmental control and subsystems. It is divided into four main sections: Scope, Normative references, Definitions and Requirements. The key issues in SANS 204 are as follows (SABS, 2011):

i. It gives the definitions of the various terms used in the standard/code to enhance energy efficiency.
ii. It gives the specific measurable requirements for site orientation, building orientation, shading, building design for all functional elements of the envelope and the building contents.

iii. It gives ratings for building sealing for air. Further, rating details for lighting and power and hot water services are prescribed.

iv. Mechanical ventilation and air conditioning systems measurements for energy efficient design are well documented. However, in one line, it does mention installed equipment in the buildings to be energy rated and have a stand-by energy reduction mode when not in use.

Enforcement of this proposed energy efficiency regulation and standard/code is by Local government departments/agency. They will be charged with reviewing designs and performing construction and post construction inspections. In the immediate term after promulgation of these regulations, the local authorities will face the following challenges:

1. They will need to develop objective procedures for evaluation, while being consistent in granting approval in exercise of discretion and flexibility in the new order to achieve easy acceptability;
2. The need to develop a multi-faceted performance range of acceptable performance criteria;
3. The ability to deliver a well worked combination of performance and a little prescriptive measures to meet energy consumption targets;
4. To develop a consistent framework among building control staff and an ability to understand and use building simulation software.

A familiar trend is that buildings’ improved energy performance follows the introduction and strengthening of building regulations and standards/codes. The level of success between promulgation and improvement corresponds to the strength of local authority law enforcement. On the other hand, lapses between promulgation of new requirements and their full implementation in the building sector are common. This could be as a result of insufficient enforcement and poor information.

5 Local Authorities and the Implementation & Enforcement of EE building Regulation Standards/codes

There are many ways local authorities get involved in the energy services and EE agenda in areas under their jurisdiction. First, municipalities and local authorities can initiate markets for energy services and EE equipment. This framework of involvement is mostly related to statutory obligations and powers of local authorities, and the ensuing energy related tasks and ownership issues (such as ownership of energy supply utilities). Second, municipalities and municipal institutions may act as buyers of energy services and EE equipment. This is related again to statutory obligations and powers, and also to public budgeting and procurement rules designed to effect policy change in areas under their jurisdiction. Third and most important to this paper, municipalities may act as implementers of interventions for improvement of end-use energy efficiency. This “traditional“ way of municipal involvement, is whereby municipalities and local authorities or the municipal institution, applies regulations, standards/codes set out in national or local statutes and ensures their implementation and enforcement in areas under their jurisdiction. Energy efficiency being new in buildings codes, sometimes gives municipalities difficulties in applying it appropriately (EGI, 2002).
5.1 Implementation and Enforcement of Energy Efficient Building regulations and standards/codes in Ekurhuleni Metropolitan Municipality (EMM/The Metro)

Energy consumptions in the key metropolis of Gauteng indicate that industry accounts for 16% and transport for 60% of energy demand. Domestic use 16% and government, commerce and local authority 7% (Ward and Schäffler, 2008) (refer to Figure 5.1). The combined energy use by the domestic, government, commerce and local authority sectors contribute to a total of 22%; the energy in this sector is mainly used in buildings thus emphasising the need to implement energy efficiency polices in that area.

![Figure 5.1: Energy consumption by sector in metropolitan areas around Gauteng Province](Source: Ward and Schäffler 2008)

The Ekurhuleni Metropolitan municipality is in the Greater Johannesburg, Gauteng Province. EMM had a population of 2.5 million people in 2004, a municipal budget of R11.3 billion (USD $1.86 billion) in 2006 and land area of 1,900km². EMM has the largest industrial and manufacturing base on the African continent and as such is considered as part of the economic engine of South Africa (The EMM: State of Energy Report, 2004). Together with residential buildings; which in 2001 stood at 745,115, EMM is a centre for energy intensive activity. It consumed nearly 6% of South Africa’s total energy demand in 2003 of which 38% is supplied by electricity. In 2003, residential buildings consumed 30% of the electricity supplied in the Metro (The EMM: State of Energy Report, 2004).

Following the restructuring of the electricity sector in 1996, EMM is one of the distributors of electricity in South Africa. This and other obligatory requirements emanating from National government's policy on energy efficiency, the need to lead by example, use energy sparingly and DSM measures of Eskom made it necessary for the metro to have a localised energy efficiency policy. The Metro adopted the policy on energy efficiency in Council Buildings and on Council premises of Ekurhuleni in 2002 (Ekurhuleni Case Study, 2007). Subsequently, the state of energy report (of 2004) which gave the situational assessment (status report) on energy demand and supply by energy carrier and user showed that though the metro was one of the economic heartlands of South Africa, there were few significant or large scale energy efficiency projects. This is partly related to the national situation where there is no specific legislation on energy efficiency (Reinink, 2007). In the building sector, the energy efficiency policy broadly mentioned the use of DSM measures such as passive solar designs, solar home systems such as solar PVs (photovoltaic) and solar water heaters and residential load control focused on the installation of ripple control systems for geysers. Generally, this policy provided the guidelines for applying...
voluntary ‘low hanging’ good practice energy efficiency principles in its building control regulations to achieve energy efficiency in all building developments.

The 2004 state of energy report laid a good framework though, to be used to develop a more comprehensive energy efficiency strategy in the metro. Among others, it stated that EMM should:

1. Establish an integrated environment and energy program to develop and roll out its energy and climate change strategy,
2. Develop showcase EE, Renewable Energy and DSM projects within its systems with the aim of educating the public and businesses how to implement ‘quick wins’ as well as longer term measures. It suggested the use of a pilot household solar water heater project which could be used both for creating energy awareness and achieving reduction in electricity demand,
3. Collaborate with the national government to develop tariff-based incentives for the implementation and enforcement of EE and DSM measures, e.g. capital subsidy packages for Renewable energy systems in buildings.

Based on these policy recommendations, EMM took a highly proactive and prominent role in the energy efficiency agenda. Earlier, in 2004, the metro joined ICLEI’s CCP Campaign. Besides the state of energy report, the Metro also went ahead and produced its first Draft energy efficiency strategy. This was an important compliment to the policy and laid out specific guidelines for new projects in energy efficiency effort in the metro. It recommended that the metro make a deliberate decision to start saving energy through ‘low hanging fruits’ principles in its buildings/premises.

5.2 The EMM EE Retrofit Project

The Ekurhuleni Metro implemented a retrofitting project of its three main buildings i.e. The Germiston Civic Centre and EGSC buildings through a programme by ICLEI CCP Campaign. These buildings serve as the EMM political head office and the administrative head office respectively (Ekurhuleni Case study, 2007). This project aimed to show market leadership by the metro in implementing energy efficiency regulations and the ease with which EE, Renewable Energy and DSM measures can be implemented in buildings cost efficiently. Additionally, it served to develop skills and make appropriate preparations within the metro in anticipation of promulgation of proposed mandatory national energy efficiency building regulations and standards.

The demonstration project started in June 2005 at a cost of R249,120 (USD $41,063). First, Using the ICLEI’s HEAT measurement system, the requisite parameters for the energy and emissions reduction were set for the respective buildings (Ekurhuleni Case study, 2007). Second, solar water heaters were supplied and fixed to meet the energy efficiency parameters set. The main objective here was to use different technologies to reduce energy consumption in lighting and boiling water (Ekurhuleni Case study, 2007). In the lighting component, incandescent lights were replaced with CFL’s and cool-beam lighters with LED’s. Urns and kettles were replaced with hydroboils. Geyser and lighting timers which could come on at pre-set times were installed as well. On cost-benefit analysis, these measures were found to be cost effective and were easily implemented.

Table 5.1 and table 5.2 below show the energy and emissions reduction which resulted from the project.

---

1 International council for Local Environmental Initiatives: An association of over 1100 local governments that represents their sustainability interests within the UN and at international policy forums.
2 Cities for Climate Protection
3 The Harmonized Emissions Analysis Tool; An International Quantification Resource (An Internet based tool for storing, tracking, and reporting emissions and reductions of both GHGs and CAPs)
Table 5.1: Energy Savings
(Source: Ekurhuleni Case study 2007)

<table>
<thead>
<tr>
<th>equipment</th>
<th>Pre retrofit energy use kWh/year</th>
<th>Post retrofit energy use kWh/year</th>
<th>Energy savings kWh/year</th>
<th>Percentage of savings %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting (CFLs &amp; LEDs)</td>
<td>366,694</td>
<td>91,673</td>
<td>275,020</td>
<td>75</td>
</tr>
<tr>
<td>Lighting (5 foot double fluorescent lights with electronic ballasts)</td>
<td>21,024</td>
<td>18,221</td>
<td>2,803</td>
<td>13</td>
</tr>
<tr>
<td>Water heating (Urns replaced by Zip Hydroboil)</td>
<td>214,072</td>
<td>171,258</td>
<td>42,814</td>
<td>20</td>
</tr>
<tr>
<td>Geyser timers</td>
<td>20,878</td>
<td>12,527</td>
<td>8,351</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>622,668</td>
<td>293,679</td>
<td>328,988</td>
<td>53</td>
</tr>
</tbody>
</table>

Table 5.2: Emissions reductions (TSP = Total suspended particulates)
(Source: Ekurhuleni Case study 2007)

<table>
<thead>
<tr>
<th>Equipment</th>
<th>( CO_2 ) reduction tonnes/year</th>
<th>( SO_2 ) reduction kgr/year</th>
<th>( NO_x ) reduction kgr/year</th>
<th>TSP reduction kgr/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting (CFLs &amp; LEDs)</td>
<td>257</td>
<td>2,183</td>
<td>1,025</td>
<td>84</td>
</tr>
<tr>
<td>Lighting (5 foot double fluorescent lights with electronic ballasts)</td>
<td>3</td>
<td>22</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Water heating (Urns replaced by Zip Hydroboil)</td>
<td>40</td>
<td>340</td>
<td>160</td>
<td>13</td>
</tr>
<tr>
<td>Geyser timers</td>
<td>8</td>
<td>66</td>
<td>31</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>308</td>
<td>2,611</td>
<td>1,226</td>
<td>100</td>
</tr>
</tbody>
</table>

As shown in the table 5.1 above, 328,988 kWh of energy worth USD $50,664\(^1\) was saved in one year in this small project. Taking into account the total investment, this would lead to a simple payback period of 1.2 years. This is besides the co-benefits of reduced GHG Emissions as tabulated above. It is also important to note that there have been no problems with the new lights or water heaters and staff has not had any complaints about their use. The results of this small demonstration project shows the cost-effective and the practical ease with which energy efficiency measures can be carried out through the local authorities building control processes. Also, the population is willing to embrace the change to EE principles of building.

Due to the relative infancy of the energy efficiency principles in buildings in South Africa, the project faced the challenge of appropriate technology, equipment and experienced tradesmen in the beginning. This is however expected to improve as more local authorities and institutions demand energy efficient technologies and equipment in the building process.

Retrofitting works involving replacement of old equipment with new more energy efficient technology is a quick way to start implementing energy efficiency standards/codes in buildings. From the EMM experience, other local authorities can replicate this effort using their own integrated energy efficiency models. Other EE efforts the metro is pursuing include; establishing an internet-based smart metering system to monitor energy use within municipal buildings (The EMM: State of Energy Report, 2004) and being the first in South Africa to introduce a scaled electricity tariff system for domestic consumers.

EMM started with the creation and adoption of the Policy on Energy Efficiency in Council Buildings and on Council Premises, followed by the State of Energy Report, then the Draft Energy Efficiency Strategy and subsequently implemented the Retrofitting Demonstration Project. These are easy energy efficiency implementation processes which can be replicated across other South African municipalities. The proposed SANS 10400XA and SANS 204, Edition 1; Parts 1-4 will serve to entrench the above model in the building control processes of all local authorities.

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\(^1\) This is based on the value of 0.157 USD/kWh for EMM Buildings under tariff C.
6 Methodology

This paper is drawn from a wider study investigating the application of Energy Efficiency building control regulations in the Key Metropolis of Gauteng in South Africa. The study has all the key ingredients of a Pragmatic School of Thought Paradigm: because it investigates a real problem of security of supply and rising costs of energy, and the actions taken by local authorities in enforcing energy efficiency regulations will provide demand reduction, hence a real life solution to the problem.

The study used Case study approach (collective), among others because it allowed for a detailed (in-depth) examination of a complex case in its natural setting and context; and the use of multiple sources of evidence. Case study as a research approach employs several methods which include documents review, archival records, interviews, direct observation, participant observation and physical artefacts (Yin, 1994; O’Leary, 2004).

Each Metropolis is treated as an independent case. An investigation of processes and procedures in applying/implementing building control regulations with respect to energy efficiency in buildings therefore brings out information on each case. The document review of each case is used to triangulate the findings emanating from interviews in the field survey.

The study adopted a two phase investigation. The first phase involved choosing the local authorities:

1. With high energy demands,
2. Had the likely effect of replicating their practices on the national scale,
3. Had some policy on energy efficiency in place,
4. Were easily accessible and
5. Were ready to participate in the study.

This was informed by the literature review (Documentary review) and Purposive (Convenience) sampling.

The authors chose both Ekurhuleni and Johannesburg as the cases for the main study. The detailed investigation on the two metropolises, done simultaneously; eliminated bias, led to enriched findings and increased authenticity that is not possible with use of other research approaches (O’Leary, 2004).

Specifically, this paper uses the Ekurhuleni case study because:

1. The Ekurhuleni study is in an advanced stage of completion and,
2. The Ekurhuleni Metro has carried out an informative and relevant energy efficiency demonstration project recently, relative to the Johannesburg.

Subsequently, the second phase was the field investigation using structured interviews. This was carried out between the last quarter of 2010 and the first quarter of 2011. Interviews; as a method of collecting information/data is very useful for studying institutional procedures and processes (Jankowksi and Wester, 1991; Tuchman, 1991). Interviews allow a researcher to interrogate at length & depth and provide multiple perspectives (Kitzinger, 2004; Newcomb, 1991).

Structured interviews were conducted with three BCAOs of the Ekurhuleni Metro and two representatives of SCIGs, Two KPPs; who were chosen because of their Expert Opinion, one being a leading practitioner and academic of energy efficiency building design and the other former head of building control in Johannesburg who has written extensively on building control regulations in South Africa and is currently practising as an Urban Specialist.

The interviewees were asked questions themed as below:

1. If energy efficiency principles are important in building development processes?
2. If energy efficiency principles are part of and or are required in the building control regulations for the approvals of the building development plans by the local authorities?
3. Which energy efficiency principles can be implemented through the buildings control approvals regulations in the local authorities?

4. What problems hamper the implementation of energy efficiency principles through the building control and approvals regulations in the local authorities?

5. What should be done to entrench energy efficiency principles in the building control and approvals regulations in local authorities?

The interviewees were allowed a little more latitude in the way they answered the questions because of their expert opinion input. This was used to gain deeper insight into the subject matter from an expert opinion. Transcribed interviews were sent back to interviewees via e-mail for further comment and to avoid subjectivity in the interpretation of interview outcomes. One interviewee failed to honour the interview schedule. Initially, the researchers had intended to get an Expert legal opinion from a Regulation Law Expert but this did not happen due to financial constraints.

6.1 Results and Analysis

For the purposes of this paper, the results presented here are a summary and restricted to issues upon which there was near unanimity among the interviewees. They were all in agreement that energy efficiency had become an important principle in the way we build and manage buildings in South Africa. This had been forcefully made apparent by the electricity supply crisis of 2007/2008 and the steep rise in electricity tariffs in the next three years starting 2010/2011. The respondents were also unanimous on the proposed energy efficiency regulations: that is SANS 10400XA and SANS 204, Edition 1; Parts 1-4, that it makes for a good legal framework upon which to build future energy efficiency rules in the built environment in South Africa.

6.2 Whether energy efficiency principles were important

As energy efficiency is an emerging issue in the developing countries generally and South Africa in particular, the respondents were of the view that it's important but it was going to take a while longer before it gets the attention it deserves in the built environment. And there being no legal demand to enforce it, developers had no obligation to follow on it. Besides, developers still viewed energy efficient buildings as costing more to construct. The respondents were aware that the costs difference between energy efficient buildings and the ordinary business-as-usual ones is continuously decreasing.

6.3 If energy efficiency principles are part of/or are required in building control regulations currently

The clear answer from all respondents was that at the moment, there is no legal requirement in the existing building control regulations which oblige the developers or local authorities to implement energy efficiency principles in buildings. However, the Ekurhuleni metro has issued energy efficiency good practice guidelines which the developers intending to build in areas under its jurisdiction can voluntarily follow. Second, SCIG respondents indicated that many of their members follow voluntary guidelines issued by their respective bodies mostly to cut their energy bills and as a CSR Environment Initiative.

6.4 Energy efficiency principles which can be implemented through the buildings control approvals regulations in the local authorities

The responses were mixed here. Respondents from the Metro and SCIG gave a list of the so called ‘low hanging’ good practice energy efficiency measures such as passive solar designs, solar home systems such as solar PVs (photovoltaic) and solar water heaters and residential load control focused on the installation of ripple control systems for geysers. This they said can be easily written

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1 Corporate Social Responsibility
into building control regulations and be implemented at no extra cost either to the local authorities or the developers. The respondents from KPPs added installed equipment to the above list as one of the requirements which can be easily added to building control regulations easily. All respondents suggested retrofit requirements to address energy efficiency requirements in the large stock of existing buildings. Generally, all respondents were in agreement that there exists many opportunities to reduce energy consumption in buildings if the requisite building regulations can be put in place.

6.5 Problems which hamper the implementation of energy efficiency principles through the building control and approvals regulations in the local authorities

Here too, the responses were mixed and varied, but the main common response was that the lack of a legal framework was the number one barrier. Other common responses included informational barriers, behavioural/lifestyle barriers, economic/financial barriers and to some extend the presumed cheapness of electricity in South Africa.

6.6 What should be done to entrench energy efficiency principles?

All the respondents were unanimous that writing the building control regulations to include building energy efficiency standards/codes was the starting point of entrenching energy efficiency principles in building regulations. In this light all respondents welcomed the proposed new building regulations and hoped they will inspire the building industry to achieve more than the minimum requirement. The respondents also added that the proposed energy efficiency regulations should be periodically revised to include principles they will not have covered at inception, like retrofits: and also to take care of developments in technology and higher energy efficiency requirements in newer developments. Additionally, the respondents said the proposed energy efficiency regulations should be accompanied with a robust informational/educational campaign to sensitise the citizenry on the benefits of energy efficiency in buildings and get them to buy into it from the beginning. SCIG respondents added that EEBSC’s stimulate the use of other higher level energy efficiency principles in buildings, like energy rating tools and incentive programmes; they said this should be encouraged alongside the implementation of the proposed mandatory regulations.

7 Conclusions and Recommendations

Issues of costs & security of supply of energy and GHG emissions are going to remain dominant drivers of the energy debate around the world in the foreseeable future. Energy efficiency is going to play an important role as a cost effective way of reducing the emissions while at the same time improving access to energy via demand reduction. The consistent implementation of appropriate Energy efficiency building regulations is going to form the backbone of achieving this goal.

In the South African case, the security of electricity supply, increasing costs of electric energy and the high carbon intensity nature of electricity production reinforce the importance of the energy efficiency agenda in the economy. In the past, this had been frustrated by perceived low energy prices and lack of clear national strategy. The new energy efficiency strategy (DME, 2005) commits the country to achieve demand reduction of 12% by 2014 and emphasizes mandatory application of regulatory instruments.

The promulgation of the proposed SANS 10400XA and SANS 204, Edition 1; Parts 1-4, will give the local authorities a legal mandate to affect EEBSCs in their jurisdictions. Demonstration projects to encourage EE principles in buildings like the one of Ekurhuleni Metro should be lauded and replicated in other municipal jurisdictions across South Africa. Other Educational and Informational programmes should be included in the implementation strategy to sensitise the whole citizenry on the benefits of Energy Efficient buildings. Other higher level energy efficiency building standards and incentives should be pursued alongside the proposed legislation to achieve energy& cost savings beyond the minimum.
A Regular update of EE building standards/codes is a hallmark of good practice in the implementation and enforcement of energy efficiency measures and principles in buildings. EEBSCs should be set in such a way that they can be periodically revised to take advantage of intelligent solutions and improved product performance spurred by the codes. Similarly, the effort to implement EE measures through regulations and standards/codes for retrofits should be scaled up. For effective implementation, EEBSCs should be set in advance or be phased in slowly to ensure that the industry and general public is prepared for the new solution. For example, the EE building standard/code for Ontario in Canada included a clause that the standards/codes introduced in 2006 was to be strengthened in 2009 and again in 2012.

Further research is needed on what can be done to realise the huge energy and cost savings potential of EEBSC’s in Retrofits. This is because the current stocks of buildings were erected when the EE principles were non-existent yet the proposed EEBSC’s don't seem to address them.

8 Acknowledgement

The authors acknowledge financial support for the study from the South African National Energy Research institute (SANERI).

9 References


Appendix A

As stated in the text, this appendix gives details of the six climatic zones/regions South Africa has been divided into for the purposes of implementation of the proposed energy efficiency regulations.

<table>
<thead>
<tr>
<th>zone</th>
<th>Description</th>
<th>Major Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cold Interior</td>
<td>Johannesburg, Bloemfontein</td>
</tr>
<tr>
<td>2</td>
<td>Temperate Interior</td>
<td>Pretoria, Polokwane</td>
</tr>
<tr>
<td>3</td>
<td>Hot Interior</td>
<td>Makhado, Nelspruit</td>
</tr>
<tr>
<td>4</td>
<td>Temperate Coastal</td>
<td>Cape Town, Port Elizabeth</td>
</tr>
<tr>
<td>5</td>
<td>Sub-Tropical Coastal</td>
<td>East London, Durban, Richards Bay</td>
</tr>
<tr>
<td>6</td>
<td>Arid Interior</td>
<td>Upington, Kimberly</td>
</tr>
</tbody>
</table>

Map of climatic zones according to SANS204.
(Source: SABS, 2011)
Construction Law
The Extent of Enforcement of The Penalty Clause on Public Sector Construction Contracts in South Africa

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Abstract:

Background: A perception exists that public sector construction contracts in South Africa are generally completed late. The penalty clause is included in construction contracts to dissuade the contractor from completing the works later than the approved date. The extent of delays in the public sector, factors to be considered in determining the penalty/liquidated and ascertained damage (LAD) quantum and extent of enforcement of the penalty clause are unknown. The legal consequences of non-enforcement of the penalty/LAD clause, in light of the Municipal Finance Management Act 56 of 2003 (MFMA) and the Public Finance Management Act 1 of 1999 (PFMA) are also unknown.

Methodology: A survey, sample obtained through the convenience sampling technique, was conducted to investigate the extent of enforcement of the penalty clause, and matters connected thereto. Opinions of clients/employers, consultants and contractors involved in the implementation of public sector contracts in Gauteng province of South Africa were sourced through a questionnaire.

Findings: A need exists to develop a more scientific/sensible method to determine the penalty/LAD quantum in the public sector. There is a significant difference of opinion whether the penalty/LAD clause is generally enforced in delayed construction contracts implemented by the public sector in South Africa. There is a significant difference of opinion whether the type of works does influence the extent of enforcement of the penalty/LAD clause. Where the penalty/LAD clause is not enforced, it is mainly because clients are sympathetic to the contractor. Public sector clients are in violation of the PFMA and MFMA if they knowingly fail to recover penalties/LAD when these are due.

Research limitations: Using the convenience sampling technique means that the findings cannot be generalised, but provide a tentative overview of the situation. The research sample was only drawn from the province of Gauteng. The study only investigated the legal consequences of non-enforcement, and did not extend to general contractual/contract management consequences.

Practical implications: Public sector clients need to be awakened to the problems consequent upon the non-enforcement of the penalty/LAD clause, in regard to both contract administration and the legal consequences.

Keywords:
Construction contracts, liquidated and ascertained damages, penalties, public sector

1 Introduction

1.1 The penalty/LAD clause in construction contracts

Construction contracts normally make provision for a penalty clause (or sometimes liquidated damages/delay damages), which requires the contractor to reimburse the employer a certain predetermined amount for the period the works remain incomplete after the lapse of the scheduled, and
sometimes extended, time of completion. Damages for late completion of construction contracts are normally liquidated at the time of concluding the contract. This is because late completion of construction contracts is the most common breach normally suffered by employers in construction contracts (Eggleston, 2009). The main advantage of the penalty clause, compared to a claim for damages in construction contracts, is that the employer need not have suffered, or even alleged, any prejudice in order to be entitled to the penalties\(^1\).

The agreed time of delivery of the product by the contractor is an essentialia of the construction contract, as it must always be contained in the contract (Nagel, 2006). The inclusion of this completion date (or contract period) is a matter of economic importance, both to the employer and to the contractor (Uff, 2009). The penalty/LAD clause thus becomes an incidentalia of the contract as it seeks to exclude, limit or alter the naturalia (i.e. general damages) of the contract. The penalty/LAD provision is regulated, protected and enforceable in South Africa under the Conventional Penalties Act 15 of 1962 (CPA). It is worth emphasising that the CPA does not require one to differentiate between a penalty and LAD. This means that the clause is enforceable, whether it is a penalty or LAD. This is a major difference in the legal position in South Africa compared to some jurisdictions in the world, especially those whose common law is heavily influenced by the English common law, where a penalty provision is not enforceable (Eggleston).

1.2 Determination of the penalty/LAD amount

There is currently no sensible/scientific method used to determine the quantum of the penalty/LAD in the public sector. The significance of this is that section 3 of the CPA empowers the courts to reduce a penalty if it is found to be "out of proportion to the prejudice" that is likely to be suffered by the employer/client. It is important to note that the CPA refers to prejudice and not the actual damages/losses. As observed by Binnington (2009), prejudice is a much wider term in law and which would embrace, consequently, far more issues than would simply be covered if the employer had to demonstrate the actual loss/damages it had suffered. In simple terms, it would be very difficult for a contractor to convince the court that the penalty is indeed out of proportion to the prejudice. This is because a contractor would find it very difficult to assess the extent of the employer's prejudice that flows from the breach. However, the need to determine the quantum of the penalty/LAD still exists. Brümmer (1998) found that penalties imposed by the Department of Public Works (DPW) are substantially lower than those of the private sector. This results in public sector clients being under-compensated for damages flowing from the breach of contract.

1.3 The enforcement of the penalty/LAD clause in the public sector

There is a general perception that public sector clients do not enforce the penalty clause. The extent of delays, if any, in construction contracts implemented by the public sector is also unknown. It is unknown whether the type of works, i.e. civil engineering or building works, affects the enforcement of the penalty clause. Brümmer found that building projects implemented by the DPW are generally completed later than the approved date. Brümmer also found that the main contributing factor for these delays was the poor work performance by contractors. The penalty/LAD clause, by its nature, is included in construction contracts in order to dissuade the contractor from completing the works late. The extent of enforcement of this clause in projects implemented by the public sector in South Africa is presently unknown. The reasons for the non-enforcement of the penalty clause are also unknown. The CPA provisions make it almost impossible for a contractor to convince the courts of that a penalty is disproportionate to the prejudice. Court challenges of a penalty/LAD clause cannot therefore be the reason for non-enforcement as was the case in Ghana (Tuuli et al., 2007). In fact, there is only one reported court judgment in South Africa where a contractor successfully challenged the enforcement of a penalty clause\(^2\). Even in that case, the penalty was reduced because the court found that the prejudice suffered by the employer

\(^1\) Steinberg v Lazard (2006) SCA 53 (RSA)
\(^2\) Afriscan Construction (Pty) Ltd v Umkhanyakude District Municipality & another [2005] JOL 14365 (D)
(Umkhanyakude District Municipality) was not caused by Afriscan Construction (the contractor) alone, but by other parties as well, whom the contractor had no control over. The court then apportioned the penalty accordingly.

1.4 Legal consequences of non-enforcement of the penalty/LAD clause

Two legislations were promulgated in South Africa to regulate, amongst others, the management of public funds by state organs; namely; the national, provincial and local government as well as other state-owned entities. The Public Finance Management Act 1 of 1999 (PFMA) regulates the management of public finances at national and provincial spheres of government as well as state-owned entities whereas the Municipal Finance Management Act 56 of 2003 (MFMA) regulates the management of public funds at local government level. The two legislations place a duty on public sector organisations to recover monies due to these organisations and prevent wasteful, fruitless or inefficient expenditure. The two legislations also regulate the contract management practices of state organisations. At face value, it appears that the clients’ failure to recover penalties/LAD due to them could be a violation of the provisions of these legislations and could thus amount to financial misconduct.

1.5 The purpose of the study

The purpose of the study can be summarised as follows:
To investigate the extent of enforcement of the penalty/LAD clause in construction contracts implemented by the public sector in South Africa, as well as matters connected thereto;
To investigate whether the type of works, i.e. civil engineering or building works, has influence on the enforcement of the penalty/LAD clause by public sectors clients;
To investigate the reasons for non-enforcement where instances of non-enforcement of the penalty/LAD clause are prevalent; and
To investigate whether the non-enforcement of the penalty/LAD clause by public sector clients amounts to the violation of the MFMA and PFMA.

2 Research methodology

A descriptive quantitative study was undertaken to solve the research problem. Research data were collected by means of a questionnaire survey that targeted construction industry professionals in the Gauteng province of South Africa.

2.1 Research questionnaire design

The research questionnaire contained seven sections (Section 1 to 7), with each section generally designed to obtain information that relates to each sub-problem. The questionnaire was designed such that open-ended questions were avoided. A combination of rating scales and checklist were used, depending on the type of question. The five-point Likert (rating) scale enabled the measurement of the intensity of the respondent's feelings about a statement, while the checklist was used to test which of the possible answers apply to the respondent. A few control questions were incorporated to detect instances where the respondents attempted to provide “socially acceptable” responses (Leedy & Ormrod, 2010).

The University of Pretoria's Department of Statistics evaluated the questionnaire and checked for compatibility with the proposed statistical analysis methods. The questionnaire was then tested in a pilot study, with five respondents, to highlight any ambiguities and other potential problems. Minor adjustments were then made based on the comments and problems highlighted during the pilot study.

The same questionnaire was used for clients, consultants and contractors. However, those sections that did not apply to one category were highlighted in the instructions to prospective respondents.
Respondents were asked to answer questions relating to projects where formal Construction Industry Development Board (CIDB) endorsed standard conditions of contract were used.

2.2 Research population and sampling

The research population consisted of public sector clients, consultants and contractors operating in the Gauteng province of South Africa. The three categories also represent the main role-players in the implementation of construction contracts in South Africa. The study was restricted to those individuals that have access to email, as the questionnaire was distributed only by email. The population groups were obtained as follows:

Clients – project/contract managers of national, provincial and local government departments that implement construction contracts in Gauteng. This group also included municipalities and state-owned entities in Gauteng;

Consultants – active members of the South African Institution of Civil Engineering (SAICE) and the South African Institute of Architects (SAIA); and

Contractors – contractors registered with the CIDB that are based in Gauteng. The minimum CIDB grade for contractors was 7. Only contractors registered in the civil engineering (CE) and general building (GB) category of works were included.

The convenience sampling technique was used to select a representative sample for each category. The sample size was made up of 20 client bodies, 450 consultants and 80 contractors.

2.3 Data collection

The data was collected over a period of two months. The questionnaire was distributed by email to all the prospective respondents. However, respondents were at liberty to return the completed questionnaire by email or fax. To address issues of internal validity of the study, the researcher’s hypotheses were not disclosed to the respondents (Leedy & Ormrod).

2.4 Data analysis

A total of sixty-two responses were received, fifteen from clients, thirty-six from consultants and eleven from contractors. The statistical analysis of the data was performed with assistance from the Department of Statistics and the results analysed by the researcher. Figure 1 illustrates the breakdown of the responses as a percentage of the total responses.

Figure 1: Distribution of responses received
3 RESULTS AND DISCUSSION

3.1 General particulars

Section 1 of the questionnaire sought general particulars of the respondents. Responses were received from a range of professions as shown in Figure 2. The majority of respondents have a civil engineering background, followed by those with an architectural, quantity surveying and project management background. The four professions generally cover most of the civil engineering and building works implemented by the public sector in South Africa. The category of "other" was made up of electrical and mechanical engineers. These two professions mostly work under a principal agent, whose background is normally one of the four professions mentioned earlier. This therefore indicates that the nature of responses will be representative of the majority of work in the public sector.

![Figure 2: Professional affiliation of respondents](image)

The above indication is confirmed by the distribution of the type of work that the respondents mostly handle, as shown in Figure 3.

![Figure 3: Breakdown of type of works handled by respondents](image)
The respondents were also asked to indicate their levels of experience in the industry. The idea was to assess the quality of the responses as they relate mainly to professional experience in the construction industry. As shown in Figure 4, the responsibility of administering construction contracts in this instance is placed on relatively well-experienced. The average working experience of the respondents is in the bracket of 10 to 20 years. The indicated experience of consultants is not surprising, as these professionals were drawn from SAICE and SAIA. Both institutions require experience in their respective professions, a minimum of five years, for an individual to be admitted as a member. Clients appear to be, generally, the least experienced of the respondents.

![Figure 4: Breakdown of type of works handled by respondents](image)

3.2 Penalties/LAD in construction contracts

The respondents were asked if they are familiar with the CPA. This legislation regulates the enforcement of the penalty/LAD clause in South Africa. Contract administrators are therefore expected to be at least familiar with the provisions of such legislation. How else do they ascertain and enforce a contractual provision whose regulatory provisions they are not familiar with?

However, as shown in Figure 5 a significant proportion of clients (60%) and consultants (50%) are unfamiliar with this Act. Interestingly, most of the contractors indicated that they are familiar with the Act.

![Figure 5: I am familiar with the Conventional Penalties Act](image)
Respondents were asked if they believe that penalty/LAD provisions are still relevant in construction contracts. Binnington (2009) believes that other forms of encouraging the contractors to finish on time, instead of dissuading them from completing the works later than the approved completion date, should instead be used.

![Figure 6: Penalty/LAD provisions are a useful tool to dissuade the contractor](image)

The majority of respondents believe that penalty provisions are still relevant and are a useful tool to dissuade the contractor from completing the works later than the approved date. But are they enforced in the public sector? An enquiry was made as to whether the enforcement of the penalty clause increases the rate of production (work performance) in construction contracts. Brümmer found that building projects implemented by the DPW are generally completed late due to poor work performance by the contractor. The effectiveness of the penalty clause in speeding up the rate of production in construction contracts was, however, not investigated in that study. The respondents are in agreement that the enforcement of the penalty clause (or the threat thereof) increases the rate of production in a construction site.

![Figure 7: The enforcement of the penalty clause increases the rate of production](image)
Respondents were asked whether there should be a relationship between the penalty/LAD and the likely prejudice, as provided for in the CPA.

There is agreement that there should be a relationship between the penalty and prejudice likely to be suffered by the client. Surprisingly, all clients agree that there should be a relationship between the two. Whether they actually ensure that such a relationship exists would be interesting to see. It is also worth mentioning that a number of respondents are not familiar with the CPA as indicated earlier, but merely provided their opinion as to the relationship between the penalty and prejudice.

Respondents were asked to rank what they consider as the most significant factors in the determination of the penalty/LAD quantum. The statistical mean of each category was then determined and the average of all the factors is as shown in Table 1.

<table>
<thead>
<tr>
<th>Description</th>
<th>Clients</th>
<th>Consultants</th>
<th>Contractors</th>
<th>Average of all respondents</th>
<th>Rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential loss of use of facility</td>
<td>1.27</td>
<td>1.22</td>
<td>1.55</td>
<td>1.35</td>
<td>1</td>
</tr>
<tr>
<td>Construction supervision costs</td>
<td>2.87</td>
<td>2.78</td>
<td>2.8</td>
<td>2.82</td>
<td>2</td>
</tr>
<tr>
<td>Interest rate on capital invested</td>
<td>3.27</td>
<td>3.06</td>
<td>2.55</td>
<td>2.96</td>
<td>3</td>
</tr>
<tr>
<td>A factor of the envisaged contract value</td>
<td>2.93</td>
<td>3.14</td>
<td>3.7</td>
<td>3.26</td>
<td>4</td>
</tr>
<tr>
<td>Professional fees</td>
<td>3.87</td>
<td>4.31</td>
<td>4.64</td>
<td>4.27</td>
<td>5</td>
</tr>
</tbody>
</table>

The most significant factor is the potential loss of use of the facility. Unfortunately, Loots (1995) showed that the potential loss of use of the facility is very difficult to assess in public sector projects at tendering stage. By their nature, public sector infrastructure is not primarily income generating. In the circumstances, the second highest ranked factor, the construction supervision costs, can easily
be determined and used. Interestingly, the most common factor that is currently used in South Africa’s public sector is the estimated construction cost (Brümmer).

Eighty percent (80%) of the respondents are in agreement that a scientific or more sensible method should be developed to determine the penalty/LAD quantum. Such a method could even make provision for all the significant factors in the determination of the penalty/LAD quantum, depending on the nature of the works.

### 3.3 The extent of enforcement of the penalty clause in the public sector

Respondents were asked to indicate the percentage of their public sector contracts that are completed later than the approved date. Figure 10 shows that 94% of the respondents’ contracts are completed late. In fact, about 20% of the respondents indicated that more than half of their contracts are completed late. Figure 11 also shows that public sector construction contracts are generally completed late. This is a very high proportion by any standards. But is the penalty clause enforced, considering that the respondents agreed that the penalty/LAD clause is useful?
In the light of the above finding that public sector contracts are generally completed late, and as shown in Figure 12, a high proportion of respondents indicated that they sometimes do not enforce the penalty clause, despite their belief that, firstly, the public sector contracts are generally completed late, and secondly, the penalty is an effective tool to dissuade the contractor from...
completing late. The responses, however, do not show a general practice of non-enforcement of the penalty clause, as the results show a significant difference of opinion in this regard.

Figure 12: I always enforce the penalty/LAD clause whenever applicable

When asked to state their reasons for non-enforcement, the respondents highlighted the following reasons.

Figure 13: Reasons for non-enforcement of penalty/LAD clause
The prevailing reason for non-enforcement is that clients are sympathetic to the contractor (24%). This is still the case despite what appears to be a legal duty on public sector clients to recover penalties as provided for in the MFMA and PFMA. It is, however, not surprising that there are fewer instances of non-enforcement due to a successful legal challenge by a contractor of the enforcement of the penalty clause. In South Africa, there is only one reported court judgment where this has happened. It is, however, possible that other challenges may have been mounted at arbitration proceedings, which, by their nature are private matters and thus not reported. Whether section 3 of the CPA also empowers the arbitrator to reduce the penalty is not clear (Binnington).

3.4 The influence of the type of works on enforcement of the penalty clause

The next enquiry was whether the type of works does affect the extent of enforcement of the penalty clause. The idea was to ascertain whether in civil engineering, for example, the penalty clause tends to be enforced compared to building contracts, or vice versa. Building contracts mostly use the Joint Building Contracts Committee (JBCC) standard contracts, whereas civil engineering contracts tend to use the General Conditions of Contract for Civil Engineering Works (GCC), FIDIC conditions of contract or the NEC suite of contracts. This would therefore give an indication of, amongst others, the strictness of the different contracts. Figure 14 shows that there was a significant difference in opinion as to whether the type of works affects the extent of enforcement of the penalty clause.

![Figure 14: The type of works affects the enforcement of the penalty clause](image)

3.5 Legal consequences of non-enforcement of penalty clause in the public sector

The respondents were also asked questions about the possible legal consequences of non-enforcement of the penalty clause, as provided for in the MFMA and PFMA. Respondents were first asked if they are familiar with the specific provisions of these legislations, especially public sector clients.

The respondents generally indicated that they are familiar with these provisions. The next question was whether a public entity is in violation of the two laws if they knowingly fail to recover penalties due to that public entity. There is general agreement that a public sector client is in violation of the MFMA or PFMA (whichever is applicable to the entity) if they fail to recover penalties in their contracts.
In the light of the above finding, it is surprising and disturbing that there are some public sector clients that still do not generally enforce the penalty clause.

4 CONCLUSION

The CPA is a very unique piece of legislation in that it provides the legal framework upon which penalties and LAD provisions can be formulated and enforced. The legislation makes it clear that contractors are not going to find much sympathy in our courts should they attempt to escape contractual provisions that they have willingly accepted. This should serve as a major encouragement for employers/clients to enforce the penalty/LAD provisions. Unfortunately, it was
found that very few clients are familiar with the legislation. It then follows that they are less likely to know about the protection they enjoy from that legislation. Interestingly, a significantly higher proportion of contractors knew about the existence of the legislation, significantly more so than the consultants and clients. It may well be that contractors regularly check the CPA provisions in order to escape the enforcement of the penalty clause.

There is general agreement amongst the parties that the enforcement of the penalty clause increases the rate of production on site, which, anyway is what clients want. The clients’ sympathy is therefore not a good enough reason not to enforce the penalty/LAD clause, let alone the consequent violation of the MFMA and PFMA, as found in this study.

The study also showed that there is a need to develop a method to determine the penalty/LAD quantum, and that there should be a relationship between the penalty/LAD and the likely prejudice. A sensible method that takes into account the main factors should be developed. In South Africa, public sector clients tend to consider a factor of the contract value. This appears to be an easy-way-out approach because the value of the contract sometimes bears no relationship to the prejudice that the client will later suffer. Even worse, previous research showed that the penalty clause has been found not to even fully compensate the public sector clients in the event of late completion.

The benefits of the proper assessment and enforcement of penalty/LAD provisions cannot be over-emphasised. This study highlighted the problems associated with the non-enforcement of the penalty clause. Tighter measures need to be implemented by the public sector to ensure that the penalty/LAD clause is indeed enforced. There is a clear positive relationship between enforcement and rate of production. Many other secondary problems surface if public sector construction contracts are not completed on time. These include poor expenditures on government infrastructure grants, reduction in the pace of infrastructure development, deterioration of existing infrastructure as well as other consequences that a developing country like South Africa cannot afford.

5 ACKNOWLEDGEMENTS

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- The South African Institution of Civil Engineering
- The South African Institute of Architects
- The Construction Industry Development Board of South Africa
- Fellow construction professionals in South Africa who participated in the study

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The Management of Construction Agreements in South Africa

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Abstract:
The management of construction agreements within the built environment of South Africa is not properly regulated. The effect of this may be seen in instances such as the poor quality of housing being built for the Rural Development Project, corruption as well as the dismal dispute resolution currently taking place. The Construction Industry Development Board, created in terms of the Construction Industry Development Board Act of 2000, is mandated in terms of section 4(f) to regulate the actions as well as procedures of parties engaged in construction contracts. Unlike the United Kingdom where the Housing Grants Construction and Regeneration Act 1996 deals with the shortcomings similar to those experienced by the South African Construction Industry; such as dispute resolution and the role of the parties. South Africa introduced the General Conditions of Contract for Construction Works (GCC). The latest edition is GCC 2010. It attempts to provide for guidelines to the construction industry. The GCC 2010 provides for dispute resolution, penalties, risk, the role of the relevant parties, to name but a few. However, there is no obligation on the parties to follow the said guidelines. It is uncertain whether the said measures adequately address the shortcomings experienced in the construction industry and up to now the GCC has not contributed towards the improvement of the situation. The aim of the paper is to critically analyse the GCC 2010 as a tool to manage construction agreements, with particular reference to dispute resolution, and to recommend improvements.

Keywords:
adjudication, construction contract, contract management, dispute resolution, South Africa

1 Introduction

The construction industry in any country, especially in South Africa, plays an indispensable role in the economy thus having a direct impact on the public. It is essential that the industry improves on its effectiveness and efficiency which will inevitably enhance the environmental outcomes, safety, health, productivity as well as quantity and value for money to society (Construction Industry Development Board Act 38 of 2000). South Africa unfortunately does not have legislation that would greatly assist in the achieving of the aforementioned goals. The United Kingdom, whom may be seen as one of the forerunners in this regard, is a good example of where legislation positively aids in the regulating of the industry. The English implemented the Housing Grants, Construction and Regeneration Act 1996 (HGRCA) which stipulates the essentialia of a construction contract and provides for adjudication; amongst others. The justification that has been provided for this intervention by the State is that adjudication will contribute to a more balanced cashflow in construction projects which will enhance the overall performance of the construction industry (Ndekugri & Russell, 2006). This viewpoint has been taken globally as may be evidenced by other states introducing same into their legislation such as New Zealand for example. South Africa is, unfortunately, not one of the States to take such initiative.
The South African construction industry had, for many years, numerous so called in house contracts used by the various parties. However, when new entrants were prevented from
competing freely for contracts as well as the lack of discipline that resulted from the confusion of conditions of contract, the South African government decided to take action (SAICE (2010) Management Guide). The Government of South Africa enacted the Construction Industry Development Board Act 38 of 2000 to ensure that leadership and ‘active promotion of best practice’ in the industry takes place. The regulatory body established in terms thereof is the Construction Industry Development Board, commonly known as the CIDB. In light hereof the CIDB has clearly defined powers and objectives such as to improve on delivery management, to establish as well as promote uniform and ethical standards which regulate the actions of those engaged in construction contracts. The CIDB Act goes on further to compel the CIDB to establish a register of contractors so as to facilitate the procurement process, albeit Public or Private Sector, as well as to obtain data so as to be utilised as a monitoring tool in the regulation of contractors’ behaviour. There are 3 main fields of engineering in the construction industry namely mechanical, electrical and civil engineering and as such different contracts are therefore utilised in each field.

Focus shall be placed on how the improvement of contract management may aid in the reduction of disputes between the parties. Focus shall also be placed on the GCC 2010 specifically as to whether the dispute resolution method currently used prescribed therein is effective in resolving disputes arising in terms of the aforementioned contract.

2 The Various Construction Agreements used in South Africa

The Green Paper on Creating an Enabling Environment for Reconstruction, Growth and Development in the Construction Industry highlighted the fact that simplification of the contract documents, streamlining of surety arrangements and those of payment procedures where required. There are currently four standard forms of construction contracts currently being utilised in the South African construction industry namely FIDIC (French acronym for International Federation of Consulting Engineers), The Joint Building Contracts Committee (JBCC Series 2000), The General Conditions of Contract for Construction Works 2010 (GCC 2010) as well as The New Engineering Contract (NEC3). The GCC 2010, NEC3 as well as FIDIC are the standard forms of contract that may be used in all types of engineering and construction projects. The JBCC 2000 is confined to building works. For purposes of this paper focus shall be placed on the GCC 2010. The South African Institute of Civil Engineers (SAICE), developed a Management Guide to the General Conditions of Contract 2010, as a guideline to assist with the interpretation of the GCC 2010; of which said interpretation should not be seen as a legal interpretation thereof. According to Willie Claassen, the compiler, the aim of the guide is to promote efficient and effective management of construction contracts to which the GCC 2010 applies. He believes that the GCC 2010 will have an influence in the reduction of claims and disputes arising in terms of the GCC 2010 as it improves management techniques in construction projects. It does not only set out legal terms of rights and obligations, but concentrates much more on the conditions for good project management. - Claassen, W. GCC 2010

2.1 The GCC 2010

The GCC 2004 was replaced by the GCC 2010. Certain amendments and/or improvements may be seen in the fact that the contract has gone from a 58 clause contract to a contract that comprises of 10 clauses, being the GCC 2010; which is in line with the objectives of the CIDB. The aforementioned contract has been revised to the extent that the parties' responsibilities have allegedly been clearly defined. However, the contract has still remained very subjective in that the engineer has retained all his/her rights and/or powers and the contractor has not been afforded rights and/or protection therein.
2.2 The NEC3

This family of contracts was originally conceived in the mid-eighties after the London Institution of Civil Engineers approved a recommendation provided to it by its Legal Affairs Committee. The reason for the recommendation was in lieu of the fact that the engineering and construction professionals advising that there was an urgent need to approach contracts with a different view; specifically to do that more in line with the approach to project management. The Engineering and Construction Contract (ECC) incorporates three important components namely:

- Conditions of contract;
- Risk management; and
- Process / project management

One of the main characteristics of the ECC is that it encourages teamwork as well as elaboration so as to increase the opportunities for partnering to occur. Partnering, according to the CIDB, is defined as

…working together in a way that suits particular partners and which suits the particular project or service being procured. There is no stable template for partnering. There are, however, key elements which determine whether or not a particular procurement process is likely to yield the benefits from a true partnership. The key words associated with partnering are: co-operation; openness; shared standards; common objectives; respect for each partner's motivation; and trust. Partnering is about sharing costs, risks and rewards.

So in effect this particular construction contract establishes a “real time” contract management process (CIDB Best Practice Guideline C2) requiring cross organisational boundaries.

3 Research Methodology

The author made use of legal research methods. Firstly a literature review was done by referring to various literature comprising of books, journal articles, legislation and case law. It is important to note that there are no updated South African sources relating to the GCC 2010 with the exception of an article or two written by an engineer. After having read through the limited sources available so as to ascertain the theoretical background of what dispute resolution methods are used in the South Africa Construction Industry in particular those specified in the GCC 2010 a comparative study between South African and England was then attended. The purpose was to compare the difference in the manner within which adjudication as a dispute resolution method is applied. Each source was analysed so as to assist in arriving to the conclusion that efficient contract management is imperative and that the South African dispute resolution procedure prescribed in the GCC 2010 is inadequate and should be regulated.

4 Management of the Contract

One of the most underestimated areas in an organisation is contract management. According to the UK Office of Government Commerce, contract management is a process enabling the contractual parties involved to meet their obligations so as to deliver the objectives arising in terms of the contract by proactively managing the contract so as to anticipate future needs and react to situations that may arise (OGC 2002 Contract Management Guidelines). It further entails building a ‘good working relationship’ between the parties that shall, hopefully, continue throughout the life of the contract.

Many organisations are moving towards a more ‘informal’ method of contract management where constructive relationships between the parties are built as well as a more rewarding method called financial incentive management is used as opposed to the formal traditional manner of contract management, where contractors’ were usually at ‘arm’s length’. The contract forms the foundation for the contractual relationship. In light hereof it is essential to have the right contract in order for
efficient contract management to take place. Aspects such as quality of service required, allocation of risk, communication methods and/or procedures and resolution of disputes, to name but a few, should be included in the contract. The GCC 2010 is said to make adequate provisions for the aforementioned factors. It is further said to have improved on the defining of the parties’ roles as well as the dispute resolution process.

One of the most common problems experienced by organisations with numerous contracts in place is that they are plagued with paper intensive contracting; of which said contracts are stored electronically and/or manually (De Oliveira, M. 2011). Therefore, emphasis must be placed on developing a sound contract management infrastructure by addressing the essential area of contract lifestyle management. Presently many organisations are establishing contract management departments so as to ensure that proper and effective contract management takes place (Barret, G. & Cummins, T 2011).

Modern day trends of contract management have two main characteristics in common namely to clearly define the parties’ roles so as to achieve the agreed main objectives in terms of the contract and to encourage a symbiotic relationship between all the parties involved (Fisher S, *et al* 2009). It may be said that contract management involves the easing and resolving of tensions so as to build a relationship which benefits all the parties involved resulting in a win/win relationship. According to Siyabonga Mbanjwa there seems to be a general consensus that ‘contractual arrangements’ may improve in achieving the objectives of the client as well as have a huge influence on the failure and/or success of a construction project. (Mbanjwa, S. 2003). Therefore, effective contract management results in the monitoring of delivery performance of the appointed contractors as well as in saving opportunities (De Oliveira, M. 2011).

According to SAICE, the management of the GGG 2010 is the responsibility of the Employer’s Engineer and of the Contractor’s site agent (SAICE (2010) Management Guide). The SAICE Management guide goes on further to stipulate that a substantial amount of power is bestowed on the Engineer in the GCC 2010. The guide goes on further to stipulate that the ‘time-trusted arrangement of contract management by the Site Agent/Engineer ensures that timeous and well-considered decisions are made, and encourages the parties to take all possible steps to avoid conflict;’ illustrating the point that the resolution of conflicts can be planned for.

5 Dispute Resolution

There are various alternative methods other than litigation to resolve disputes between the parties namely arbitration, mediation, negotiation, adjudication, refereeing. All of these methods have certain characteristics in common in that they are supposed to be cost effective, expedient and presided over by a neutral third party.

The prescribed dispute resolution method in the GCC 2010 may be seen as a three-pronged process: first the parties attempt to resolve it amicably amongst themselves failing which a notice of dispute must be furnished to the engineer. Secondly the engineer is to make a ruling and should either party be dissatisfied with the ruling the matter may be referred to adjudication which forms the third leg. Adjudication is seen as a combination of mediation and arbitration where a third party adjudicates on the matter and provides a ruling which may be final should the parties agree thereto. According to SAICE, the GCC 2010 has been updated so as to include the ‘latest thinking of dispute resolution’ (SAICE (2010) Management Guide). However, is it really the latest thinking? If one has reference to the English construction industry for example, it will be noted that the English have been utilising adjudication for many years and have gone so far as to include the procedure as well as the contents of the contract in legislation, of which said legislation is specific to the construction industry and deals with the day to day obstacles encountered. Northern Ireland, as small as it may seem, has also developed a Construction Act. South Africa is extremely behind in that there is nothing regulating contracts let alone the construction industry.
Furthermore the whole point of alternative dispute resolution is the fact that it is said to be more expedient and cost effective. If one refers to the procedure found in the GCC 2010 it is somewhat lengthy as well as costly. The reason for this is that each stage involved in the adjudication process is 28 days meaning that a dispute is resolved within 90 to 100 days; resulting in the process being substantially drawn out. The impression created by the GCC 2010 is that 28 days is a reasonable time. Whilst this may allow for the individual tasked with resolving the dispute to assess the matters, the nature of the construction industry does not always allow for such a prolonged period. Clause 10 deals with claims and disputes. Clause 10.1 specifically deals with the contractor’s claim relating to the extension of time and/or additional payment/compensation. The contractor has to submit a written claim to the engineer within 28 days of the occurrence substantiating the reasons for the extension and/or variation. The engineer is to furnish the employer as well as contractor with his written recommendations within 28 days of receipt of the written notice. If the contractor disagrees with something in the contract he is to first attempt to resolve it with the engineer amicably; should this not resolve itself then the aggrieved party must furnish the other with a dispute notice (clause 10.3 GCC 2010). If one had to monitor the process more efficiently the amount of disputes that take place would in all likelihood reduce. Adjudication in South Africa is becoming costly as well as lengthy and the way within which it is applied in South Africa it defeats the purpose of alternative dispute resolution. As a result more non-traditional mechanisms have been introduced to resolve disputes; namely: Private Judging in which participants hire a third party judge to make a decision Neutral Expert fact-finding in which a third party with specialised knowledge makes a recommendation Mini-trial in which legal summaries of the participants’ position are presented to a jury comprising of principals of the affected parties.

(Civil Engineer)

6 Conclusion and Recommendations

Conflicts between parties are inevitable. That having been said, it is blatantly obvious that South Africa needs to do something so as to circumvent the ever increase of disputes arising between the parties due to various factors; the one being poor contract management as well as to make the chosen method of alternative dispute resolution more efficient. The English took the initiative and regulated their construction industry which can be seen as successful. South Africa should learn from its English counterparts and attend to the regulating of its construction industry. Greater emphasis must be placed on regulating the construction industry, focusing primarily on the contract used as well as the dispute resolution method, so as to allow for efficient contract as well as project management to take place and for the occurrence of disputes to reduce alternatively to be dealt with expeditiously.

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SAICE Management Guide to General Conditions of Contract 2010
Abstract:
Sustainable building is becoming ever-more popular in the U.S. and around the world. Historically, sustainable building practices have ebbed and flowed with the cost of energy. As energy prices go up, a heightened awareness is placed on sustainable building; as energy prices go down, the industry goes back to its traditional building practices with sustainability being a "footnote". In the past few years a number of associations have championed the topic and are making headway towards governmental requirements and keeping the topic in front of the general public so as to not let the strides made in the past few years subside as they have in the past.
As sustainable building practices become more mainstream, owners are requesting, and sometimes requiring, that the design and construction contracts contain some language that addresses the sustainability goals of the owner. This can be as simple as achieving a certain rating by one of the accrediting (or certifying) associations or as nebulous as reaching some level of efficiency. However, what happens if the goals set by the owner are not achieved? Who carries the liability if this is the case? In addition, the certification process is normally carried through at the completion of the project (if a new construction) and there is typically little to no follow-up required to ascertain or verify that the expected efficiencies are indeed being met.
This study will examine the potential damages that may exist if sustainability objectives fall short of their expectations. In addition, the authors will look at model design and construction contracts and the potential damage theories that have evolved over the years. While conclusions of law can only be made by the courts, we will discuss how sustainable contract language fits within the traditional theories of damage and how it does not. Where conclusions of law have been reached by the courts we will include them with our discussion. The goal of this paper is to uncover the different measures of damage that are utilized when a construction team fails to meet its sustainability goals.
Keywords:
consequential damages, contracts, green, law, sustainability

1 Introduction/Background

When owners begin planning a project, they typically assemble a program to guide their project’s design; this can include numerous criteria such as a space needs assessment, preliminary layout, and their desired level of finish. Increasingly in this early planning stage owners identify the sustainability objectives that they want their building to achieve. These objectives may include performance goals such as energy efficiency measures, and/or it may include a third party certification such as LEED®, BREEAM, Green Star or Green Globes. Whatever their sustainability objective may be, if the owner wants to make it more than just an aspiration, they will include it within their contract documents. The question then becomes who is responsible if the contracting parties do not meet this objective and what measure of damages should be assessed.
In the United States a number of organizations provide the construction industry with model contract documents. These organizations tend to be forward thinking and are relatively quick to
adapt their model contract documents to procedural and technological changes within the industry. The three primary organizations which provide this service include: 1) American Institute of Architects ("AIA"); 2) ConsensusDOCS®; and 3) Design Build Institute of America ("DBIA"). Their model contract documents can be adopted by a project team and easily tailored to a specific job. Many owners and developers use these documents or at least consult them when forming their agreements between project team members. Since these model documents are regularly consulted when forming agreements they carry a great deal of influence within the industry as it relates to how contracts are drafted and the general rights of the contracting parties.

Each of these three organizations has produced a separate guide to enable a project team to successfully navigate and achieve a certain sustainability goal. There are some commonalities between each organization’s framework for assigning responsibilities and resolving issues, but there are also some notable differences.

The AIA contribution to sustainable construction is AIA D503. This document is not so much a model contract as it is a guide with selected contract language intended to modify their other agreements. The hallmarks of the guide’s suggestions include the project team developing sustainability objectives; then creating sustainability measures and a plan to achieve the sustainability objectives. The guide goes on to suggest specific language it would incorporate with its governing agreement between the architect and owner and it suggests the same for the governing agreement between the contractor and owner. An excerpt from the AIA D503 follows:

The Owner and Architect acknowledge that LEED® Certification is awarded by the Green Building Certification Institute (GBCI), an independent third party organization, and is dependent on factors beyond the Architect’s control, such as the Owner’s use and operation of the Project; the Work provided by the Contractor or the work or services provided by the Owner’s other contractors or consultants; or interpretation of credit requirements by GBCI. Accordingly, the Architect does not warrant or guarantee that the Project will be granted LEED® Certification by the GBCI.

For both the architect and contractor the guide suggests that these parties should include a mutual waiver of consequential damages which is intended to insulate them from consequential damages flowing from their failure to meet a sustainability objective. As illustrated below, D503 goes on to provide another layer of protection from potential liability flowing from a failure to meet sustainability objectives. This liability limitation is a type of umbrella coverage for the contracting parties.

Neither the Contractor, Contractor’s consultants, nor their agents or employees shall be jointly, severally or individually liable to the Owner in excess of _____________ ($_________), for any failure to perform a Sustainable Measure or failure of the Project to achieve the Sustainable Objective, including breach of contract or negligence not amounting to a willful or intentional wrong.

Add the following Section 15.1.6.3 to A201–2007:

The ConsensusDOCS® organization addresses sustainability through an addendum to ConsensusDOCS® 310. As with the AIA publication this addendum is not intended to operate on its own; but is to be used to modify the underlying governing agreements. ConsensusDOCS® sustainability goals are referred to as green measures. These “measures” are similar to what was defined as sustainability objectives in the AIA documents. The ConsensusDOCS® make the “green measures” the general responsibility of the project team with ultimate responsibility resting with the Green Building Facilitator (“GBF”). The documents allow the drafter to select the “GBF” from among the architect, engineers, contractor, or presumably a third party such as a sustainability consultant.

The ConsensusDOCS® 310 does a great job of allowing the contract drafter to specifically define the “green measures” as either a certain “selected green status” meaning a third party certification (LEED, BREEAM, Green Star, Green Globes) and/or some performance based criteria such as a specific energy efficiency level.
After the ConsensusDOCS® 310 sets the table for the project team in regards to goals, roles and responsibilities, it discusses liability. In a fashion similar to its other provisions, it allows the drafters to elect how best to transfer the risks between the project team members. It first tries to define any damages resulting from a failure to meet green measures as consequential damages and then subjecting those damages to applicable mutual waivers of consequential damages in the governing contract. See language below from section 8.2

Owner’s loss of income or profit or inability to realize potential reductions in operating, maintenance or other related costs, tax or other similar benefits or credits, marketing opportunities and other similar opportunities or benefits, resulting from a failure to attain the Elected Green Status or intended benefits to the environment, shall be deemed consequential damages subject to any applicable waiver of consequential damages in a Governing Contract unless specifically excluded from such a waiver in the Governing Contract.

Under the ConsensusDOCS® addendum the default protection applies to all parties except the GBF. See language below.

Unless otherwise expressly provided in a Governing Contract, no Project Participant other than GBF shall be liable or responsible for the failure of the Elected Green Measures to achieve the Elected Green Status or intended benefits to the environment or natural resources. This Paragraph 8.3 does not relieve any Project Participant from any obligation to perform or provide Elected Green Measures as required by its Governing Contract.

The DBIA is another organization that provides model contract documents to the construction industry. Like the AIA and ConsensusDOCS®, the DBIA has created an addendum to be used as a guide with its governing document. The DBIA addendum has a provision for defining sustainable project goals but allows the drafters to select from three remedies in the event that any of these goals are not met. The three remedies are: 1) the parties can agree to a waiver of claims, such that the failure to achieve the desired sustainable goals (including the targeted level of certification) will not be deemed a breach of contract and will nullify any such claims; 2) the parties have the option to agree that the failure to meet the sustainable goals for the project will cause the Design-Builder to be liable for liquidated damages in an amount agreed to at contract formation; and 3) the parties can agree that the Design-Builder has an obligation to cure any failure to achieve the desired sustainable goals through the addition, replacement or correction of materials, configurations, systems or equipment in order to obtain the third party certification or certain sustainable performance measure (Kelley & Vornehm, 2009).

2 Contract Damages

A brief review of the common law of contract damages would be instructive as to potential liabilities facing the project participants who are responsible for the success or failure of a sustainability objective. These are the typical contract damages that a breaching party may be liable for if they fail to achieve a sustainability goal. As stated in American Jurisprudence 2nd, under a general allegation of damages resulting from a breach of contract, a plaintiff may recover those damages that naturally and necessarily result from the alleged breach. The plaintiff must show a compensable injury resulting from the alleged breach. In a breach-of-contract action, a plaintiff may recover the amount of damages necessary to place him in the same position he would have occupied had the breach not occurred. This is measured by a combination of 1) direct damages; 2) consequential damages; and 3) any offset for not having to perform.

1 22 Am. Jur. 2d Damages § 624
2 Restatement 2nd of Contracts, §347 "Measure of Damages in General"
Direct (or “general”) damages are those that are the natural and necessary result of the wrongful act or omission. Said another way, direct damages are those which are traceable to, and the probable and necessary result of, the injury. They are the direct, natural, logical, and necessary consequences of the injury, or usually flow from the breach.\footnote{22 Am. Jur. 2d Damages § 38}

Consequential (or “special”) damages, denotes damages that arise from the special circumstances of the case, which, if properly plead, may be added to the direct damages which the law presumes or implies from the mere invasion of the plaintiff’s rights. Consequential damages are the natural, but not the necessary, result of an injury. Thus, they are not implied by law, and while they need not be the necessary and usual result of the wrong, they must be a proximate result thereof.\footnote{22 Am. Jur. 2d Damages § 40} This rule is generally derived from the holding in Hadley vs. Baxendale.\footnote{Hadley v. Baxendale (1854) 156 ER 145.}

In a more modern interpretation of this rule within the construction environment, the Supreme Court of Virginia weighed in on the difference between direct and consequential damages and found for the plaintiff on the issue of whether extended interest cost related to a job being finished late was a direct damage.\footnote{Roanoke Hospital Association v. Doyle & Russell, Incorporated (1975) 215 Va. 796} In that same case the Supreme Court of Virginia found that some interest expenses were consequential damages.

Many owners choose to pursue a green building for a variety of reasons, including the fact that they wish to capitalize on higher rents and asset value that are perceived to derive from third-party green building certification, as well as potentially lucrative financial incentives offered by state and local governments. If the party responsible for attaining third-party certification fails to accomplish the goal as required by contract, the damages that flow from that breach may be deemed both direct and consequential damages\footnote{Prum & Del Percio, 2010.} (Prum & Del Percio, 2010). Because of the green building arena’s novelty, courts have yet to set a precedent as to whether the damages should be considered direct or consequential (Prum & Del Percio, 2010).

## 3 Case Law

Looking at reported case law to establish the legal precedent can help to conclusively answer some of the questions that have been referred to above. Unfortunately reported cases on this aspect of green building law are sparse to non-existent. In the course of researching the current legal precedent some initial pleadings and factual background were uncovered on a state trial court case which is related to this subject and provides some insight. This case is Shaw Development vs. Southern Builders. The following set of facts concerning the lawsuit were uncovered by a blogger working at gbNYC magazine. The lawsuit in question relates to the construction of a $7.5 million condominium complex in coastal Maryland. From what can be gleaned from the initial pleadings it appears that the specifications included a stated goal for the project to achieve a LEED silver certification issued by the United States Green Building Council. The owner’s interest in this LEED silver rating was not purely altruistic, as there were state tax incentives related to new buildings achieving LEED certification. In this case the state of Maryland was offering tax credits up to 8% of the total project costs for projects which achieved a LEED certification. These tax credits were not specifically mentioned or claimed in the contract but the LEED certification was clearly stated in the specifications as a sustainability objective. As it turns out the performance of the project team delayed the receipt of LEED certification which subsequently disqualified the owner from receiving the tax credits; and, as such, the owner pursued a cause of action against the builder based partially on these lost tax credits (Del Percio, 2008).

Unfortunately for legal commentators and academics this case never proceeded to trial and was settled out of court. But the facts of the case illustrate the types of disputes and claims that will undoubtedly be seen in the future related to one party’s failure to achieve a sustainability objective.
4 Discussion

Without established legal precedent some common threads may be uncovered from the model contract documents and the basics of contract law. It appears that contract drafters are managing their risk using a few common strategies. It is also clear that owners are looking for ways to ensure their project participants meet the sustainability measures.

The first and most desired risk avoidance strategy for contractors and architects is a waiver of consequential damages. Most of the sustainability guides attempt to define damages related to the failure to meet a sustainability objective to be consequential, then further rely on the waiver of consequential damages in the governing contract to absolve the parties of liability. It appears that some of the damages flowing from a failure to meet a sustainability objective would be considered a consequential damage (i.e. decreased rents, decreased asset value, failure to acquire lucrative financial incentives offered by state and local governments). However, the danger with relying on this risk avoidance strategy is that some damages related to a failure to achieve a sustainability goal may be deemed direct damages; and the line is often blurred between direct damages and consequential damages. The AIA has added some umbrella coverage for possible direct damages by adding a limitation of liability provision in addition to the mutual waiver of consequential damages.

The other type of risk sharing strategy which has been mentioned in both the ConsensusDOCS and DBIA addendums is some sort of liquidated damage provision relating to a party’s failure to meet a sustainability objective. This may be the most reasonable and balanced approach considering the interest of all parties. It is clear that in these cases, harm has been done to the owner if a sustainability objective is not met. And it further stands to reason that if the owner feels strongly about the sustainability objective that message can be conveyed clearly by putting a price tag on it in the form of a liquidated damage clause when the contract is initially negotiated. This type of liquidated damage would be subjected to the typical legal challenges and as such would have to be drafted carefully. According to the Restatement 2\textsuperscript{nd} of Contracts, “Damages for breach by either party may be liquidated in the agreement but only at an amount that is reasonable in the light of the anticipated or actual loss caused by the breach and the difficulties of proof or loss. A term fixing unreasonably large liquidated damages is unenforceable on grounds of public policy as a penalty.”\textsuperscript{1} With respect to liquidated damages, no court to date has interpreted a green building-related liquidated damages provision. As a result, a provision that imposes liquidated damages on a party for failing to earn the owner’s desired level of LEED certification may in some jurisdictions, be deemed a penalty and thus an unenforceable condition of the contract (Prum & Del Percio, 2010).

A third option addressing this issue has recently been brewing in Washington D.C. In 2006, the city of Washington D.C. passed legislation that would require green performance bonds to be used on construction projects beginning in 2012. This legislation was a bit confusing to industry participants who had never heard of a green performance bond and where uncertain how to acquire one (Cheatham, 2011). According to section 6b of the act:

On or before January 1, 2012, all applicants for construction governed by section 4 shall provide a performance bond, which shall be due and payable prior to receipt of a certificate of occupancy.

The bond, which could be worth up to $3 million, would be forfeited if a building should fall short of expected green building standards (such as LEED certification) outlined within the act.

It is anticipated that Green performance bonds would function similarly to a normal construction performance bond, with the primary difference being that it covers harm specific to a project’s sustainability objectives. Performance bonds guarantee the performance of the principal (“contractor”) to their obligee (“owner”). In the event of default under the terms of a performance bond, the obligee may file a claim against the surety company for the full value of the bond. The surety company is then responsible for making good any losses incurred by the obligee. Performance bonds are typically used in situations where there is a high risk of default, such as in public works projects.

\textsuperscript{1} Restatement 2\textsuperscript{nd} of Contracts, §356 “Liquidated Damages and Penalties”
bond the obligee will require the surety to step in the shoes of the principal and fulfill the obligation or surrender the penal sum of the bond. It is assumed that a green performance bond would function in a similar same way (Cheatham, 2011).

When it comes to green performance bonds, the bond would offer a financial guarantee that the principal will adhere to certain green building objectives. If the contractor should fail to do so, the surety would be accountable for making sure the principal fixes the problem (Cheatham, 2011). It is unclear whether the standard performance bond would cover the failure of a contractor to meet an explicit sustainability objective, or if a separate bond device will have to be created to address this risk.

Lastly, in the United States there is a groundswell of momentum behind green building and that has caused regulators and code drafters to take notice. In the near future regulators and code drafters will convert these sustainability goals from a voluntary system enforceable only under the laws of contract, to a mandatory system which becomes part of building codes subject to enforcement by local municipalities and governments. In the event that sustainability objectives become part of building codes; then in addition to the contract damages, violators could face fines and other remedies imposed by governmental authorities. This will add an additional level of risk for project participants to consider and plan for.

5 Conclusion

It is clear that sustainable construction isn’t going away anytime soon, so project participants will have to familiarize themselves with this new reality to navigate its pitfalls and risks. It seems that since the risk of failing to meet a sustainable objective is somewhat new, owners are not rigidly enforcing these conditions and contractors and architects have received a temporary reprieve. As this type of expectation becomes more common place and owners become more sophisticated it seems that owners will become less likely to ignore these provisions and allow project participants to waive all liability related to them. The next logical step for owners seeking some assurances beyond a handshake on their sustainability objectives is to include specifically tailored liquidated damage provisions in the governing contract. A properly drafted liquidated damage provision could serve the dual purpose of putting the project participants on notice of the owner’s serious intent to achieve their sustainability objectives and provide the contractor and architect some certainty as to their potential liabilities.

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Defect in Building Construction Contracts. A case of liability and contractual risk

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Abstract:
This paper aims to compare the regulations of the defects in building construction of the DCFR, Spanish Law and contracts of sale of goods on the Directive 199/44/EC, to check how the rules about defects and risks are and must be closely connected because the liability for defects depends on them. The connection shows two things which are also the conclusions. One, you cannot establish as general rule on the construction contract that the constructor could not be liable of defects caused by an event which he could not avoid or overcome. It is a risk matter. Therefore, the risk has some influence on liability for defects. Two, as a consequence of the last, the liability of constructor for defects is a hypothesis of strict liability that not require of the construction fault. This is to all remedies for defects except enforcing damages because those require the fault.

I would like to warn you this piece of work is a first draft as result of my previous publications on the subject of defects in building construction and of the sale of goods. For this reason this paper needs more profundity and should be looked at in contrast to other authors, which will explain the absence of bibliographical notes.

Keywords:
construction contract, risk, liability for defects, conformity.

1 Introduction

This paper aims to compare the regulations of the defects in building construction and contracts for the sale to check how the rules about defects and risks are and must be closely connected because the liability for defects depends on them. To achieve this goal we are going to exam three regulations. One is the Directive 1999/44/EC of the European Parliament and the Council on certain aspects of the sale of consumer goods and associated guarantees. In my opinion this is the best legal text elaborated on the subject of defects. Secondly, we will examine Spanish Law regulations on the liability for defects in building constructions. And, thirdly the Principles, Definitions and Model Rules of European Private Law also known as the Draft Common Frame of Reference (DCFR) about the similar subjects.

A general view of the regulations of defects on those legal texts show some interesting contrasts. The Directive 1999/44/EC has broad regulations on the sale of defective goods that this legal text calls “non-conformity” instead of “defect” which is a distinctive change of name. This Directive also applies to contracts for the supply of consumer goods to be manufactured or produced which in other words means that it applies to contracts on the construction of movable things (for instance, the construction of kitchen or any furniture). The Directive does not directly establish any rule about the risk but it does indirectly and is therefore very important. With regard to Spanish Law Parliament dictated in 1999 an Act which established some extensive rules of liability for defects in building construction and a simple rule about the risks that in my view is probably wrong, as we will see. The DCFR regulates the construction contract which rules apply to the construction of
buildings and movable things, but it hardly dictates any rules about the specific subject of the defects. So, it does not establish the types of defects -a very important issue-, neither the remedies for defects nor the deadlines that the client can rely on for the remedies of the defect. However, it dedicates a long article to the contractual risks.

2 The Directive 1999/44/EC on certain aspects of the sale of consumer goods and associated guarantees

I will refer to only the more relevant aspects of this Directive for the purpose of this paper. It establishes all rules that govern the defects subject for the sale of goods to the contracts signed between businesses and consumers. First of all, we have to underline that the Directive is inspired by the UN Convention on Contracts for the International Sale of Goods of Vienna 1980. It means that those rules which were drawn up to be applied to contracts between businesses but are now being applied to contracts between businesses and consumers, which, in theory require more protection. A proof of that is that the German BGB was modified in 2001 and adopted most of the rules of Directive to apply to all contracts for sale, business to business, consumer to consumer and of course business to consumer.

With regard to the Directive objective scope, as I said before, it is the contract for the sale of goods but also the contracts to construct some movable things. That is the conclusion of reading Article 1. 4. It stipulates: Contracts for the supply of consumer goods to be manufactured or produced shall also be deemed contracts of sale for the purpose of this Directive. It means that the rules of the defects to sales are also relevant for the construction contract, at least to the construction contract of movable things, because this directive only applies to the sales (constructions) of movable items. Moreover, as already stated, in this Directive the former meaning has been changed by the use of words the “non-conformity”. This is a significant change of meaning because in European Civil Law countries the defect regulations and all that entails come from Roman law, in which the liability for the defect was dissociated from the non-performance of the seller obligations. But now the Directive follows the UN Convention the new name “non-conformity” which involves things like seller non-performance.

With regard to the types of non-conformities or lack of conformity they can be deduced by the requirements of conformity with the article 2 Directive. It establishes: The seller must deliver to the buyer (consumer) goods which are in conformity with the contract of sale. The conformity depends on different circumstances, for instance, if they fit the description given by the seller or any particular purpose for which the buyer requires or the purposes for which goods of the same type are normally used, etc. I cannot entry go into all the extensions of this Article. Article 2.3 Directive has some importance which declares there shall be deemed not to be a lack of conformity if, at the time the contract was concluded, the consumer was aware, or could not reasonably be unaware of, the lack of conformity. This rule is traditional in the subject of defect. It is the knowledge or not of the defect by the buyer at the conclusion of the contract which would be equivalent to a reasonable awareness.

1 Article 2. Conformity with the contract

1. The seller must deliver goods to the consumer which are in conformity with the contract of sale.
   2. Consumer goods are presumed to be in conformity with the contract if they:
      (a) comply with the description given by the seller and possess the qualities of the goods which the seller has held out to the consumer as a sample or model;
      (b) are fit for any particular purpose for which the consumer requires them and which he made known to the seller at the time of conclusion of the contract and which the seller has accepted;
      (c) are fit for the purposes for which goods of the same type are normally used;
      (d) show the quality and performance which are normal in goods of the same type and which the consumer can reasonably expect, given the nature of the goods and taking into account any public statements on the specific characteristics of the goods made about them by the seller, the producer or his representative, particularly in advertising or on labeling.
Another aspect that I would like to refer to is about the deadline (limit?) within which the seller is liable for a lack of conformity. Article 5 establishes that the seller shall be held liable where the lack of conformity becomes apparent within two years from the delivery of the goods. This period is very important because it is in fact the legal and mandatory guarantee expiry date. In Civil law countries this period was very short\(^1\). Nevertheless, in the cases of second-hand goods the Directive allows member States to provide that the seller and consumer may agree a shorter term than two years, but such a period may not be less than one year.

Finally, the most important issue for us in this work is the rule of risk that Article 3.1 establishes. It says: "The seller shall be liable to the consumer for any lack of conformity which exists at the time the goods were delivered." At first this rule is obvious: the seller will be only liable for any lack of conformity which exists before the delivery, never a lack of conformity (defect) caused after it (for example, caused by the buyer). It is the traditional defect requirement by doctrine: liability for defects is only when the defect is original. As for the risk, this rule involves that it is passed to the buyer at the time of the goods delivery. But I would like to call attention to the fact that the seller will be liable for defects if the goods suffers some deterioration (defect or lack of conformity) before the delivery to the buyer although the defect would have been caused between the time that the contract was concluded and the delivery. Of course the seller would be liable despite the lack of conformity due to an event of which the seller cannot be held accountable. In addition I like to add that Directive establishes a rule about the burden of proof on this aspect to profit the consumer, so if the lack of conformity becomes apparent within six months of the delivery time it is presumed to have existed at that time.

Of course the strict liability is to resort all remedies for defects except enforcing damages which will require the fault of the seller.

That is the seller liability for lack of conformity (or defect) is a strict liability or to say the same, the seller liability for defect does not need the requirement of the fault as I have said. It has always been that even from the Roman law and doctrine has never disagreed about it. However, doctrine and jurisprudence in Civil law countries like Spain have hardly ever connected the defect subject with the risk rule. This is the issue. But the Directive has served to enhance than important issue that shall serve to clear the defect liability in other contracts, like for example the construction contract.

I would like to stress a novelty rule of the Directive to Civil law countries, about the delivery time when the risk is passed to the buyer, mandatorily applied at least to the consumer contracts. The reason is that rule was absolutely contradictory to the traditional risk rule coming from Roman law: *periculum est emptori*” in Latin. In Spain and most countries of Civil law the traditional risk rule continues to be applied to the other contracts that are between businesses and between consumers.

3 **Spanish regulations of Building defects**

In Spain the subject defects on construction contracts is regulated in a Act of 1999 called the Building Regulation Act -in Spanish Ley de Ordenación de la Edificación (from now the acronym LOE)-, despite its name it does not regulate the construction contract totally but one smale part only. The construction contract in general is regulated in the Civil Code with very old rules coming from XIX Century. On the contrary LOE basically establishes the rules of liability for defects in building construction. But also take advantage to dictate a rule about risk which is contradictory to the general rule risk established in the Civil Code. The result is confusion about the requirements of defects liability and a big mistake.

The LOE establishes the list of people and companies who make the building, called building agents and of course the domains of each one. Basically they are the promoter, the architects and the constructor. Architect and constructor do not need any explanation or definition but the promoter probably yes. A promoter is the business developer of buildings that normally is a company, who as

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1 French Civil Code in the article 1648 only refers to a short time, but does not establish something concrete; the Italian Civil Code the article 1495 establishes one year; the German BGB before the reform of 2001 established in paragraph 477 six months, like the Spanish Civil Code (article 1490).
owner of a plot, manages, decides, contracts the other agents, invests, finances and finally sells the different houses, apartments, etc. getting the main profit. The LOE establishes the domain of each building agent in detail. Each domain is very important to distribute and determine the liability of each agent in case of any defect. This, in my opinion is not a fault issue; it is only a criterion for knowing which agent has the scope of domain, because in case of defect he could allege the defect is out his domain. If the defect is inside his domain he could never allege it was not his fault. I will come back to this. In addition we have to refer to the people who can claim liability for defects in building. They can be of course the client, but also third parties like buyers from the developer or last purchasers from the first buyer. Also the LOE allows all people refer to sue all building agents (architects, constructors, etc.).

With regard to the types of defects the LOE states three and at the same time establishes the different periods of building agent liability. So it distinguishes structural defects, functional defects and finished defects. The periods are ten years for the first, three years for the second and one year the last. These rules have a similar function to the sale of goods which signifies that the seller shall be held liable where the lack of conformity becomes apparent within two years to be counted from the delivery of the goods. We could enter into detail in the three types of building defects but it is a subject of singular cases which I think is not important for the aim of this paper. Only add that the time to start to count the periods is the handover of the structure.

But the main issue is how to determine the liability for defects in building or more specifically, the question would be if it is a requirement to claim the agent being at fault. Before LOE and until now it has been discussed by jurisprudence and doctrine in Spain, because some authors have held that it is a necessary the requirement of the agent fault and the courts not always have held some secure criteria about it. In addition the matter is not only in Spanish Law because in France the modification of Civil Code of 1978 established in article 1792 a exception of liability of the constructor if he proves that the damage was caused by an alien cause. That panorama has should influenced lawmakers to establish in article 17.8 LOE a similar rule of French Civil Code. It says: The liability will not be due by building agents if it is proved that the defect was caused by any event which the agents could not avoid or overcome. In my opinion this is a big mistake to form such a generalization. That would not be correct if this event had happened before the handover but if that had happened after it. Why, because it is a risk matter. So in the first case the agents still have the risk, whereas in the second the risk has passed to the client through the handover. If we would admit the agents could not be liable in the first hypothesis LOE would be absolutely contradictory with the traditional and much known risk rules in construction contract and of course in Spanish Civil Code.

In effect if we read the articles 1589 and 1590 of Spanish Civil Code about the risk in construction contract, they establish that the constructor suffers the loss or the damages and cannot claim payment of the price of the contract if they happen before the handover. In the same way, the constructor still has to perform (if it is possible) or as the case may be, perform again. Consequently with this risk rule the agent is liable for all defects which exist in the structure at the time when it was handed over. Obviously not for the defects caused after that. In this way the client will only have to prove the defect existed at that moment, the same thing happens in the contract of sale. And of course the constructor shall be held liable where the defect becomes apparent within periods ten, three and one year from the handover of the structure stated above.

In any case these rules about defects in the construction contract are similar to the traditional defect rules of the contract of sale. As I said before doctrine has always affirmed the requirement of the original feature of defect so the seller would be liable to the buyer for it. But the most important consequence of the primary considerations is the absolutely clear strict feature of contractual liability for defects in building construction contracts. I insist, the same thing has always happened in the sale contract dating from Roman law.

1 Like similar way French Civil Code which in this subject of liability for defect in building, in 1978 was modified in its articles 1792 and following.
In addition the same thing similarly happens in sales contracts, in construction contracts they will be deemed not to be a defect if the client was aware, or could not reasonably be unaware of, the defect. But whereas in the sale the time concerned is when to aware is when the contract was concluded, in the construction it cannot be that but the handover time. In the handover the client has the burden to inspect, supervise and accept the structure or refuse it when the structure has a defect or does not conform to the contract. Also the client can accept with an assurance cure by the constructor. On the other hand if the client accepts the structure, the constructor is relieved of liability for apparent defects although not for other defects.

4 The rules of the Draft Common Frame of Reference

The DCFR regulates the construction contract on articles IV.C.3.101 to IV.C.3.108 and its scope is building or other immovable structure and movable things. The DCFR only dictates an article about the specific subject of defect. It is the IV.C.3 that like the Directive 1999/44/EC uses the words “non-conformity” instead of the word defect. As I said above DCFR dictates hardly any rules about the specific subject of the defects. So, it does not establish the types of defects nor the remedies for defects or the deadlines that the client can rely for the remedies of the defect.

With regard to the remedies for non conformity, some are characteristic of all specific contracts in the DCFR. Here all the remedies for non conformity are established in general rules of the contract, inside remedies for non performance. In my opinion it is suitable. However, I do not have a favorable opinion about the lack of periods where the client can rely on a defect (“non-conformity”) and the types of non conformities because in the construction contract they are absolutely necessary. The same thing happens in the regulations of the contracts of sale. All these lacks of previsions could be resolved applying the general period of prescription of three years of DCFR article III.-7:201. But this solution would be suitable for the contract of sale and for the construction of movable things. Not for building construction because there have different types of non conformity. In relation to that, there is an overlap in DCFR between the regulations of the contract of sale and the contract of construction. In the first is a rule which, like the article 1.4 of Directive refers to the above saying “A contract that one party undertakes to manufacture or produce goods is to be considered as a contract for the sale of goods”. But if we remember the contract of construction regulation covers the movable thing, you cannot have security about what regulations apply.

With respect to the risk the article IV.C.-3:106 DCFR establishes the rule of the risk to the constructor if the event occurs before the handover. In this case if it still possible to perform, the constructor has to perform or, as the case may be, perform again. Only in this case is the client obliged to pay for the constructor's performance. In the case where it is no longer possible to perform the client does not have to pay for the services rendered. Finally, when an event happens after the handover the constructor does not have to perform again and the client remains obliged to pay the price. That is applied to non conformities (or defects) it will mean that the client would only have to prove that the defect already existed when the control of the structure was transferred and the constructor could not allege that it was by an alien cause. The conclusion is in any case that the liability for defects in building construction is a case of strict liability in accordance with the traditional rules of risk in the construction contract. These rules are also similar to the contract of sale as we saw before. And of course as I said to sales, the strict liability is to resort all remedies for defects except enforcing damages which will require the fault of the constructor.

To finish I would like to do refer to the handover of structure. The article IV.C.-3:106 DCFR regulates the handover of structure declaring that acceptance by the client of the control of structure does not relieve the constructor wholly or partially from liability. It is obvious that the acceptance does not relieve him from liability for non conformities hidden at this time. But the constructor could be relieved to apparent non conformities which the client had refused to accept. I do not understand why in this article the DCFR does not distinguish those two possibilities as it does in the regulations of sale. So in a similar way as we saw before in the Directive, Article IV.A.-2:307 declares that the seller is not liable (for non conformities) if, at the time of the conclusion of the
contract, the buyer knew or could reasonably be assumed to have known of the lack of conformity. It is clear in the construction contract that the relevant time cannot be the conclusion of contract but the handover of the structure.

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Global claims: a cost effective way of disposing of construction disputes?
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Abstract: This paper uses traditional doctrinal methodology to evaluate judicial statements on the merits of global or rolled up claims where it is said to be impractical or impossible to demonstrate the links between certain causes of action and the monetary value to be attached to each cause. The paper reviews key authorities from a number of jurisdictions. The key authorities are then summarised with key ingredients of the global claim authorities being identified as: impossibility, impracticability, conduct of the claimant and defendant, balance between excessive particularity and basic information, the keeping of records, the costs of claim preparation and apportionment. The Jackson Review of the costs of litigation are considered and, in that context, the paper proposes that global claims can be a cost effective way of disposing of complex construction disputes without necessarily jeopardising the basic proposition of the claimant being required to prove that to which he believes he is entitled so that the defendant knows the case he has to meet.

Keywords: causation, cost benefit analysis, global claims, litigation

1 Introduction

Construction disputes can be very costly to resolve by litigation. Global claims are probably significantly less costly to advance than traditional claims but carry a greater risk of failure. This paper uses traditional doctrinal legal methodology to evaluate judicial statements on global claims, drawing on key authorities from a number of jurisdictions and from the realms of health and safety law and professional negligence. The paper also considers the Jackson Review of litigation costs and concludes that if a cost benefit analysis is conducted in respect of claim preparation, this paper proposes that global claims, if advanced correctly, could significantly reduce the costs of litigating complex construction disputes.

2 The Starting Point

The general rule as regards a claimant being compensated in damages for breach of contract was set out by Lord Blackburn in these terms:
'in settling the sum of money to be given for reparation of damages you should as nearly as possible get at that sum of money which will put the party who has been injured, or who has suffered, in the same position as he would have been in if he has not sustained the wrong.' 1

In other words, the wronged party, so far as money can do it, should be placed in the same position as if the contract had been performed.

Contractors may find themselves in the position of having suffered a loss on a particular project and consider the whole of that loss is attributable to breaches of contract by the client. Contractors may then proceed, in a seemingly generalised and simplistic way, to present a claim for the total ‘loss’ as a measure of damage which should compensate them for the harm suffered.

The claimant’s right to be compensated for harm done should also be balanced up with the rights of the defendant as set out by Lord Justice Saville:

'The basic purpose of pleadings is to enable the opposing party to know what case is being made in sufficient detail to enable that party properly to prepare to answer it.' 2

3  Review of the global claims authorities

Global or ‘rolled up claims’ occur when the claimant presents a claim with no breakdown in the sense that, rather than showing how each individual event has caused delay together with the monetary loss attached to each delay, the claimant provides a single claim lumping each alleged cause together without itemisation. Such an approach under normal circumstances:

'is the antithesis of a claim where the causal nexus between the wrongful act or omission of the defendant and the loss of the plaintiff has been clearly and intelligibly pleaded.' 3

Lord Humphrey LLoyd QC also indicated that nexus need not always be expressed since it may be inferred. 4

Awards given on a global basis have, however, been supported in the context of

'an extremely complex interaction ......[where] it may be difficult or even impossible to make an accurate apportionment of the total extra cost between the several causative events' 5. (emphasis added)

The arbitrator in Crosby v Portland also used the word ‘impractical”. Similar words were used by Vinelott J, where he indicated:

'a rolled up award can only be made in a case where the loss or expense attributable to each head of claim cannot in reality be separated and . . . . where apart from that practical impossibility the conditions which have to be satisfied before an award can be made have been satisfied in relation to each head of claim' 6 (emphasis added)

Awards made by both arbitrators and adjudicators on a global basis have been supported by the courts. 7 There have however been notable failures. An argument commonly cited against the global approach is that it amounts to an abuse of process, such an argument usually being presented at an interlocutory stage in the form of an application to strike out the claim. The abuse can be categorised as where the claimant provides no particularisation to a claim such that the defendant does not know what he is defending himself against. In Wharf v Cumine Associates, 8 the claimant had submitted a four hundred page document without stating their exact position and without

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1 Livingston v Rawyards Coal Co (1880) 5 App Cas.25, 39
2 British Airways Pension Trustees Limited (Formerly Airways Pension Fund Trustees Limited) v Sir Robert McAlpine & Sons Limited & ORS [1994] 72 BLR 26, CA
3 Bernhard's Rugby Landscapes v Stockley Park Consortium (1997) 82 BLR 39 para. 131
4 Bernhard's, note 3
5 Crosby and Sons Ltd v Portland UDC (1967) 5 BLR 121, QBD
6 London Borough of Merton v Stanley Hugh Leach Ltd (1985) 32 BLR 51 pp. 102-103
7 Crosby, note 5 and Shell Refining (Australia) Pty Limited v AJMayr Engineering Pty Limited [2006] NSWSC 94
8 Wharf Properties Ltd v Eric Cumine Associates [1991] 52 BLR 1
identifying the key cause of delay. In responding to an application to strike out, the claimant averred "It will be necessary at trial to consider all variations instructed in order to establish which of them are unnecessary". ¹

The court then concluded; _The failure even to attempt to specify any discernable nexus between the wrong alleged and the consequent delay provides, to use Mr Thomas's phrase [counsel for the defendants] – no agenda for the trial"._²

While Wharf could be argued to be the low point for global claims, in _Mid Glamorgan v Devonald Williams³_ the court reiterated the view that global claims were permissible in situations where there were issues of impossibility or impracticability:

> Where however a claim is made for extra costs incurred through a delay as a result of various events whose consequences have a complex interaction that renders specific relation between event and time/money consequence **impossible or impracticable**, it is permissible to maintain a composite claim.⁴ (emphasis added)

From Wharf onwards we can see the courts reluctance to strike out global claims purely because they were presented as global claims.

The District Court of Western Australia (2007) defines the nature of a Scott Schedule as being a form of pleading which allows the court to have before it a single document. That document conveniently providing a full description of each element of claim together with the adopted positions of each party (in terms of admission or denial and quantum/evidence) to each element. In _ICI v Bovis_ the claimant produced four volumes to present its case in the form of a Scott Schedule. _The objectives sought to be achieved by the Court in orders made relating to Scott Schedules are to ensure that when the action is entered for trial: each individual item claimed is particularised ... the amount asserted by both parties ... the contentions of each parties ... areas of agreement relating to the description of the item and quantum ... the aggregate of the claims and areas of admissions of each party are known._⁵

The global claim in _ICI v Bovis_ was still found to be deficient in many respects but permitted to proceed without further and better particulars being required. Global claims have also been permitted to proceed subject to further and better particulars being require where; the claimant's claim was seriously defective⁶ and; where the pleadings showed no nexus between the events claimed of and the loss and damage alleged⁷.

Consideration was given as to how far the claimant must go in particularising his claim in the case of _Bernhard's Rugby Landscapes v Stockley Park⁸_. Judge Humphrey LLoyd, restated the principles of a global claim and, while maintaining the proposition that the claimant is entitled to present its case as it thinks fit, the court must ensure a party spells out its case in sufficient particularity in order to ensure fairness and observance of the rules of natural justice. Judge Humphrey LLoyd went on to say:

> What is **sufficient particularity** is a matter of fact and degree in each case, with a balance being struck between excessive particularity and basic information. The approach must also be **cost effective**.⁹ (emphasis added)

The Court of Appeal concluded that the core dispute, over pleadings and case management, in _Petromec Inc v Peroleo Brasileiro SA¹⁰_ concerned the degree of particularity with which Petromec

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¹ Wharf, note 8
² Wharf, note 8
³ Mid Glamorgan County Council v J Devonald Williams (1991) 8 Const LJ 61, QBD (OR)
⁴ Mid Glamorgan, note 11
⁵ ICI Plc v Bovis Construction (1992) 8 Const LJ 293
⁶ British Airways, note 2
⁷ Holland Construction and Engineering Pty Ltd v Kvaerner RJ Brown Pty Ltd (1996) 82 BLR 83
⁸ Bernhard's Rugby, note 3
⁹ Bernhard's Rugby, note 3 para. 138
¹⁰ Petromec Inc v Petroleo Brasileiro S.A. Petrobras & ors [2007] EWCA Civ 1371
must plead its case. The dispute raised questions of fairness, practicality and the appropriate means of enabling the court to define and decide issues between the parties. The court concluded that it would not be fair to Petrobras, nor a practical way of the court proceeding, if Petromec were not required to give adequate particulars of their claim.\(^1\) (emphasis added)

Lord Woolf and Lord Justice Otton heard an appeal against the refusal of a late strikeout application of a poorly pleaded global claim in the case of \textit{GAB Robins v Specialist Computer Centres}\(^2\). The appeal was refused. Lord Woolf acknowledged that the case should have taken a different direction. He also expressed some sympathy for the trial judge and expressed hope that the judge would take into account the contribution the poor pleadings may have had on whether, to use the earlier words of Lord Justice Otton (citing with approval Judge LLoyd in \textit{Bernhard’s Rugby Landscapes v Stockley Park}), the court’s fundamental concern that the dispute should be determined \textit{—expeditiously and economically}\(^3\) had been addressed.

There are warnings against the danger of a global claim failing completely if any significant part of the delay is not established and the court finds no basis for awarding less than the whole (Furst and Ramsey, 2006).

In \textit{John Doyle v Laing}, Lord McFadden indicated that \textit{—advancing a claim for loss and expense in global form is therefore a risky enterprise}\(^4\). The risk being the global claim is undermined if either the claimant fails to prove that a material event was the fault of the defendant or, the defendant is able to prove that a material contribution to the global loss was attributable to other factors not attributable to him. Lord McFadden mitigated his analysis by providing two considerations:

\begin{itemize}
  \item The first of these is that while ...... the global claim as such will fail, it does not follow that no claim will succeed. ...... but there may be in the evidence a sufficient basis to find causal connections .... or to make a rational apportionment of part of the global loss....
\end{itemize}

The second factor ...... is that \textit{causation must be treated as a commonsense matter}.\(^5\) (emphasis added)

In terms of awarding less than the whole, Lord McFadden made it clear that \textit{—if a lesser claim is to be made out, that must be done on the basis of the evidence which is properly led within the scope of the existing pleadings.} \(^6\)

The American courts have considered total cost claims and awarded less than the whole. In \textit{Servidone v the United States}, the claimant:

\begin{itemize}
  \item presented evidence under the total cost method. Servidone, 19 Cl.Ct. at 384. Under this method, the contractor must show: (1) the impracticability of proving actual losses directly; (2) the reasonableness of its bid; (3) the reasonableness of its actual costs; and (4) lack of responsibility for the added costs.\(^7\)
\end{itemize}

In finding that the claimant’s bid (\textit{Servidone}) was unreasonable, the Claims Court applied a modified total cost method and ‘\textit{substituted a reasonable bid amount for Servidone’s original estimate.}’ The court also considered the effect on contractor’s costs of ‘\textit{performance inefficiencies.}’ \(^8\)

Judge Thornton asked a number of questions in \textit{How Engineering v Lindner} as to how the Lindner claim could be scaled down if some of the causative events alleged had been eliminated or to take account of defects, inefficiencies or events at Lindner’s risk\(^9\).

Support for an apportionment process may be found in the words of Mr Justice Donaldson in \textit{Crosby} who supported the arbitrators strategy in recognising that a claim does not need to be fully

1 Petromec, note 18 para. 31
2 GAB Robins Holdings Ltd v Specialist Computer Centres Ltd [1998] EWCA Civ 924 (8 June 1998)
3 GAB Robins, note 20
4 John Doyle Construction Limited v Laing Management (Scotland) Limited Outer House, Court of Session [2002] Scot (D) 23/4 para. 37
5 John Doyle, note 22 paras. 38 and 39
6 John Doyle, note 22 para. 41
7 Servidone Construction Corporation v the United States [1991] 931 F.2d 860 United States Court of Appeals, Federal Circuit paras. 9 and 10
8 Servidone Construction, note 25 paras. 9 and 10
9 How Engineering Services Ltd v Lindner Ceilings Floors and Partitions plc unreported (QBD (OR), 17 May 1995
global or fully detailed but, that the contractor should particularise where possible and then ascertain his losses through a global claim where it was not possible by saying:

_I can see no reason why he [the arbitrator] should not recognise the reality of the situation and make individual awards in respect of those parts of individual items of the claim which can be dealt with in isolation and a supplementary award in respect of the remainder of those claims as a composite whole._"\(^1\)

Winter argues that this type of approach reverses the burden of proof (Winter, 2007). In order to prevent the burden of proof being reversed the claimant may be required to ensure evidence is led to indicate what his own failings might be so that the court can attribute quantum to those failings. The claimant may also be required to lead similar evidence to indicate other issues not the fault of the defendant so that, again, the court can attribute quantum to those liabilities. A rational apportionment of the global claim or a reasoned deduction from the whole can then be made without, necessarily, reversing the burden of proof.

This paper now discusses key elements arising from the global claims authorities and considers whether a cost benefit analysis has a part to play in the advancement of global claims as being a ‘commonsense approach’\(^2\).

4 Impossible or impractical to particularise

The Oxford English Dictionary defines impossible, impractical and impracticable respectively as follows:

_Not possible; that cannot be done or effected; that cannot exist or come into being; that cannot be, in existing or specified circumstances._\(^4\)

_Not practical; unpractical. Also = impracticable_\(^3\)

_Not practicable; that cannot be carried out, effected, accomplished, or done; practically impossible._

The meanings apparently being interchangeable and absolute.

It is worth noting that the definitions of impossible, impractical, impracticable can shed some of their absolute meaning if the meaning of impractical is taken to include the words _not sensible or realistic_\(^5\) as may be found within the 2\(^{nd}\) Edition of the New Oxford American Dictionary.

In their Delay and Disruption Protocol, the Society of Construction Law (2002) consider the starting point with any claim is for the claimant to maintain accurate and complete records during the project so that it should be able to establish causal links between events and the loss complained about without need to resort to a global claim. In any event, with or without such records at what point does the question of impossibility arise? Is it at advancement of the claim or at trial? This question may be answered by the words of Lord McFadden in _John Doyle_:\(^6\)

_The rigour of that analysis is in my view mitigated by two considerations. The first of these is that while, in the circumstances outlined, the global claim as such will fail, it does not follow that no claim will succeed. The fact that the pursuer has been driven (or chosen) to advance a global claim because of the difficulty of relating each causative event to an individual sum of loss or expense does not mean that after evidence has been led it will remain impossible to attribute individual sums of loss or expense to individual causative events._\(^3\) (emphasis added)

In some cases, the courts have balanced up the needs of the claimant to add to his case by serving further and better particulars in order to assist the defendant to understand the case he has to answer\(^4\).

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\(^1\) Crosby, note 5

\(^2\) Commentary by the editors of the Building Law Reports on Lord McFayden’s decision at [2002] BLR 396

\(^3\) John Doyle, note 22 para. 38

\(^4\) See ICI, note 13, British Airways note 2 and Holland note 15
In considering whether the claimant advances a global claim or not, it should also be recognised that such a claim is _a risky enterprise_¹ particularly if absolute definitions are given to phrases such as impossible, impractical and impracticable as may be found in various judicial statements made in considering global claims. But we also see some relaxing of the absolute terms when the court uses words such as _adequate_² or _sufficient_³ particularity.

5  Sufficient or adequate particularity

The seemingly absolute requirement of impossibility could be assimilated with an obligation to use best endeavours. To that end, should a claimant use his best endeavours and _leave no stone unturned_⁴ either before he presents his claim or at any time through to trial? Or should he be required to use reasonable endeavours to produce adequate or sufficient particularity?

Although Judge Flaux was not convinced the distinction between best and reasonable endeavours made much difference on the facts of the case before him in _Rhodia v Huntsman_, he nevertheless addressed his mind to the distinction and appeared to conclude that best endeavours equated to all reasonable endeavours and that reasonable endeavours was a lower requirement. Some consideration as to the cost consequences of each was not considered except in terms of sacrificing and/or acting against the parties' own commercial interests⁵.

Time, trouble and expense are factors to be taken into consideration when weighing up whether statutory defences in health and safety law are proven (see _Coltness Iron Co v Sharp_⁶ and _Edwards v National Coal Board_⁷).

Here we see some discussion of a balance being struck and a question of proportionality (albeit _gross proportionality_⁸). The health and safety authorities and published guidance do not appear to define what constitutes the distinction between proportionality or gross proportionality. What is clear in relation to the duties of a designer under the Construction (Design and Management) Regulations 2007 is that those duties to perform _so far as is reasonably practicable_⁹ are qualified by having to take:

_―due account of other relevant design considerations‖_⁸ and, according to CDM ACOP (Managing Health and Safety in Construction, 2007), in doing so the designer should _―weigh the various factors and reach reasoned, professional decisions‖._⁹

6  The striking of a balance

Direct guidance is provided by the Health and Safety Executive (2007) in their Policy Statement on Enforcement as to their approach of proportionality in the enforcement of health and safety law in particular:

11. Proportionality means relating enforcement action to the risks ....

14. Deciding what is reasonably practicable to control risks involves the exercise of judgement.¹⁰

Even though the obligation appears to be akin to an absolute obligation in health and safety law i.e. to comply so far as is reasonably practicable, there appears to be an element of proportionality and the exercise of judgement.

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¹ John Doyle, note 22
² Petromec, note 18 para. 31
³ Bernhard's Rugby, note 3 para. 138
⁴ Sheffield District Railway Co v Great Central Railway Co (1911) 27 TLR 451 at p. 452.
⁵ Rhodia International Holdings Ltd. Rhodia UK Ltd. v Huntsman International Plc [2007] EWHC 292 (Comm) at para. 35
⁶ Coltness Iron Company v Sharp (1938) AC 90, 94.
⁷ Edwards v National Coal Board (1949) 1 KB 704 p. 712
¹⁰ see page 3
The standard to be expected of a professional in exercising judgement may be found in the widely recognised direction to the jury set out by Judge McNair in *Bolam v Friern Hospital Management*\(^1\) such that where a professional is required to exercise the ordinary skill of a competent respected practitioner in his field he will not be: _guilty of negligence if he has acted in accordance with a practice accepted as proper by a responsible body of medical men skilled in that particular art._\(^2\).

The Bolam test was modified by the House of Lords in *Bolitho v Hackney Health Authority*\(^3\) such that the court is required to ask whether _the body of opinion relied on can demonstrate that such opinion has a logical basis_. In particular, the House of Lords also concluded that there must be a ‘weighing of risks against benefits, ... the Judge .... will need to be satisfied that .... the experts have directed their minds to the question of comparative risks and benefits and have reached a defensible conclusion on the matter.’\(^4\)

This paper proposes that even where there are seemingly absolute definitions, the court leans towards a cost benefit analysis. Specifically with regard to global claims, Judge Thornton stipulated that the approach to providing sufficient particularity must be _cost effective._\(^5\)

### 7 The Jackson Review

Judge Thornton considered *Amec’s* behaviour as against the overriding objectives of the Civil Procedure rules in determining whether its costs were reasonable or unnecessary\(^6\).

Building on the principles of access to justice enshrined in the Civil Procedure Rules, The Jackson Review (Jackson, 2009) linked access to justice, proportionate costs and practicable coming to the conclusion that:

_Proportionate costs make access to justice practicable. Access to justice is only practicable if the costs of litigation are proportionate._\(^7\)

Lord Justice Jackson set out guidelines to help the Rules Committee to formulate a definition of proportionate costs which, he hoped, would bear a reasonable relationship with such matters as: the sums in issue; complexity; any additional work generated by the conduct of the paying party\(^8\). He also considered that oppressive conduct by wealthy litigants in putting their opponents to excessive and disproportionate costs should be sanctioned by indemnity costs with the proposed definition of proportionate costs protecting a receiving party even where indemnity costs are not awarded\(^9\). What is also important to consider is that Lord Justice Jackson went on to say:

_The policy which underlies the proposed new rule is that cost benefit analysis has a part to play, even in the realm of civil justice._\(^10\) (emphasis added)

So both a claimant and a defendant are required to conduct a cost benefit analysis as to the detail and extent of their pleadings and evidence. This is particularly relevant to construction claims which can be voluminous especially where Scott Schedules are required.

### 8 Conduct

This paper closes on the discussion of a proposed framework by providing a reminder of what happened in *Wharf* and the effect of conduct on the outcome of proceedings in global claim cases.

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\(^1\) Bolam v Friern Hospital Management Committee [1957] 2 All ER 118
\(^2\) Bolam, note 42
\(^3\) Bolitho v City and Hackney Health Authority (1997) UKHL 46
\(^4\) Bolitho v City and Hackney Health Authority (1997) UKHL 46
\(^5\) Bernhard's Rugby, note 3 para. 138.
\(^6\) Amec Process and Energy Ltd v Stork Engineers & Contractors BV (No 3) [2002] All ER (D) 48 (Apr) para. 26
\(^7\) see Part 1 Chapter 4 para. 2.5
\(^8\) see Part 1 Chapter 3 para. 5.15
\(^9\) see Part 1 Chapter 3 para. 5.21
\(^10\) see Part 1 Chapter 3 para. 5.17 (citing AB v John Wyeth and Brothers Ltd, CAT 13 December 1996)
Wharf had been ordered to, and agreed to provide further and better particulars using Scott Schedules, which they did not do. To that extent, it could be argued that the failure of the global claim in this instance was not a matter of principle in respect of global claims but procedural failure and a matter of conduct of the claimant.

Conduct of the claimant was also considered in Merton v Leach:
- a the time when loss or expense comes to be ascertained it is impractical to disentangle or disintegrate the part directly attributable to each head of claim, then provided that the contractor has not unreasonably delayed the making of the claim and so has himself created difficulty the architect must ascertain the global loss directly attributable to the two causes, the courts also commented positively on the claimant and his advisors in ICI v Bovis to the extent that there was a total lack of any contumelious behaviour on the part of ICI or its advisors.

It would appear the Judge had certain sympathy to ICI's situation however, despite ICI's considerable work the defendant was still not fully aware of the case they had to meet. Wharf was reconsidered; their Lordships commented that if a pleading was to embarrass the fair process of trial, it could not be considered in isolation from the litigation history and to that extent, ICI were allowed to proceed with their claim.

The courts criticised the behaviour of the defendant in Inserco v Honeywell Control Systems both at first instance and in the Court of Appeal. The conduct of the defendant also came under scrutiny in the case of Amec Process v Stork Engineers. Judge Thornton dismissed Stork's procedural objections and concluded a fair trial was both possible and manageable.

Amec were ultimately successful with their largely global claim. On the question of costs, Judge Thornton criticised Stork's continuous and obstructive obfuscation as being at the heart of its failure to produce evidence which contributed greatly to the time and costs Amec expended in presenting and defending the case. This case was considered to fall within one of those exceptional cases where indemnity costs should be awarded even if there is no disapproval of Stork's conduct.

Judge Thornton nevertheless, disapproved of the manner in which Stork's overall case was presented and awarded indemnity costs to Amec in addition to being successful with their global claim.

The criticisms levelled at the defendants in Inserco v Honeywell and Amec v Stork are arguably at the heart of the Jackson Review's discussion on prolix pleadings (with specific reference to TCC proceedings) which centred around re-pleading and/or disallowing costs at the end of the case. Lord Justice Jackson suggested amendments to the TCC Guide be amended to give power to the court to disallow costs in certain circumstances.

9 Conclusion

The basic premise for presenting a claim in whatever form, whether it be a global claim in whole or in part, is that the defendant needs to know the case he has to meet so that there may be a fair trial of the issues.

The following ingredients for a global claim can be distilled from the authorities: impossible to particularise; impractical/impracticable to particularise; material contribution; adequate

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1 London Borough of Merton, note 6
2 ICI v Bovis Construction and others (1992) 32 ConLR 90
3 ICI, note 53
5 Inserco, note 55
6 Amec Process and Energy Ltd v Stork Engineers & Contractors BV [2002] All ER (D) 98 (Feb)
7 Amec, note 57
8 Amec note 47 para. 84
9 Amec note 47 para. 85
10 Inserco note 55
11 Amec note 57
12 Part 5 Chapter 29 para. 2.2
13 Part 5 Chapter 29 para. 6.1
The global claim authorities therefore appear to indicate that the claimant need only present his claim in sufficient or adequate particularity providing a balance is struck between a claimants' right to be compensated and a defendants' right to be able to respond. Those authorities also indicate that the claim needs to be dealt with expeditiously and economically and in a cost effective manner. Cost benefit analyses are supported in decision making in health and safety law and in the law of professional negligence. The recent Jackson Review supports cost benefit analysis to civil justice. This paper concludes that a cost benefit analysis requires a claimant to present his claim with sufficient particularity. Where that cost benefit analysis is defensible and can demonstrate the advancement of a global claim is cost effective so that the trial would be fair, a global claim should be the norm for all claims. This is particularly so where it can be demonstrated that all the events complained of are the fault of the defendant.

It may be cost effective to present even a claim that can be particularised as a global claim provided the claimant leads evidence in order to ensure an apportionment and/or appropriate deduction can be made from the globally claimed amount without compromising basic principles and/or reversing the burden of proof. The Jackson Review should also provide sufficient safeguards to protect against unreasonable conduct.

10 References


Perception of the UK industry on ‘the new 2009 Construction Act’: An empirical study

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Abstract:
It is generally recognised that the UK construction industry is associated with low profit, delay in payments, cash flow concerns, insolvency, and short-term relationships compared with the other industries. In particular, claims and disputes have proliferated in the construction industry due, largely, to unfair payment practices. Therefore, to allow swift and a cheaper method of resolving construction disputes by way of adjudication, the ‘Housing Grants, Construction and Regeneration Act 1996’ (HGCRA) was introduced in the UK. The Act, however, has its strengths and weaknesses. To ensure the Act is more effective in achieving its intended objective, amendments have been proposed. This Paper will present the existing HGCRA 1996 Act, along with the ‘new’ 2009 Construction Act. The Paper, based on literature review and online questionnaire survey, will discuss the level of awareness on the new Act, the perception of the UK industry on the abolition of ‘contracts in writing’ rule, and the key reasons for amending the HGCRA 1996 Act. The Paper concludes that the new Act is perceived as being more effective at improving cash flow in the construction supply chain and is expected to encourage parties to resolve disputes by adjudication. However, the process of integrating the proposed changes into existing dispute resolution processes is often a complex issue.

Keywords:
adjudication, Construction Act, cash flow, dispute resolution, HGCRA 1996 Act

1 Introduction

Construction industry in the United Kingdom (UK) is an important industry which accounts for approximately 9% of national gross value added and employs around 2 million people (Chappel and Wills, 2011). However, it is generally recognised that the UK construction industry is associated with low profit, delay in payments, cash flow concerns, insolvency, and short-term relationships compared with the other industries. In particular, claims and disputes have proliferated in the construction industry due, largely, to unfair payment practices. As documented in the Egan (1998) and Latham (1994) reports, the construction industry compares badly with other industries in terms of capital cost, product quality, and client satisfaction. Furthermore, in its report on improving public services through better construction, National Audit Office (NAO, 2005) recommended that ‘unfair payment practices, such as unduly prolonged or inappropriate cash retention, undermine the principle of integrated team working and the ability and motivation of specialist suppliers to invest in innovation and capacity’. Therefore, in order to ensure prompt cash flow, improving efficiency and productivity and to allow swift resolution of disputes by way of adjudication allowing projects to be completed without wasted profit and time in
litigation, the _Housing Grants, Construction and Regeneration Act 1996_‘ (HGCRA) was introduced in the late 1990s. The _HGCRA 1996_‘ is also commonly known as the _UK Construction Act 1996_‘. This Act has played an important role in improving the efficiency of construction supply chains in the UK.

The paper aims to report findings of research into perceptions of the UK industry on _th e new 2009 construction Act_. The paper is based on literature review and an online questionnaire survey. This paper discus the existing _HGCRA 1996_‘ Act, along with _the new 2009 Construction_‘ Act. Further, the paper will explore the level of awareness on _the new 2009 Construction_‘ Act, the perception of the UK industry on the abolition of _contracts in writing_ rule, and the key reasons for amending _the HGCRA 1996_‘ Act.

2 **The Housing Grants, Construction and Regeneration Act 1996 (HGCRA 1996)**

The _HGCRA 1996_‘ Act came into force in 1998 to reduce confrontation, facilitate better cash flow and fair play through allowing swift resolution of disputes by way of adjudication. The _HGCRA 1996_‘ Act achieves this through (CIOB, 2008): (1) providing a statutory right to refer disputes to adjudication. The adjudicator’s decision is binding until it is finally determined by legal proceedings or arbitration; (2) providing the right to interim, periodic or stage payments; (3) requiring that contracts should provide a mechanism to determine what payments become due and when, and a final date for payment; (4) requiring that the payer gives the payee early communication of the amount he has paid or proposes to pay; (5) providing that the payer may not withhold money from the sum due unless he has given an effective withholding notice to the payee; (6) providing that the payee may suspend performance where a sum due is not paid in full by the final date for payment; and (7) prohibiting pay when paid clauses which link payment to payments received by the payer under a separate contract.

Kennedy (2006) noted that in the UK, adjudication is now being used more extensively than anticipated. Various industry surveys indicated that poor payment practices are a major issue for many in the construction industry (CIOB, 2008). The _HGCRA 1996_‘ Act has generally improved cash flow and dispute resolution under commercial construction contracts, however, it is ineffective in certain key regards (DCLG, 2008). For instance, the original objectives of the _HGCRA 1996_‘ Act are being undermined by: exploitation of _loops-holes_ stopping the flow of money through the supply-chain; lack of clarity relating to payment resulting in adverse effects on cash flow; increased litigation; and disputes under construction contracts were threatening the viability of individual businesses and eventually would undermine the long-term health of the construction industry (DCLG, 2008). Therefore, due to some of the above inadequacies and extensive consultation with the UK construction industry and its clients, the Government has developed proposals, which it believes will address many of the industry’s concerns, particularly those of sub-contractors.

3 **The new 2009 Construction Act**

The main reason for amending the _HGCRA 1996_‘ Act was to improve the performance of the UK construction industry. The amendments (contained in Part 8 of the 2009 Act) result from concerns in the construction industry about unreasonable payment delays, and a desire to improve access to adjudication (Brampton and Hayward, 2010). The legislation including the proposed changes (The Local Democracy, Economic Development and Construction Act) received Royal Assent on 12 November 2009 and is therefore officially on the statute book (CIArB, 2010). However, it is unlikely changes to payment notice procedures and adjudication through amendments to the _HGCRA 1996_‘ Act will come into force in October 2011.

The new 2009 Construction Act aims to address a number of issues in the _HGCRA 1996_‘ Act to make the legislation more effective at improving cash flow in construction supply chains (e.g.
reducing unfair payment practices such as unduly prolonged or inappropriate cash retention in the construction industry) and to encourage parties to resolve disputes by adjudication (e.g. reducing restrictions or disincentives). However, the new Act seeks to address some of the issues and grey areas raised by a decade of case law on the _HGCRA 1996_ Act. However, critiques argue that many of the _HGCRA 1996_ Act grey areas had already been addressed by the common law and therefore the new Act adds nothing new.

4 Research Methodology

The main aim of this research was to produce a valuable insight into some of the key issues and challenges do the UK industry facing with the abolition of _contracts in writing_ rule in Section 107 of the _HGCRA 1996_ Act. In order to achieve the aim of this research, a robust methodology is essential. According to Hughes and Sharrock (1997) research is defined as the process of discovering something that is not already known. It is a reasoned process done with scrupulousness, with rigour, with careful weighing of evidence and the arguments, with some methodology. According to Dainty (2007), the choice of research methodology is a crucial and difficult step in the research process. Hussey and Collis (2003) define methodology as the overall approach to the research process, from the theoretical underpinnings to the collection and analysis of the data. Therefore, research methodology in social enquiry refers to far more than the methods adopted and encompasses the rationale and philosophical assumptions that underlie a particular study. These, in turn, influence the actual research methods that are used to investigate a problem and to collect, analyse and interpret data.

Given the relatively new and unexplored nature of the research problem, quantitative research method was adopted to collect and analyse data. A web-based, an online questionnaire survey method was employed to collect data. This method of data collection have many advantages including low cost, speed, and ability to reach respondents anywhere in the country, according to Punch (2005). The sampling technique used for data collection for this survey was a convenience sample, rather than random sampling. This is because there is no comprehensive, nor any standard, database of UK organisations involved in construction dispute resolution.

Survey invitations were e-mailed to respondents requesting to submit their views via an online survey hosted at http://www.survey.bris.ac.uk/uclan/construction which was live from 06/12/10 to 08/04/11. Using this method of data collection, a total of 102 fully completed and usable questionnaires were received. Of them 71% (72 of the 102 respondents) were from Small and Medium Sized organisations (SMEs) (employee size between 1 and 250) and 29% (30 of the 102 respondents) were from large organisations that have employee size of 251 and above. The survey respondents include: arbitrators, main contractors, construction lawyers, adjudicators, claims consultants, project managers, delay experts, sub-contractors, and quantity surveyors. Saunders et al. (2003) argue that a minimum number (i.e. effective responses) for statistical analysis should be 30. Therefore, the statistical analysis of 102 responses collected in the current study is seen as reasonable and effective, especially for a survey of this kind.

5 Findings and Discussion

Analysis of online survey responses suggests the following insights.

5.1 The level of awareness on the new 2009 Construction Act

It is possible that having an awareness of _the new 2009 Construction Act_ contributes highly to the development of a successful implementation strategy. As shown in Figure 1, at the aggregate level, 88% of the survey respondents indicated that they had some awareness of the new Act.
However, 12% maintained that they had no understanding of the new Act. Indeed, the current survey results clearly show that there is a relatively high level of awareness among the UK industry regarding the new Act. This is a welcome progress made by the UK industry.

Figure 2 shows the dis-aggregated responses from SMEs and large organisations awareness of the new Act. A comparative analysis has shown that between SMEs and large organisations the differences are very minor. Furthermore, in this study, through online survey, respondents were asked to indicate the level of awareness of the new 2009 Construction Act on a four-point Likert scale ranging from very well informed; fairly well informed; little informed; and not at all informed.
As shown in Figure 3, at the aggregate level, 39% of the survey respondents indicated that they had very well informed of the new Act. However, 21% claimed that they had fairly well informed of the Act while 28% of the respondent indicated that they had little and 12% claimed that they had not at all informed. From the above results, it appears that there is well informed of the new Act among the survey respondents. However, still 40% of the survey respondents believe that they had little or not at all informed of the new Act.

Figure 4 shows the level of awareness of the new Act between the SMEs and large organisations. A comparative analysis has shown that between SMEs and large organisations, the level of awareness of the new Act varies. For instance, 35% of the respondents from SMEs and 43% from the large organisations indicated that they had little or not at all informed of the new Act. For successful implementation of the new Act, wider awareness-raising across organisations is critical. For those
members who are not yet familiar with the new Act and for those companies are not yet prepared, it is strongly recommended that contractors and employers begin the process of updating their existing contract precedents and schedules of amendments to bring them in line with the new Act as soon as possible. It is also important to be familiar with the intended changes that will impact on contracts once the new Act comes into force.

It is therefore advised that an industry-wide awareness-raising programme on the _new 2009 Construction Act_ needs to be developed and deployed. Guidance and awareness-raising can combat some of the practical difficulties in implementing the new Act to an extent. However they cannot eliminate them completely. Furthermore, the existing education and training programmes need some reorientation; the syllabuses should cover aspects of reasons for amending the _HGCRA 1996_ Act, affect of the proposed changes to the _HGCRA 1996_ Act on the adjudication process, key challenges to the adjudication process with the abolition of _contracts in writing_ rule and the impact of the abolition of _contracts in writing_ rule has on the adjudication process in the UK construction industry. The challenge, therefore, is for construction law related schools and adjudication consultants to bridge the gap in the market place. Continuing Professional Development (CPD) programmes and executive training programmes are valuable ways to raise awareness of the new Act.

### 5.2 The perception of the UK industry on the abolition of ‘contracts in writing’ rule

One of the most important proposed amendments to the _HGCRA 1996_ Act is the repeal of Section 107 of the _HGCRA 1996_ Act, which provided that only construction contracts made _in writing_ or _at the very least evidenced in writing_ could be adjudicated (CIArB, 2010). As shown in Figure 5, at the aggregate level, 84% of the survey respondents indicated that they had aware of the abolition of _contracts in writing_ rule in the new Act. However, 16% indicated that they had not aware of it. These findings suggest that the UK construction industry organisations are well aware of the abolition of _contracts in writing_ rule in the new Act. However, 16% indicated that they had not aware of it. These findings suggest that the UK construction industry organisations are well aware of the abolition of _contracts in writing_ rule in the new Act.
Figure 6. Awareness among respondents of the abolition of ‘contracts in writing’ rule in the new 2009 Construction Act

From Figure 6, it is clear that the level of awareness of the abolition of ‘contracts in writing’ rule in the new Act between SMEs and large organisations is less. Furthermore, in this study, respondents were asked to indicate their perception of the abolition of ‘contracts in writing’ rule in the new Act is good, or bad, or of little insignificance/relevance for their businesses.

Figure 7. Perception among respondents of the abolition of ‘contracts in writing’ rule in the new 2009 Construction Act
As shown in Figure 7, at the aggregate level, 60% of the survey respondents indicated that the abolition of ‘contracts in writing’ rule in the new Act is good for their businesses. However, 40% of respondents perceive that the abolition of ‘contracts in writing’ rule in the new Act is of little significance/relevance or bad to their business.

Furthermore, from Figure 8, 63% of the respondents from SMEs believe that the abolition of ‘contracts in writing’ rule in the new Act is good, 11% believe it bad and 26% percent believe it of little significance/relevance to their businesses. While 54% respondents from large organisations perceive that the abolition of ‘contracts in writing’ rule in the new Act is good, only 3% perceive it bad and 43% percent perceive it of little significance/relevance to their businesses. From the above analysis it is clear that the perception of SMEs and large organisations of the abolition of ‘contracts in writing’ rule in the new Act varies.

Lal (2008) noted that, Section 107 of the HGCRA 1996 has ‘wasted money, wasted adjudicator and court time’ and has lead to ‘jurisdictional attacks on adjudicators that have nothing to do with the merits of the referring party’s case’. The requirement for construction contracts ‘in writing’ as a precondition for adjudication has been repealed in full from the new Act. Therefore, it is good for the industry. However, Phillpott (2009) noted that adjudicators will be faced with the difficult task of trying to sort out what the contract terms were that were agreed and will pose challenges to the Adjudicator in the assessment of witness evidence because it is likely that hearings will become more common.

### 5.3 Key reasons for amending the ‘HGCRA 1996’ Act

Various amendments have been proposed to the ‘HGCRA 1996 Act’ to improve the efficiency and productivity of the UK construction industry (BERR, 2008). Through the online survey, respondents were asked to indicate the level of importance they attribute
Table 1. Key reasons for amending the _HGCRA 1996_ Act

<table>
<thead>
<tr>
<th>Key reasons</th>
<th>All respondents</th>
<th>SMEs</th>
<th>Large</th>
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<tbody>
<tr>
<td></td>
<td>Mean values</td>
<td>Rank</td>
<td>Mean values</td>
</tr>
<tr>
<td>To allow swift resolution of disputes</td>
<td>1.55</td>
<td>1</td>
<td>1.58</td>
</tr>
<tr>
<td>To improve the enforcement of the adjudicators’ decisions</td>
<td>1.65</td>
<td>4</td>
<td>1.63</td>
</tr>
<tr>
<td>To encourage parties to resolve disputes by adjudication</td>
<td>2.02</td>
<td>8</td>
<td>2.06</td>
</tr>
<tr>
<td>To make the legislation more effective at improving cash flow in construction supply chains</td>
<td>1.59</td>
<td>3</td>
<td>1.62</td>
</tr>
<tr>
<td>To improve the right to suspend performance under the contract</td>
<td>1.99</td>
<td>7</td>
<td>2.01</td>
</tr>
<tr>
<td>To abolish ‘contracts in writing’ rule</td>
<td>2.13</td>
<td>9</td>
<td>1.98</td>
</tr>
<tr>
<td>To reduce unreasonable payment delays</td>
<td>1.57</td>
<td>2</td>
<td>1.54</td>
</tr>
<tr>
<td>To improve access to adjudication</td>
<td>1.85</td>
<td>6</td>
<td>1.80</td>
</tr>
<tr>
<td>To reduce unwarranted litigation</td>
<td>1.81</td>
<td>5</td>
<td>1.79</td>
</tr>
</tbody>
</table>

to each key reason for amending the _HGCRA 1996_ Act on a four-point Likert scale ranging from “very important (1)”", “important (2)”", “fairly important (3)”" and “not at all important (4)”". Their responses have been averaged, and are presented in Table 1.

It is apparent from Table 1 that, with a mean value of 1.55, “to allow swift resolution of disputes” is the single most important reason for amending the _HGCRA 1996_ Act. “To reduce unreasonable payment delays” placed second as a key reason to amend the 1996 Act. It was followed closely by “to make the legislation more effective at improving cash flow in construction supply chains” and “to improve the enforcement of the adjudicators’ decisions”. However, to abolish “contracts in writing” rule and to encourage parties to resolve disputes by adjudication are the least important reasons for amending the _HGCRA 1996_ Act.

It is evident from the above results that to allow swift resolution of disputes by way of adjudication allowing projects to be completed without wasted profit and time in litigation is a key reason for amending the _HGCRA 1996_ Act. According to Uff (2009) speed is an important criterion for an effective dispute resolution system. Speed ensures that the overriding objective of expediting the recovery of payment debt is not defeated. Therefore, the timescale afforded to resolve a particular dispute must be reasonable.

Further analysis of Table 1 reveals that the key reasons for amending the _HGCRA 1996_ Act varies between SMEs and large organisations. For instance, for SMEs “to reduce unreasonable payment delays” is the key reason for amending the _HGCRA 1996_ Act while “to encourage parties to resolve disputes by adjudication” is the least important reason. It is understandable that in an environment where the economy is volatile, large banks which are dominant sources of capital for projects would have little appetite for whole-sale-type financing. This might make it difficult for SMEs to secure funding. According to Davis (1991) for SMEs cash flow problems are a major source of insolvency. Therefore, in this study respondents from SMEs believe that amendments to the _HGCRA 1996_ Act could reduce unreasonable payment delays. Whereas for large organisations “to allow swift resolution of disputes” is the single most important reason and “to abolish “contracts in writing” rule” is the least important reason for amending the _HGCRA 1996_ Act. Building and preserving long term relationship with customers and suppliers is of paramount importance, according to Latham (1994). Prompt and fair payment practice throughout construction supply chains to better enable the industry to adopt integrated working culture. Therefore, amendments to
the _HGCRA 1996_ Act is sensible. However, it is difficult to justify the costs and uncertainty that will come with the changes. Costs can mean legal/expert costs as well as adjudicator’s fees.

6 Conclusion and Further Research

The proposed _new 2009 Construction Act_ aims to address a number of issues in the _HGCRA 1996_ Act to make the legislation more effective at reducing unfair payment practices such as unduly prolonged or inappropriate cash retention in the construction industry and encouraging parties to resolve disputes by adjudication. If the new Act comes into force, there will be significant impact on the adjudication and payment method in the UK construction industry.

The paper is based on literature review and quantitative data obtained from 102 completed online survey questionnaires. This paper has explored the existing _HGCRA 1996_ Act, _the new 2009 Construction Act_ as well as the level of awareness of _the new 2009 Construction Act_. Further, the paper explored the perception of the UK industry on the abolition of _contracts in writing_ rule and the key reasons for amending the _HGCRA 1996_ Act. The study reveals that there is relatively high level of awareness among the UK industry of the new Act and it appears that the industry is well informed about the new Act. Difference in the level of awareness of the new Act between SMEs and large organisations is minor. This is a ‘welcome progress’ made by the UK industry. However, it is going to be very challenging for the industry to understand amendments to the _HGCRA 1996_ Act. Furthermore, the study results suggest that the UK Construction industry is well aware of the abolition of _contracts in writing_ rule in the new Act and the industry perception is that is good for their businesses. Difference in the level of awareness of the abolition of _contracts in writing_ rule in the new Act between SMEs and large organisations varies. As revealed by this study, the three key reasons for amending the _HGCRA 1996_ Act include: to allow swift resolution of disputes, to reduce unreasonable payment delays and to make the legislation more effective at improving cash flow in construction supply chains. The key reasons for amending the _HGCRA 1996_ Act varies between SMEs and large organisations.

The paper concludes that the new Act will be more effective at improving cash flow in construction supply chains and to encourage parties to resolve disputes by adjudication. However, the process of integrating the proposed changes into existing dispute resolution processes is often a complex issue. The construction industry employers, main contractors, sub-contractors and their respective advisers will need to adopt and become accustomed to quite significant changes on the adjudication and payment practices. It is therefore advised that an industry-wide awareness-raising programme on the new Act needs to be developed and deployed. Furthermore, the existing education and training programmes need some reorientation. Given that the research reported in this paper is based on small sample, hence, the results presented here are only tentative. Therefore, it is advocated that additional research should explore the complex issues associated with amendments to the _HGCRA 1996_ Act. The nuances, which should focus on capturing the critical tensions and the impact on the adjudication process in the UK construction industry.

7 References


Investigating the Relationship between Construction Contract Documentation Incompleteness and Project Transaction Characteristics: The Frequency Characteristic

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Abstract:
The results presented in this paper have been produced as part of an ongoing study to model the impacts of construction documentation incompleteness on claims management. The research project examines both the antecedents (primitive project characteristics of interorganizational relationship (IOR) governance mechanisms, i.e. Uncertainty, Asset Specificity, and Frequency of trade between parties) and consequences (Claims Management, in this case) of governance structure. There is a need to understand governance structure antecedents and consequences to better assist modern project management. This paper reports on development of measures of: the Frequency antecedent and its impacts on the corresponding IOR governance mechanisms developed to manage projects. Due to the sensitive nature of the information required for this research, data collection has been a primary concern throughout. Also, given the dynamism and practical concerns (confidentiality, ease of collection or provision, cost, time, etc.) of the research process, careful consideration has been given to acquiring an appropriate data set which would permit rigorous testing and analysis to address the research questions. Throughout, the aim has been to maximize response rates and quality of data obtained. Therefore, an effort is also made to outline the considerations behind development of clear and precise questions to elicit data and information about the Frequency antecedent and its impacts that was readily available to the respondents (a professional body of construction lawyers).

Keywords:
frequency, measurement, construction interorganizational relationship governance mechanisms

1 Introduction

Research examining the way in which construction contract design and structure shape interorganizational dispute resolution processes is currently underway. Ultimately, the research aim is to understand how reliance on contractual governance will impact dispute resolution processes and outcomes. Overall, the research explores how the degree of construction documentation incompleteness influences interorganizational behaviours after conflict has arisen (i.e. when a primary objective of interorganizational relationship (IOR) governance fails) and when and how contracts will be effective in reducing destructive interorganizational conflict. Relevant to this endeavour is an examination of antecedents of UK construction industry IOR governance structures and their outcomes, in order to control for various attributes of the IOR and of the resulting conflict and disputes. Therefore a useful place to start when evaluating the efficacy of contractual governance in resolving disputes would be to develop a thorough understanding of the influence of the antecedents on governance design. This article aims to refocus the study on these antecedents and resulting governance structures with a particular focus on how a prior relationship based on the Frequency of trade between contracting parties affects the resulting contractual governance
structure; while raising questions about implications for research design. A professional body of lawyers has been consulted to provide the necessary data in the form of responses to survey questions. With this understanding, suitable practical data acquisition strategies have been devised.

2 Literature Review

Reviewing the extant literature on design of IOR governance structures, we see that there is a wide variety of mixed forms of contracts, in between the two hierarchical and market governance extremes. Winch (2010), building on Macneil’s (1974) groundbreaking contribution to the theory of contracting, explains that governance has two distinct aspects: the contractual (capturing the legal basis of the relationship), and the relational (which captures interpersonal and interorganizational aspects). Contractual and relational governance are not mutually exclusive and theorists (Poppo and Zenger, 2002; Gulati and Nickerson, 2008) have argued that parties should, ideally, rely on both mechanisms to manage relationships. However, more often than not, there is evidence of relational considerations in the written documentation that embodies the legal basis of the relationships. For this reason, our research depends on the evidence presented by the written documentation to detect both contractual and relational considerations.

From the literature, we also see that contract documentation packages vary in their intent and detail (Macauley, 1996). The process by which construction industry firms choose from among the variety of governance designs available to them has been the object of numerous studies in strategy and organizational theory (Williamson, 1985; Pisano et al., 1988; Gulati, 1995; Winch, 2010). Lumineaux and Malhotra (2011) provide a good summary of how IOR antecedents influence governance structures. They explain that firms rely on a variety of governance mechanisms to mitigate risks of opportunistic behaviour and promote cooperation. Therefore, some documentation packages contain large numbers of provisions, while others seek to codify as little as possible. Others focus heavily on the need to mitigate the risk of opportunism and include many provisions, the aim of which, are to control parties’ behaviours (Williamson, 1985). Additionally, contracts may focus on ensuring that parties have a shared understanding of the relationship so that they can optimally coordinate their efforts (Salbu, 1997; Mellewigt et al., 2007). Also, the research recognizes that contracts are inevitably incomplete (Grossman and Hart, 1996; Williamson, 1996). Some are incomplete due to bounded rationality (BR) (parties not knowing precise conditions under which contracts will be executed (Winch, 2010) – making it impossible to delineate all potential future contingencies (Simon, 1961; Malhotra and Murnighan, 2002). Others may be incomplete by design: some parties will choose to limit their reliance on contractual governance even when greater contractual detail is possible. (Lumineaux and Malhotra (2011) outlined three reasons why parties may choose to limit their reliance on contractual governance. First, parties may want to minimize contract development, monitoring, and enforcement costs (Williamson, 1985). Secondly, parties may wish to allow for greater strategic flexibility, recognizing that additional information regarding each party’s needs, interests, and capacities will be uncovered over time (Bernheim and Whinston, 1998; Malhotra, 2009). Third, parties may wish to encourage development of mutual trust and cooperative norms which can be ‘crowded out’ when too much emphasis is placed on contractual governance (Sitkin and Roth, 1993; Tenbrunsel and Mesick, 1999; Malhotra and Murnigan, 2002). There is broad coverage of the antecedents’ influences, however, the literature has not devoted attention to analysis of the material presented to provide practical guidance for designing instruments for eliciting the necessary information to achieve general research objectives. Therefore, we propose a framework for instrument design for our research endeavours. We draw inspiration from Furlotti (2007) to devise a systematic approach for reviewing the literature to identify recurring themes for antecedent impacts to guide instrument design and content, and operationalize our constructs for acquiring the data to populate our overall research model.

Our overall model incorporates Oliver Williamson’s (1975, 1985) model of transaction costs and governance structures, as Winch (2010) has applied it to IORs in the construction industry. Winch (2010) explains Williamson’s (1975, 1985) arguments that the most efficient relationship
governance mode for interorganizational transactions is determined by three main transaction characteristics: Uncertainty, Asset Specificity, and Frequency. Uncertainty, affects IORs because it creates BR for decision-makers. BR makes writing complete and unambiguous contract documentation impossible because of uncertainty about precise conditions under which contracts will be executed, and makes it impossible to fully measure contract performance. Asset Specificity describes the degree to which investments are specialized to a particular transaction and results when either the buyer or the supplier is limited in their choice of transaction partner because of the specific nature of the resources to be supplied. Asset Specificity may exist pre-contract (ex ante) (market monopoly or monopsony), or may be generated post-contract (ex post) because of specific investments made by either party. This generates the possibility of opportuniism, where one party tries to exploit the other's disadvantage – often by withholding information from the other party. Through threats to terminate the relationship, opportunistic partners can seek to re-negotiate the transaction terms to their advantage. Frequency affects transaction governance because one-off transactions provide no opportunity to learn about the other party, while repeated transactions allow learning and in some cases, trust generation (Munns, 1995; Munns, 1996; Mellewigt et al., 2007; Winch, 2010). Thus, the most efficient governance mode can be thought to occupy a three-dimensional space (See Figure 1a) and therefore, in our model, the IOR governance design, embodied in the contract documentation package can be represented as being directly influenced by these primitive interorganizational transaction characteristics (inter-firm governance antecedents) (See Figure 1b).

![Figure 1a The Governance Level](Source: Winch 2010, Fig. III.1)

![Figure 1b The Inter-firm Relationship Governance Design](Source: Winch 2010, Fig. III.1)

2.1 A Note on the Frequency Characteristic

The economics literature on Uncertainty and Asset Specificity impacts on contractual governance design is extensive and comprehensive (Klein, 2006). Conversely, testing of the Frequency antecedent to indicate how past transactions affect inter-firm relationship governance is rather scarce (Klein, 2006; Furlotti, 2007). Klein (2006) explains that Frequency appears in three distinct, and seemingly incompatible, forms: a) Frequency of Trade Between Specific Trading Partners; b) Frequency of Trade Among Many Trading Partners; and c) Frequency of Disturbances in the Environment. This research explores the first form – Frequency of Trade Between Specific Trading Partners. This is the repeated-game notion of Frequency (Klein, 2006), as described by Williamson (1985, p. 62) and Baker et al. (2002) and hereinafter, will be referred to simply as Frequency. The relative rarity of encountering empirical evidence of Frequency impacts on governance design, has prompted some theorists (Casciaro, 2003) to argue that the research agenda seems to be less
concerned with the Frequency contribution of trust, learning, and evolution to IOR relationship governance. However, anecdotal information provided by a prominent economic theory academic suggests that this lack of treatment and exclusion from analyses may actually be due to the fact that theory of contract researchers are still unsure of the exact way in which Frequency influences IORCG design. Review of this status of understanding of the Frequency contribution provides the impetus for this research direction on this particular occasion. Moreover, we are unaware of any comprehensive reviews of the state of understanding of Frequency impacts from evidence generated through study of Frequency impacts on construction industry project transactions. This allows us to uncover considerable, but unevenly distributed evidence of Frequency impacts on a number of overlapping contractual dimensions (measurable contractual attributes that are separate and distinct from individual contract terms) as described by different fields of IORCG theory. It also enables description of contracts in a larger number of dimensions than is commonly appreciated. Consequently, we believe that our decision to restrict our focus here to the Frequency antecedent makes an important contribution.

3 Research Methodology

The research methodology entails a literature review of empirical studies of formal contract design in IORs. Due to the complex nature of construction contracts (resulting from Asset Specificity in all but the simplest projects) systematic analysis of their dimensions is necessary for thorough understanding of Frequency impacts. This analysis draws inspiration from and extends the contribution to the legal and economic theories of contract made by Furlotti (2007), who proposed a general and tentative framework for relational contract design by summarizing empirical evidence on contracts. The review considers evidence presented in the Organizational Theory, ICT, TCE, Agency Theory, and Strategic Management literatures on interorganizational relationships (IORs). Through this summarizing process, Furlotti (2007) explained how contracts operate in practice. This was achieved by highlighting the multi-dimensional character of contractual incompleteness while emphasizing extra-contractual governance devices that complement formalized contract documentation.

Therefore, the considerable thrust imparted by Furlotti (2007) to our analysis is in the form of a systematic methodology for assessing impacts of Frequency on the structure and content of formalized contract documentation, as well as on some associated extracontractual governance devices presented in the evidence from the empirical studies reviewed. Our methodology and sampling criteria is similar to that deployed by Furlotti (2007) in that we focus our search, on articles written in the last decade, only making exceptions when we feel that particular contractual design processes are underrepresented in recent literature. Also similar to Furlotti (2007), our review focus will only be on empirical studies of formal contract design in IORs; i.e. studies based on observation of real-world contracting, either by means of documentation analysis, or by case studies, interviews, or questionnaire survey. Rather than reviewing studies that take contract terms for granted, we focus on studies wherein the parties are responsible for designing their own agreements. We review only those studies that have been cited more than 3 times in high-impact journals by recognized theorists on the subject. By reviewing only empirical studies of IORs, we do not review tests or exploratory investigations of contracting theories based on experimental approaches, nor does our review cover other fields such as employment contracts. Also, by selecting only studies published in high-impact journals, we ensure that our review subjects are topical and influence the current thinking on Frequency. Although achieving comprehensiveness is not our preoccupation at this stage, we trust that not many important articles strictly fulfilling the above-stated criteria have escaped our search.

Our review isolates specific Frequency impacts on some identified IOR contractual governance (IORCG) dimensions, in turn, and discusses the associated implications for research instrument design and survey instrument content. We build on Furlotti’s (2007) work by reviewing literature excluded from Furlotti’s (2007) analysis – mainly due to non-existence at the time of his review. In
presenting our review of Frequency impacts, we are guided by Furlotti’s (2007) explanation of contractual dimensions and his approach to assessing how the dimensions are sensitive to the primitive project characteristics (antecedents).

4 Findings and Discussion

Interestingly, the few studies that have investigated this Frequency form have been largely drawn from technological industries (IT, high technology, and biotechnology R&D). A summary of the results from our review are presented in Table 1 (in the Appendix).

4.1 Theoretical Perspectives on IOR Contractual Governance Design

This review uncovered a number of accounts of the processes encompassed by relational contracts and their associated theoretical perspectives on IOR governance design, namely: Strategic Management, Organizational Theory (OT), Incomplete Contract Theory (ICT, and Agency Theory. Review of these theories should prove instructive, fostering better appreciation for our rationale for contractual design evidence categorization and systematic analysis.

4.1.1 Theoretical Perspectives of Frequency Impacts supported by Empirical Evidence

Our review also, indirectly exposes the genealogy of this understanding of Frequency impacts and the theoretical perspectives that underpin them. (See Table 1). The main empirical evidence contributions that fit our criteria described above for explaining how contracting parties’ working history influences IORCG design is provided by scholars who examine: the way in which firms learn to develop governance arrangements (Mayer and Argyres, 2004); the effects of prior alliance experiences with the same partner, or with any partner, on the management of the collaboration (Hoang and Rothaermel, 2005); impacts of prior experiences on the choice of strategic alliance type (Gulati, 1995), on contract changes (Argyres et al., 2007; Mayer and Argyres, 2004; and Reuer et al., 2002) and on alliance structure and outcomes (Sampson, 2005; Zollo et al.; 2002). Mellewigt et al. (2007); Vanneste and Puranam (2010); and Dekker and Van den Abbeele (2010) also provide other compelling post-Furlotti (2007) evidence of ways in which firms learn and acquire knowledge to inform governance choices.

Dekker and Van den Abbeele (2010) adopt a Strategic Management perspective on IORCG design and noted the seemingly paradoxical nature of Frequency impacts. Some scholars (Gulati, 1995; Gulati and Nickerson, 2008; Zollo et al., 2002) report that firms with prior ties use less extensive governance structures for new exchanges, compared to firms without joint histories. This is attributed to familiarity and trust generated during prior interactions that reduce the need for control. Conversely, others (Ryall and Sampson, 2009; Argyres et al. 2007; Mayer and Argyes, 2004; Poppo and Zenger, 2002) have observed that interactions over time with an exchange partner and increasing relational governance entail important learning effects that facilitate (cost-efficient) development of control structures. The most recent Frequency evidence suggests that by facilitating both trust development and learning, partner experience thus can have opposite offsetting effects on IORCG design.

We were guided in our measurement of Frequency by Vanneste and Puranam (2010), who noted that obtaining the precise number of prior interactions in survey-based studies is difficult. We, therefore, relied on respondents' estimates of the number of times they interacted with their co-disputant in the past on a six-point scale ranging from ‘never’ to ‘many times’. The response to this item is corroborated with another survey item designed to capture estimates of the volume of business in prior transactions with the co-disputant.

4.1.2 Strategic Management Theory view of Contracts

Mellewigt et al. (2007) highlight the two prominent theoretical perspectives recurring in the recent Strategic Management literature on IORs, namely: TCE, and the Resource-Based (RB) view. TCE
and RB perspectives primarily assign a control and coordination function, respectively, to contract
design, and therefore, it is important to recognize the dual function of contracts bestowed by
Strategic Management theory. TCE is motivated by efficiency considerations and mitigation against
opportunism and (mis)appropriation of value by counterparties. The general consensus is that
transaction characteristics translate into exchange hazards, which might be managed by drawing
more complex contracts (Williamson, 1975, Nooteboom et al., 1997). If firms make specific
investments, they put themselves at risk of value appropriation by potentially opportunistic
counterparties (Klein et al., 1978) since the specific asset is of little use outside of the relationship.
Essentially, contracts incorporate safeguards to control against opportunism risks that may result
from transaction hazards, such as Asset Specificity. This is manifested through more contractual
details and stipulations. Formal contractual provisions protect against self-interested counterparty
behaviour and function as controlling devices.

Methods to measure usage of Outcome and Behaviour Control mechanisms can be based on those
used by Dekker and Van den Abbeele (2010) who followed precedents set by Jaworski and McInnis
(1989) and de Mortanges and Vossen (1999). Outcome Control functions without interference in
suppliers' processes and is measured by five items about the extent to which the buyer, during
transaction management, engaged in target-setting, evaluation and rewarding of outcomes, and
provision of feedback to the supplier. Behaviour Control is measured by six items about the
procedures specified and used to achieve certain goals, not necessarily focusing on the extent to
which the buyer monitored the supplier's use of procedures, required reports, provided feedback,
and shared in costs if guidelines were followed.

From the RB perspective, an IOR enables two organizations, to attain some mutually beneficial
outcome through sharing and combining resources in a manner that they could not attain on their
own (Madhok and Tallman, 1998). Here, the challenge is organizing value creation processes by
coordinating respective resources across organizational boundaries and contracts serve as
coordinating devices. For instance, contracts clarify mutual expectations, enable goal congruence,
and establish bases for shared common ground (Das and Teng, 1998). More specifically, delineation
of roles, rules, programs, and procedures enables coordination of interfaces that are often necessary
for joint endeavours to successfully accomplish collective goals (Mayer and Argyres, 2004). There
is a change between perspectives - from value appropriation under TCE, to value creation under
RB. Whereas contractual control mechanisms tend to mitigate relational risks, coordination
mechanisms tend to address performance risks (the probability and consequences that alliance
objectives are not achieved, despite a satisfactory cooperation among partner firms (Das and Teng,
1996)). IOR performance risks and their associated coordination requirements vary systematically,
with the extent and importance of the shared resources (Borys and Jemison, 1989; Kumar and Seth,
1998), because execution of activities involving more strategically important resources and services
directly influences other organizational services and resources as well as the partnership's collective
goals. Contracts incorporate various types of coordination mechanisms to handle heightened
concerns of strategic importance in IORs. Contract clauses can precisely enumerate the tasks to be
accomplished, define procedures to be used and lay out quality standards to be fulfilled. Alternatively,
contracts can specify the decision rights in IORs and may structure communication flows in a decisive way.
With construction projects becoming increasingly valuable and complex
endeavours that entail greater interdependence, the coordinating role is correspondingly, becoming
increasingly important to the IORs formed. This has important implications for design of
contractual governance structures for the effective management of IORs.

According to Lumineaux and Malhotra (2011) the first two terms of Parkhe's (1993) eight-term
index developed for evaluating formal contract provisions relate to Coordination between
contracting parties, and may be used as a proxy for the degree to which the parties focus on
coordinating their expectations and behaviours. (Interested readers should consult Parkhe (1993)
and Lumineaux and Malhotra (2011) for the complete list.) Coordination focus is, therefore,
measured as the ratio of coordination-related clauses included in contracts, i.e. clause categories
about i) Periodic written reports of all relevant transactions and/or ii) Prompt written notice of any
departures from the agreement, to the total number of provisions in the contract. By controlling for the total number of clauses, the ratio measure mitigates concerns that coordination provisions were included incidentally (due to institutional factors that promote greater contractual detail), rather than deal with coordination issues. Moreover, by assessing the percentage of the contract devoted to coordination, the measure captures the extent to which the contracting process is motivated by a focus on coordination.

4.1.3 Organizational Theory View of Contracts

Furlotti (2007) provides a good explanation of the Organizational Theory perspective on IORCG choice. In developing Stinchcombe's (1985) hypothesis that contracts are an organizational phenomenon, Furlotti (2007) identified a number of IORCG processes and dimensions and reviewed regularities uncovered. He set out from the observation that contracts (usually regarded as market transactions) were observed in some situations when TCE would expect integrated structures (in-house procurement routes). For those situations, his central premise was that contracts perform the same functions as integrated structures. Here, contracts incorporated similar mechanisms more frequently observed in organizations, such as: norms, rules, negotiation, voting, authority, etc. In turn, as these mechanisms are of a different type, and perform different functions, they need not correlate with a single contractual dimension (e.g. Completeness). Thus, contracts act like complex organizations. IORCG involves coordination and procedural aspects well-known to the organizational literature and Furlotti (2007) saw it necessary to study project antecedents under which procedural coordination becomes a significant component of IORCG.

Now, the genealogy of the legal and economic theories of contracting also sheds light on the rationale for IORCG choice and, in turn, the rationale for this research methodology. (Interested readers may refer to Walker and Pryke (2009) for a more detailed treatment of the evolution and expansion of the economic theory of contracts and methodological shift for incomplete contract (IC) analysis resulting from the failures of general equilibrium theory.) To summarize, the original contracting theory models were created for equilibrium studies and therefore, did not demonstrate how contracts worked in practice. Later there were calls from both economists and legal theorists to demonstrate, rather than assume, how contracts work in practice (Saussier, 2000). Furlotti (2007) observed that early economic theory's reliance on a highly unrealistic depiction of real-world contracting resulted in disregard of the temporal dimension of contracts and the multidimensionality of incompleteness as a measure of contractual heterogeneity. This is why Furlotti (2007) deemed it important to demonstrate how contracts can perform similar functions to integrated structures using evidence from real-world contracts. By this, he was able to observe the general structure of contracts and the heterogeneity of IORCG design. He found that contracts span over non-negligible time periods and that incompleteness is conceptualized and operationalized (developed internally by an economic model) in different ways.

Due to the assumption that courts work in ‘informed, sophisticated and low cost ways’ (Williamson, 1983), under the traditional notion, contracts were not conceptualized as spanning over non-negligible time periods, with a potential need for adjustment. Because court adjudication is considered to be costly and imperfect, contracting parties try to shift the locus of decision-making and adjustment from the courts to the transactors. This is why contracts contain enforcement mechanisms. These enforcement features are also captured by the relational contracting concept which emphasizes the extra-contractual governance means complementary to those that have been specified by the formalized contract.

We used Furlotti's (2007) observed general contractual content, heterogeneity, and sensitivity analysis of the antecedents influences to guide our review of the literature on the Frequency impacts from an OT perspective. We will present Furlotti's (2007) propositions about contractual content and heterogeneity, in the next section and highlight the Frequency impacts identified.

Furlotti (2007) proposed that contracts consist of transactional and procedural elements. Parties use transactional elements to commit to undertaking specific performance in exchange for reciprocal undertakings of the counterparty. Therefore, the transactional part contains: commitments on tasks,
resources, outputs and remuneration provisions. Remuneration provisions are regarded as a substantive aspect of contracts (the core, in effect) because through these, many goals, such as: sharing the quasi-rent (the difference between the value in use in which the investments are committed and the next best use (Klein et al., 1978)) of the collaboration, provision of incentives for adoption of efficient behaviour, risk allocation, and promotion of efficient adaptation and balance of different types of hazards are pursued. Where price adjustments are carried out during the life of the contract, the process is rarely formulaic, due to the zero-sum nature of such adjustments. Therefore, essentially, actual remuneration, rather than the provisions are subject to adaptation. Furlotti (2007) found support for the idea that Behavioural and Task Uncertainty affect flexibility in remuneration specification. Corresponding flexibility in specification of task obligations is required. Within the procedural elements Furlotti (2007) classified the rights and processes intended to serve purposes of: dynamic adaptation, integration, and preservation of a shared understanding. There is: decision-making, to discover the actions parties must undertake to produce or adjust the quasi-rent; restraints (rules) – to prescribe specific behaviour and ensure relationship predictability; rights underpinning enforcement of promises through payoff manipulation; and monitoring, which is instrumental to decision-making and enforcement. Goal statements and term definitions, which delineate the meaning shared by the parties, may also be included here.

4.1.4 Decision-Making

The requirement for decision-making is another consequence of non-negligible contract duration. Decision-making is also required because contract subjects may be so uncertain that performance requirements cannot be defined ex ante, and substantial ex post planning mechanisms must be established. Furlotti (2007) observed various patterns of allocation of decision rights, namely: to either party unilaterally; to both parties, jointly or separately; and, also, to third parties (as is the case for construction projects). There were other observations of antecedents’ influence on decision-making and its allocation. Joint decision-making for contractual adjustment usually results with greater contract rigidities, higher task uncertainty, and lower history of parties’ past litigation. Contractual assignment of unilateral decision rights is more generous the less consequential those decisions for the party subject to them are. Parties to whom enough control rights are assigned can exercise actual control, regardless of asset ownership. Actual allocation of control is influenced by parties’ respective bargaining power at the time of entering the agreement and fewer rights are assigned to the party with a conflict of interest. Finally, the assessment of decision rights to one party seems to be complementary with the simultaneous assignment of means of enforcement to that party. Furlotti (2007) did not comment on the sensitivity of decision-making elements to Frequency, and our analysis did not seek to measure decision-making elements nor detect such Frequency impacts in the literature reviewed.

4.1.4.1 Enforcement

As mentioned previously, contractual Enforcement mechanisms (self-help) serve to reduce reliance on enforcement by court adjudication. Furlotti (2007) concluded the following: i) the probability of non-performance can be reduced through greater contractual formalization; ii) where formalization is not feasible, assignment of certain decision rights or hostages (such as construction performance bonds) may be used to deter non-performance; iii) as dependence of one party upon another increases, so does the intensity of either form of enforcement. Second-party termination rights are another type of Enforcement mechanism proposed by Klein and Leffler (1981), who argued that the existence of a flow of quasi-rent, coupled with the threat of termination, is sufficient to assure performance if the parties perform repeat transactions. This can be regarded as a forward-looking (‘Shadow of the Future’) perspective of Frequency.

Lumineau and Malhotra (2011) explained how deadlined vs open-ended contracts might also be expected to affect IORCG choice. They stated that parties with short-term contracts may envision a short Shadow of the Future and may choose to rely more extensively on contractual provisions
(Poppo et al., 2008). In our review, Shadow of the Future (expected future interactions) was measured by taking note of special arrangements that increase the likelihood of cooperation and reciprocity in future interactions. According to Vanneste and Puranam (2010), expected future interactions may lead to less reliance on contractual detail for ensuring cooperation (Axelrod, 2006; Heide and Miner, 1992), however, longer futures may make it worth investing more heavily in additional safeguards (Williamson, 1985). Thus we noted that the literature had not yet decided on the aggregate effect of expected future interactions. Three items were used to measure Shadow of the Future. One item asked: ‘To what extent future actions were expected at the time of contract execution?’ The extreme categories of the five-point answer scale were: ‘not likely’ and ‘very likely’. The aim of the second item was to detect the existence of special arrangements such as Framework agreements. The third item asked whether the contract in question specified a predefined length of time or whether it described an open-ended relationship (Reuer and Ariño, 2007).

4.1.4.2 Rules and Restraints

Furlotti (2007) cites Klein and Murphy (1988) who refer to restraints as ‘a series of practices that are commonly referred to as such’. He also cites Lafontaine and Slade (2005) generic definition as ‘any restriction that is imposed by one member (…) on the other member of the relationship.’ In relational contracts, the prescription of specific behaviour through rules increases with the level of externalities. Overall, the role of rules in contractual governance has been the focus of very little investigation. Yet, the evidence available indicates their use in contracts is influenced by contextual factors that deserve further analysis. Therefore, this research did not seek to detect Frequency impacts on the Rules and Restraints found in the construction IOR contracts reviewed.

4.1.4.3 Monitoring

Furlotti (2007) is of the view that Monitoring may be considered as an integral part of the enforcement apparatus. Agency Theory (the branch of financial economics that looks at conflicts of interest between people with different interests in the same assets), views Monitoring as a cure to conflicts of interests. However, Monitoring may be useful to prevent non-performance that is simply accidental or caused by insufficient skills. Thus, there are numerous reasons to analyze it as a process not entirely explained by the same factors as Enforcement. In sum, several of the authors reviewed see a role for Monitoring in contracting. Empirical evidence confirms that Monitoring is a relevant process addressed by relational contracts. Furlotti (2007) felt that the little evidence supported hypotheses based on Agency Theory and ICT. Nevertheless, the findings suggest that enhanced supervision and monitoring by principals are required when financial adversities render mistakes more costly and when short track records make it more difficult to assess counterparties’ revenues at the time of financing of venture capital contracts (Arruñada et al., 2001). Ryall and Sampson (2006) also provided further empirical evidence that Frequency (in the form of prior deal experience) positively and significantly affects the level of Monitoring. In this light, we depended on Ryall and Sampson (2009) for our measure of the extent of Monitoring provided for in the contracts under review. The categories of the seven-point answer scale, increasing in the extent of Monitoring provided for were: i) Project reviews ‘required’ (including documentation development and construction progress) ii) reviews of the completed works (including documentation development and site work) only required iii) discretionary reviews of production information are to be permitted iv) Timing of reviews specified v) Content of reviews specified vi) Physical Audits of completed work required v) the principal may reject the end products of the contractor if they materially fail to meet requirements.

4.1.5 Contract Duration and the Multidimensionality of Contractual Completeness

Furlotti (2007) organized the contract dimensions, according to: Duration, Complexity, Contingency Planning, and Specificity.
4.1.5.1 Duration

Economists and business scholars observed that the heterogeneity of contracts could be measured in terms of Duration. Therefore, it is a dimension on which antecedents’ canonical TCE dimensions of transactions effects should be tested. Duration is recognized as a fundamental design variable for IORCG under conditions of transaction-specific investment, and has been investigated empirically. The study results indicate that in some contexts, parties use Duration as a safeguarding device to protect reliance (the interest of a party to a breached contract in being compensated for detriments suffered (as expenses incurred) in reliance on the agreement) in a variety of contexts. Duration benefits (savings on bargaining costs of repeat negotiations) must be traded off against the associated costs (potential for maladaptation). The effectiveness of Duration is enhanced by simultaneous use of mechanisms that define admissible dimensions for adjustment. In other situations, such as manufacturing, long-term contracting is less well-suited to project-specific investment.

4.1.5.2 The Multidimensionality of Contractual Completeness

In recalling the genealogy of the economic theory of ICs and reflecting on positive economic theorists’ attempts to model Incompleteness, Furlotti (2007) reminded that incompleteness should be understood as “the possibility to improve efficiency ex post”. Endogenizing (internally developing an economic model parameter) Incompleteness in this way prompted a stream of research deploying a variety of denominations and operationalizations for Incompleteness constructs. It then became apparent that all the virtues of the contractual ideal type could not be achieved by increasing only one specific contract dimension. Also, as a result of the review being restricted to drawing conclusions about dimensions on which empirical investigation had actually been conducted, Furlotti (2007) regrouped the dimensions often encountered and referred to as Incompleteness, under three labels, namely: Complexity, Contingency Planning and Ambiguity/Specificity. These correspond to three contractual strategies that are said to be effective in fulfilling the competing requirements of reducing risk of contractual non-performance and ensuring the possibility of harmonious ex post adaptation.

4.1.5.3 Complexity (CD)

The reasoning behind Complexity as a measure of Completeness is based on the view that real-world contracts approach the complete archetype when there is higher language stringency and greater exertion in foreclosing possibilities of misbehaviour. Therefore, the studies regarded more complex contracts as being longer, including a higher number of clauses, and providing for larger arrays of enforcement mechanisms. Thus the evidence on Complexity is in the form of studies that empirically investigated relationships between Complexity and transaction strategic importance; and between Complexity and contractual hazards created by cooperative venture Size and Frequency in inter-firm strategic alliances, international joint ventures, information services, dyadic alliances, IT and biotech R&D, and IT products and accompanying services contexts. After reviewing this evidence, Furlotti (2007) concluded that: the risk of project hold-up is better captured by Size, which proves to be the most significant antecedent of Complexity; however, he found no strong indications that more efficient contracts ought to be more complex as Frequency increases or when there are greater contractual hazards.

Furlotti (2007) made no observations of the impact of Frequency on CD, but outlined measurement approaches encountered in the studies reviewed. For the contract set under study, number and stringency for the CD can be evaluated, using the Walker and Pryke (2009) operationalization, which is based on the Parkhe (1993) “contractual safeguards” operationalization. This is an assessment of strength of explicit contractual opportunism deterrents. Parkhe (1993) examines contracts for the presence of provisions embodying the specific contractual enforcement apparatus for the type of agreement in question. Once identified in the contract set, with the help of practitioners, the provisions can be ranked in order of increasing stringency to facilitate a stringency score assignment. Next, these scores can be summarized into an index of deterrents’
iod). For each contract, an IOD can be determined by arranging safeguards in order of increasing stringency and assigning each its corresponding value. e.g. the first-ranked safeguard would be assigned a value of 1, the third – 3, etc. The composite IOD would then be computed as $\sum \text{(number of safeguard used)} / \sum \text{(number value of all possible safeguards)}$. Higher IOD values are expected for large, important contracts with heightened perceptions of opportunistic proclivities.

4.1.5.4 Contingency Planning (CPD)

Contingency Planning measures the intensity of use of one particular strategy to achieve efficient adaptation, e.g. it can measure the degree to which parties use a strategy of developing explicit response rules for specific classes of events. The general consensus is that parties generally resort to this strategy, as *ex ante* conflicts of interest increase and as costs of specifying contingencies decreases (Furlotti, 2007). Using the Mayer and Bercovitz (2003) evidence, Argyres et al. (2007) find that CP is positively affected by prior relationships between the parties. While the result is open to the interpretation that a history of frictions advises the adoption of greater safeguards under the form of stricter CP, Argyres et al. (2007) subscribe to the view that repeat interactions allow the partners to develop relation-specific routines, and lower the cost and effort of explicitly planning for contingencies. Mayer and Argyres (2004) also favour this interpretation.

Respondents were expected to grade contracts on: ‗degree to which parties develop explicit response rules for specific classes of events‘, using the Mayer and Bercovitz (2008) three-point CP scale:

- 0 if there is no CP for the project
- 1 if there is CP to accommodate ‗any‘ kind of change
- 2 if there is more specific and detailed CP

4.1.5.5 Ambiguity and Specificity (ASD)

Introducing Ambiguity (broadly stating requirements, without restricting parties to specific actions, i.e. failing to specify verifiable obligations of parties) is a common strategy for increasing the adaptability of a contract. For example, in the construction industry, fixed price contracts can be arranged in increasing order of Specification Ambiguity as follows: fixed design, scope design, and cardinal points‘ (Turner, 2004). Furlotti (2007) reviewed evidence for this relevant dimension gathered from empirical studies that investigate _contract specificity‘ or _contract detail‘ because the studies do not generally address the opposite issue of _Ambiguity‘. In sum, the findings indicated that Contract Specificity decreases with Uncertainty and increases with behavioural hazards. Also, in certain settings, the existence of relational reinforcement mechanisms also favoured greater contractual detail (Furlotti, 2007).

The Ryall and Sampson (2006) database, already mentioned for its implications for measuring Monitoring, was cited by Furlotti (2007) to illustrate that contracts can be more detailed when organizations have prior detail experience, and have engaged in prior deals with the same partner. The implication is that there is a learning effect and the capacity to draft detailed contracts increases with experience. Argyres et al. (2007) also find evidence of complementarity between task description detail and CP due to learning spillovers from prior relationships. Corts and Singh (2004) was regarded as evidence that contracts based on more ambiguous term specification (in that they fail to specify verifiable obligations of the parties) are increasingly opted for when previous experience with the same partner assuages moral hazard fears.

To operationalize ASD, we depended on the procurement route indicated by the respondent for the project in question. Similar to Crocker and Reynolds (1993), we consider the more fully-specified contracts to be procured via the traditional route, using fixed price contracts and the least fully-specified contracts to be the fee-based (cost reimbursable) contracts.
5 Conclusion and Further Research

This study provides insight into the motivation for and design of IORCG mechanisms based on primitive transaction/project characteristics. The question of how the Frequency primitive project characteristic impacts IORCG design has, surprisingly, received relatively less attention in prior research, in comparison to Asset Specificity and Uncertainty, despite it being identified alongside them as one of the principal TCE dimensions for characterizing transactions (Williamson, 1985). Our focus on the Frequency of trade between organizations differs from prior studies in that we do not limit ourselves to evidence of relationships and influences put forward by any specific theoretical perspective. Rather, our study represents a consolidation of different theoretical perspectives on IORs to develop a comprehensive framework for assessing the contribution of prior transaction history on general IOR governance mechanism design. Our findings indicate that the IT and IT Services, High Technology, and Biotechnology fields are leading the charge on investigation into the Frequency impacts. As this study applies the general findings and approaches uncovered from our review to the design of IORCG mechanisms in the UK construction industry, it will add specific dimension here.

Our findings also indicate that initially, the general consensus was that the relationship between IORCG mechanisms and Frequency was moderated by the trust, generated from repeated interactions between the same trading partners. This would imply that that IORCG would become less complex, (as the need for control is reduced) with increased levels of experience with the same transaction partner. However, as the evidence began to indicate otherwise, alternative explanations were put forward, such as the incorporation of past experience and lessons learned into newer contracts (learning spillovers). There was support for both substitutive and complementary effects of partnering experience that run through different paths. The focus then shifted toward disentangling the trust effect from other consequences of relationship history, such as learning spillovers. The most recent suggestion was for a ‘trust first, learn later’ pattern. Despite its contributions, there were some limitations. For example, despite identifying a number of features and mechanisms of IORCG, we were unable to find studies providing evidence to indicate the sensitivities of each to Frequency. Specifically, our study made no observation of Frequency impacts on decision-making and rules and restraints. Also, review of impacts on the coordination function, and for monitoring were also quite limited. Therefore, given the significance of these dimensions, in addition to the dearth of research about these issues, we feel that these missing dimensional sensitivities is an area that warrants further investigation and analysis.

We also noted that the literature was still undecided on the aggregate impact of expected future interactions, though there is some speculation about the effects of open- vs close-ended contracts. For the most part, the notion of Frequency here was basically, an analysis of the ‘Shadow of the Past’, and therefore, we recommend that future research strive for a more balanced view that would incorporate the ‘Shadow of the Future’.

Some more specific measures for construction industry subsectors could also be developed. For the measure of Complexity, we were largely dependent on Parkhe’s (1993) operationalization. Specifically, a measure of contract Complexity, that incorporated input from a wide variety of practitioners to develop a similar IOD for a specific subsector would enable greater insight into the Frequency impacts for specific construction subsectors. Also, we used a rather simple measure for the Ambiguity/Specificity Dimension. Our recommendation is for future research to draw inspiration from Ryall and Sampson (2009) to develop frequency and cross-frequency tables presenting incidence of occurrence and co-occurrence of terms across contracts in a set. Such a structural presentation would provide the benchmark, and thus, the upper bound for ASD. In this way, a more objective procedure for checking contracts against this descriptive structure would enable determination of how ‘fully-specified are contracts within particular subsets. Contractual content can be measured by examining the number of terms within each broad category of variance. Finally the validity of our methodology may be subject to debate. Our use of survey data may cause concerns about potential biases, e.g. common method biases. However our use of more objective
indicators for many of our constructs should alleviate some of these concerns. The cross-sectional approach to data acquisition may cause some concerns about recall bias and may constrain our ability to examine dynamics between prior relationships and IORCG mechanism design. Use of objective indicators should also be helpful in this regard. Future research recommendations are for longitudinal studies, which would allow more in-depth and dynamic examination of Frequency and prior relationships and their impacts on IORCG.

Despite these limitations, we believe that our results have significant implications for those involved in designing IORCG mechanisms, who need relevant knowledge to make design choices. They will be able to design suitable IORCG mechanisms to address hazards associated with the primitive project characteristics (Frequency, in particular) with which they are faced. They will also be able to conduct marginal analysis using the IORCG mechanism measures. Given the continuing growth of IORs in the construction industry, the need for guidance on designing effective control structures will only increase in importance.

6 Acknowledgement

The authors are grateful to the RICS Education Trust for a research and conference grant in support of this work.

7 References


[Accessed: 01/06/2011]


8 **APPENDIX**

Table 1: Empirical research on Frequency Impacts on Interorganizational Relationship Contract Governance Design
<table>
<thead>
<tr>
<th>YEAR</th>
<th>INDUSTRY</th>
<th>PAPER</th>
<th>SUMMARY OF PURPOSE OF STUDY</th>
<th>IMPACT OF FREQUENCY ON IORCG (SUBSTITUTE OR COMPLEMENT)?</th>
<th>CONSISTENT WITH TRUST, LEARNING EFFECTS, INFORMAL OR SOCIAL CONTROL?</th>
<th>PART OF CONTRACT Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>Animated film industry</td>
<td>Lumineau, Frechet, and Puthod</td>
<td>Longitudinal study of alliance contracting. Discussion of how contracting and learning processes are related. Analysis of the role of the contractual process in supporting organizational learning.</td>
<td>Frequency encourages parties to learn about: each other, transaction features, and the contracting process.</td>
<td>In addition to Experiential learning (trial-and-error learning or learning-by doing: making meaning from direct experience), there are: vicarious, and inferential learning mechanisms from repeated interactions.</td>
<td>No linear relationship between contractual details and experience was observed (as was the case for Vanneste and Puranam).</td>
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<tr>
<td>November-December, 2010</td>
<td>Buyers and Suppliers of IT products and services. IT Transactions range from: Routine commodities to highly customized and specialized development projects, which usually require relationship-specific investments, high levels of integration and mutual coordination.</td>
<td>Dekker &amp; van den Abbeele</td>
<td>Analysis of transactions between buyers and suppliers to determine how partner search processes and prior exchange experiences impact firms’ ability to design control structures for new inter-firm interactions.</td>
<td>BOTH COMPLEMENT &amp; SUBSTITUTE: Partner search and prior experience facilitate learning and control design, but reduces the need for control and the intensity of the partner search process (need for new information is reduced) for new transactions.</td>
<td>Prior experiences increase trust and provide first-hand partner experience. Prior experience with focal partner has a negative direct effect on use of control mechanisms to manage interfirm transactions.</td>
<td>Control mechanisms: (Outcome Control; Behaviour Control)</td>
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<tr>
<td>January, 2010</td>
<td>IT Procurement by Dutch small-and medium-sized enterprises (SMEs)</td>
<td>Vanneste &amp; Puranam</td>
<td>Analysis of conditions under which learning effect is most likely to manifest itself.</td>
<td>COMPLEMENT: Learning effect is stronger for technical, than for legal detail; and is stronger for firms with IT expertise than for firms without such expertise</td>
<td>Learning Effects</td>
<td>Frequency: Technical Provisions become more detailed. Legal Provisions do not become more detailed. The learning effect is stronger for technical provisions than for legal provisions, and for transactors with at least some in-house IT expertise.</td>
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<tr>
<td>June, 2009</td>
<td>Joint Technology Development in</td>
<td>Ryall &amp;</td>
<td>Investigation of the extent</td>
<td>COMPLEMENT (between formal</td>
<td>Informal/Social Control</td>
<td>Transactional: Enforcement</td>
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<th>YEAR</th>
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<tr>
<td>2008</td>
<td>Telecommunications and Microelectronics (High Technology Sector)</td>
<td>Sampson</td>
<td>to which firms substitute relational for formal mechanisms in the presence of repeated interactions (Empirical comparison of contract terms in 52 contracts and relational contracts): Prior deal experience affects positively, and significantly, the level of monitoring. The firms’ contracts are more detailed and more likely to include penalties when it engages in frequent deals</td>
<td>(Relational Capabilities) A learning effect for Specificity – increased capacity to draft detailed contracts with increasing experience.</td>
<td>(Relational Capabilities)</td>
<td>Procedural; Ambiguity/Specificity Frequency: Penalties more likely with increased interaction.</td>
</tr>
<tr>
<td>2008</td>
<td>Sequential exploratory (purpose was to evaluate new technological opportunities through upstream activities, such as: fundamental research, experimenting, and testing) R&amp;D alliances between one of the world’s leading imaging companies (Graph – 20,000 employees in 40 countries) and a stock-quoted inkjet technology company (Jet – 185 employees). Alliances were made up of a team from each company, of approximately 5 engineers, supported by 2 senior managers</td>
<td>Faems et al.</td>
<td>Case study of two sequential alliances between the same pair of R&amp;D firms. 1st Alliance: Exploration of feasibility of side shooter head (SSH) for printing applications 2nd Alliance: Exploration of feasibility of end shooter head (ESH) for printing applications Disentangling of how: (1) contracts with a similar degree, but different nature of formalization (narrow vs broad) trigger different types of trust dynamics at operational and managerial levels. (2) trust dynamics and contract application (rigid vs flexible) coevolve over time. (3) relational dynamics in previous transactions influence contract design in subsequent transactions.</td>
<td>Contract designs differed in the way that monitoring, task division, and information flows were defined, but were the same regarding the juridical clauses regulating partner behaviour outside the alliances.</td>
<td>(Relational Capabilities)</td>
<td>Provisions for Monitoring, task division, and information flows</td>
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<tr>
<td>2008</td>
<td>IT Services Industry</td>
<td>Mayer and Bercovitz</td>
<td>Examines whether the prior relationship between two firms produces an inertial drag that influences contracts used for subsequent exchanges Prior relationships between the firms create interorganizational inertia (a constricting effect) on future contracts, which leads firms to use the same level of contingency planning in current exchanges that they used in prior contracts</td>
<td>Interorganizational inertia</td>
<td>(Relational Capabilities)</td>
<td>Contingency Planning</td>
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<tr>
<td>December, 2007</td>
<td>HR Outsourcing</td>
<td>Mellewigt et al.</td>
<td>Highlight the fact that contracts serve a dual purpose of control and coordination; and analysis of the relationship between trust and contractual complexity SUBSTITUTE AND COMPLEMENT: High trust means weaker +ve relationship between control concerns and contractual complexity. High trust</td>
<td>Trust moderates the relationship between Control (substitute), Coordination (Complement) concerns and contractual complexity Trust can be a substitute for Complexity (regarding control concerns); Trust can be a complement for Complexity (regarding coordination concerns).</td>
<td>Trust can be a substitute for Complexity (regarding control concerns); Trust can be a complement for Complexity (regarding coordination concerns).</td>
<td><strong>Coordination, Control and Complexity.</strong> Trust can be a substitute for Complexity (regarding control concerns); Trust can be a complement for Complexity (regarding coordination concerns).</td>
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<td>March, 2007</td>
<td>Alliances vs M&amp;A, Equity vs Non-Equity</td>
<td>Reuer &amp; Ariño</td>
<td>Examination of contractual features of strategic alliances. (Dimensionality of contractual complexity and firms' adoption of various contractual provisions)</td>
<td>COMPLEMENT Firms that have collaborated with each other in the past are less likely to negotiate enforcement provisions; rather, repeat collaborators are less likely to adopt contractual provisions that are informational in nature and are geared to the coordination of the alliance</td>
<td>Firms' usage of particular contractual provisions is a function of Asset Specificity and whether the alliance duration is open or prespecified. (Consistent with learning effects)</td>
<td>Low Trust + ↑Complexity = Enabling Control; High Trust + ↑Complexity = Enabling Coordination</td>
</tr>
<tr>
<td>Jan/Feb, 2007</td>
<td>IT Services (high technology projects)</td>
<td>Argyles, Bercovitz &amp; Mayer</td>
<td>Analysis of the relationship between contingency planning and task description for contracts where environmental uncertainty or technological complexity are significant. (Contract changes)</td>
<td>COMPLEMENT: Repeated exchange between two firms leads to a greater effort at contingency planning in subsequent contracts. Contingency planning and task description are complements in contractual design. This reflects patterns of learning to contract.</td>
<td>Learning spillovers from repeated interactions.</td>
<td>Coordination: Repeat collaborators are less likely to adopt contractual provisions that are informational in nature and are geared to the coordination of the alliance</td>
</tr>
<tr>
<td>2006 No</td>
<td>IT Service Provision</td>
<td>Mayer</td>
<td></td>
<td>COMPLEMENT: Increase in Reusability of knowledge-intensive work results in increase in Specificity of ASD of task description</td>
<td></td>
<td>Evidence of complementarity found between task description detail and Contingency Planning. Specificity of ASD increases as a result of more Contingency Planning, and increased extensiveness of task descriptions. No support found for a direct relationship between prior relationships (Frequency) and cost and effort of writing more specific task obligations</td>
</tr>
<tr>
<td>December, 2005</td>
<td>IT Products and Accompanying Services</td>
<td>Anderson &amp; Dekker</td>
<td>Analysis of how close partners exposed to a significant hazard, structure and control a significant interaction.</td>
<td>COMPLEMENT: Characteristics associated with hazards are +vely related to contract extensiveness.</td>
<td></td>
<td>Control Structure: Characteristics associated with hazards are positively related to extensiveness.</td>
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<td>April, 2005</td>
<td>Large pharmaceutical firms and biotechnology partners</td>
<td>Hoang and Rothaermel</td>
<td>Analysis of terms of contracting to determine whether transaction and supplier characteristics that generate opportunistic hazards are related to the formal management control structure.</td>
<td>Analysis of whether misalignment between transaction and supplier characteristics and the control structure is associated with ex post performance problems</td>
<td>-ve partner-specific impact may be due to firms inappropriately generalizing from their experience with the</td>
<td>Benefits of alliancing are not automatic, but depend on whether firms can actively mobilize and leverage their experience.</td>
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<td>YEAR</td>
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<td>July-August, 2004</td>
<td>Personal computer</td>
<td>Mayer &amp; Argyres</td>
<td>Detailed case study of a time series of 11 contracts concluded during 1989-1997 between the same two partners, to explore whether and how firms learn to contract, with each other over time. (Contract changes)</td>
<td>The evidence shows that changes in contract structure are largely the result of processes in which the firms were learning how to work together, including learning how to contract. Learning is incremental and local</td>
<td>whether contracts have a positive or negative effect on interorganizational trust</td>
<td>Contingency Planning Frequency: Complexity - contracts became more complex, addressed communication and became more specific</td>
</tr>
<tr>
<td>April, 2004</td>
<td>Offshore Drilling</td>
<td>Corts &amp; Singh</td>
<td>Analysis of repeated interaction on incentive problems and contracting costs</td>
<td>SUBSTITUTE: Oil &amp; Gas companies are less likely to choose fixed-price contracts as the frequency of their interaction with a driller increases</td>
<td>Repeated interaction reduces incentive problems more than contracting costs; Contracts based on more ambiguous terms are increasingly opted for when previous experience with the same partner assuages the fear of moral hazard. i.e.</td>
<td>Transactional: Effort Incentives; As Frequency increases, Ambiguity of ASD increases when previous experience with the same partner assuages the fear of moral hazard.</td>
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<tr>
<td>April, 2004</td>
<td>IT Services</td>
<td>Kalnins &amp; Mayer</td>
<td>Analysis of how prior relationship between the firms influences the type of contract selected. Analysis of the use of fixed-fee, time &amp; materials/cost plus, and hybrid contracts (time &amp; materials with a cap)</td>
<td></td>
<td></td>
<td>Transactional: Effort Incentives</td>
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<tr>
<td>March, 2004</td>
<td>Strategic Alliances (Alliances vs M&amp;A, Equity vs Non-Equity agreements)</td>
<td>Reuer &amp; Ariño</td>
<td>Analysis of contractual features of strategic alliances</td>
<td>There are 2 underlying dimensions of contract complexity: enforcement and coordination. Firms that have collaborated with each other in the past are less likely to negotiate enforcement provisions. Contractual provisions adopted are informational in nature and are geared toward coordination</td>
<td>Trust AND Learning Effects; Usage of particular provisions is a function of asset specificity as well as whether the alliance's duration is pre-specified or open-ended.</td>
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<td>January, 2004</td>
<td>Buyer-Supplier Strategic Alliance for supply and joint innovation Railway Safety Equipment</td>
<td>Dekker</td>
<td>Informal/Social Control; Relational Trust; Good partner selection motivated by Trust in a partner’s goodwill and capabilities. Despite an extensive governance structure, the high level of goodwill trust seemed to moderate the use of formal control mechanisms to manage transaction hazards. Formal controls added provided mutual transparency and facilitated achievement of the alliance’s goals, and the partners strongly believed that they add quality to the relationship instead of being deteriorating to it.</td>
<td></td>
<td></td>
<td>Procedural: Monitoring and Enforcement (Prevent Expropriation)</td>
</tr>
<tr>
<td>August, 2002</td>
<td>Information Services outsourcing</td>
<td>Poppo &amp; Zenger</td>
<td>Test that complexity (enforcement/control mechanisms) of the contractual governance apparatus increases with intensity of exchange hazards.</td>
<td></td>
<td></td>
<td>Procedural: Monitoring.</td>
</tr>
<tr>
<td>2001</td>
<td>Automobile franchise contracts</td>
<td>Arruñada</td>
<td>Regression coefficients of the number of monitoring rights assigned to the franchisor</td>
<td>COMPLEMENT</td>
<td></td>
<td>Procedural: Monitoring. Greater monitoring rights to financier contingent on alliance financial adversities</td>
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<td>Winter, 1995</td>
<td></td>
<td>Bhattacharyya &amp; Lafontaine</td>
<td></td>
<td></td>
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<td>Transactional: Effort Incentives</td>
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<td>February, 1995</td>
<td>Gulati</td>
<td>Choice of alliance type</td>
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<tr>
<td>Spring, 1993</td>
<td>Jet Engine Procurement</td>
<td>Crocker &amp; Reynolds</td>
<td></td>
<td>Ambiguity of ASD increases with task uncertainty, and decreases (Specificity increases) with a known propensity of the contracting party for litigiousness.</td>
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A UK, US, and Australian Perspective of the Suitability of the SCL Protocols’ Provisions for dealing with Float for Adoption and Use by the Australian Construction industry

Peter Ward

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Abstract:
During the negotiation and resolution of delay and disruption disputes on construction projects, the use and misappropriation of float, and the question of float ownership, are considered to be a major concern to those involved. Most practitioners and authors are of the opinion that it is an issue that should be clearly defined and addressed within the provisions of the contract. However, the terms “float” or “ownership of float” are rarely mentioned (if at all) in most of the standard forms of Australian construction contracts, giving little guidance to those involved as to how this issue should be addressed. In October 2002 the United Kingdoms Society of Construction Law (SCL) published a Delay and Disruption Protocol (the Protocol) that contains a suggested approach to the issue. The aim of this research was to obtain a comparative opinion of those involved in the drafting of the Protocol’s provisions, a US perspective and an Australian perspective of the suitability of the SCL’s Delay and Disruption Protocols suggested approach to the issue of float and ownership of float for use by the Australian construction industry. Semi structured qualitative interviews were carried out with members of the SCL protocol’s drafting committee and US and Australian construction industry experts experienced in the administration, negotiation, and resolution of delay and disruption disputes to obtain their opinions of the suitability of the SCL’s proposed approach. An ethnographic content analysis was then undertaken of the interview transcripts in an attempt to identify any common themes in the participants’ responses. Initial results indicate no general agreement or consensus concerning the potential benefits of the SCL’s proposed approach to the ownership of float for the Australian construction industry, with the identification of a number of issues that would need to be addressed should the approach be adopted.

Keywords:
dispute, float, ownership, protocol

1 Introduction

The issue of ownership of float during delay and disruption disputes is well recognized and appreciated amongst construction industry practitioners and professionals. Typically the contract documents attempt to address the issue, either expressly or impliedly within their provisions. Industry norms have evolved in an attempt to rationalize and standardize procedures. In the US and the UK the courts a have attempted to clarify and give guidance on the issue. Yet there is no single approach to the issue recognized, accepted, or applied. In Australia the standard forms of construction contracts typically impliedly allocate float ownership to the Contractor (National Public Works Conference and National Building and Construction Council 1990). In October 2002 the Society of Construction Law published a Delay and Disruption Protocol that contained a proposed approach to the issue of float and float ownership that they hoped would be adopted and applied on construction projects in the UK that is contrary to the position of float
ownership in Australia. A part summary by the Chairman of the SCL Protocol drafting committee of the main changes to the Protocol concerning “float” from the consultation edition (November 2001) and the Workshop edition (May 2002) to the final version published in October 2002 is duplicated in Table 1 below.

Table 1. Part summary by the Chairman of the SCL Protocol drafting committee of the main changes to the Protocol concerning “float” from the consultation edition (November 2001) and the Workshop edition (May 2002) to the final version published in October 2002, published 15th October 2002 (www.eotprotocol.com/responses.shtml, accessed @10.00am on 17th December 2008

Contractors were concerned about our approach to the “ownership” of float, so we have thoroughly reviewed our position on this important topic. We emphasize that the question of how float is treated should be specifically and clearly addressed in contracts (since it is not clearly dealt with in most of the standard forms).

2 What is float?

The term “float” itself is considered to be one that “causes many communication difficulties” (Hatfield 2001) due to the inconsistent use of the term, and the inconsistent use and interpretation of the associated terminology used to define its meaning and application in the dispute resolution process and profession (Pickavance 2005). In the literature there are a number of suggested definitions. De La Garza (1991) considers total float to represent “the total length of time an activity’s finish date may be delayed without it affecting the completion date of the entire project”, whilst Stephenson (2004) considers float to be the “the period by which a non-critical activity can be delayed before that activity becomes critical”, and defines it further as “the period by which non critical activity can be delayed before the delay to that activity adversely affects the planned date for completion (that is, not the contractual date for completion)”. The above definitions reflect both how float is considered to be generated, as a by-product of a Critical Path Method (CPM) calculation (De la Garza, Vorster et al. 1991; Pickavance 2005; Weaver 2006), and the perceived benefits of float, that it is, extra time available for use as a contingency to be used to cope with unanticipated conditions, and/or circumstances on non critical activities of a project (De la Garza, Vorster et al. 1991; Uher 2003; Weaver 2006), thereby acting as a safety net against project risks (Al-Gahtani 2009), as illustrated in Figure 1. Here, activities 4 and 5 can be moved within the float contained within the chain of activities without delaying the project completion date.

Weaver (1987; 1987) states that the problems associated with float can be classified under the three broad categories of technical, philosophical, and legal. He suggests that the technical problems associated with float concern:

i. Defining how much float is really available to be used when the uncertainties of the network process are considered;

ii. The fact that project managers invariably change the programme, and/or the planners assumptions to suit the actual resources available; and

iii. The difficulty in knowing at any point in time how much reliance to place on the information being supplied by the network.

The philosophical problems associated with float concerns the misunderstanding of, and abuse of, float, by all parties associated with the Project, due to the incorrectly widely held view that float is “spare time” and therefore “unimportant”, a view that Weaver (1987) states is “detrimental to the timely completion of the Project”, that manifests itself in many ways.
The legal problems associated with float result from the conflict between the Construction Managers desire to have as much float as possible in the network, thereby benefitting from maximum flexibility in the allocation of resources and completing the project within time, and the contractual needs to minimise float and show as many activities to be as critical as possible. Weaver (1987) suggests that, due to the legal precedents currently in place and followed, combined with the current trend in specification clauses to state that extensions of time would only be granted for delays to critical activities, any programme prepared for contractual purposes will tend to be biased in such a way as to minimise float.

2.1 Ownership of Float – The Issue

The issue of ownership of float is concerned with who has the right to use the perceived spare time present in a non critical or chain of non critical activities in a CPM network. The ‘spare time’ present within a non critical or chain of non critical activities may be the result of inaccuracies, or the ‘rounding up’ of the estimation of the activity durations, or as a contingency deliberately included within an activity duration as a way of catering for uncertainty and risks within the activity, as illustrated in Figure 2. Its use by either party may be to increase the efficacy of their operations, or to alleviate the effects of an individual party’s unexpected risk event, resulting in the possible appropriation of the float.

The consequence of the misappropriation of such float or contingency by a party not perceived to be entitled to its use may result in a claim for some form of compensation from the party who is considered to ‘own’ the float, or as a result of its use, non critical activities becoming critical as illustrated in Figure 3, or even extending or delaying the project completion date, as illustrated in Figure 4, resulting in delay and/or disruption disputes or liquidated damages claims that need to be resolved by an assessment of causation, depending upon who is perceived to be responsible for the delay that actually caused the project completion date to be extended. This introduces two issues into the scenario:

i. If float or ‘contingency’ that has deliberately been included in an activity by one of the party’s to cater for risk and uncertainty within that activity is misappropriated by another party, as illustrated in figure 3, should the first party be entitled to any form of compensation, regardless of any project delay or not?

ii. Where there are a number of delay events, as illustrated in Figure 4, that cause the project completion date to be delayed, who should be held accountable? For example, in Figure 4, if both delay events are contractor responsible, depending on the contract provisions, the client

---

Figure 1. Illustration of Float

---
may be entitled to liquidated damages equivalent to the delay to the project completion at the agreed rate. Whereas, if both delaying events were the responsibility of the client, depending upon the contract provisions, the contractor may not be entitled to a claim for loss and expense in relation to the first delay as there has been no delay to the project completion date, but may be entitled to an extension of time and a claim for loss and expense equivalent to the period of delay to the contract completion date as a result of the second delay. Problems occur where the responsibility for each delay is accredited to more than one party. For example, in Figure 4, if the first delay was a contractor responsible delay, and the second delay was a client responsible delay, the contractor would be entitled to an extension of time and loss and expense equivalent to the period of the delay, whilst the employer would not be entitled to any compensation for the first delay, as the contractor would be perceived to have gained the benefit of the float or ‘contingency’ that they had included within their programme to cater for such eventualities. However, if the first delay was an employer responsible delay, and the second delay was a contractor responsible delay, depending upon the contract provisions, the contractor may not be entitled to any form of compensation for the loss of the benefit of their float or ‘contingency’ that had been appropriated by the client by the first delay, but would also be likely to be liable for liquidated damages at the agreed rate for the period of the delay, simply as a result of the loss of the benefit of their float or ‘contingency’ resulting from its appropriation by the earlier client delay. This results in a situation where whoever uses the float first is perceived to obtain the benefit of it.

As has been previously stated there is generally no accepted standard approach to the issue of float and float ownership in Australia. Typically, Australian standard forms of construction contract rarely address the issue expressly or directly, favouring it being implied into, and interpreted through, the terms of the contract (National Public Works Conference and National Building and Construction Council 1990), leaving the contracting parties at liberty to, at best, attempt to negotiate the issue as a separate specification document, or at worst, ignore the issue altogether in the hope that there will be no project delays, relying on the interpretation of the events, project records, and contract documents should things go wrong.
4 The Society of Construction Law

The SCL (UK) are an organisation founded in 1983, of lawyers and surveyors, engineers, architects and others with an interest in the subject of law as applied to construction projects (Davison 2003). Their objective as an organisation is “to promote the study and understanding of construction law amongst all those involved in the construction industry” (Society of Construction Law 2002; Scott, Harris et al. 2004).
4.1 Objective, Purpose, and Aims of the Protocol

The Protocol's objective is “to provide useful guidance on some of the common issues that arise in construction contracts, where one party wishes to recover from the other an extension of time and/or compensation for the additional time spent and the resources used to complete the project” (Knowles 2002; Society of Construction Law 2002; Pickavance 2005; Ndekugri and Russell 2006), whilst its purpose “is to provide a means by which the parties can resolve those matters and avoid unnecessary dispute” (Russell 2002; Society of Construction Law 2002; Pickavance 2005).

4.2 The Protocols Approach

The Society of Construction Law’s Delay and Disruption Protocol (Society of Construction Law 2002) propose a number of specific definitions and suggested provisions concerning float and how the issue of ownership of float should be approached. With regard to float in relation to an extension of time, the Protocol states: “Unless there is express provision to the contrary in the contract, where there is remaining float in the programme at the time of the Employer risk event, an extension of time should only be granted to the extent that the Employer Delay is predicted to reduce below zero the total float on the activity paths affected by the Employer delay” (Society of Construction Law 2002).

5 Methodology

The research was conducted in accordance with the Commonwealth of Australia’s National Statement on Ethical Conduct in Research Involving Humans (1999), following procedures approved by the University of Newcastle’s Research Ethics Committee. A literature review to determine current Australian industry practice and position on the issue was undertaken, together with semi-structured qualitative interviews with eight members of the SCL Protocol drafting committee, twelve US and seventeen Australian construction industry practitioners specialising in the negotiation and resolution of construction delay and disruption disputes, to obtain their opinions of the suitability of the Protocols approach to the issue of float and float ownership, for adoption and use by the Australian construction industry (background details of those who were interviewed are contained in Tables 2, 3, and 4 respectively). Participants were given a clarifying statement and then asked for their opinion of the statement.

Clarifying statement: Ownership of float concerns ‘who’ is entitled to the use of project float, the client or the contractor? The guidance section of the protocol recommends that the parties address this issue in the wording of the contract. Where they have failed to do so, the protocol recommends that the float is not for the exclusive benefit of either the employer or the contractor, but is available for use by those who need it first, and that an extension of time should only be “... granted to the extent that the Employer Delay is predicted to reduce to below zero the total float on the activity paths affected by the Employer delay.”

Question: What is your opinion of how the protocol deals with this issue?

Analysis of the participants responses, together with an ethnographic content analysis (Mason 1994; Altheide 1996; Bryman 2004) based on the categories contained in Table 5 was then undertaken of the interview transcripts to identify and quantify respondents comments concerning their perceived levels of agreement or disagreement with the protocols approach to the ownership of float, as well as an attempt to corroborate Weavers (1987; 1987) philosophical, technical, and legal issues.

Table 2. SCL Participant Profiles

<table>
<thead>
<tr>
<th>Participant</th>
<th>Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCL1</td>
<td>An independent claims consultant with over twenty years experience of working in the construction and civil engineering industry.</td>
</tr>
<tr>
<td>SCL2</td>
<td>A solicitor and Partner with a leading UK law firm with over twenty years experience of resolving national and international construction and disputes.</td>
</tr>
<tr>
<td>SCL3</td>
<td>Managing Director of a specialist risk, programming and dispute resolution</td>
</tr>
</tbody>
</table>
organisation with over fourteen years experience of civil engineering and building disputes.

**SCL4**  Head of a large UK organisations forensic engineering and construction disputes team with over twenty years experience as a chartered quantity surveyor and over fourteen years experience as an arbitrator and adjudicator.

**SCL5**  Director and Senior Vice President of a leading international consulting organization, international arbitrator, adjudicator and expert in delay related disputes.

**SCL6**  A partner in a London based legal practice who is a dual qualified English solicitor and U.S. attorney, with over 10 years of contentious and non contentious construction experience, adjudications, and national and international arbitrations.

**SCL7**  A construction planning professional with over 30 years of experience in the industry who provides construction planning and programming advice to clients, contractors, and subcontractors on new build and refurbishment projects.

**SCL8**  A quantity surveyor who is a non executive, executive, and chief executive officer for a number of claims consultant organizations who was responsible for forming a quantity surveying practice that grew into one of the top ten UK quantity surveying companies, who has also acted as a qualified mediator, arbitrator and adjudicator.

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**Table 3. US Participant Profiles**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US01</strong></td>
<td>A director and co-founder of a specialist American construction and asset cost consulting Quantity Surveying Practice with expertise in commercial construction, procurement, and dispute resolution.</td>
</tr>
<tr>
<td><strong>USA02</strong></td>
<td>A lawyer, architect and schedule (programme) consultant specializing in forensic schedule analysis.</td>
</tr>
<tr>
<td><strong>US03</strong></td>
<td>An international forensic claims consultant and expert witness with some 35 years of experience in construction claims specializing in schedule delay and soft cost damage issues.</td>
</tr>
<tr>
<td><strong>US04</strong></td>
<td>A project controls engineer with over ten years of experience of developing and monitoring schedules and provided expert forensic schedule analysis and testimony for contractors and owners in the highway, power, and commercial construction industries.</td>
</tr>
<tr>
<td><strong>US05</strong></td>
<td>An internationally renowned scheduling expert, author of a best-selling professional text on construction scheduling, and founder of an international company providing scheduling products and services to the global construction community.</td>
</tr>
<tr>
<td><strong>US06</strong></td>
<td>A lawyer and claims consultant with over 30 years experience of resolving national and international construction claims disputes.</td>
</tr>
<tr>
<td><strong>US07</strong></td>
<td>A certified planning engineer with over 15 years of experience of developing, monitoring, and resolving construction disputes on international projects.</td>
</tr>
<tr>
<td><strong>US08</strong></td>
<td>A certified claims consultant with over 25 years experience of resolving and negotiating construction disputes.</td>
</tr>
<tr>
<td><strong>US09</strong></td>
<td>The principal of a construction management consulting firm, who is a certified planning, scheduling, and cost consultant involved in the resolution of construction disputes, with over 25 years of experience and involvement in the commencement, execution, and completion of</td>
</tr>
</tbody>
</table>
commercial, public, and government projects.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>US10</td>
<td>A certified forensic claims consultant and professional engineer with over 27 years experience in the industry.</td>
</tr>
<tr>
<td>US11</td>
<td>A project control engineer supervisor employed in the petro-chemical industry, with 9 years experience of working on International construction and engineering projects.</td>
</tr>
<tr>
<td>US12</td>
<td>A lawyer, arbitrator, and mediator, with over 35 years of experience of practicing in construction litigation, international litigation and arbitration on major international construction, petroleum, gas, chemical, infrastructure, wastewater, and power production.</td>
</tr>
</tbody>
</table>

Table 4. Australian Participant Profiles

<table>
<thead>
<tr>
<th>Participant</th>
<th>Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part 1</td>
<td>A lawyer and arbitrator who is a Partner in a leading Australian law firm whose areas of expertise are Construction, Dispute Resolution, and Litigation.</td>
</tr>
<tr>
<td>Part 2</td>
<td>A lawyer and Partner in a leading Australian law firm with over seventeen years legal experience specialising in construction law.</td>
</tr>
<tr>
<td>Part 3</td>
<td>A director and co-founder of a specialist Australian construction and asset cost consulting Quantity Surveying Practice with expertise in commercial construction, procurement, and dispute resolution.</td>
</tr>
<tr>
<td>Part 4</td>
<td>An assistant contracts manager in the Legal and Contractual Department of one of the Australian States Department of Public Works.</td>
</tr>
<tr>
<td>Part 5</td>
<td>A lawyer and arbitrator who is a Partner with a leading Australian law firm, a Fellow of the Institute of Arbitrators Australia, and a Member of the Australian Institute of Judicial Administration, whose areas of practice include construction law and ADR.</td>
</tr>
<tr>
<td>Part 6</td>
<td>A director of an Australian Quantity Surveying Practice representing clients and contractors, with over fifteen years construction industry experience.</td>
</tr>
<tr>
<td>Part 7</td>
<td>A claims consultant who was trained as a civil engineer, with 5 years experience working in engineering and contract management, and 9 years experience involved in construction claims, with the last 6 years specialising in time related claims.</td>
</tr>
<tr>
<td>Part 8</td>
<td>A solicitor and partner of a NSW law firm (with degrees in construction management and law) who has been practising and specialising in construction law for twelve years.</td>
</tr>
<tr>
<td>Part 9</td>
<td>A partner in a leading Australian law firm with over 20 years of experience, specialising in major projects work and construction and engineering law, primarily as an advisor to major contractors, major developers and Governmental authorities in the Australian and Asia-Pacific region.</td>
</tr>
<tr>
<td>Part 10</td>
<td>A chartered quantity surveyor, contractual claims consultant, and arbitrator, with over forty years of experience of working in the construction industry.</td>
</tr>
<tr>
<td>Part 11</td>
<td>A delay analyst from a mining engineering background with over twenty years experience of working on heavy civil engineering projects who has been involved in dispute resolution for over ten years.</td>
</tr>
<tr>
<td>Part 12</td>
<td>A Barrister and Solicitor of the Supreme Court of Western Australia experienced in the negotiation of construction contracts, and the resolution of construction disputes in Australia, the UK, Hong Kong, and the Middle East.</td>
</tr>
<tr>
<td>Part 13</td>
<td>The founding Managing Director of an Australian claims consultancy involved in dispute resolution, production planning and analysis, and risk</td>
</tr>
</tbody>
</table>
management in the construction and defence industries, specialising in construction delay disputes.

Part 14
A construction lawyer with a leading Australian construction law firm with over nine years experience of all forms of dispute resolution including litigation, arbitration, adjudication, expert determination, conciliation and mediation, who specialises in the practice of building and construction law, and dispute resolution.

Part 15
The manager of a leading International Planning, Programming, and Claims Consultancy, with over 17 years experience as a professional in the Building and Construction Industry, involved in the front end planning and programming of construction and engineering projects, as well as forensic planning and delay analysis of time-related construction claims.

Part 16
A Barrister and Grade 1 Arbitrator specialising in construction disputes and engineering claims, with over twenty five years experience of practising law, and a further ten years experience as a practising Architect involved in the design and construction of commercial and industrial buildings.

Part 17
A Chartered Engineer with one of Australia’s leading construction consultancy firms with over thirty years of experience involved in the managing, planning, and programming of construction projects in Australia and Internationally, specializing in the analysis and resolution of construction claims.

Table 5. Ethnographic coding manual

<table>
<thead>
<tr>
<th>Category</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreement</td>
<td>Whether the respondent expressed or indicated agreement, neutral, or disagreement with the protocols proposed position on float and float ownership.</td>
</tr>
<tr>
<td>+/- Comments</td>
<td>The number of positive and/or negative comments expressed/indicated in relation to the protocols position on the issue of float and float ownership.</td>
</tr>
<tr>
<td>Contingency</td>
<td>The number of times a respondent distinguished float from contingency.</td>
</tr>
<tr>
<td>Float as a Commodity</td>
<td>The number of times a respondent referred to float as a commodity or tradable commodity.</td>
</tr>
<tr>
<td>Compromise</td>
<td>The number of times a respondent referred to the protocols approach to float and float ownership as a compromise.</td>
</tr>
<tr>
<td>Contractors resource</td>
<td>The number of times a respondent referred to float as a contractors’ resource.</td>
</tr>
<tr>
<td>Contract documentation</td>
<td>The number of times a respondent indicated/suggested that the issue of float and/or ownership of float should be addressed in the contract or contract documents.</td>
</tr>
<tr>
<td>Defining how much float available</td>
<td>The number of times a respondent expressed or indicated a questioning/querying of the accuracy of the information obtainable from the programme as a result of errors built into the estimation of activity durations.</td>
</tr>
<tr>
<td>Changing programme</td>
<td>The number of times a respondent suggested that a programme would be changed/amended over the life of the project.</td>
</tr>
<tr>
<td>How reliable is the network</td>
<td>The number of times a respondent indicated a questioning/querying of the reliability of the network in relation to it being an accurate indication/record of the projects plan of work.</td>
</tr>
<tr>
<td>Float as spare time</td>
<td>The number of times a respondent referred to float being available as spare time within an activity/chain of activities.</td>
</tr>
</tbody>
</table>
6 Results and Discussion

Overall the participants’ responses gave no clear indication either in favour of, or against the Protocols position on float. Approximately 46% of the participants’ responses expressed or indicated agreement with the Protocols approach, and 37% of all comments being in favour of the approach, whilst approximately 46% of the participants’ responses expressed or indicated disagreement with the Protocols approach, and 63% of all comments expressing or indicating disagreement with the approach. Sixteen percent of participants gave no clear indication of agreement or disagreement with the approach.

Table 6. Results of ethnographic content analysis

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Agreement</th>
<th>Neutral indication</th>
<th>Disagree</th>
<th>+ comments</th>
<th>- comments</th>
<th>Contingency</th>
<th>Float in commodity</th>
<th>Compromise</th>
<th>Contractors resource</th>
<th>Contract documentation</th>
<th>Defining how much float available</th>
<th>Changing programme</th>
<th>How reliable is the network</th>
<th>Float as spare time</th>
<th>Float as a resource</th>
<th>Biasing to minimise float</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCL UK Participants</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>US Participants</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>11</td>
<td>18</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Australian Participants</td>
<td>7</td>
<td>1</td>
<td>9</td>
<td>13</td>
<td>30</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>13</td>
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<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>17</td>
<td>6</td>
<td>14</td>
<td>32</td>
<td>55</td>
<td>10</td>
<td>3</td>
<td>14</td>
<td>22</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

6.1 SCL Participant Responses

Surprisingly, the SCL participants responses gave no conclusive indication as to whether they agreed or disagreed with the protocols approach, with 37.5% expressing or indicating agreement with the approach, and 53% of all comments made expressing or indicating agreement with the approach, whilst 37.5% of the SCL participants expressed or indicated disagreement with the protocols approach, and 47% of all comments expressing or indicating disagreement with the approach. Twenty five percent of SCL participants gave no clear indication of agreement or disagreement with the approach.

These results reflected some of the comments made by some of the SCL participants in that the Protocols overall approach was one perceived to be of an agreed compromise between the Protocol drafters.

Some 75% of the SCL participants made a clear distinction between float and contingency, with a further 87.5% of the SCL participants expressing or indicating that the issue of float and float ownership should be clearly addressed in the contract or contract documentation. In terms of float being a contractors’ resource, 62.5% of the SCL participants expressed or indicated an opinion that float was a resource for the use of the contractor. A further 50% of the SCL participants either expressed or indicated that the reliability of the information obtainable from the network may have been questionable due to inaccuracies in the estimation of the activity durations.

Edited abstracts of the some of the comments made by the SCL participants are contained in Table 7.
6.2 US Participant Responses

Individually, the US participants gave the greatest indication of acceptance with the Protocols approach, with 58% of their responses expressing or indicating agreement with the approach, and 38% of all comments made by this participant group expressing or indicating agreement with the approach, whilst 17% of the US participants expressed or indicated disagreement with the Protocols approach, and 62% of all comments made by this participant group expressing or indicating disagreement with the approach. Eight percent of the participants gave no clear indication of agreement or disagreement with the Protocols approach. These responses reflect the general comments given by the US participants in that in the US it is generally accepted (by the courts and contract specifications) that the project owns the float, and that it is available for whoever needs it first.

However, some 50% of the US participants either expressed an opinion or indicated that float was a resource available to the contractor.

Edited abstracts of some of the comments made by the USA participants are contained in Table 8.

6.3 Australian Participant Responses

The Australian participants responses gave no conclusive indication as to whether they agreed or disagreed with the protocols approach, with 53% of their responses expressing or indicating disagreement with the approach, and 70% of all comments expressing or indicating disagreement with the approach, whilst 41% of the Australian participants expressed or indicated agreement with the approach, and 30% of all comments expressing or indicating agreement with the approach. Six percent of the Australian participants gave no clear indication of agreement or disagreement with the approach.

Some 23.5% of the Australian participants made a clear distinction between float and contingency, with a further 76% of the Australian participants expressing or indicating that the issue of float and float ownership should be clearly addressed in the contract or contract documentation. In terms of float being a contractors’ resource, 29% of the Australian participants expressed or indicated an opinion that float was a resource for the use of the contractor. A further 12% of the Australian participants either expressed or indicated that the reliability of the information obtainable from the network may have been questionable due to inaccuracies in the estimation of the activity durations.

Edited abstracts of some of the comments made by the Australian participants are contained in Table 9.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCL 1</td>
<td>… we did have lots of debate on this … no one agreed with everything on the drafting committee, and we had certain quite heated debates on float. We did eventually agree what we felt was a compromise, in that we then decided, to coin a phrase, ‘defend the compromise’.</td>
</tr>
<tr>
<td>SCL 2</td>
<td>This is one of the most controversial parts of the protocol… If we had only addressed the issue of float we would not have addressed it in the way that we did. In isolation I can see that there are stronger arguments for saying that the float should be preserved for the contractor because it is them who puts it in their programme for their own delays and not for those of the employer … I think that the most important thing about float is the primary advice that the protocol gives about recommending that parties address this fair and square in their contract.</td>
</tr>
</tbody>
</table>
| SCL 3       | I think a lot of contractors take the view in the UK they ‘own’ the float… When contractors say they own the float they are referring to end float in an early completion programme… what the protocol says is
SCL 4
Personally I think that the way in which the protocol deals with the issue is correct. I recognise that many contractors in particular feel that they own the float and that it should be there for their exclusive use, they seem to view float as a commodity that can be bought and sold.

SCL 5
The Protocol recognises that there is a world of difference between time contingency and float, and if the parties want time contingency they should identify it in their programme. Contingency, in that respect, is time that is allocated for a non-specified use whereas float is just unallocated time… The Protocol recommended that contingency and float should be defined.

SCL 6
I agree with how the protocol deals with the issue of the ownership of float.

SCL 7
I don’t agree with it at all... I believe it’s the contractors programme, and if it’s the contractors programme he owns the float … I think the bit that everybody agrees with the protocol is that it should be written into the contract.

SCL 8
Obviously I disagree because the overriding thing is what’s in the contract... My opinion is that it is the most straightforward and transparent way of dealing with float … So I think it’s the best solution to an unresolved problem.

Table 8. Selected US Edited Participant Responses

<table>
<thead>
<tr>
<th>Participant</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>US01</td>
<td>… it doesn’t seem to distinguish between network float and project float. So that’s one area that comes up often these days, at least in the United States, there’s that distinction, especially when it gets around to the right to finish early and stuff like that.</td>
</tr>
<tr>
<td>US02</td>
<td>I actually agree with the protocol. I think of float as being a project commodity … It should be available for both.</td>
</tr>
<tr>
<td>USA03</td>
<td>Not applicable</td>
</tr>
<tr>
<td>US04</td>
<td>I agree with that implementation, in terms of people trying to write contract clauses that go in different direction in terms of I own the float, you own the float or this is how we are going to pass it out, I find that to be difficult. I don’t think I’m unique in preferring the idea that the project owns the float, but I strongly feel that float is a commodity that should not be owned.</td>
</tr>
<tr>
<td>US05</td>
<td>I don’t put great weight on the total float, even though it’s still an important value.</td>
</tr>
<tr>
<td>US06</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
US07 The protocol tries to make it neutral and tries to say it in the best interests of the project. Basically I think float cannot be owned by the client ... The float has to be owned by the contractor, because it's their ability to do it. If the owner wants float, then they need to build their own float in ... So I think the compromise may not be that good.

US08 I have a problem with that, and I think float continues to be a debate we will have for some time. Until the contractors want to start to identify float as a resource constraint or somehow or other part of their plan. Now if they implement float as part of their plan then they may start to own it... I don't think is an equitable affair.

US09 I think that's consistent and appropriate with the way I've seen it dealt with

US10 I will tell you that it's been my experience that most construction documents in the United States state that the project owns the float. Whoever gets to it first gets to use it first … This approach may be difficult to manage.

US11 I think it should be shared by both parties, that's true, but not to be used by whoever first needs it ... So it should be shared but not taken first by the one who first needs it.

US12 If I read it correctly, the float belongs to the party who uses it first, which by the way is the general rule in the United States, unless the parties have defined it differently under the contract. In the United States, if there wasn't a clear definition in the contract, most courts as a matter of common law will do exactly what the protocol calls for, so it's a result that I'm very familiar with.

Table 9. Selected Australian Edited Participant Response

<table>
<thead>
<tr>
<th>Participant</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part 1</td>
<td>That’s a more difficult one because comparing it to the Australian regime, in Australia float, as a starting point, is generally considered to be owned by the builder, but I get the impression that most of the Australia industry spends most of its time trying to change that situation. The protocol I think adopts a sensible approach.</td>
</tr>
<tr>
<td>Part 2</td>
<td>I struggled to understand how it’s going to be applied in practice in that I’m not sure that the guidance principle splits the allocation of float between both parties … The only comment I would make is that I don’t understand why it is that they have sought to say that the float doesn’t belong to the contractor.</td>
</tr>
<tr>
<td>Part 3</td>
<td>Float, traditionally I would think was owned by the builder. I suppose a lot of it depends on who’s dictated the programme. Typically I guess in Australia it’s the builder who dictates the programme… I would say that float should be owned by the contractor, if that makes sense.</td>
</tr>
<tr>
<td>Part 4</td>
<td>I’m not entirely convinced of the concept that it’s available for use by those who need it first, albeit I think what the protocol attempts to achieve in practice is a very reasonable and balanced approach... In general I think it’s a very balanced approach.</td>
</tr>
<tr>
<td>Part 5</td>
<td>I believe that the float should belong to the contractor because by enlarge the contractor prepares his programme and accepts what is invariably quite a tight time frame dictated by the principal… I am firmly of the</td>
</tr>
</tbody>
</table>
view that the float should, in the absence of some express agreement, belong to the contractor.

Part 6 I think it’s fair … I think it tries to give a clear guidance as to float ownership.

Part 7 I think that is correct. Ownership belongs to the project… I’m not to keen on having that prescribed in the contract because I think it’s generally implicit.

Part 8 That’s certainly one way of dealing with the ownership of float. I think it’s certainly a reasonable way of dealing with the issue.

Part 9 … it’s constructive … I think most contractors endeavour to hide the float anyway and protect it through I suppose a shroud of secrecy or lack of transparency in their programming make up

Part 10 … at least in English law, float probably does not belong to the first party that needs it (unless the contract specifically provides for this), … and that the –first come first served‖ approach to float entered by the contractor is a smoke and mirrors trick.

Part 11 If the entitlement of float isn’t discussed in the contract, then I believe that the contractor is entitled to it as the Employer is able to specify the length of the contract.

Part 12 Firstly I agree that the parties should address it in their contractual negotiations. My view is that where they don’t, the contractor should have the benefit of the float … But I agree that it is a fair outcome if it is agreed in the contract that the project owns the float. So the first party that has need of that float essentially has the benefit of that float.

Part 13 I agree that that’s an appropriate way of dealing with the question of float. It’s essentially the float belongs to whoever gets it.

Part 14 I agree with the way the Protocol addresses it.

Part 15 My view on that approach is that it can be unfair to look at ownership of float that way for principal-caused delays, particularly where the principal-caused delays erode the float and make the activity or activity path critical before a contractor caused-delay occurs, where a contractor would be held responsible for any critical delays to the programme / project.

Part 16That’s a fine process, but it may not necessarily be the legal consequences or what the contract says, and that’s an attempt to impose a compromise on what the contract would otherwise say.

Part 17The answers in the contract of course.

7 Conclusions

Overall the issue of ownership of float still causes confusion and uncertainty as to how it should be addressed.
The individual participant groups gave no clear indication of their acceptance or rejection of the Protocols approach to float and float ownership, with only the US participants indicating any preference in favour of the Protocols position on float and float ownership. The SCL's suggested approach to the issue of float and float ownership is considered to be at odds with the contractual provisions of the Australian standard forms of contract, and the Australian construction industry norms, however, it was acknowledged that attempts to change the Australian position in an attempt to clarify the parties' contractual position were often made. The SCL's approach to float and float ownership was considered to be reasonable, balanced, and fair, but the concept was generally considered to be difficult to implement in practice in the Australian construction industry environment. The issue of float ownership was considered to be closely related to who had prepared/dictated the contract programme. Overall there was general uncertainty as to the Protocols' approach, with suspicion of the reasoning behind the first come first served theory, and general disagreement over whether the issue should be expressly dealt with in the contract documents. Both the SCL participants and the Australian participants indicated that they considered it important to distinguish between contingency and float when constructing a network programme. All participants considered that the issue of float and float ownership should be clearly defined and addressed in the contract documents. Contradictory to the protocols approach to the issue of float and float ownership, all participants (to varying degrees) indicated that float should be considered to be a contractor resource. The technical, philosophical, and legal issues related to float (Weaver 1987) were all recognised and acknowledged (to varying degrees) within the comments made in the interviews undertaken by all of the participant groups.

8 References

Pickavance, K. (2005). Delay and Disruption in Construction Contracts, LLP.


Environmental Law
Abstract:
The environmental impact of tenanted commercial office buildings can be reduced substantially while at the same time enhancing the productivity and wellbeing of their occupants. Given that relationships between office building owners, occupants and operators are largely defined by leases, it is crucial that the structure and content of those leases facilitate innovation and encourage the most responsible operating practices. Policy measures recently introduced in the UK and Australia provide incentives to improve the environmental performance of office buildings and new ways of easing the financial burden of environmental upgrades. Coupled with market drivers, these are likely to impact on commercial lease practices. However landlord-tenant relationships are still presented as barriers to improving environmental performance. More fundamental changes that align and reward owners and tenants for working together for mutual benefit are required. This paper explores the interplay between the content and structure of commercial leases and the behaviour of building owners, managers, tenants and occupants, illustrated through the experiences of a large Australian-based commercial office building owner/operator. With reference to practical examples it shows how conventional leases stifle innovation and illustrates the difficulties in drafting leases that enable a responsive approach to building management to be adopted. It tentatively presents a number of ‘model clauses’ for encouraging best environmental practices and concludes with a suite of recommendations.

Keywords:
commercial leases, environmental performance, leasehold innovation, energy efficiency, thermal comfort.

1 Introduction

This paper illustrates some of the opportunities and challenges involved in adapting tenanted commercial space to improve environmental performance and reduce energy consumption. Through a focus on the experience of a large Australian-based commercial office building owner and operator, Investa Property Group, we illustrate the complexities of improving the environmental performance of tenanted space. Given the scale of the impact that commercial property has on the environment, and its contribution to greenhouse gas emissions, it is crucial that a better understanding is developed of the interplay between the technical possibilities of the building itself, the content and structure of leases, and the behaviour of the various actors involved in letting and using that space (owners, managers, lawyers, landlord and tenant agents, occupiers, and customers). Although in recent years there has been much talk, internationally, around the topic of ‘green leasing’ there is little evidence as to what is happening in the marketplace, what the process of
negotiating green leases is like and the extent to which green leases are able to make a difference. With some rare exceptions, letting practices—in the UK, the USA and Australia—have remained largely untouched by the green agenda and both landlords and tenants are resistant to entering into commitments to work together to improve the environmental performance of the rented space.

A green lease has no fixed form, it is simply one that provides a leasehold structure that will facilitate and support the property being used in an environmentally efficient way. This can relate to any or all of energy use, water management, waste disposal, travel plans and the use of sustainable materials. It can flavour the whole leasehold relationship and include binding environmental performance targets, or can adjust usual provisions to encourage environmentally sensitive behaviour (For further discussion see Bright, 2008). It is clear that ‘green transformation’ of the letting market is not going to happen easily, but by telling the story of Investa’s experience and drawing on other models available, we demonstrate the role leases can play in facilitating innovation within commercial office buildings and encouraging responsible operating practices.

Investa’s experience is of value beyond Australia. Although there are detailed differences in the policy and regulatory environments of the major developed nations, and in the content of commercial leases, the essential issues faced are the same in the UK and in the USA. The central challenge is the ‘split incentive’, referred to extensively in legal and policy literature in each of these nations as a major barrier. The majority of investment grade property in these countries is let on a ‘net rent’ basis, which means that the tenant pays for the energy costs. As the landlord has responsibility for the building structure and equipment there is little financial incentive for the landlord to improve the energy efficiency of plant and equipment. The disincentive effect is compounded by the fact that the cost of any equipment upgrades will usually fall to the landlord who may be unable to pass the capital costs through the service charge. But there are other common features of leases, which likewise inhibit change; such as the length of leases, the rigidity of leasehold language, and the approach to ‘fit out’. The problem is not confined to the wording of the lease itself. It extends beyond this to the whole process of letting – the role that agents play in agreeing ‘heads of terms’, how the occupied space is managed, and the way that the space is used.

It is unlikely that there will be a standardised response to the challenge as the nature of the issues is so complex, that no template or standard will ever be able to adequately do the job being called on. Rather, innovation is required in the way parties approach negotiations, define their self-interests and deal with each other throughout the lease term and at expiry. These principles can apply to all commercial lease arrangements and, importantly, can be addressed not only at the time of initial let but also through amendments to lease arrangements where a building’s environmental performance or services to occupants is falling short of what might be defined as ‘best practice’.

2 The lease relationship and its limitations

The relationships between the owners (/landlords), occupiers (/tenants) and operators of tenanted commercial office buildings are largely defined by leases. A typical office building lease protects the interests of the landlord and tenant without expressly dealing with matters of broader community concern, such as greenhouse gas emissions from operating the premises, waste recycling, water use, etc. Despite a growing awareness of the need to reduce environmental impacts from the operation of commercial office buildings—expressed in community concern, emerging rating schemes, tenant requirements, staff expectations, and emerging regulations, including disclosure regulations—the structure and content of commercial leases can impose significant constraints on the ability of buildings to be adjusted/updated.

In addition to the problem of the split incentive outlined above, there is the fact that leases tend to be very rigidly drafted and do not allow flexible responses to new situations. The length of leases means that these problems can persist over considerable time frames. In the UK, although two-thirds of new leases entered into in 2008/09 were for five years or less these short leases were more common on units with lower rental values. For the higher value properties, the proportion of leases less than 5 years in length is notably smaller, at 38 percent, and the proportion of leases longer than
16 years is 9 percent. Tenants who occupy larger units tend to sign longer leases (IPD, 2009). Leases may also contain extension options exercisable upon expiry, and in the UK there may be a statutory right to renew which will make it difficult to change leasehold terms even when the contractual term expires.\(^1\) There is no public data on lease length in Australia but Investa's experience and (slightly dated, and limited) research suggests that the pattern is similar (Crosby, 2006).

The quickening pace of policy, regulatory and technical change in relation to environmental understandings of commercial space means that leases need to allow greater flexibility in order to maximise the opportunities available. The story of the implementation of the CRC Energy Efficiency Scheme (CRC) in the UK provides an illustration of the difficulties of lease language. The CRC is intended to encourage carbon savings within large organisations by requiring those who receive supplies of energy to purchase permits (CRC allowances) to emit the resulting carbon dioxide. Many landlords are required to be participants in the scheme. This increases the cost of supplying energy to tenanted space and, in tune with the idea of the net rent, several landlords intend to pass the cost of CRC participation onto tenants. The difficulty is that leases have not built the language of CRC into the service charge and general outgoings clauses so it is doubtful in many cases as to whether landlords can legitimately pass on the costs. Furthermore, there is a real risk that leases will not be _future proof_. The property industry invested much time and debate into consideration of how to accommodate CRC into new lease drafting throughout 2009 and 2010, only to find that the new UK Coalition Government moved the goalposts significantly in its Comprehensive Spending Review of Autumn 2010, leaving the details of the scheme in a state of flux for some time thereafter. (For fuller discussion see Bright & Highmore, 2010).

In Australia, leases often set detailed specifications about management issues, often with reference to standards in the Property Council of Australia's Guide to Office Building Quality (PCA, 2006). This level of detail would be highly unusual in the UK. In Australia the rigidity of this approach makes innovation difficult. A practical illustration is the standard provision for thermal comfort which provides for a fixed temperature range – this prevents building operators from making adjustments outside of this range even where that may promote greater comfort for the occupiers and be less energy intensive. Investa has been exploring how thermal comfort can be achieved with less energy use, but doing this has often involved breach of lease terms. This experience is explained in section 4 below, but for now the point to draw from this is that it shows how conventional leases stifle innovation.

### 3 Crucial relationships function outside the lease

_Green_ provisions must be built into the expectations of the parties at the start of negotiations. In late 2010, the Northwest Energy Efficiency Alliance (NEEA) moved into a building in Portland, USA, on the basis of a green lease. NEEA explains how important it was to the leasing process that its brokers continually communicated NEEA's environmental goals to the landlord and, indeed, only introduced NEEA to landlords that shared its sustainability vision (NEEA, 2011). In practice, most negotiations are conducted through landlords' and tenants' agents (figure 1) who are focussed primarily on getting a deal done, and if environmental goals are not introduced early on it will be difficult to build them into the lease itself. Research conducted in the UK by Crosby _et al._, shows that the heads of terms agreed have a significant impact on the resulting lease (Crosby, Hughes, & Murdoch, 2005, pp. 167, 172). This has also been the experience of Investa; unless key _green lease terms_ are discussed as part of the initial heads of terms, there is considerable resistance to their inclusion in the resultant lease.

![Figure 1: Lease negotiations are largely conducted through intermediaries](image_url)

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Various actors who play important roles in relation to how the space is used are not in fact party to the lease itself (figure 2). Property management is often outsourced to building operators who do not have a direct contractual obligation to the occupants/tenants even though they are crucial to the delivery of services described in leases and have a pivotal role in achieving environmental objectives.

The building manager may in turn subcontract elements of the building’s operations (mechanical services maintenance, lift maintenance, cleaning, security, etc.) to specialist providers, or act as agent for the landlord who contracts their services directly. Regardless of the contractual structure, the landlord is unlikely to maintain a close or direct working relationship with the service providers. Even in the case of landlords that internally manage their buildings,1 the majority of specialist functions will be performed by people who have no direct connection to the lease. Furthermore, employees of the landlord with responsibility for operating a building will not usually have been involved in negotiating a lease and may not even have access to it.

The situation is similar for tenants. Negotiations between landlords and tenants take place at a corporate level, generally before the tenant occupies the demised premises. Individual building occupants may be employed by tenants, but they are not themselves tenants. Most occupants have neither access to a copy of the lease, nor awareness of the obligations of landlord or tenant.

Given that operators and occupiers of commercial office buildings are in most cases not familiar with the contents of leases between landlords and tenants, it begs the question: can commercial office building leases effectively facilitate innovation and encourage responsible operating practices? Put another way, does it matter whether leases prohibit or promote improved environmental performance if the people on the ground do not know what the leases say? This identifies a broader challenge. It is simply not possible to address environmental performance in the commercial built environment without understanding how the various communities using the building engage – with the space, with legal documentation, and practice manuals, and with other owners, occupiers, building managers, customers, employees and so on.

Clearly these questions are fundamental to determining whether leases can provide a basis for improving the environmental performance of commercial buildings. We believe they can and they should. However it is clear that fundamental changes that align and reward owners and tenants for working together for mutual (and community) benefit are required. It will be necessary for innovative approaches to be adopted within leasing practices that take account of how occupiers behave and what occupiers want out of buildings. Operators need to be free to innovate in the way they run buildings, to be incentivised to do so, and to engage meaningfully with occupants regarding these kinds of issues. Furthermore, the content and structure of agreements between landlords and tenants will need to be understood by this wider group of stakeholders.

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1 Investa Property Group operates an internal model. A directly employed ‘property supervisor’ is based at each building and oversees the work of contract service providers.
4 Some challenges illustrated through practice

The limitations and challenges mentioned above have profound implications for the operation of buildings and the wellbeing of their occupants in practice. Often landlords are compelled to instruct building operators to meet requirements that are not in the best interests of occupants and in doing so they waste energy and resources that could be put to better use. In other situations landlords must sit by as tenants make poor fit out decisions which impact their staff wellbeing and productivity. Some illustrations follow.

4.1 Thermal comfort

Office buildings exist to provide productive workplaces for their occupants. Insofar as it affects productivity, comfort is obviously important; however, there is no absolute standard for human thermal comfort. The internationally-accepted definition states that "thermal comfort is that condition of mind which expresses satisfaction with the thermal environment" (ISO, 1994). Everyday experience of office environments tells us that different people have different perceptions of thermal comfort at different times. Furthermore, those perceptions are impacted by a range of environmental and human variables (Fanger, 1970).

With the increasing prevalence of air conditioning in commercial offices, there has been a trend to codify in leases what constitutes acceptable thermal conditions. In Australia, where air-conditioning is universal, this has led to the prescribing of internal air temperatures of 20-24°C (21.5±1.5°C in winter and 22.5±1.5°C in summer) in typical commercial leases. For reasons yet to be understood, these prescriptions are significantly cooler than the 23-26°C recommended by leading international authorities on the subject (ASHRAE, 2010; ISO, 1994). Furthermore, these specifications take no account of other influences on human thermal comfort such as air velocity and the temperature radiating from windows. This inconsistency between leases and established comfort benchmarks is significant because energy use is directly proportional to the differential between internal and external temperatures (Ward & White, 2007). Also, because people adjust clothing to dress for the weather, so is occupant comfort weather and seasonally dependent (Morgan & de Dear, 2003; Ove Arup & Partners Ltd, 2008).

Landlords in Australia who attempt to provide air temperatures above 24°C during summer run the risk of breaching leases and incurring penalties, even though the conditions are likely to be more comfortable for occupants than those prescribed by the leases. A study by Investa during the Australian summer 2009/10 (where such lease boundaries were pushed on the basis of scientific rather than contractual advice!), found that a 1°C increase in thermostat settings was associated with a 6 percent reduction in daily air conditioning energy use (Roussac, Steinfeld, & de Dear, 2011). Furthermore, an analysis of data recorded via the company's tenant "helpdesk" for a follow up trial (2010/11) found a 16 percent reduction in the frequency of complaints relative to other building issues (Roussac, Steinfeld, & de Dear, Forthcoming). These results demonstrate significant potential for greenhouse gas emission reductions and comfort improvements, if only the leases would not preclude it!

4.2 Fit out churn

Fit outs and refurbishments consume large volumes of resources, much of it associated with "churn". Churn refers to the replacement of building elements throughout the life of a facility. Using Investa's portfolio as a guide (Investa's is the largest portfolio of office buildings in Australia), it is estimated that each year between 10 and 15 percent of commercial office leases expire. At expiry tenants generally have the choice of whether to stay or go. It is common for landlords to offer incentives to stay and these are normally in the form of fit out contributions or cash. While Investa does not keep precise statistics, prior to the global financial crisis they estimated that 75% of expiries led to fit out contributions (to both renewing and new tenants) and the other 25% took cash and retained their fit out. So, from Investa's experience, the annual churn
range is probably between 7.5 and 11.5 percent and the average life of a typical office fit out is just over 10 years (Terry & Moore, 2008). Fixtures, fittings and furniture are replaced even more frequently and have larger impact. Treloar *et al.* estimated that the total life cycle energy consumption of fixtures, fittings and furniture at a churn rate of 5.6 times over 40 years (i.e. a life of just over seven years) was close to, if not more than, the operational energy use for the case study building (Treloar, McCoubrie, Love, & Iyer-Raniga, 1999).

The implications of these figures are significant. It is clear that fit outs are more likely to be replaced because they become unsuitable than because they ‘wear out’. In many cases, fit out decisions at the commencement of lease impact negatively on indoor environment quality (IEQ) and occupant wellbeing by reducing the penetration of daylight and limiting the circulation of air, as found in a study by a team working at Cardiff University (CRiBE, 2007, p. 9). Landlords are often powerless to intervene in these decisions. Alterations clauses in leases commonly permit the tenant to install demountable partitioning and carry out non-structural work (subject to the landlord’s consent, not to be withheld unreasonably), again without reference to the environmental impact. It has also become standard for leases to require departing tenants to ‘make good’, i.e. remove all of the tenant's property from the premises and repair or reinstate to a condition which is satisfactory to the landlord. Although this (partially) protects landlords from misconceived fit out decisions it increases waste yet further.

### 4.3 Excessive demand for building services capacity

A commercial office building’s quality is measured according to a range of criteria, including its capacity to provide tenants with services such as mechanical and electrical capacity. A high quality building is therefore generally one which boasts significant capacity to handle tenant loads, in addition to providing prestigious accommodation and views. The Property Council of Australia’s Guide to Office Building Quality is an example of a document which classifies office building quality, setting out minimum performance criteria which the market then uses to determine a building’s status.

Understandably, perhaps, tenants presented with benchmarks will typically seek performance towards the upper end of the scale in each of the categories for any given amount of rent, perceiving that greater service represents better value. This challenge was expressly acknowledged by the PCA in the 2006 version of its Guide, noting that ‘higher, bigger, larger is not necessarily better’ and that excessive demands often lead to negative environmental and financial consequences (p. 7).

### 5 Significant innovations occurring outside leases

Even without effective green lease arrangements there are numerous factors driving the creation of more environmentally and socially responsible office accommodation, both via new construction and refurbishment. Corporate responsibility has become a significant factor in the decision making of large organisations and this desire to project an image of good corporate citizenship is influencing accommodation choices, particularly among larger institutions (Colliers International, 2010). Likewise, major property owners are competing to demonstrate sustainability leadership credentials to their array of stakeholders, notably tenants, investors and staff. These demand and supply side factors are being brought together by growing evidence that environmental performance is associated with asset quality and is contributing to higher investment returns (IPD, 2011).

Governments too are encouraging this change. The City of Melbourne, for example, now offers building owners the opportunity to recover the cost of financing environmental retrofit works from tenants through a charge linked to the City’s rates collection (City of Melbourne, 2011). Likewise,

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the state of NSW has passed legislation—The NSW Local Government Amendment (Environmental Upgrade Agreements) Act 2010—to allow local councils to enter into environmental upgrade agreements with owners of buildings and finance providers as a way of funding works to improve the energy, water or environmental efficiency of those buildings.” (Office of Environment & Heritage (NSW), 2010). The Green Deal in the Energy Bill currently before the UK Parliament adopts a similar approach.\(^1\) Again, the aim is to make it easier to fund energy efficiency measures with no upfront costs, with costs recovered by a charge on utility bills.

The hope is that landlords will voluntarily make use of these funding opportunities. This may be optimistic. The UK government, in a signal that more forceful measures may be required, has made provision for a review to be undertaken of private rented properties (both domestic and non-domestic) by 1 April 2014 to compare the energy efficiency of rented properties with non-rented,\(^2\) and power to make non-domestic energy efficiency regulations which could compel landlords to upgrade properties prior to letting (but this power can be used only if it will not materially decrease the number of properties available for rent).\(^3\) It is early days for the financing arrangements in Melbourne and NSW; however, there are indications that barriers, particularly in relation to the requirement for tenant consent and the accounting treatment of liabilities, are limiting the schemes' effectiveness: there has been no evidence of take-up to-date.

These various approaches all work to provide either an incentive to improve environmental performance or easier access to capital to fund technical improvements. But none of them address the problem of what you do in the face of leases that prevent technical changes being made, nor do they address behavioural issues. Furthermore, in the majority of cases, owners can only take up the opportunities if the building is currently unlet, or if the leases allow flexibility.

6 The case for broader engagement via the lease

Earlier we suggested that relationships between building operators and occupiers are largely defined by leases, and yet those parties tend to be unfamiliar with the contents of the leases that affect them. This is a problem, of course. The benefit of making changes to the structure and content of leases between landlords and tenants will be limited if changes do not focus on improving communication and collaboration with this broader group of stakeholders. What's needed is a broader and more collaborative approach to the defining of objectives, drafting of agreements and administration of duties. As mentioned above, intermediaries involved in the leasehold negotiations have a crucial role in setting the framework.

A further step is to increase the transparency of building performance. The most eco-efficient commercial office buildings exhibit a combination of excellent design and appropriate technology, together with highly competent and committed operators. Yet a building's eco-efficiency is not readily observable to occupants (who themselves also have an influence on building performance) and other stakeholders in the way that attributes such as views, location and finishes are. The EU’s Energy Performance of Buildings Directive requirements for display certificates and the Australian Government's recently enacted Commercial Building Disclosure legislation are both designed to address this information gap. Both schemes, however, only require annual updates. Raising awareness about buildings' operational performance was a key motivator behind the development of Investa's 2009 Sustainability Report, the first of its kind to incorporate an interactive data visualisation tool (ref. figure 3) (Investa Property Group, 2010). This “bare all” approach, which provided insights into detailed monthly performance statistics at an individual building level, was expected to be popular with those staff associated with well performing

\(^1\) Energy Bill [HL] 2010-11.
\(^2\) Energy Bill [HL] 2010-11 cl 39, as at 3 June 2011.
\(^3\) Energy Bill [HL] 2010-11 cl 46, as at 3 June 2011.
buildings and less so with those operating the others\(^1\). Feedback from Investa employees was somewhat surprising. In response to the question: “What do you think the consequences of publicly disclosing detailed building-level performance statistics will be for the future performance of Investa-operated buildings,” 70 percent (N=52) from a sample of 74 staff (representing approximately 1/3 of Investa's workforce) surveyed upon their first exposure to the online data visualisation prototype rated them as either “very good” or “extremely good.” Interestingly, the proportion was higher among those working directly within buildings at the ‘property supervisor’ level (9 of 12). 55 percent of staff (N=41) rated the public disclosure of detailed building-level performance statistics as being “very good” or “extremely good” for them “personally and/or professionally”. Unsurprisingly, property supervisors working on buildings that had demonstrated significant eco-efficiency improvements were found to respond most favourably to that question, whereas those from poorer buildings were more cautious; though all were more than “slightly positive.”

Figure 3. Snapshot of the Investa 2009 Sustainability Report’s interactive data visualisation tool showing monthly data trends.

(Source: Investa Property Group, 2010)

Lease obligations that require building operators to disclose detailed performance data in a form where ‘good/bad’ performance can be easily distinguished by building occupants may therefore be welcomed or resisted, depending on the performance leading up to disclosure. It is widely accepted that people are most productive in an organisational setting when they combine high levels of competence and commitment, where commitment is defined as a combination of an individual’s motivation and confidence on a goal or task (Hersey, Blanchard, & Johnson, 2001). Clearly the

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\(^1\) Investa wanted to respond to feedback that previously reported aggregated portfolio performance data was of limited use for independent analysis because it masked much of the detail. Concerns about poorer performing buildings being perceived negatively were offset by the fact that most buildings would present well and that the publication of such data would be an ‘industry first’.

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existence of an ‘audience’ can help to increase competence and commitment levels and drive better building performance. On the flip side, it has been found that ‘if either motivation or confidence is considered low or lacking, commitment as a whole will be low’ (Hersey, et al., 2001).

Disclosure of poor operational performance without adequate support from a landlord willing to invest in the systems, training and tools to help building operators address that performance may therefore be counter-productive. Furthermore, to a poorly informed audience, more information is unlikely to deliver greater understanding or better behaviour (Janda, 2011). For these reasons it is crucial that initiatives be implemented as a suite that combines education with useful information, technology and a forum that facilitates working together.

7 A suite of examples for how we might do better

This section suggests a variety of ways the structure and content of leases can be improved to encourage better alignment between the stakeholders that influence the environmental performance of commercial office premises.

7.1 Green lease schedule

It is possible to promote environmental performance in a flexible way by agreeing a ‘Green Lease Schedule’ which can be attached to a standard lease. This can be comprehensive, or sketchy, depending on how much detail the parties wish to put in. Likewise, it can be aspirational (setting non-binding goals) or more prescriptive (setting binding goals and the consequences of breach).

An example of this approach is the Investa precedent lease, extracts from which follow:

16.1 Green Lease Schedule
(a) The Landlord and the Tenant agree that:
(i) the objectives outlined in the Green Lease Schedule are established to positively contribute to the working environment of the occupants of the Building and promote the efficient use of resources in the Building's operation;
(ii) they will each use reasonable endeavours to meet the objectives outlined in the Green Lease Schedule and to use the Premises and operate the Building in the spirit of progressively improving environmental performance as measured against the objectives outlined in the Green Lease Schedule;
(iii) they will consult with each other on issues or circumstances that may enhance environmental performance and will consider undertaking all such opportunities which are expected to have a positive impact on the work environment subject to an analysis of the costs and benefits;
(iv) they will constructively consult with each other on issues or circumstances that may detract from attaining the objectives outlined in the Green Lease Schedule;

(Investa Property Group, 2009)

The landlord commits to annual measurements, and the tenant to providing the landlord with information necessary to enable environmental reporting. The commitments are not binding and breach will not constitute a breach of the lease. Future landlords are not required to adopt the Green Lease Schedule. The problem of fit out churn discussed earlier is reduced by a tenant promise to incorporate energy, water and indoor environmental quality performance criteria into fit out design and equipment selection.

The Green Lease schedule referred to in the Investa lease is a 12 page document containing checklists used to indicate the landlord’s and tenant's wide-ranging ‘green lease’ commitments (Investa Property Group, 2007b). Each of the checklists is reproduced from the Green Lease Guide, a publication developed by Investa in collaboration with the cities of Melbourne and Sydney and the NSW Government to educate the parties about the benefits and costs of various commitments. The Guide is used in conjunction with the lease and schedule and summarises the impact of each commitment in terms of: financial cost, employee wellbeing, and corporate reputation (Investa Property Group, 2007a). The schedule is attached to every Investa lease.

7.2 Building management plans and committees

The green lease schedule discussed above differs from the Green Lease Schedule developed by the Australian Government under its Energy Efficiency in Government Operations (EEGO) policy. That policy requires, for the majority of office leases the Australian government enters into, a formal commitment to energy efficiency, including an agreement between landlords and tenants to commit to a minimum ongoing operational building energy performance standard, measured by the National
Australian Built Environment Rating Scheme (NABERS). The schedule sets out the requirement for the creation of a Building Management Committee (BMC) and how it functions, including the Energy Management Plan the committee is required to develop, how building performance is to be monitored and periodical reporting on the outcomes (Australian Government, 2010). A key advantage of this approach is the formalisation of the ongoing role of the BMC in developing, monitoring and implementing the EMP. Participants need the necessary skills to “meet the landlord or tenant’s needs and obligations”, however “they will not need to be accredited building or energy experts or hold specialist qualifications” (Australian Government, 2010).

Under the EEGO model, the BMC must include the landlord’s and tenant’s ‘energy representatives’ (Australian Government Solicitor, 2011, p. 21). There is no requirement that the committee include other stakeholders (although they are not excluded). We understand the BMC is a feature of the schedules used for larger tenancies where the government tenant has greater bargaining power (p. 20), however, we have not found evidence that government tenants are widely using the policy to drive “effective operational management” (Australian Government, 2010).

In the UK, there are few publicised examples of green lease provisions in use. The Better Buildings Partnership (BBP, a collaboration of London’s leading commercial property owners and allied organisations) produced a ‘green lease toolkit’ during 2009, but there is little evidence as to what impact it is having. This toolkit also promotes the use of a BMC which is tasked, inter alia, to set up and review an environmental management plan for the building, including specific targets (Better Buildings Partnership, 2009, pp. 9, 13, 14, 20, 21).

### 7.3 Green Improvements

Under a ‘net lease’ the ‘split incentive’ means that the landlord has limited financial incentive to install eco-efficient plant and machinery because the cost of servicing the building is borne by its tenants. A survey conducted as part of the New York City Office of Long-Term Planning and Sustainability (OLTPS) PlaNYC initiative found that 60 percent of NYC building owners believed the split incentive was an impediment to their investing in retrofits (PlaNYC, 2011). Approaches that overcome this “significant disconnect between those owning/managing buildings and those paying the energy bills” (All Party Urban Development Group, 2008, p. 25) may be crucial, therefore, in improving the environmental performance of buildings leased on a net basis. In light of this challenge, Investa amended its precedent lease to permit the recovery of costs associated with capital works directly benefitting the tenants through a special amortisation charge applied to the rent. The concern that the landlord will be able to upgrade its buildings at the tenant’s cost (expressed by tenants during the consultation process) is addressed by limiting the application to projects that will reduce outgoings costs to tenants and also reduce the environmental impact of running the property (i.e. energy and water saving projects, and some projects to enhance IEQ). The tenant’s outgoings costs are not permitted to increase (due to the improvements charge) above the amortised cost of the project without written approval from the tenant. Subject to the improvement not causing an increase in the tenant’s outgoings, the landlord can carry out a green improvement after a consultation period. The tenant must then allow the landlord to do “all things reasonably required’ to this end, even if ‘quiet enjoyment’ or access to the premises is affected.

Similar approaches have been adopted under the models recently legislated by the Victorian and NSW governments, and also for the model lease language in the PlaNYC –Energy Aligned Lease’. Under the PlaNYC model, a building owner’s capital expense pass-through is limited to 80 percent of the predicted savings in any given year. This provides the tenant with a cushion to protect against underperformance and the owner still receives the full reimbursement, however, the payback (recovery) period is extended by 25 percent (PlaNYC, 2011). Investa’s experience negotiating these clauses has been mildly positive, with the provisions making it through the negotiating phase on approximately 50 percent of occasions since they started being introduced in 2009. A large proportion of tenants has been willing to accept the fact that there may be free-riders in buildings where not all tenants have signed up to the new green improvements clauses, noting that their expense is always in proportion to their benefit. In some instances,
however, particularly where government tenants are involved, tenants have expressed the view that
the capital reimbursement provision is not justified because the landlord has the benefit of the asset
improvement and a greater likelihood of retaining tenants at lease expiry. The (landlord's) counter
to this argument is that it is invariably cheaper and more effective to conserve capital and offer a
substantial tenant incentive payment instead.

7.4 Sustainability incentive (lighting controls)
As mentioned in the earlier section on fit out churn, it is common practice for landlords to offer
financial incentives to new and renewing tenants. Depending on the level of demand, this may
amount to 20-30 percent of the total rent payable over the term of the lease. Tenants are generally
free to use the incentive at their discretion; however, it generally offsets the rent or contributes to
the cost of fitting out the premises. Although conventions vary from market to market, it is usual in
Australia for the landlord to provide floor and ceiling finishes, air conditioning and fluorescent
lights as base provisions and the tenant fits out from there (often removing part of these components
and reinstating at expiry). It is a tenant's decision whether or not lighting controls that automatically
switch off lights based on occupancy should be installed.

In 2005 Investa introduced an initiative called the Investa Greenhouse Guarantee (Investa Property
Group, 2005) designed to give tenants access to quality office lighting systems and expertise, with
guaranteed environmental and investment benefits. While some tenants were motivated to take up
the offer, it was found that many simply lacked the time and inclination to invest in lighting controls
even though they would, in typical cases, deliver guaranteed returns on investment of 30 percent
and better. In response to this inertia, the company decided to introduce a 'sustainability incentive'
that can only be used to pay for lighting controls. An arrangement was agreed with the partner
company delivering the Greenhouse Guarantee to provide the controls for a fixed rate per square
metre equivalent to the incentive being offered. The controls specification and all associated details
are described in a schedule to the lease. Under this arrangement, where tenants must introduce
automatic lighting controls if they are to receive the incentive, take-up is now in the order of 70
percent.

7.5 Re-work counter-productive clauses
Many clauses designed to protect the parties' interests have unfortunate side-effects. Examples
discussed throughout this paper include 'make good' requirements that oblige tenants to return
premises to the state that existed prior to their fit out, even when this might involve stripping out
still valuable materials, alterations clauses that pay no attention to environmental impact, and
temperature control bands that take no account of the weather outside or occupants' clothing
choices. These things can be changed by amending standard lease clauses to take account of
environmental impact. So, for example, the NEEA green lease specifies that all tenant improvement
work must be performed in accordance with sustainability practices and maintain LEED
certification for Commercial Interiors certification (LEED, or Leadership in Energy and
Environmental Design, is an internationally recognised green building certification system,
developed by the US Green Building Council) (NEEA, 2011). Likewise, a model clause in the BBP
green lease toolkit provides that if proposed tenant alterations adversely impact on energy and water
efficiency the tenant 'will consider, [and, where reasonable, implement], the landlord's suggestions
to minimise this impact (Refer to BBP toolkit, p. 23). The cautious approach advocated by BBP
reflects the commercial challenge in agreeing changes to standard leasing practices.
Investa's lease, as well as emphasising the role of the schedule and the broader collaboration that
entails, also seeks to eliminate some of the more problematic 'industry standard' clauses.
For rent reviews, the independent valuer must be instructed to take into account the sustainability
incentive and the green improvement payments to avoid any erosion of the value of these when
making a determination.
The landlord may require the tenant to *not* remove improvements to the premises made by the
tenant that, in the landlord's opinion (acting reasonably), improve the environmental performance of
the premises. There is a similar provision in the BBP green lease toolkit (Refer to BBP toolkit, pp. 23, 24).

Some of these anomalies can alternatively be addressed by negotiating a green lease schedule. However if the schedule is not binding, as is the case with the Investa example provided above, this may leave an unsatisfactory degree of uncertainty. This was the motivation for the Northwest Energy Efficiency Alliance when it recently negotiated the inclusion of a variety of green aspects into the lease itself for its new premises in Portland’s Commonwealth Building (NEEA, 2011). The advantage, as described by NEEA, is that “if the building sells, the next owner will be required to stick to their predecessor’s commitments” (p. 6).

8 Concluding remarks

‘Green leasing’ has become the catchphrase to represent new approaches to leases that aim to promote improved environmental performance. Although we also use this language, it carries the risk of becoming stereotyped. In sum, what we argue for is an approach to leasing and managing let space that enables and encourages innovation, co-operation and collaboration. This involves not simply a re-examination of the structure and content of the lease itself but also the relationships between the landlord and tenant, building operators and users of the space so that practices take account of how occupiers behave and what occupiers want out of buildings. Operators will need to be free to innovate in the way they run buildings, to be incentivised to do so, and to engage meaningfully with occupants regarding these kinds of issues. Furthermore, the content and structure of agreements between landlords and tenants will need to be understood by this wider group of stakeholders. The following recommendations suggest ways of encouraging innovative leasing that put environmental concerns at the core of the relationship:

1. Start the discussions early in the negotiating process, make sure that agents understand the environmental goals, but don’t leave it only in the hands of agents.
2. Express clearly what constitutes good environmental design and performance (e.g. in green lease schedules).
3. Consider whether to use language that gives enforceability and will also bind future owners.
4. Commit to transparency and accountability for performance that goes beyond regulatory requirements.
5. Develop processes, such as a BMC, noticeboards, etc., that enable all stakeholders to be actively involved in the pursuit of, and commitment to, environmental goals for the duration of the lease.
6. If it is a net rent lease, use clauses that enable environmental improvements to be made in a way that overcomes the problem of the split incentive.
7. Review standard lease terms to consider their potential impact on environmental performance (particularly the alterations, making good, and rent review clauses).
8. Consider how control and responsibility are aligned within the lease, as in the lighting controls example considered above.
9. Build in adaptability for changes in technology, occupant expectations and legislation.

9 References


Public Participation and Environmental Impact Assessment

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Abstract:
With the adoption of the Aarhus Convention, the question of whether there is a need for public participation in environmental decision-making has replaced the question of possible ways of public participation and a manner of achieving maximum effects from public participation. One of the procedures where the public is a participant in the decision-making is the environmental impact assessment. This paper analyzes the types of public participation in environmental decision-making, the benefits that could be achieved by means of public participation in decision-making in the environmental impact assessment, as well as preconditions for adequate public participation in environmental impact assessment. The paper also explores the development process of impact assessment of environmental legislation in Serbia and the transformation of the public's right to participate in environmental impact assessment. The review is provided on the relevant case law of Serbia, and the Comparative and Case Law are pointed to.

Keywords:
Environmental Impact Assessment, environmental values, Serbian environmental law, public participation

1 Introduction

The concept of the need for public participation in environmental decision-making is found in the Stockholm Declaration on the Environment. As stated in the first Principle of this Declaration: „Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations. In this respect, policies promoting or perpetuating apartheid, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated‖. The importance of public participation in environmental decision-making is also highlighted in Principle 10 of Rio Declaration: „Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.” The basic principles of public participation in environmental decision-making were established by Aarhus

From the moment of Aarhus Convention's adoption, the key question was no longer whether there is a need for public participation in environmental decision-making, but how to achieve optimal public participation in environmental decision-making. The paper analyzes the types of public participation in the environmental impact assessment, requirements to be met for the best results of public participation and effects achieved by involving the public in the environmental impact assessment. This paper presents the current solutions and reviews the development of environmental impact assessment in Serbian legislation. In addition, the paper points to the European Court of Justice.

2 Literature Review

The public is a necessary participant in the process of making environmental decisions in a formal and material sense. In a formal sense, the public, as an entity environmental decisions relate to, should be entitled to participate in making these decisions (Holder and Lee, 2007; Dryzek, 1997; Steele, 2001; Kelman, 1997; Fisher, 2010). In a material sense, the public is an essential participant in the process of making environmental decisions, because it contributes to the quality of decision-making in environmental matters (Holder and Lee, 2007; Bell and McGillivray, 2008; Nadal, 2008).

Environmental impact assessment is a unique procedure in which a decision is made on initiating projects which, based on estimates and taking into account all the information about the possible effects on the environment, could have an impact on the environment (Holder, 2004; Bina, 2007). As there are different forms of public participation in environmental decision-making, the paper discusses the forms that are unique to the process of environmental impact assessment (Morriss and Therivel, 2009). In addition, it is pointed to specific objectives necessary to achieve public participation in environmental impact assessment (Lee and Abbot, 2003), as well as prerequisites for adequate public participation (Bell and McGillivray, 2008; Kysar and Salzman, 2003; Felleman, 1997).

The paper points to the current statutory provisions of public participation in the environmental impact assessment in Serbia and the degree of compliance of Serbian legislation with the Aarhus Convention after the adoption of the Law on Ratification of the Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters, May 2009. (Drenovak Ivanovic, 2011a). In addition, paper provides a review of the development of a legal framework governing the procedures for environmental impact assessment and indicates the change in attitude towards public participation (Todic and Durac, 2003a).

3 Types of Public Participation

"Recent decades have seen the emergence of a very widespread consensus that "public participation" is a crucial element of good and democratically legitimate environmental decision-making. Consensus around public participation can be seen at every level, international, regional, national and local." (Holder and Lee, 2007, pp. 85; Rosener, 1997). In this sense, the key question of modern environmental law is not the existence of need for public participation in environmental decision-making, but the analysis of procedures and ways in which the public can take part in the protection of basic environmental values and assumptions to be met in order to give maximum public participation results (Schrader-Frechette, 1985; Fiorino, 1989).

The notion of public participation in environmental decision-making can be defined in a broad and narrow sense. In a broad sense, public participates in environmental decision-making with every activity that aims at influencing the practice of the legislative and executive powers regarding the protection of essential environmental values. Public participation understood in such a manner is present when the public elects representatives of legislative power in parliamentary elections, who

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will legislate in the field of environmental protection and influence the formulation of environmental policy (Bell and McGillivray 2008). In a narrow sense, public participates in environmental decision-making only when there is a possibility, stipulated by law, of its participation in the decision-making policy, plan or strategy in the field of environmental protection or in the procedures of issuing certain permits that are accompanied by environmental impact assessment.

The basic criterion for distinguishing forms of public participation in the narrow sense may be the moment of making public participation in environmental decision-making possible. We distinguish between cases in which the public has the opportunity to participate as early as when policies, programs and strategies of environmental protection are formulated, and those in which the public can only participate in the final stage of making concrete decisions. In the first case, it is a deliberative participation, which includes public participation in the process of achieving agreement on the grounds of environmental protection (Steele 2001). The public, in this case, is an indispensable party in formulation of environmental policy and has the ability to participate in the formulation of the general environmental policies and strategies that are later applied to environmental protection in a particular case. However, if the public has no opportunity to participate at the early stages of environmental decision-making, but only at the stage where decisions have already been formulated, and the public is given the opportunity to express an opinion on specific decisions, it is a stakeholder participation (Bell and McGillivray, 2008). This form of public participation sees the public as an important factor in achieving the protection of environmental values. However, the public, in this sense, is the party with no role in determining the extent and direction of environmental protection, but the one which, by expressing an opinion on already formulated decisions, contributes to their better quality. An example of this form of public participation is found in the procedures of issuing permits that are accompanied by the environmental impacts assessment, such as permit to use the land, or building and occupancy permits.

The distinction has not only theoretical, but also a practical value. If the model of deliberative participation is accepted and obligation of public authorities to provide the possibility of participation in the formulation of plans, programs and strategies of environmental protection is established, then the public has the ability to participate in making these documents. Otherwise, the public can, as an expression of desire to achieve best practice or by informing the public about the activities in the field of environmental protection, invite the public to express their opinion. However, public opinion has no binding force (Arnstein, 1996). Administrative authority may consider an opinion disclosed in such a manner when making plans, programs or strategies for environmental protection, but is not obliged to. In addition, the administrative authority is not obliged to explain the reasons why public opinion was not taken into account.

Since the public is largely engaged in the process of environmental impact assessment and since the public is guaranteed not only the right to participate in environmental decision-making, but also to the legal protection of this procedural right in the environmental impact assessment, there will be a discussion on public participation in the procedure of environmental impact assessment further on.

4 The Index of Environmental Impact Assessment Procedure

4.1 The Term of Environmental Impact Assessment

In terms of the Convention on Environmental Impact Assessment\(^\text{1}\) in a transboundary context, environmental impact assessment represents the assessment of the impact that planned activities may have on the environment, particularly considering alternatives to the proposed activities and measures which, in the case of project approval, are necessary to be applied in order to accomplish

comprehensive environmental protection (Lawrence, 1997). Environmental impact assessment may also be defined as a unique procedure in which a decision is made on initiating projects which can have an impact on the environment, based on estimates and taking into account all the information about the possible effects on the environment (Morriss and Therivel, 2009). It is a procedure that expresses the need to identify and predict the impact of certain legislative proposals, policies, programs and projects on the environment and human health, and to interpret environmental information that are relevant in a particular case (Munn, 1979). If the environmental impact assessment is compared with other instruments of environmental protection, we may see that the dominant feature of impact assessment is prevention.

Environmental impact assessment is applied to projects which could have an impact on the environment and which are in a planning or construction phase, as well as those related to technological change, reconstruction and capacity expansion, termination of work and removal of projects. In addition, the subject of environmental impact assessment are projects that are not approved for construction, or are used without the use permit, and which have been realized without the implementation process of environmental impact assessment.

The procedure of environmental impact assessment in Serbian legislation is carried out in two or three phases. The first phase is deciding on the need to assess the environmental impact. This phase does not apply to projects for which impact assessment is required. The second phase is determining the extent and implications of environmental impact assessment study. This phase applies to projects with demand for environmental impact assessment at the previous phase, as well as to those projects for which the impact assessment is required. The third phase means deciding on the approval of the environmental impact assessment project study.

If the project in question is the one that requires environmental impact assessment or the one with the identified need for impact assessment, the applicant can not begin with its execution without the consent of the competent authority on the environmental impact assessment study. It further means that these projects can not be accessed without a prior procedure of environmental impact assessment and adequate public participation in making the study. In this sense, the environmental impact assessment represents the realization of idea of participatory democracy in environmental decision-making, i.e. ideas of the necessity of consultation and public participation in decision-making in cases of possibilities for certain projects, plans, legislative proposals and measures to have an impact on the environment (Holder and Lee, 2007).

Procedure of environmental impact assessment encompasses the right to access environmental information in a broad sense, as part of the right to access public information, the right to access environmental information in the narrow sense, as a right to access those environmental information that are related to the particular stage of the environmental impact assessment procedure, the public's right to participate in decision-making on the environmental impact assessment, and the right to legal protection of access to environmental information in the narrow and broad sense, or, in other words, the protection of the public's right to participate in the stages of environmental impact assessment (Drenovak Ivanovic, 2011b). An illustrative example that indicates the necessary connection of these elements is the case of the European Court of Justice *Djurgarden-Lilla Vartans Miljoskyddsforening*. The Court, among other things, expressed the following opinion: „Thus, the fact relied on by the Kingdom of Sweden, that the national rules offer extensive opportunities to participate at an early stage in the procedure in drawing up the decision relating to a project is no justification for the fact that judicial remedies against the decision adopted at the end of that procedure are available only under very restrictive conditions.― (Ryall, 2010).

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4.2 Environmental Impact Assessment in Serbia

Procedure of environmental impact assessment in Serbia is applied according to the Law on Environmental Impact Assessment. Facilities, or activities that are subject to environmental impact assessment are determined by the List of projects under EU Directive 85/337/EEC as amended by the 97/11/EC.

The legal framework of implementation of environmental impact assessment in Serbia are: Law on Environmental Impact Assessment (Official Gazette of the Republic of Serbia, no. 135/04 and 36/09), Law on Strategic Environmental Impact Assessment (Official Gazette of the Republic of Serbia, no. 88/10), Decree on the List of projects for which EIA is mandatory and Lists of projects that may require environmental impact assessment (Official Gazette of the Republic of Serbia, no. 114/08), Regulation on the contents of requests for deciding on the need for impact studies and content requirements for determining the scope and content of the environmental impact assessment study (Official Gazette of the Republic of Serbia, no. 69/05), Regulations on the contents of the environmental impact assessment study (Official Gazette of the Republic of Serbia, no. 69/05), Regulations on the content, appearance and manner of keeping public records on executed actions and decisions of the environmental impact assessment (Official Gazette of the Republic of Serbia, no. 69/05), Regulations on the work of the technical committee for the environmental impact assessment study evaluation (Official Gazette of the Republic of Serbia, no. 69/05), Regulations on public release, presentation and public discussion of the environmental impact assessment (Official Gazette of the Republic of Serbia, no. 69/05). The legal framework governing the rights of public participation in decision-making in environmental matters in Serbia complies with the Aarhus Convention (Article 6-8). Aarhus Convention has become a part of Serbian legal system by adopting the Law on Ratification of the Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters in May, 2009.¹

The adoption of the Environmental Impact Assessment Law and the Law on Environmental Protection in 2004 made significant progress towards the promotion of public participation in the environmental impact assessment. Previous legislation did not recognize the public's right to participate in decision-making in the process of environmental impact assessment. Under article 16 of the Law on Environmental Protection of the Republic of Serbia (Official Gazette of the Republic of Serbia Nos. 66/91, 83/92, 53/93, 67/93, 48/94, 44/95 and 53/95), an analysis of the environmental impact had to be made with respect to all facilities and works that may put the environment at serious risk. This analysis had to be approved by the ministry in charge of environmental affairs and such an approval forms part of the urban planning and technical documentation. The law did not provide for public participation in the decision-making process. In practice, the absence of legally established opportunity for the public to participate in the environmental impact assessment has led to serious difficulties. An illustrative example is the case from 1998 where plaintiffs appealed against the approval of an environmental assessment, seeking review of wrongly established facts in the first detailed analysis, including area of land involved, the level of dust in the air and on the ground, noise produced by the quarry, and the safety of citizens around the quarry. In this case, there was no public participation in the development of the detailed analysis. Regulations of the Federal Republic of Yugoslavia and of the Republic of Serbia did not address public participation in decision-making regarding the preparation of environmental assessments. Consequently, there was no basis for the local residents to claim that their participation rights had been violated. The only opportunity for residents to challenge the conclusions, therefore, was to appeal against the decision approving the detailed analysis on the basis of legal insufficiency.” (Todic and Durac, 2003a, pp. 190)

In the existing legislation in Serbia, public's right to participate in environmental impact assessment is standardized. After the competent authority has notified the public of application filed for environmental impact assessment and the application filed for determining the scope and content of

the environmental impact assessment study, interested agencies, organizations and the public can submit their opinion within 10 days. It is a possibility for the public concerned to take part in the first phase (or in the second phase in the event of required environmental impact assessment), i.e. before making decisions on approval of a study on the environmental impact assessment when interested public can give an opinion about the need to perform impact assessment, and on the scope and content of the study. In addition, the public concerned has a right to participate in decision-making in the second phase of environmental impact assessment. This means that the public has a right to be informed on filed application for determining the scope and content of a study, within 10 days of receipt of the application to determine the scope and content, and the public concerned has the opportunity to express an opinion on the application within a specified period of time. In order to prepare for a public hearing on the environmental impact assessment study, the competent authority is obliged to inform the project sponsor, interested bodies and organizations and the public about the place and time of public access, public presentation and public discussion on the impact assessment study within 7 days of receipt of the application for approval of impact assessment study. In order for the public to prepare in the best possible way for a public hearing, it is normalized by Environmental Impact Assessment Law that a public hearing may be held at earliest 20 days from the date of notifying the public.¹

4.3 What is the Purpose of the Environmental Impact Assessment Procedure?

Involving the public in environmental impact assessment leads to an adequate and effective protection of the right to a healthy environment and to establishing a balance between the needs of present and future generations in distinguishing between environmental goods and environmental "evils." The question that arises is whether the goal of environmental impact assessment is the decision making, which is a product of compromise of administrative bodies, industry and the public, in a particular case, as a participant in the process, or the goal is absolute protection of the environment which includes compliance of proposed activities with the development policy? Study on the environmental assessment is a document in which the analysis and professional assessment of environmental factors' quality are presented, as well as their sensitivity to the area of planned activity, for which the environmental impact assessment procedure is carried out. The study analyzes the interplay of existing and planned activities. In addition, the study contains an element that refers to the prediction of direct and indirect harmful effects of specific project on environmental factors. This element brings the environmental impact assessment closer, as well as the process of formulating environmental policy. The answer to the question what is the difference between these two procedures depends on the answer to the question what is the objective of environmental impact assessment.

The environmental impact assessment is the preventive measure of environmental protection during which all data, necessary for determining the potential adverse impact of a specific project on the environment, are collected. If potential harmful effects are determined, it is necessary to compare the proposed activity with alternative measures. If the proposed activity is the best solution in a particular case, measures are established and proposed in the process of environmental impact assessment, by which, in a particular case, adverse effects can be prevented, reduced or eliminated. This means that the impact assessment procedure considers both positive and negative effects of the implementation of specific, concrete activity and impact of these effects on the environment. Environmental impact assessment study should not contain an analysis of impact of specific project on the implementation of development policies. This is because a study on the environmental impact assessment is produced by legal person or entrepreneur, if he/she is registered in the appropriate register for activities of design, engineering and making studies and analyses, and multi-disciplinary team consisting of persons qualified to analyze each of the factors of the environment. These persons are not competent to define the environmental and development policy, plan or program, but to determine the environmental impact of a specific project in a specific case.

¹ Law on Environmental Impact Assessment, Article 20 paragraph 3.
The objective of environmental impact assessment is establishing the impact of the proposed project or activity on the environment, rather than analysis of compliance of implementation with developmental or environmental policy of the state (Weston, 2002). If it were allowed for environmental impact assessment study to contain this analysis, the public could be mislead about the real strengths and weaknesses of a particular project. In Comparative Law, an illustrative example is found in the case of *West Coast Wind Farms Ltd. v. Secretary of State and North Devon DC*¹ (Leitch, 2010). In this case, the opinion was expressed that the aim of determining the development state policy is achieving comprehensive protection of environmental values. This procedure requires identifying interests that influence its formulation and, by means of balancing these interests determining a unique development policy. The "balancing" of competing interests should take place when it is being decided whether or not to authorize the development - a decision which should be taken by elected and accountable representatives, as part of a political process.” (Holder and Lee, 2007, pp. 565)

5 What is Achieved with Public Participation in the Process of Environmental Impact Assessment?

Response to a question about the goals that can be achieved by introducing the public in environmental decision-making can be approached from a philosophical standpoint and the standpoint of positive environmental rights. However, analysis of the goals to be achieved by public participation would be incomplete if we access it only from one or another point of view (Steele, 2001). In a further analysis, the basis is a Positive Environmental Law, and the additional elements are philosophical points of view on public participation.

Starting from the standpoint of Positive Law, the role of the public in environmental decision-making depends on whether this right, in the case of environmental protection, is stipulated by law. If so, public participation in environmental decision-making process is a condition for its legitimacy and viability. „As well as potentially improving results, public participation might be used to improve procedural legitimacy, tempering unease with the democratic condition of environmental decision-making.—(Lee and Abot, 2003). In addition, if the law stipulates the obligation of government to allow the public expression of opinions in the process of environmental impact assessment, this means that the legislator had in mind the fact that public participation contributes to the quality of their decisions when regulating such a provision. Improving the quality of decisions in the process of environmental impact assessment is *ratio legis* for the standardization of mandatory public participation. Thus is realized an idea expressed in the Preamble to the Aarhus Convention: „improved access and public participation in decision-making enhance the quality and the implementation of decision.”²

If the Law on Environmental Impact Assessment did not standardize public's right to participate in decision-making, the public has a completely different role. First of all, by participating in a legally non-binding discussions, the public can express the views on certain activities that are subject to environmental impact assessment. In this way, the administration authority will be acquainted with the role that certain values have to the public in environmental decision-making (Steele, 2001; Lee and Abbot 2003). Consequently, although not legally binding, public opinion expressed in this way can influence the decisions of administrative bodies.

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¹ *West Coast Wind Farms Ltd. v. Secretary of State and North Devon DC* (1996) JPL 767.

6 Theses of Adequate Public Participation in Environmental Impact Assessment

, Technological risk disputes are not just discrete technical or ethical disagreements. They concern how collective institutions should identify, understand and take action in relation to such risk.— (Fisher, 2010, pp. 11). In that sense, it is necessary to take account of all aspects of public participation in the environmental impact assessment as a collective that identifies environmental risk and takes it into account when forming an opinion on its acceptability.

Public participation in the process of environmental impact assessment has a quantitative and qualitative dimension (Macnaghten and Jacobs, 1997; Duram and Brown, 1999). Quantitative dimension is reflected in the fact that the introduction of public participation in environmental impact assessment brings an additional element to this process that may influence the decision of the administration. In this sense, the administrative authority is obliged to consult and / or include disclosed public opinion in the moment when, using the delegated discretionary power, decides on the impact that the proposed activity may have on the environment. Public participation in qualitative sense means that the public, by expressing opinions in the process of environmental impact assessment, can contribute to perception of those aspects of proposed activities which administrative body would not have had in mind when making decisions, which are necessary for making lawful and appropriate decisions. In this sense, public participation is not an element that further burdens the environmental impact assessment, but an element without which this procedure does not lead to achieving environmental justice in terms of substance. The environmental impact assessment is a procedure in which it is necessary to consider alternatives of the proposed activity. The role of the public in qualitative sense is particularly pronounced in this matter. The public, in this case, has an opportunity to present not only an opinion in terms of the proposed activity, but to point out whether the existing alternatives lead to more adequate environment protection.

6.1 Informing the Public

In order for public to make a contribution in qualitative and quantitative sense to realization of environmental impact assessment, it is necessary to meet several conditions. First of all, it is the proper informing of public, i.e. allowing public assess to environmental information in broad and narrow sense (Kysar and Salzman, 2008).

In the legislation of Serbia, in the process of environmental impact assessment, the public has a right of access to environmental information in the broad and narrow sense (Drenovak Ivanovic, 2011b). The right of access to environmental information in the narrow sense refers to access to any information relating to the procedure of impact assessment. It is the data about the holder of the project, name, type and location of the project whose implementation is planned; time and location of potential access to the data; information and documentation from the requirements of the project holder; the nature of decision to be made on the basis of an application; the name and address of the competent organs. The competent authority has a duty to inform the public of these data within ten days of receipt of proper application on the need to assess the environmental impact. In addition, it is essential that the public has a right of access to environmental information in the narrow sense in the procedures of environmental impact assessment, established by law. An illustrative example in the comparative practice is found in the case R (on the application of Edwards and another) v Environment Agency and others. On 16 April 2008, the House of Lords handed down judgment in this case and Lord Hoffmann stated „when the whole question of public involvement has been considered and dealt with in detail by the legislature, I do not think it is for the courts to impose a broader duty. The right of access to environmental information in a broad sense is the public's right of access not only to information relating to the specific procedures for environmental impact assessment and are

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1 Law on Environmental Impact Assessment, Article 10.
part of the request on the need to assess the environmental impact, but also to access all the information which the public can access, and are in connection with the protection of essential environmental values. Since forming attitudes on environmental values is a key element in (non)acceptance of environmental risk on the public's side, the right of access to environmental information in a broad sense is the basis for proper public participation in the process of environmental impact assessment (Kelman, 1987; Dryzek, 1997; Fournroy, 2003). The right of access to environmental information in a broad sense is of particular importance for the process of environmental impact assessment, because it allows public access to a variety of environmental information, which enables educating the public about the state of the environment and awareness about the environment as a whole, whose certain aspects may be exposed to project influence, for which the environmental impact assessment is done (Felleman, 1997). This is the type of information held by public authorities, related to the threat or the protection of public health and the environment. The applicant is not obliged to give reasons for access, in the request for access to this information, but the law regulates the assumption that the justified public interest to know is always present when it comes to environmental information held by government. The right of access to environmental information in the narrow and broad sense is the basis for public's qualitative participation in the environmental impact assessment.

6.2 Entrusting the Public with Possibility to Participate in the Environmental Impact Assessment

The second condition that must be met in order to achieve maximum results of public participation is entrusting the public with an opportunity to participate in a form that is optimal in a particular case. In the earlier legislation of Serbia, before introducing the Law on Environmental Protection and the Law on Environmental Impact Assessment in 2004, there has been no right of public to participate in decision-making in the process of environmental impact assessment. It was planned for environmental impact assessment to be initiated with an investor's request for approval of the analysis of the object impact. In doing so, the citizens, as well as public, were aware of the existence of decision of giving consent to the environmental impact assessment only when the decision was final, or when the investor has already begun implementation of the activities for which the permit was issued. In such circumstances, the public had the opportunity to challenge the legality and appropriateness of the authority's consent on the analysis of environmental impact, primarily by filing complaints and petitions (Todic and Durac, 2003b). For filing the appeal, as a regular legal remedy or any of the extraordinary legal remedies, it was necessary that the public is recognized as a party to the proceedings. Only in those cases where the public was recognized as a party to the proceedings, the public had an insight into the decision, and environmental information in the narrow sense, i.e. information regarding the process of environmental impact assessment. In practice, this led to reduced opportunities for the public, even after the decision on the environmental impact assessment, to challenge its regularity, because it was impossible to access not only environmental information in the broad and narrow sense, but the challenged decision itself. Requirements of the public concerned, in accordance with the previously applicable legislation, were considered as an appeal, if the appeal had been lodged in time. Requirements that were not made in the appeal period have been considered as a proposal to reopen the administrative proceedings, the demand for the abolition of emergency executive orders, or request for cancellation or abolition of final decision on the basis of official control (Todic and Durac, 2003b). Bearing in mind the above example, we conclude that the effect of public participation is largely dependent on the way the public is allowed to participate in the environmental impact assessment. If the public is not identified as a participant, and is not provided adequate information, despite the finding of alternative ways to participate in the environmental impact assessment, the public will not be able to contribute to decision-making.

1 Law on Free Access to Information of Public Importance, „Official Gazette of the Republic of Serbia”, no. 120/04, Article 15 paragraph 4.
To achieve maximum results of public participation, it is not enough to stipulate such possibility by law. It is also necessary to distinguish cases in which the public participates in the environmental impact assessment, i.e. impact assessment of specific activities on the environment, from those in which the public participates in the strategic environmental impact assessment, i.e. in the preparation of policies relating to the environment. Proper public involvement in these activities can not be achieved in the same way. Namely, in case of public participation in the environmental impact assessment, the question of informing the public concerned, which has a significant role in relation to the public, is getting more attention. In fact, environmental information about the particular impact assessment procedure must be made public, but only the public concerned has an opportunity to present an opinion which the appropriate authority must take into account when deciding on the request to assess the impact on the environment, the request for determining the scope and content of impact assessment study, or a decision on approval of the environmental impact assessment study. In this sense, it is necessary to carefully identify who makes the public concerned, how to achieve timely and complete informing of public identified in such manner and how to include it in the assessment process from the initial phase.

When it comes to public participation in the strategic environmental impact assessment, the key question is at what stage the public should be involved. In a environmental impact strategic assessment, it is not necessary to identify the public concerned. Consequently, access to public informing in this case is different. The strategic environmental impact assessment procedure in Serbia is divided into three phases: a) preparation, which aims at decision-making on a strategic impact assessment, b) drafting stage of the environmental impact assessment report, and c) phase of consent, i.e. adoption of the report. In preparation of the decision on strategic assessment elaboration, or the decision on non-elaboration of the strategic assessment, the competent planning authority shall request from the competent environmental protection authority and other authorities and organisations concerned to submit their opinions, but not from public concerned or public.\(^1\) In a report on strategic assessment, as the second phase, the starting point of strategic assessment, among other things includes the results of previous consultations with authorities and organisations concerned that are relevant from the aspect of objectives and evaluation of potential impact of the strategic assessment.\(^2\) Public participation is provided only at the stage of deciding on the strategic impact assessment, i.e. in the third and final phase. The authority responsible for the preparation of plans and programs have an obligation to ensure public participation in the review report on strategic assessment before filing the application for approval of the strategic assessment report. „By favoring the participation of authorities and organizations to the public, and not including the public concerned in the process of making strategic assessment from the first phase, the level of public involvement in the process of preparing reports on the impact assessment is reduced. — (Drenovak Ivanovic, 2011a, pp. 67).

One of the serious obstacles to implementation of the Aarhus Convention and Serbian legislation harmonized with it is little interest of citizens to participate in the procedures of impact assessment on environmental projects at the provincial level.\(^3\) In order to stimulate public interest in participation in decision-making on matters of mutual interest, primarily those relating to environmental protection, the Serbian government adopted the Decree on the Office for Cooperation with Civil Society in 2010. It was envisaged that the Office carries out tasks for the Government relating to the coordination of public administration bodies and encouragement of cooperation between public administration bodies with associations and other civil society organizations for the purpose of their participation in the preparation and monitoring of strategic documents and initiation of the adoption of regulations and other by-laws. Public education in

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\(^1\) *Law on Strategic Environmental Impact Assessment*, Article 11, paragraph 1.

\(^2\) *Law on Strategic Environmental Impact Assessment*, Article 13, paragraph 1, item 6

environmental protection and rights and the establishment of coordinated cooperation between government and civil society should contribute to the greater interest of the public to participate in decision-making in environmental matters.

7 Conclusion

Environmental impact assessment is a complex process that includes several basic rights: the right of public to access environmental information in the broad and narrow sense, the right of public (concerned) to participate in decision-making and the right to protection of rights of access to environmental information and public participation. The paper analyzed the public's right to participate in decision-making in the environmental impact assessment.

In the modern environmental law, it is accented that the need for involving public in environmental decision making is indisputable. The paper analyzed the types of public participation in environmental decision-making, the benefits that can be achieved by public participation in decision-making in the environmental impact assessment, as well as prerequisites for public participation in the environmental impact assessment that lead to achieving maximum results. In this sense, it was established that the public, by participating in decision-making in the process of environmental impact assessment, contributes not only quantitatively but also qualitatively to impact assessment procedure. Quantitatively, because it introduces another element in the process of impact assessment that has an impact on the formulation of the decision, and qualitative, because the public contributes to the substantiality of concrete decisions by expressing their opinion. In addition, by means of expressing opinions in the environmental impact assessment, the public can contribute to the quality of concrete decisions, even though the law has not stipulated the right for participation in a particular stage. When the administrative body consults the public on certain activities which induced environmental impact assessment, it is under no obligation to present reasons for the decision and the reasons for accepting or not accepting the arguments put forward by the public. However, in this way, the administrative body gets important information about public attitudes on environmental values and the manner public accepts environmental risks.

In order for the public to have ability to competently participate in the environmental impact assessment, two conditions must be fulfilled. Firstly, the public must be provided with timely access to information regarding the environmental impact assessment, as well as information about the state of the environment. In addition, it is necessary to stipulate the public's right to participate in the environmental impact assessment. This results in public interest to assess the impact on the environment and the state of the environment, public's sense that it has an obligation to make decisions on environmental issues of which he is a part of, as well as better public understanding of issues relating to environmental risks and environmental impact assessment.

8 References


Abstract:
Being passed in 2005 and coming into effect on January 1st 2006, the Renewable Energy Law is the first comprehensive policy document that directly aims to promote renewable energy in China. It also acts as the legal basis for country-wide activity to drive renewable energy and to increase the share of electricity generated from renewable energy. During the past 5 years since the Renewable Energy Law’s announcement, however, little research has been done to give a close look at how the law really works in practice, which accordingly becomes the focus of this article. By making a case study on Shanghai Green Electricity Scheme (Scheme) which creates incentives to drive renewable energy by local government in strict compliance with the Renewable Energy Law, the article explores the existing problems and barriers of this Scheme and discusses whether the Renewable Energy Law has addressed them and provided possibility to solve them in the long run, hoping to benefit the future law making and enforcement regarding renewable energy in China.

Keywords:
green electricity scheme, incentives, renewable energy law

1 Introduction

After 30 years’ economic growth, China has become a divided society with remarkable growth rate on one hand, but also with deteriorating environmental conditions and astonishing resource scarcities on the other hand (Hallding, Han and Olsson, 2009). When the Hu Jintao-Wen Jiabao (Hu-Wen) administration took office in late 2002, they took a decisive shift in focus from the single-minded growth policies of the Jiang Zemin era to a broader notion of social development—in particular the search for an alternative path to industrialization –featuring high technology, good economic returns, low resource-consumption, low environment pollution and the full use of human resources” (Xinhua, 2006) under “the new guiding principles of Scientific Development Concept and the building of a Harmonious Society” (Halling, Hand and Olsson, 2009). The Hu-Wen leadership’s development strategy has provided a historical opportunity for China to develop renewable energy and go green.

Against this backdrop, China has done a lot of right things to promote the development of renewable energy, including but not limited to developing an extensive set of laws, policies and programs in the pursuit of renewable and low carbon energy, setting a series of renewable energy related targets, making tremendous investment in renewable energy field and participating in global efforts to facilitate renewable energy technology transfer and cooperation.

Among these policy measures, the announcement of Renewable Energy Law has been regarded as the most effective one and attracted the most attention. Coming into effect on January 1st 2006, the Renewable Energy Law is the first comprehensive policy document that directly aims to promote renewable energy in China. A lot of literatures talk about the significant role Renewable Energy
Law has played in stimulating renewable energy and helping China to win a leading position in this field. However, as Elizabeth mentioned, “even when you are looking at these big numbers that are coming out of China today, I think it really pays to give a close look at what is really happening on the ground” (Larson, 2010). Although 5 years have passed already since the announcement of the Renewable Energy Law, few people have tried to examine or evaluate its real effect, particularly in the following aspects: In what way the law has been enforced by local governments? To what extent the law has contributed to the generation and demand of renewable energy? What have been the pros and cons of the law? Bearing these questions in mind, this article makes a case study on Shanghai Green Electricity Scheme, a scheme creating incentives to drive renewable energy by local government in strict compliance with the Renewable Energy Law. Specifically, the article examines the existing problems and barriers of this Scheme and discusses whether the Renewable Energy Law has addressed them and provided possibility to solve them in the long run, hoping to benefit the future law making and enforcement regarding renewable energy in China.

2 Overview of Shanghai Green Electricity Scheme

2.1 The Scheme in a Nutshell

The Shanghai Green Electricity Scheme offers electricity consumers in Shanghai the opportunity to “green” their electricity consumption by buying some amount of green electricity for which a premium needs to be paid. Through participation, Shanghai electricity consumers including both enterprise consumers and individual consumers can directly contribute to CO2 reduction and environmental protection. The Shanghai Municipal Government guarantees that the additional payment for Green Electricity will be used to develop additional renewable electricity generating capacity such as wind farms. An independent supervising body is responsible for auditing the green electricity accounts and publishing the audit results to ensure that no more green electricity is sold than produced and that the consumers’ additional payment is used exclusively for developing renewable electricity generation capacity (Shanghai Green Power, 2005).

2.2 Guiding Principles

2.2.1 Voluntary Purchase
Consumers purchase green electricity on a voluntary basis.

2.2.2 Government Pricing
At present, the green electricity shall temporally not participate in the price competition on the electricity market for going onto the grid. Its price shall be set by the government according to the principles of “Being beneficial to the development and utilization of renewable resources, being economic and reasonable, being able to reasonably compensate for the cost and put apart room for profits”.

2.2.3 Incentivizing Purchase
The government of Shanghai Municipality encourages the development of green electricity and vigorously encourages consumers to voluntarily subscribe to green electricity by adopting the following measures:

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1 Shanghai Green Electricity Marketing Promotion Regulation 2005, s 3(12).
2 Ibid., s 4(16, 17 and 18).
The Shanghai Municipal Energy Conservation Supervision Center (SMECSC) shall regularly make public the list of users of green electricity, and award the honorary certificates to the users who have subscribed to green electricity.

For the users who have signed with the electricity company a contract for a term of at least two years and annually subscribed to green electricity in the quantity of more than one million kilowatt hours, and whose purchasing capacity of green electricity accounts for no less than 10% of the previous year's electricity quantity used for manufacturing main products, the Shanghai Municipal Development and Reform Commission (SMDRC) and Shanghai Municipal Economic Commission (SMEC) shall authorize the SMECSC to grant them the Emblem of Green Electricity. The users who have obtained the Emblem may use it within the period of purchase.

For the users making outstanding achievements in subscribing to green electricity, the SMDRC and SMEC shall jointly award medals to them.

2.3 Significance

2.3.1 Initiative Spirit
Shanghai has become the first developing country city in the world to offer green electricity.

2.3.2 Environmental Friendly
Given green electricity is produced from renewable resources such as wind, solar and biomass, the generation of green electricity produces little or no pollutants to air, water and land, therefore helping to reduce CO2 emissions and improve air quality in Shanghai. In addition, green electricity does not consume fossil fuel, so it is beneficial to sustainable utilization of energy. Finally, developing the renewable energy industry promotes Shanghai's image as an environmentally conscientious and responsible city while improves local economy and employment (Shanghai Green Power, 2005).

2.3.3 Driving End-Users’ Demand
This Scheme represents Shanghai government's efforts to enforce the newly issued Law of the People's Republic of China on Renewable Energies (Renewable Energy Law). In particular, different from the commonly-used measures of promoting renewable energies through encouraging the generation of green electricity, this Scheme aims to advance the development of renewable energies by increasing the end-users' demand for green electricity.

3 Working Mechanism and Existing Problems

3.1 Working Mechanism
The Shanghai Green Electricity Scheme was developed over 2004, formally launched in 2005, and was formally called and branded “Jade Electricity”. In June 2005, the Shanghai government issued Shanghai Green Electricity Promotion Regulation (Regulation). The Regulation establishes legal framework and provides specific guidance for implementing the Scheme. It states that the aims are pushing forward the development and utilization of green electricity in this Municipality, improving the energy source composition, promoting the protection of environment and the sustainable development, and creating a good atmosphere of the whole society showing concern about the development of green electricity. The Regulation was formulated in accordance with the newly issued Renewable Energy Law at that time and turned out to be an important measure of the

\[1\text{ Ibid., s 1(1).}\]
Shanghai government to implement *Renewable Energy Law* and promote renewable energy in Shanghai.

The Scheme will initially support wind and PV electricity only. The approach adopted by the Shanghai government was “to start small and to let the Scheme develop and grow with increasing demand and increasing availability of renewable electricity” (ASTAE, 2006). To qualify as a Green Electricity user, customers must buy by yearly a certain amount of green electricity. For example, the minimum annual subscription shares for the residential household are ten quotas, with one quota defined as 12 KWh; the one quota for the enterprise (unity) user is set at 6000 KWh, and the minimum annual subscription shares are varied in accordance with the electricity volume consumed by that user in the preceding year.¹

The green electricity subscription fees are counted according to the unit price of green electricity and the green electricity capacity subscribed to. The unit price of green electricity is determined by the difference between the average on-grid price of green electricity and the on-grid price of electricity produced by Shanghai coal-fired new generator as examined and verified by the State. The unit price, namely the incremental cost of green electricity, has initially been set at 0.53 Yuan/KWh. The green electricity capacity is purchased through customers’ voluntary registration in compliance with the above mentioned minimum annual subscription shares. The term for the subscription to green electricity shall be one year, two years, or three years respectively. The subscription fees for green electricity shall be paid monthly through the current channel and method of paying electricity fees.²

For example, if a household has subscribed to 10 quotas of green electricity, i.e. 120 KWh, for one year, then the household needs to pay an additional 63.6 Yuan for purchasing one years’ green electricity apart from the normal electricity bill. Given this total 63.6 Yuan will be distributed to 12 months, this household needs to pay an additional 5.3 Yuan when paying their monthly electricity fees.

### 3.2 Existing Problems

The biggest problem encountered by the Scheme is that the actual quantity of green electricity purchased is much smaller than expected. In June 2005, the Shanghai government held the Ceremony of Signing Contracts to Purchase Green Electricity. During this ceremony 15 industries and institutions signed contracts with Shanghai Municipal Electric Power Company (SMEPC) for a duration of 1-3 years and became the first consumers to purchase green electricity.

However, after that the process of subscribing to green electricity became very slow. Over one year later, i.e., by the end of 2006, only 22 industries and 6842 households purchased green electricity amounting to a total of 15.82 GWh. Particularly, around 2/3 of the 22 industries are foreign funded enterprises (Chen, You and Zhou).

In addition, among Shanghai’s top 10 electricity-consuming enterprises, only Baosteel Corporation subscribed to 3 years’ green electricity amounting to a total of 1.2 GWh. To make it more clear, the single year of 2006 will be taken as an example to demonstrate the insufficient purchase of green electricity. In 2006, the total amount of green electricity purchased was around 8.5 GWh while the amount of green electricity generated that year was more than 20 GWh. Notably, the green electricity purchased was less than half of green electricity generated in 2006. For the surplus green electricity, the SMEPC had to temporarily pay for the price differential between green electricity and electricity generated by conventional energy.

Instead of rising, the public’s enthusiasm for purchasing green electricity even falls a little bit as time goes on. At the end of 2008, the green electricity’s purchase amount only accounted for 13.5% of its’ total supply amount in Shanghai (World Wind Power, 2009). Until recently, the green electricity scheme is not very popular with Shanghai citizens.

¹ *Ibid.*, s 2(9).
4 Barriers and the Way Forward

Given Shanghai's abundant renewable energy resources, advanced production capacity of equipments relevant to green electricity, and relatively high level of economic development and people's living standard, Shanghai has great potential to develop green electricity. However, the Scheme has not been as successful as expected. According to a survey (Chen, You and Zhou, 2008) conducted by South-North Institute for Sustainable Development in 2006, the main reasons for customers' unwillingness to purchase green electricity are as follows: lack of sufficient understanding about green electricity (36%); unacceptable high price of green electricity (27%); no substantive benefits or returns to green electricity users (25%); lack of knowledge of how to purchase green electricity (10%).

4.1 Publicize the Scheme and Increase Public Awareness of Environmental Protection

To solve the problem of customers' lacking understanding about green electricity and lacking knowledge of how to purchase green electricity, the Shanghai government should take more effective measures to publicize the Scheme and gradually increase public awareness of environmental protection.

4.1.1 Specific Measures

Fist of all, to make the Scheme widely known by Shanghai citizens and enterprises, the Shanghai government should make full use of various media to introduce the Scheme such as newspaper, books, magazines, TV programs (including mobile TV programs), websites, booklets, posters and public service advertisements. Secondly, the Shanghai government may cooperate with NGOs and the producers and investors of green electricity to better publicize the Scheme. Thirdly, “Better city, better life” is the Shanghai municipality slogan to promote its image as an environmentally conscientious and responsible city. Development of green electricity is an important measure for Shanghai to realize its commitment. If the Shanghai government can combine the Scheme with Shanghai's city planning and development, the Scheme will attract more attention and gain more support. In addition, the Shanghai government needs to pay more attention to the large electricity users and encourage them to use green electricity. In the US, it is estimated that the total amount of green electricity purchased by the top 50 institution users surpassed 13.7 billion KWh annually, representing more than 70 percent of the green electricity commitments made by all the US green power subscribers (U.S. EPA, 2011). This has shown the significant role large electricity users may play and set a role model for the Shanghai government to emulate. Finally, the Shanghai government and SMEPC should provide better service and guidance to facilitate the purchase of green electricity.

4.1.2 Special Point

Given that green electricity is still quite new in China, most people have not fully realized the benefits of using green electricity. As we know, green electricity contributes to CO2 reduction and pollution control mainly through its use of renewable energy and its clean production process. However, to end users, green electricity looks the same with conventional electricity. No matter green electricity or conventional electricity, they are transmitted through the same grid and users can hardly distinguish between them (Zhang and Gao, 2006). Therefore, during the publicity of green electricity, the Shanghai government should highlight green electricity's substantial benefits to environmental protection, create culture of “using green and being environmental friendly”, and make the purchase of green electricity a kind of fashion.

4.2 Reduce the Cost of Green Electricity

The price of green electricity set by the Shanghai government is 1.14 Yuan/KWh and the price for conventional electricity is 0.61 Yuan/KWh. There exists an incremental cost of 0.53 Yuan/KWh
between the two. The high price of green electricity has deterred many consumers to use it and become the biggest barrier to the development of green electricity. Actually, this issue of price differential is quite common in China. There is a difference between power purchase price for coal-fired and for renewable energy generation in a number of provinces. Coal prices are always considerably lower. For example, in the provinces of Xinjiang, Liaoning and Inner Mongolia the wind power prices are even more than double the ones from coal.

4.2.1 Reasons for Green Power’s High Price

Notably, such a price differential lies with the fact that the cost of electricity from renewable energy generation is higher than from coal. One reason for the relatively high cost of green electricity has been the weak domestic manufacturing industry in China. Specifically, renewable energy technologies are relatively nascent within the power sector and unlike conventional energy technologies do not benefit from the economy of scale. For example, in the wind industry, only a very small number of Chinese owned manufacturers have been established and they are significantly limited in the size and quality of the turbine they are able to produce. The small size and poor quality of domestic manufacturing industry forces renewable energy developers to import costly equipment from overseas, which increases the cost of electricity from renewable energy and inhibits the growth of the local manufacturing industry.

Another reason for the relatively high cost of green electricity has been the lack of competition and the relatively small scale of market.

Last but not the least, a more significant contributory factor to the high cost of green electricity has been the low-cost of coal-fired electricity generation in China. The full cost of coal-fired electricity has not been fully reflected in its price (Zhang, 2009). For example, the costs of transmission and distribution are not accurately reflected in the coal-fired electricity price. As coal resources are primarily located in the north of China, far from demand centres in eastern and south-eastern coastal areas, true transmission costs are likely to be high by comparison with renewable energy given that the southeast coast of China is rich in wind resources. More importantly, the environmental externalities associated with coal-fired generation have not been reflected in the price of conventional electricity because of weak pollution control. Thus, internalization of the environmental damage within the cost of coal may help to decrease the incremental cost between green electricity and coal-fired electricity.

4.2.2 Current Solution to the Issue of High Price

Due to the relatively high cost, green electricity is currently unable to compete with coal-fired electricity. Under the Shanghai Green Electricity Scheme, the grid price of green electricity is set by the Shanghai government according to the principle of “Being beneficial to the development and utilization of renewable resources, being economic and reasonable, being able to reasonably compensate for the cost and put apart room for profits” or through public bidding with prices no higher than those set by the government for similar projects. The difference between the on-grid price of green electricity and conventional electricity is absorbed through the voluntary purchase of green electricity by the public, or is to be passed on in the selling price of electricity in case some remaining unsold green electricity exists.

Clearly, the Shanghai government takes pricing as an incentive to promote the generation of green electricity and to increase its market scale. However, such a fixed price guarantee can only be temporary because it is anti-competitive and can not reflect the real cost of green electricity. From the long run, to reduce the cost of green electricity is the key to the success of the Scheme and the development of renewable energy. The Shanghai government states that with the deepening of reform in electricity system afterwards, Shanghai shall establish and perfect competitive market of renewable energy. In addition, the Shanghai government determines to gradually reduce the cost of generation of green electricity through reducing revenue and providing allowance in order to reduce

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1 Ibid., s 3(12).
the selling price of green electricity. Thus, we have reasons to believe that although the Scheme is currently small and confronted with some difficulties, it will grow with the increasing demand and increasing availability of green electricity and with the decreasing cost and decreasing price of green electricity.

4.2.3 Renewable Energy Law’s Constructive Role and Possible Drawbacks

Notably, the Shanghai government establishes and implements the Scheme in strict compliance with the relevant State provisions and in particular, the Renewable Energy Law. In China, the central government sets the policy and legal framework to guide the development of renewable energy and the local governments are responsible to specify and implement the relevant provisions. Thus, the State-level laws and policies will also have a significant impact on the future development of the Scheme. As we know, the Chinese central government has long been concerned with the development of renewable energy and has made a strong commitment to growing the renewable energy industry. There have been a lot of national and provincial policy initiatives to foster the development of renewable energy and has made a strong commitment to growing the renewable energy industry. There have been a lot of national and provincial policy initiatives to foster the development of renewable energy. The Renewable Energy Law, which was passed in 2005 and came into effect on January 1st 2006, is the first comprehensive policy document that directly aims to promote renewable energy in China. It acts as the legal basis for country-wide activity to stimulate renewable energy and to increase the share of electricity generated from renewable energy. Hence, the Renewable Energy Law will be briefly examined here to see whether it addresses the four previously-discussed factors for green electricity’s relatively high cost and provides the possibility of reducing the cost in the long term.

As previously mentioned, one reason for the relatively high cost of green electricity is the weak domestic manufacturing industry in China. To improve the quality and capacity of domestic renewable energy manufacturing industry, the fundamental way lies in the promotion of domestic technological innovation. The Renewable Energy Law stimulates domestic technological innovation mainly through encouraging investment in the research and development (R&D) of renewable energy, setting up a renewable energy development fund and establishing a feed-in tariff (FIT) system. Specifically, the Renewable Energy Law makes investment in renewable energy R&D a priority and provides that the government allocates funding for the scientific and technical research, application demonstration and industrialized development of the development and utilization of renewable energy, reduce the production cost of renewable energy products and improve the quality of products. The law also establishes a renewable energy development fund to support scientific and technological research, standard setting and pilot projects for the development and utilization of renewable energy, and to foster the localized production of the equipment for the development and utilization of renewable energy. In addition, the Renewable Energy Law stipulates that grid utilities shall enter into agreements with licensed power generators to purchase all the renewable energy that they produce within the area of the grid, and the grid price of renewable energy shall be set by price authorities of the State Council. This implies establishment of a FIT system, an obligation on electricity suppliers to accept all power from renewable energy generators at a guaranteed fixed price set by the State. Given that the FIT system enables renewable power generators to capture the surplus created by technical change, it will stimulate them to invest in R&D to reduce costs and increase profits, thus providing a stimulus for technological innovation in China. Notably, the Renewable Energy Law promotes an innovative system for renewable energy technologies, which is likely to strengthen China’s domestic manufacturing industry and hence to reduce the high cost of electricity from renewable energy.

However, room for improvement still exists. For example, the provision of renewable energy development fund does not specify the value of the increase in funding or the likely distribution of

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2 Ibid., s 6(24).
3 Ibid., s 4(14).
4 Ibid., s 5(19).
funding, so there is a risk that compliance could be satisfied with a very small increase or inappropriately targeted funding, contrary to the intention of the law. In addition, there contains no suggestion of tariff reductions overtime which could provide a further incentive for R&D investment in technological innovation among market participants. Finally, the Renewable Energy Law provides that middle and long-term targets for the total volume of renewable energy at the national level are to be set by the Energy authorities of the State Council subject to approval by the State Council,¹ and based on the national targets, provincial, regional and municipal energy authorities will prepare renewable energy development and utilization plans for their own administrative regions to be implemented subject to approval by governments at their own level.² This provides the basis for implementation of a mandatory market share policy (MMS), an obligation on electricity suppliers to source a proportion of their power from renewable energy generation. Given that MMS policy does not allow producers to capture the surplus from technological change, and universal pressure to reduce costs under MMS schemes can discourage R&D investments in favour of sourcing technology from abroad. This may prejudice technological innovation and hinder the development of domestic manufacturing industry. While experience in other countries has shown that the MMS is usually combined with tradable renewable energy certificates to ensure greater equity, efficiency and innovation that will deliver renewable energy at the lowest possible cost, there is currently an absence of such a mechanism to foster innovation and drive cost reductions in China.

To address the issue of insufficient competition, the Renewable Energy Law introduces the tender system, i.e., where there is more than one applicant, licenses for construction of renewable power generation projects will be determined through a tender system (Concession Programme).³ The Concession Programme may effectively stimulate competition and encourages a systematic effort to reduce costs through economy of scale and use of the very best available sites. The MMS mechanism can also provide pervasive competitive pressures, giving an incentive for cost reductions and project quality improvements.

As for the scale of market, the FIT and MMS can be used to stimulate an increase in market scale. The FIT helps to overcome the cost disadvantages of renewable energy sources and thus boost adoption of renewable energy technologies. Experience in other countries has shown a rapid increase in capacity following implementation of a FIT. For example, the FIT has been associated with a large growth in solar power in Spain, Germany and wind power in Denmark. The MMS may also be taken to scale up markets for renewable energy, but in a more steady way compared with the rapid increase led by the FIT. The US has been very successful in stimulating new renewable energy capacity through MMS policies. Increased market scale can reduce costs of renewable energy technology and bring economy of scale, which accordingly encourages further scale increases.

The Renewable Energy Law makes no reference to the low cost of coal-fired electricity generation in China. Compared with the relatively nascent renewable power industry, the conventional electricity sector enjoys more benefits during the decades of institutional and organizational adaptation. Particularly, the Chinese central government keeps electricity prices low in support of GDP growth for a long time and the environmental externalities associated with coal-fired generation have not been reflected in the price of conventional electricity. Now changes and improvements need to be made to pollution control policies so as to redress the economic balance between coal and renewable energy.

In short, the Renewable Energy Law helps to reduce the cost of green electricity and foster the development of renewable energy mainly through making provisions for implementing the three policy mechanisms, the FIT, the MMS and the Concession Programme. Actually, these are the most commonly used promotion policies in renewable energy field. However, the law does not specify the manner in which these three mechanisms will be combined. Given that these policies serve different purposes and have differing advantages and disadvantages, they need to be differentiated

¹ Ibid., s 2(7).
² Ibid., s 2(8).
³ Ibid., s 4(13).
over time taking into account China's specific policy objectives, socio-economic conditions and the capacity to expand renewable energy production. In addition, the law would have been more effective and easy to be implemented had it paid more attention to details and included more specific provisions.

4.3 Incentivize Customers to Purchase Green Electricity

As mentioned above, the Shanghai government encourages customers to purchase green electricity mainly through increasing their sense of honour and promoting their public image. The primary encouragement methods include making public the list of users of green electricity and awarding them honorary certificates, Emblem of Green Electricity or medals. However, such methods have proven to be ineffective in providing proper incentives, and more initiatives should be taken to better incentivize customers to use green electricity.

4.3.1 Introducing Fiscal Incentives

Apart from giving commendation and honour, the Shanghai government may think about providing more attractive rewards for the users of green electricity. According to the survey in 2006, a quarter of respondents chose not to purchase green electricity because they were not satisfied with the relevant rewards and returns (Chen, You and Zhou, 2008). For example, some enterprises proposed that as a reward large users of green electricity should be allowed to emit more pollutants. Of course, this has been denied by the government (Yu, 2006). To encourage the wide use of green electricity, some measures involving substantive benefits such as preferential loans, direct subsidy to the users and tax reduction or exemption might be adopted as possible incentives. For instance, experience in the Netherlands has shown a rapid increase in the demand for green electricity due to the adoption of tax incentive. Aiming at stimulating energy saving attitudes by consumers, the Dutch government started to collect the Regulatory Energy Tax (REB) on electricity consumption of all types since October 1996, irrespective of whether the energy resources used for generating electricity are renewable or not. Based on this tax policy, the Consumer-driven Strategy, a scheme encouraging the customers’ voluntary purchase of green electricity promoted by the Dutch government from 1995, attracted little attention and consumer participation was quite modest. Later on, specifically beginning with 1 January 1998, the Dutch government introduced the “nil tariff” policy which exempts “domestic renewable generators and the selling of imported green electricity from the REB tax”, thus allowing consumers subscribing to the green electricity not to pay the REB tax anymore (Dinica and Arentsen, 2001). This has led to dramatic expanding of customers’ demanding for green electricity and now more than 20% of Dutch residents have chosen to use green electricity. Also deserving mention is the fact that “the higher the REB tax goes, the more attractive it will be for consumers to subscribe to a voluntary green electricity scheme” (Dinica and Arentsen, 2001). Apart from stimulating green demand, given that green electricity users are exempted from the REB tax and given the high level of the REB tax in the Netherlands, this tax policy helps renewable energy companies to lower cost so as to provide green electricity products at almost the same price as conventional electricity products. Therefore, the REB scheme has proved to be one of the most effective Dutch policy mechanisms, functioning not only as a powerful fiscal instrument to stimulate green demand, but also as a subsidy scheme to encourage green generation and green investments (Dinica and Arentsen, 2011).

4.3.2 Combining Voluntary Purchase with Mandatory Consumption

Currently, the Shanghai Green Electricity Scheme is fully based on voluntary purchase. Given the relatively high price of green electricity, only some enthusiastic customers are willing to pay for it. Even many government organizations in Shanghai have not taken initiative in subscribing to green electricity. Thus, a shift from this pure voluntary system to a mixed parallel system of voluntary purchase and mandatory consumption might hold the key to the success of this Scheme. Actually, many countries have done very well in combining voluntary purchase with compulsory
consumption. For example, all the US local governments are required to join the Green Power Partnership, a program aimed for promoting the purchase of green power, while other businesses, organizations and individuals are free to decide whether to buy green electricity or not. Similarly, in Germany, public utility companies are required to purchase green electricity. By collecting the REB tax, the Dutch government also combines voluntary purchase with compulsory consumption to increase the market demand for green electricity.

5 Acknowledgements

The author would like to thank Ms. Jolene Lin Shuwen for her encouragement and advice.

6 References


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Abstract:
In connection with mitigating climate change, the European Union has committed to raising the use of energy from renewable sources to 20 % of overall Community energy consumption by the year 2020. The national target set for Finland is a challenging 38 % compared to 28.5 % in 2005. A traditional form of renewable energy is hydropower. In Finland, hydropower generates about 3 to 4 % of total energy supply at the moment, depending on the yearly rainfall. The national target set for hydropower production is 14 TWh in 2020, which means an increase of 0.5 TWh from the present situation. This subtle rise would consist of capacity increases in existing power plants and small hydropower. Although Finland is described as a land of a thousand lakes and therefore rich in water resources, increasing the use of hydropower is difficult on a large scale mainly due to national nature conservation legislation: namely the rapids conservation legislation. Another characteristic in Finnish geography is the flatness of the country; concerning hydropower, the modest differences in altitude mean smaller capacity plants generally.
This paper analyses the existing environmental legislation in Finland concerning hydropower and looks at the targets for promotion of renewable energy in the light of that legislation. The paper suggests some amendments to the existing national legislation: for example, the permit procedure is designed for large-scale hydropower plants, and the administrational burden may seem heavy for small-scale plants. Therefore, a lighter procedure might ease the promotion of small hydropower. One option that would ease the use of hydropower is to loosen the nature conservation legislation at some level without risking conservation values. In conclusion, in order to achieve the goals set for mitigating climate change, some amending of the traditional environmental legislation may be needed.

Keywords:
hydropower, climate change, environmental legislation, nature conservation, water law

1 Introduction
Climate change is one of the biggest challenges facing mankind in the near future. The European Union has taken action in order to mitigate climate change: the so-called EU 20-20-20 target consists of 1) decreasing emissions by 20 %,1 2) improving energy efficiency by 20 %,2 and 3) promoting the use of energy produced with renewable sources by 20 %.3 The target is set to be accomplished by 2020. The promotion of the use of energy from renewable sources is regulated by

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Directive 2009/28/EC.\(^1\) The Directive divides the average EU target into more precise national targets; for Finland, this means that by 2020 the share of energy produced with renewable sources should rise up to 38% of the gross final consumption of energy, compared to 28.5% in 2005. This binding target is the third highest in the EU; only Sweden exceeding it with 49% and Latvia with 40%.\(^2\)

The Finnish Government has drawn up the Long-term climate and energy strategy that defines the main objectives and means for Finnish climate and energy policy in connection with the EU targets.\(^3\) The objectives include the promotion of production and use of energy produced with renewable sources: as the strategy renews the Commission-set obligation of 38% for renewable energy, it comments that the target is challenging and requires that energy end-use will decrease. The largest potential for promoting renewable energy is seen in wood-based energy, recovered fuels, heat pumps, biogas, and wind energy. Hydropower is described more as a steady energy provider than as a promising sector for increasing the energy production.\(^4\)

According to the Directive 2009/28/EC, EU Member States have to draw up national renewable energy action plans (NREAPs).\(^5\) Finland's NREAP, among other things, breaks down the target of 38% into different sectors of renewable energy production. The main focus in increasing renewable energy is on wind power and wood-based energy; however, hydropower is also mentioned. By 2020, hydropower production will increase by 0.5 TWh to amount to 14 TWh.\(^6\) This subtle rise will consist of capacity increases in existing power plants and small hydropower, and require no changes to the existing legislation.

Utilisation of hydropower is regulated by the Water Act (587/2011): a permit is needed for establishing and operating a hydropower plant. The Water Act has recently been revised,\(^7\) but regulation concerning hydropower does not alter significantly from the previous Water Act (264/1961). In deciding whether it is possible to grant a permit for a hydropower plant or not, the nature conservation legislation plays a crucial role: the Rapids Conservation Act (35/1987) and the special river conservation acts (concerning rivers Ounasjoki and Kyrönjoki) as well as the Nature Conservation Act (1096/1996) with its regulation concerning the EU Natura 2000 Network. Consequently, the small potential seen in increasing the production of hydropower is caused largely by two reasons: most of the rapids suitable for hydropower plants are already in use or protected by nature conservation legislation.

This paper is a study about hydropower legislation in relation to climate law. The paper analyses the existing environmental legislation in Finland concerning hydropower and looks at the targets for promotion of renewable energy in the light of that legislation. The paper does not examine the economical aspects of electricity production with hydropower (e.g. windfall\(^8\) issues). Neither does the paper thoroughly examine the Finnish legal praxis related to hydropower construction – there are plenty of rulings over the years - which would be a topic of a paper on its own.

This paper starts with an overview of the Finnish energy sector and particularly the role of renewable and hydropower therein (chapter 2). Then we look at hydropower more specifically: past, present and future (chapter 3). Chapter 4 is a review of the Finnish legislation concerning hydropower. This chapter answers to the following questions: who has the right to establish a hydropower plant, on which circumstances is it possible to build such a plant, and what else needs

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\(^4\) Finnish Government (2008), supra note 6, p. 9, 36 and 40.


\(^6\) The target is set regarding an average year's rainfall. Ministry of Employment and the Economy (2010), Suomen kansallinen toimintasuunnitelma uusittuun lähitulesta peräisin olevan energian edistämisestä direktiivin 2009/28/EY mukaisesti (Finnish national renewable energy action plan (NREAP)), p. 5. Also available on the Internet at <http://www.tem.fi/files/27405/NREAP_300610_FINLAND.pdf> (last accessed on 10 June 2011).

\(^7\) The new Water Act was accepted in Parliament on 11 March 2011 and will enter into force on 1 January 2012.

\(^8\) Unexpected money received which is not a direct result of something the recipient did.
to be taken into account in relation to hydropower. Lastly, conclusions will be made in the final chapter: how does the hydropower legislation appear in the light of climate change and targets for the promotion of energy from renewable sources.

2 Background

According to the Statistics Finland’s preliminary data, the total energy consumption in Finland in 2010 was 1445 PJ (petajoules) that is 402 TWh; of this amount 87.5 TWh was electricity consumption. In 2010, 47.5 % of energy was produced with fossil fuels (oil 24.5 %, coal 12.9 %, natural gas 10.3 %), 16.5 % with nuclear power, 6.5 % with peat, 2 % with other sources, 2.5 % with net import and 25 % with renewable energy.¹ The sources of renewable energy in energy production have traditionally consisted largely on wood-based residues. In 2006, the sources of renewable energy were: 1) black liquor and other concentrated liquors from industry (42 %), 2) wood fuels from industry and energy production (26 %), 3) small combustion of wood (13 %), and 4) hydropower (11 %). Other renewable energy accounts for 8 %; this includes wood-chips, heat pumps, recovered fuel, biogas, other biofuels, and wind power.² ³

Energy supply differs from electricity supply due the significance of heating (both for the domestic and industry needs) in energy production and the suitability of different sources in electricity and heat production. As the table below shows, in 2010, combined heat and power production (CHP) and nuclear power account for nearly 60 % of the electricity production leaving hydropower the share of about 15 %. Around half of the electricity is consumed by the industry (forest industry consuming 25 %, and the other sectors being chemical, metal, and other) and half is other consumption (heating, transport, and other).⁴

<p>| Table 1. Electricity supply in Finland 2010 |
| (Source: Finnish Energy Industries, 2011) |</p>
<table>
<thead>
<tr>
<th>TWh</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHP</td>
<td>28.5</td>
</tr>
<tr>
<td>- Industry</td>
<td>- 11.1</td>
</tr>
<tr>
<td>- District heating</td>
<td>- 17.4</td>
</tr>
<tr>
<td>Nuclear power</td>
<td>21.9</td>
</tr>
<tr>
<td>Hydropower</td>
<td>12.8</td>
</tr>
<tr>
<td>Wind power</td>
<td>0.3</td>
</tr>
<tr>
<td>Separate</td>
<td>13.5</td>
</tr>
<tr>
<td>PRODUCTION</td>
<td>77.0</td>
</tr>
<tr>
<td>Net imports</td>
<td>10.5</td>
</tr>
<tr>
<td>ELECTRICITY SUPPLY</td>
<td>87.5</td>
</tr>
</tbody>
</table>

There is some geographical and climate information that needs to be stated about Finland. There are 187,888 lakes in Finland.⁶ Although Finland is rich in water resources, the flatness of our country

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² Finnish Government (2008), _supra note_ 6, p. 41.
⁶ A lake is defined as a water area exceeding 500 square metres. [http://www.ymparisto.fi/default.asp?node=8103&lan=fi](http://www.ymparisto.fi/default.asp?node=8103&lan=fi)
makes the differences in altitude very modest, which means that we have smaller capacity plants generally. The flatness also causes that possibilities to reserve the water flow are limited since the reserve would need much more horizontal space than in steep terrain. Spring floods are usual because of melting snow and, therefore, the water flow is not even throughout the year. In connection with this, the yearly rainfall varies from year to year making the prediction of water reserves difficult and causing the yearly production of electricity by hydropower vary from year to year notably. Additionally, Finland is located relatively far north in the planet Earth, and the average yearly temperature is about 1.9 ºC.  

In the wintertime, the need for energy rises significantly due to heating. The energy supply has to be built in a way that extra energy is available when extremely cold days occur causing the so called peak loads when the energy demand is at its highest level; additionally, the extra energy is needed to assure the security of the grid. This extra energy supply is called adjustment power (in Finnish säätövoima), and hydropower is very suitable for this purpose because the extra energy is quickly available. The significance of adjustment power will be emphasized further in the future as the share of wind power increases; on days when there is no wind and therefore no wind power, the lack of wind power has to be replaced with another kind of energy.

Although hydropower is climate-friendly as a renewable energy source it does have effects on the environment. The watercourse is not in its natural state after establishing a hydroelectric installation. This change affects the biodiversity of the watercourse and the effects are greater in case an artificial lake is founded. One of the most obvious effects is on fishes and fishing. However these effects can be reduced by using fish ladders, fish bypass systems and fish lifts (upstream) as well as fish-friendly turbines (downstream). Moreover, control of the water level has effects both on the upper and lower course: on the upper course flooding and on the lower course too little water/stream may cause harm. On the other hand, hydropower plants may be actors in controlling flood risks, which are assumed to increase due to climate change.

3 Hydropower in Finland

The first hydropower plant that produced electricity nationwide was established in Finland at Imatrankoski in 1929. Till then, the hydropower plants had been smaller and produced electricity only for local use; mills have been used since the Middle Ages. The major rapids located in the Southern Finland were harnessed during 1930’s and 1940’s; the next few decades after the Second World War were the time of heavy increase in the hydropower capacity as the hydropower construction concentrated at the big rivers of Northern Finland. After a slow phase in the 1980’s, the development of hydropower generation picked up at the turn of the millennium when about 15 % of today’s hydropower capacity, 3.000 MW, has been build. Nowadays, the share of hydropower in energy production varies between 3 to 4 % annually depending on the rainfall, which accounts for 10 to 20 % of the electricity production. At its peak the share of electricity produced with hydropower was in the 1950’s and 1960’s when it accounted for 90 % of electricity at its best. In 2006, there were 207 hydropower plants in use: 57 of those

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1 Between 1971 and 2000, the average yearly temperature in Finland has been about 1.9 ºC.
3 The target is 6 TWh by 2020. Ministry of Employment and the Economy (2010), supra note 9, p. 2.
4 More information about the environmental consequences of hydro power, see for instance Pienvesivoimayhdistys ry. (2009), Pienvesivoimalaopas, p. 18, also available on the Internet at <http://server.perlasoft.fi/vesivoima/images/Pienvesivoimaopas.pdf> (last accessed on 10 June 2011); Finnish Energy Industries (2008), supra note 19, p. 38-41.
plants were large (production more than 10 MW), 83 were small hydropower plants (production 1-10 MW), and 67 were so called micro hydropower plants (production less than 1 MW). On an average year’s rainfall, the electricity production of these plants is 12.9 TWh; of this amount large plants account for 91 %, small hydropower 8 %, and micro hydropower 1 %.

As mentioned above, the current hydropower capacity in use is 3.000 MW. According to a recent study, the whole potential in hydropower is about 5.100 MW; this number includes the hydropower in use and the potential. The potential consists of both water systems that are protected and unprotected; the potential can be divided to large, small and micro hydropower, as well. As can be seen in the table below, the largest potential in Finland for hydropower is situated in waters that are protected by the nature conservation legislation. However, there is some potential left unprotected.\footnote{Ministry of Trade and Industry (2005), supra note 23, p. 2 and 26.}

Nature conservation legislation will be examined below in chapter 4.3.

<table>
<thead>
<tr>
<th></th>
<th>Unprotected</th>
<th>Protected and transboundary waters</th>
<th>Altogether</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large hydropower (more than 10 MW)</td>
<td>375</td>
<td>1.033</td>
<td>1.408</td>
</tr>
<tr>
<td>Small hydropower (1-10 MW)</td>
<td>144</td>
<td>286</td>
<td>430</td>
</tr>
<tr>
<td>Micro hydropower (less than 1 MW)</td>
<td>144</td>
<td>148</td>
<td>292</td>
</tr>
<tr>
<td>ALTOGETHER</td>
<td>663</td>
<td>1467</td>
<td>2130</td>
</tr>
</tbody>
</table>

According to another recent study, there is 934 MW potential in hydropower that is technoeconomically significant; of this amount 365 MW is unprotected and 569 MW is protected. Additionally, there is 274 MW potential in other hydropower that is worth building; this amount consists largely of small and micro hydropower. Technically worth establishing small hydropower that is unprotected is 63 MW; about forth of this is in micro level.\footnote{Minister of Trade and Industry (2005), supra note 23, p. 8 and 17.}

This study supports the view that the bigger part of the potential for new hydropower for electricity production is protected by the nature conservation legislation. However, there is some potential left outside the protection.

## 4 Hydropower legislation in Finland

### 4.1 The right to establish a hydropower plant

Water resources management is regulated by the Water Act (587/2011), which has recently been revised. According to Chapter 3 Section 3 of the Water Act, a permit is required for establishing a hydropower plant;\footnote{Water Act (587/2011) Chapter 3 Section 3 point 6 (respectively Chapter 3 Section 2 in the former Water Act 264/1961). In addition, a hydropower plant requires a building permit according to the Section 125 of the Land Use and Building Act (132/1999).} a permit is always required regardless of the size of the plant. A permit is required for altering an existing plant or power increases, which are quite usual. The permit authority is the Regional State Administrative Agency whose decisions may be appealed to the Vaasa Administrative Court and further to the Supreme Administrative Court.\footnote{The Finnish courts of law consist of district courts dealing with criminal and civil cases, administrative courts reviewing the decisions of the authorities, and certain special courts (Market Court, Labour Court, Insurance Court and High Court of Impeachment). The decisions of the administrative courts can be appealed in the Supreme Administrative Court.} There are several conditions that must be fulfilled before a permit may be granted.

\footnote{Small hydropower is generally defined as sites with installed capacity of less than 10 MW. European Commission, Directorate-General for Energy, Renewables make the difference, p. 19. Available on the Internet at http://ec.europa.eu/energy/publications/doc/2011_renewable_difference_en.pdf (last accessed on 16 May 2011).}

\footnote{Finnish Energy Industries (2008), supra note 19, p. 177-179.}
The first condition is that either the plant may not hurt much public or private interest or the public or private interests will benefit significantly because of the plant compared to the disadvantages to the public or private interests that the plant would cause. In the first case the plant is regarded as a minor undertaking. In the second case, a comparison between interests will be conducted; as the value of the hydropower production, the price of average annual amount of electricity produced by the plant at least twenty-folded will be taken into account. Moreover, there are some overriding reasons that prevent from granting the permit, such as danger to public health or security, or substantial harmful changes in the relations of the natural environment or in the water nature.

Second, the applicant must have a right to use the areas needed for the plant and the project. In relation to the permit decision, it is possible to decide coercive measures and compensation issues. Third, the applicant must have a right to use the hydropower on the site. That can be arranged beforehand (ownership or other right to use) or during the permit procedure (right to use common hydropower).

Initiative for the right to use common hydropower can be made by a party or parties together who has/have at least one fifth of the hydropower in question. Primarily, the target is to make an agreement of the common use. Secondarily, the initiative party/parties may offer other parties to participate on the hydropower plant. The participation procedure is done with the assistance of the waterpower in question; this question is for the district court to decide, not the permit authority.

The permits for mills or other kind of hydropower plants have been given for the time being (not for a fixed-term). Therefore, in many cases the old permits are still valid. This situation will remain the same with the Water Act (587/2011).

### 4.2 Right to waters

The right to waters is based on two concepts: the water material and the ground of the water area. Historical development plays a central role regarding the right to waters. The right to the water material may be targeted only at a water which the owner holds, in other words water in a water reservoir, well, other intake, spring, or artificial pond. In other cases the

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2. Water Act (587/2011) Chapter 8 Section 2 subsection 2 (respectively Chapter 3 Section 2 in the former Water Act 264/1961). In a recent permit decision PSY-2005-y-185 by the Northern Finland Regional State Administrative Agency, the comparison between interests was seen as following: the advantages amount to 112 million € and the disadvantages to 83 million € (p.316-327). Also available on the Internet at <http://www.avi.fi/fi/virastot/pohjoissuomenavi/Ymparistojaavesitalousluvat/Vesiluvat/Documents/P%C3%A4%C3%A4t%C3%A4%C3%B6ks
3. The decision does not have legal force yet; time for appeal is still running.
5. As a preliminary question, it may have to be found out who is entitled to the waterpower in question; this question is for the district court to decide, not the permit authority.
6. The first condition is that either the plant may not hurt much public or private interest or the public or private interests will benefit significantly because of the plant compared to the disadvantages to the public or private interests that the plant would cause. In the first case the plant is regarded as a minor undertaking. In the second case, a comparison between interests will be conducted; as the value of the hydropower production, the price of average annual amount of electricity produced by the plant at least twenty-folded will be taken into account. Moreover, there are some overriding reasons that prevent from granting the permit, such as danger to public health or security, or substantial harmful changes in the relations of the natural environment or in the water nature.
7. Second, the applicant must have a right to use the areas needed for the plant and the project. In relation to the permit decision, it is possible to decide coercive measures and compensation issues. Third, the applicant must have a right to use the hydropower on the site. That can be arranged beforehand (ownership or other right to use) or during the permit procedure (right to use common hydropower).
8. Initiative for the right to use common hydropower can be made by a party or parties together who has/have at least one fifth of the hydropower in question. Primarily, the target is to make an agreement of the common use. Secondarily, the initiative party/parties may offer other parties to participate on the hydropower plant. The participation procedure is done with the assistance of the waterpower in question; this question is for the district court to decide, not the permit authority.
9. The permits for mills or other kind of hydropower plants have been given for the time being (not for a fixed-term). Therefore, in many cases the old permits are still valid. This situation will remain the same with the Water Act (587/2011).
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11. Second, the applicant must have a right to use the areas needed for the plant and the project. In relation to the permit decision, it is possible to decide coercive measures and compensation issues. Third, the applicant must have a right to use the hydropower on the site. That can be arranged beforehand (ownership or other right to use) or during the permit procedure (right to use common hydropower).
12. Initiative for the right to use common hydropower can be made by a party or parties together who has/have at least one fifth of the hydropower in question. Primarily, the target is to make an agreement of the common use. Secondarily, the initiative party/parties may offer other parties to participate on the hydropower plant. The participation procedure is done with the assistance of the waterpower in question; this question is for the district court to decide, not the permit authority.
13. The permits for mills or other kind of hydropower plants have been given for the time being (not for a fixed-term). Therefore, in many cases the old permits are still valid. This situation will remain the same with the Water Act (587/2011).

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water is not owned but governed: the water with an open surface is governed by the owner of the water or land area in question.\(^1\) Traditionally it is seen that open surface water or groundwater cannot be a subject to ownership because water is a natural resource which is continuously in circulation; this is why it is defined as governing. Governing is a special kind of right of possession that takes into account the restrictions set in the Water Act and other parties' rights to water. Governing is a priority right to use and also a limited right to dispose. The exact content of governing cannot be defined generally but case-by-case taking into account the restrictions set in the legislation and other parties' rights to the water.\(^2\)

In Finland, the ownership of the water area is based on private ownership\(^3\) - the leading principle is that "he owns the water, who owns the land".\(^4\) The ownership of water areas can be sorted out to three ways. First, most of the water areas enjoy shared private ownership in which the water area belongs to several real estates nearby (common waters). This is due to historical reasons: the water area used to belong to the nearest village (so called median line principle which means that, for example, a lake between two villages is divided between the two villages by its median line) and since the Great Land Reform\(^5\) the real estates in the village according to their share of the land in the village. Still, in most of the cases these real estates in the village enjoy a shared ownership of the water area. Second, the ownership of some water areas is private but not shared. These water areas belong to a single real estate or form a real estate of their own (so called water real estates). Third, the state owns some water areas: the high seas and the centres of large lakes (so called common water areas); there are eight such lakes in Finland.\(^6\)

Rapids have always been in a highlighted position compared to other water areas due to the importance and financial aspects of hydropower. In the Middle Ages the ownership of a mill site could be established by claim: the claimant had to own a share of the common land in which the mill would have been situated (be a land-owner in the village) or, in some provinces, be a citizen of that province. Additional condition in both cases was that he had to intend to build a mill on the site. Building of mills was promoted because they were considered to be of public interest. Later on, in case of common mill sites\(^7\), the land-owners in the village could build a common mill; if not all the land-owners were interested in building the mill, the court could empower the builder to do one alone\(^8\). The ownership of private mills could also be based on the ownership of a single real estate, immemorial enjoyment of a mill site, or an old judgement. Additionally, there were mills that were owned by the crown.\(^9\)\(^10\)

Depending on the individual case, the ownership of a mill may include the ownership of the water area in question or just the right to use the discharge and head in question; the building permit of the mill may have an indication of the character of the right to the water.\(^11\) In the Great Land Reform,\(^12\) generally the mills were formed to their own plots of land – either common (shared ownership by the land-owners of the village), or private – separate from other real estates in the village that were formed from the common land in the reform. However, this did not change the ownership of the rapids and the hydropower since the reform did not apply to water areas. Unless otherwise stated,

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\(^1\) Water Act (587/2011) Chapter 2 Section 1 (Chapter 1 Section 8 in the former Water Act 264/1961).
\(^3\) Private ownership of water areas is defined as German-Scandinavian whereas public ownership is of Roman Law heritage. Hollo, E. (1991) 103-104.
\(^4\) This is stated in the old Land Laws.
\(^5\) The Great Land Reform took place between late 18th century and early 20th century. In the reform, the shared ownership of the land in villages was divided and every land-owner in the village owned his share as piece of real estate. The reform concerned only land, water areas were excluded.
\(^6\) Laki , sisältävä määräyksiä välijärjestä vedessä ja vesialueen jaosta (31/1902), Sections 1-3 and 9. See more about the right to waters Haataja, K. (1951), p. 139-236; Belinskij, A. (2010), p. 233-236;
\(^7\) The land-owners of the village owned a share of the mill site (and its waterpower) according to their share of the land in the village.
\(^8\) The court would set conditions, such as in which time the mill had to be build and how long the builder had the right to use the other villagers' share of the rapids. The "licence" was temporary.
\(^9\) In case of old mills, the ownership has been stated in the old decisions on the taxation of mills (in the 18th and 19th century).
\(^11\) Building permits to mills have been required since the 17th century. Haataja, K. (1951), p. 241 and 320.
\(^12\) About the Great Land Reform, see supra note 48.
the ownership of a water area, including rapids, is shared among the land-owners of the village according to their share of land in the village.\textsuperscript{1}

There is a special rule concerning rapids situated in the water area between two villages: the owners of both sides have equal rights to the water flowing therein. This has been the situation for centuries now but this is stipulated in the Water Act (587/2011), too, concerning water areas that belong to two real estates or common land areas.\textsuperscript{2} In these cases, the median line principle does not apply in rapids because it may be that the watercourse is not symmetrical in both banks and most of the hydropower is situated on the other side of the watercourse. That is why it is stipulated that the owners of both sides share the waterpower 50-50%.

\section*{4.3 Nature conservation aspects}

Since the 1970's, the conservation of rapids has become an important issue of nature conservation. First, the protection in legal context begun in court practice.\textsuperscript{3} Thereafter, the rapids have become subject to nature conservation by the special Rapids Conservation Act (35/1987) and two other special rapids conservation acts as well as by the general Natura 2000 nature conservation areas. Additionally rapids may be included in nature parks and wilderness areas.

The Rapids Conservation Act, given in 1987, prohibits the authorities from granting a permit for a new hydropower plant in certain water systems. In the Act, there is a list of 53 water systems or parts of water systems in which the building of a new hydropower plant is forbidden. However, the Act did not interfere with the existing plants on those water systems at the time when the Act was issued. Additionally, the river Ounasjoki is protected under the Act 703/1983 and the river Kyrönjoki under the Act 1139/1991. Consequently, these water systems or parts of water systems are excluded from new hydropower construction.

Natura 2000 network includes areas protected by the Habitats Directive\textsuperscript{4} and the Birds Directive\textsuperscript{5}. According to Section 65 of the Nature Conservation Act (1096/1996), if establishing a hydropower plan is likely to have to have significant adverse effect on the ecological value of a site included in Natura 2000 network the applicant is required to conduct an appropriate assessment of its impact. The permit authority may not grant a permit to such a plant, if the assessment procedure indicates that the plant would have a significant adverse impact on the particular ecological value for the protection of which the site has been included in the Natura 2000 network.\textsuperscript{6} Therefore, the Natura 2000 network is taken into account in the permit procedure of a hydropower plant.\textsuperscript{7}

\section*{4.4 Other relevant legislation}

Preceding the permit procedure for hydropower plants, an environmental impact assessment usually takes place. The assessment is regulated by the Act on Environmental Impact Assessment Procedure (468/1994) and the Government Decree on Environmental Impact Assessment Procedure (713/2006). The aim of the procedure is to promote the assessment of environmental impacts and their consideration in planning and decision-making as well as increase the information available to citizens and possibilities to public participation.\textsuperscript{8}

\textsuperscript{1} Haataja, K. (1951), p. 310-361 (especially p. 330).
\textsuperscript{3} See Supreme Administrative Court (1978), milestone case KHO 1978-A-II-123, which was the first ruling that rejected a plan for constructing a hydropower plant. In this –Huopanankoski² case, the Court put weight on the beauty of the nature and other values in the landscape, the values of the cultural history around the rapids, and fishes that would be devastated. The Court stated there was no public need for the plant, and advantages of the project were not significant compared to the disadvantages.
\textsuperscript{6} Nature Conservation Act (1096/1996) Sections 65 and 66. The same applies to sites that are intended for inclusion in the Natura 2000 network and to plants either individually or in combination with other projects and plans as well as plants situated inside the Natura 2000 site or outside the site in case they are liable to have a significantly harmful impact on the site.
\textsuperscript{7} The influence of Natura 2000 network on a hydropower plant and reservoir project in the Northern Finland was among other issues under consideration in a recent and quite famous case KHO 2002:86 by the Supreme Administrative Court, \textit{supra note} 35.
\textsuperscript{8} Act on Environmental Impact Assessment Procedure (468/1994) Section 1.
Other relevant legislation worth pointing out concerning hydro power is the Act on Dam Security (494/2009) and the Act on Flood Risk Control (620/2010).

In general, financial support plays an important role in the promotion of energy from renewable sources. However, this is not the case concerning hydropower because of the little potential seen in its promotion and that the existing plants have succeeded in competing with other sources of energy. Still, when discussing renewable energy it is always justifiable to have a look at the subsidy system. Legislation related to financial support for renewable energy has been totally renewed in the beginning of year 2011 and there are totally new instruments available. The Act on subsidies for electricity produced with renewable energy sources (1396/2010) introduces a feed-in tariff system to Finland from the beginning of 2011. This new feed-in tariff scheme seeks primarily to increase electricity production based on wind power by 6 TWh, and on forest chips utilisation by 22 TWh. Additionally, the Act includes a fixed subsidies system for electricity production for wind power, forest chips, biogas and hydropower. The fixed subsidy system is intended to power plants which are not applicable to feed-in tariff scheme, because of power limits, or because the spent fuel. This fixed system replaced the former subsidies of the Electricity Tax Act (1260/1996).

Electricity produced with hydropower is entitled for 4.20 Euros per MWh of fixed subsidy compared to electricity produced with wind power or wood chips which is entitled for 6.90 Euros per MWh; electricity produced with biogas is treated the same way as hydropower. Conditions of fixed subsidy are: 1) plant location and network connectivity meet the general requirements (e.g. located in Finland, economical qualifications) and same size requirements as the feed-in tariff production, 2) power plant is not and has not been part of the feed-in tariff system on the basis of electricity production with the same fuel, and 3) operator of the plant maintains reliable accounting of the fuels spent in the plant and its energy content, if it is possible to use different fuels in the power plant, for the calendar year. For the hydropower plants, there is a special size requirement that the total rated output of the generators may not exceed 1 MVA. Therefore, only relatively small hydropower plants are eligible to subsidies. The fixed subsidy system is based on the target price, but fixed subsidies will also be paid for those hours when the market price of electricity is negative at the power plant location. There are limitations for the fixed subsidies: subsidies will not be paid if the amount of electricity produced is less than 200 MWh during the calendar year. Production volumes on plant level may vary considerably, but in practice the 200 MWh means annual production of power plants, which generator rated power is about 20-40 kVA. Neither will the subsidy be paid for electricity generated by hydropower if the market price of electricity in the calendar year exceeds the average of 76.6 Euros per MWh.

5 Conclusion

In Finland, the whole potential in hydropower is about 5.100 MW: about 3.000 MW is in electricity production already, about 1.500 MW is protected by nature conservation legislation or as transboundary rivers out of reach for energy production, and around 600 MW is available for hydropower construction, in theory. In practice, of this 600 MW only half is techno-economically significant and the number small-scale hydropower worth harnessing does not add up much. These figures explain the modest potential for increase seen in electricity produced with hydropower. However, since climate change mitigation calls for all the deeds to be exploited, also further

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1 The Council of State approved on 24 March 2011, after decisions of the Commission in March, the new Government Decree (258/2011) according to which the Act came fully into force 25 March 2011.

2 Act on subsidies for electricity produced with renewable energy sources (1396/2010), Section 30.

3 Act on subsidies for electricity produced with renewable energy sources (1396/2010), Section 31.

4 Act on subsidies for electricity produced with renewable energy sources (1396/2010), Section 33.

5 The feed-in tariff scheme will be financed from funds within the state budget. In the 2011 budget, an appropriation of 55.35 million Euros has been approved for production subsidies under the feed-in tariff scheme. Finnish Government (2010), Hallituksen esitys Eduskunnalle laiksi uusiutuvilla energialähteillä tuotetun sähkön tuotantotuesta HE 152/2010 (Government proposal for an Act on subsidies for electricity produced with renewable energy sources), p. 28.
promotion of hydropower may have an influence in Finland. The question is what can be done related to the legislation concerning hydropower.

First, the hydropower plant operators feel that the permit procedure is complicated and difficult. For instance, the owners of small and micro hydropower criticise procedure to offer initiative for the right to use common hydropower and see it as a historical remains slowing down the permit procedure. Consequently, the permit procedure is designed for large-scale hydropower plants, and the administrational burden may seem heavy for small-scale plants. Different scale of plants differ with their impacts on the environmental and nature. Therefore, a lighter procedure for small and micro hydropower would be justified and may ease their promotion.

As one example, the utilisation of small hydropower could be exempted from the permit procedure, at least in some cases; at its most unnoticeable form, micro hydropower device can be as small as a microwave oven producing electricity only locally and be comparable to solar power. Its environmental impact would probably be minimal but still, according to present legislation, it would need a permit (since a permit is always required regardless of the size of the plant) and therefore the right to use the waterpower in question. For the purposes of this kind of micro hydropower plant, it does seem as exaggeration.

Second option that would ease the use of hydropower is to loosen the nature conservation legislation at some level without risking conservation values. There are a few ways to conduct this: 1) power increases in existing plants, 2) establishing plants in protected areas which have dams for other purposes, and 3) utilisation of new micro hydropower could be accepted in the protected water systems. In all these situations, the absolute condition would be that conservation values would not be endangered.

In conclusion, in order to achieve the goals set for mitigating climate change, some amending of the traditional environmental legislation may be needed. Although subsidies are available for electricity production by hydropower and the target is in the promotion of energy from renewable sources, it seems that the traditional water legislation does not support this target. This paper shows a need for further research in the topic: an international comparative study to give insight into solutions used in other countries.

6 References


Supreme Administrative Court (2002), case KHO 2002:86.
Nuclear Power: Ecologically Sustainable or Energy Hot Potato? A case study

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Abstract:

―Man is here only for a limited time, and he borrows the natural resources of water, land and air from his children who carry on his cultural heritage to the end of time. One must hand over the stewardship of his natural resources to the future generations in the same condition, if not as close to the one that existed when his generation was entrusted to be the caretaker.‖

(Delano Saluskin, 1991)

We are now facing the prospect of fossil fuels running out. The magnitude of the hydrocarbon resource gap, lack of significant alternative energy sources and disastrous impact on society of energy shortfalls leave few choices. Any gap between supply and demand must be met through increased efficiency or increased nuclear/renewable energy production. With the proposed development of 10 nuclear power stations providing 16GW of new capacity, the government appears committed to obtaining a significant percentage of the country’s energy from this source. The sustainability of this power source in comparison to other forms of low carbon energy is of paramount importance.

The World Nuclear Association stated: ‘[nuclear power] is robust from a sustainable development perspective …‘ Using the basic pillars of sustainable development (economic, environmental and social) this paper examines this statement using the proposed reactors at Hinkley Point, Somerset and Oldbury, (South Gloucestershire), as a case study.

EDF Energy plans to develop two new reactors at Hinkley Point with forecasted construction costs in excess of £9bn to produce a capacity of 3.2GW. The Company believes this will boost the regional economy by over £500m, particularly through job creation, during the construction period and beyond. Horizon Nuclear Power is to invest £15bn to produce a capacity of 6 GW and again positively impact on the regional economy.

These nuclear power stations will be located on the Severn Estuary, and thus enabling the abstraction of seawater for the cooling process. However, water is then returned to the sea at a ‘slightly raised temperature‘. Even small increases in temperature can create fluctuations in environmental conditions enabling the establishment of invasive/non-native or eurybiontic species that can rapidly colonise and threaten marine and coastal biodiversity.

Studies have also shown a decline in phytoplankton and zooplankton abundance close to the discharged water with possible impacts upon the wider food chain and overall ecosystem services. Highly uncertain decommissioning and waste disposal costs are of key public and governmental concern when assessing the relative competitiveness and sustainability of nuclear power against other forms of low carbon energy. The Nuclear Decommissioning Authority shows current
discounted decommissioning and clean-up liabilities for existing nuclear facilities of over £45bn. If sufficient provision for costs of decommissioning waste from the new proposed nuclear facilities are not properly provided for, the burden will fall on the taxpayer (either directly or indirectly). The key issue here is to ensure that nuclear energy is truly sustainable and not simply shifting the economic and environmental burden of responsibility onto future generations to satisfy short-term political energy objectives.

**Keywords:**
nuclear power, sustainable development, thermal pollution, economics, intergenerational equity.

1 **Introduction**

Given the move to low carbon technologies in order to mitigate the effects of climate change (with nuclear generation currently reducing carbon emissions by 7-14%) (DECC,2011), the UK plans to invest heavily in nuclear power, with the impact on the Severn region now to be significant, following the rejection of the Severn Tidal Barrage scheme. However, there is currently a great deal of uncertainty and debate over the likely costs of expanding the UK’s nuclear electricity generating capacity. Aside from the ecological and legal issues surrounding the building and operation of new nuclear facilities, economic considerations are very much to the fore, for the energy companies themselves, the government and the region. The energy companies involved in new nuclear development in the Severn area are keen to promote the regional economic benefits from the schemes. Job creation and impact on the regional economy are seen as being key benefits. Horizon Nuclear Power state that 800 permanent jobs will be created at Oldbury (South Gloucestershire) during operation and a peak of 5000 jobs during construction(Horizon,2011). Hinkley C. (Somerset) is projected to provide £100m of economic benefit for the regional economy during every year of construction” and £40m per year in economic benefit for every year of the site’s 60 year operation” (EDF Energy,2011a). EDF Energy reveals that 700 permanent and 200 contract staff will be required during the operation of Hinkley C. Furthermore, forecasts suggest a peak construction workforce of 5600, with 20,000-25,000 individual jobs being created over the 10 year construction period, with up to ¼ of these going to local people. To further support the local workforce, the company is to invest £6.1m in local colleges to help train potential employees and create more new apprenticeships to provide 200 of the technicians required by the new power station. The company also has plans to establish a £20m community fund to be spent on local projects (EDF Energy, 2010).

The modern concept of sustainability has its roots in the technique of forest management practised by central European foresters in the eighteenth and nineteenth centuries (Schutt,1992). It was fundamentally an economic management technique and was not inspired by ecological or biological considerations (Schutt, 1992). The current definition of sustainable development is as much concerned with economic and social development as it is with environmental protection (Brundtland, 1987). According to Brundtland sustainable development (SD) is a process of transformation which, by combining economic growth with broader social and cultural changes, enables individuals to realise their full potential. This dimension of sustainability brings with it the recognition that development must adhere to the physical constraints imposed by ecosystems, so that environmental considerations have to be embedded in all sectors and policy areas. Sustainable development was one of many issues discussed by the International Court of Justice in the Danube Dam case (The Gabčíkovo-Nagymaros(1998). In this case Judge Weeramantry in his dissenting opinion argued that the principle of sustainable development had already become part of modern international law and practice, however the court in its infinite wisdom stated that the ‘concept of sustainable development’ was one which expressed the need to reconcile economic development with the protection of the environment.

The EU incorporated the principle of sustainable development into Article 2 of the Treaty on European Union provided that the Community ‘shall have as [one of its tasks]…to promote throughout the Community harmonious, balanced and sustainable development of economic
activities (Treaty of Amsterdam, 1997), and Article 6 provides ―Environmental protection requirements must be integrated into the definition and implementation of the Community policies and activities referred to in Article 3, with a view to promoting sustainable development‖ (Treaty of Amsterdam, 1997). The Lisbon Treaty made this commitment stronger and the new Article 3 provides that ―Union shall... work for the sustainable development of Europe...‖ indicating that strengthened sustainable governance is in place (Treaty of Lisbon, 2007). In the UK the definition changed, from a trade off between the economy and the environment (DEFRA, 1994) in 1994, to 2005 where the definition expanded to incorporate five guiding principles (Five principles include living within environmental limits, just society, sustainable economy, good governance and sound science). The effectiveness of UK sustainable development legislation however remains questionable, and none go as far as to impose a duty to achieve sustainable development. For example it is questionable to what extent the legal duty in the Planning and Compulsory Purchase Act 2004 Section 39(2) which requires all plan making bodies to exercise their function ‘with the objective of contributing to the achievement of sustainable development’ has any real content or value. However, the non-binding wording allows a great deal of discretion.

Sustainable development has been incorporated into national law in India, through the Vellore Citizens’ Welfare case (Vellore Citizens’ Welfare Forum v Union of India AIR [1996]) and in Sri Lanka through the Eppawela case (Bulankulama and Others v Secretary, Ministry of Industrial Development and Others SLR [2000]) and could under certain circumstances be said impose duties and obligations on public and private bodies (Razzaque, 2002). This development, further suggests that the issue of the needs of the current generation and those of future generations are central to the Brundtland definition of sustainable development (Rauschmayer, et al., 2011). Needs can be distinguishable from preferences as they are considered the very minimum necessary for the survival of a species i.e. food, clean air and water and shelter a tolerable climate. There is however considerable debate about what we really ‘need’ (Redclift, 1993). The problem is further compounded when we engage in judging the needs of the future generations owing to the fact that what is valued by one generation will not necessarily be held in the same esteem in the preceding generation (Bell, & McGillivray, 2008).

In this context nuclear technology can amongst other things contribute significantly to the creation of a steady and abundant supply of electrical energy. It is suggested that electricity generated from the use of nuclear power satisfies the economic and environmental protection goals of the Rio Principles (Joskow, 2009). Furthermore the energy aspect of nuclear power has links with the three dimensions of sustainable development – economic, environmental, and social. Energy services are fundamental for economic and social development. As energy use will continue to grow, its health and environmental impacts will have to be controlled, alleviated or mitigated in order to achieve sustainable development goals.

In a bid to establish nuclear energy as the solution to UK’s the energy problem, the government in 2010 (Cabinet Office, July-2009) rebranded nuclear energy as a means of delivering a sustainable energy supply which mapped on to the internationally agreed Millennium Development Goals (UN Millennium Development Goals). To truly appreciate this aspect of nuclear energy we will analyse its environmental and economic implications.

2 Environmental Implications

The environmental concerns over nuclear power, such as the difficulties with the disposal of intermediate and high level waste, are well documented and it is beyond the scope of this work to address all these issues. However, a significant and little considered area of concern that could call into question the ‘sustainability’ of nuclear power is the ‘death by a thousand cuts’ ecological impact from the new power stations. The cumulative impacts of a small number of ‘minor adverse’ or ‘moderate adverse’ impacts (EDF, 2011b) combined over the operational lifetime of the power station could, ultimately, result in major adverse impact.
The consultation process for the Hinkley Point C (HPC) power station finished on 28 March 2011 (EDF, 2011b). As one of the statutory consultees, the Environment Agency (EA) provided a detailed response to the proposal and, in particular, addressed a number of ecological concerns (EA, 2011). These focussed upon three key areas of the main HPC development.

The locations considered for the intake and outflow pipes are shown in fig. 1. EDF (2011)b advised their preferred configuration to be intake at point A and outflow at point B. It is anticipated that the intake rate will be ‘low velocity’ at 120cumecs. Temperature of the discharged water will be raised by 12.5°C. The locations for the intake and outflow pipes represent the least damaging option. However, the Environment Agency (EA, 2011) expressed concern about a lack of appropriate assessment of the impact from the thermal plume particularly modelling in different conditions for example a ‘hot summer’. They require further studies to be undertaken and reviewed by the EA prior to a planning application being submitted.

The thermal plume will have an impact upon the species assemblage within the Severn Estuary with warmer water loving fish, such as bass, thriving and colder water species, for example cod, moving away from the area (Forster et al. 2011). There is no mention within either the EDF (EDF, 2011b) assessment or the Environment Agency (EA, 2011) response as to the potential for invasive / non-native species to colonise the area. There are no definitive criteria for determining whether a non-native species will become invasive. It is possible that the niche created by a cold-water species moving away could provide an ideal opportunity for a non-native species already present within the ecosystem to exploit (DEFRA 2011).

The BEEMS (Forster et al. 2011) study highlighted the likely impacts from cooling water discharge without biocide and discharge with biocide (likely hydrazine). There are no studies, as yet, into the impact of this chemical on the marine environment within the Severn Estuary. The Environment Agency has recommended further study (EA, 2011).

2.1 Fish impingement / entrainment

It is this aspect of the nuclear power plant development that could, potentially, result in significant impact on the marine ecology of the Severn Estuary. Again, the Environment Agency expressed concerned over a lack robust survey methodology used by EDF to establish likely impact. They note that only using a beam trawl would not have sufficiently sampled the marine environment and would have missed those species present in the water column. Although it is acknowledged that the turbidity of the water within the Severn Estuary results in limited commercial fishing activity, the population of eel within the area is significant. It is reported that 95% of elver catch in the UK comes from the Severn Estuary (EA, 2011).

3 Relevant International, EU and UK Legal Instruments

There are several International, European and National legislation that need to be taken into considered in relation to the proposed developments. These can be broken down into preventive and sanctioning legislation (Ginige, 2002) and have been considered in depth in the April 2011 report.
produced by EDF Energy (EDF, April 2011). It is suggested that the majority of legislation can be adhered to with appropriate monitoring (EDF, 2011b) by regulatory agencies. However, it is suggested that there may be issues with regard to the Eel Regulations of 2010 (SI 2009 No. 3344) and EU Habitats Directive (Dir. 92/43/EEC (1992)).

The European Eel Regulations 2010 (COUNCIL REGULATION (EC) No 1100/2007) state that it is a requirement that mitigation is in place at the intake point for power stations to prevent impingement by eel. The European Eel has also been placed on the CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1973) register thereby adding a further level of protection for this species (E A, 2011). In addition, the impact on the marine food web of impingement / entrainment of smaller species, for example the brown shrimp (Crangon crangon) have not been assessed. Significant destruction of populations of these species could have impacts upon the ecosystem within the region and the possible further decline of protected species, for example Allis shad (Forster et al. 2011).

The Environment Agency (2011) subsequently supported the inclusion of a fish return device within the intake / outflow system for HPC. However, they require further details of the location of the fish return to ensure it is not within the vicinity of the thermal outflow (Payne, 2011).

3.1 Cumulative Impacts

The European Commission published a booklet titled Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC in 2000 (European Commission, 2000), giving detailed guidance on Articles 6(3) and (4) (European Commission, 2001) in 2001 and in 2007 a guidance document on Article 6(4) (European Commission, 2007) which was intended to 'further develop and replace' the section on Article 6(4) of the booklet of 2000 (European Commission, 2007). The main aim of these documents was to ensure a coherent application of the Directive's provisions at national, regional and local level. Thus contributing to the establishment of sound management of the Natura 2000 network.

Habitats Directive attempts to ensure that those habitats that come under its jurisdiction per Article 6 are not significantly affected by plans or projects. Therefore, such plans or projects should not normally be authorised (Article 6(3)). The provisions of Article 6(4), which provide for compensatory measures, constitute an exception to those of Article 6(3) and must therefore be interpreted restrictively (European Commission, 2000), (European Commission, 2007). Thus in the context of Article 6(4), the question that needs to be asked is whether a plan or a project is likely to have a significant effect on the site concerned within Article 6(3) of Directive 92/43. Whenever the responsible authorities consider it probable that there might be a significant effect, they have to make an assessment. The requirement for an appropriate assessment of the implications of a plan or project is that there is a probability or a risk (Case C-127/02 Waddenvereniging [2004] at 43) that the latter will have significant effects on the site concerned (Case C-127/02 Waddenvereniging [2004] at 44). Furthermore any reasonable scientific doubt as to the absence of adverse effects on the integrity of the site must be removed for authorisation to be given (Case C-127/02 Waddenvereniging [2004] at 59) and Case C-239/04 Commission v Portugal [2006] at 31). In order to determine whether there is likely to be a significant effect, an appropriate assessment has to be made, according to Article 6(3) of Directive 92/43. The assessment under Article 6(3) of Directive 85/337 (Dir. 85/337 (1985) OJ NO. L 175/40) only requires an assessment of a project on the environment in general, while the assessment under Article 6(3) is site-specific and must examine whether a plan or project adversely affects the integrity of the natural site in question: _assessments carried out pursuant to Directive 85/337 or Directive 2001/42 cannot replace the procedure provided for in Article 6(3) and (4) of the Habitats Directive (Case C-418/04, Commission v Ireland [2007] at 231). The Commission documents suggest the type of considerations that should be take into account for the assessment; in particular, the necessity to identify all potential impacts, including cumulative impacts, and to use the best available techniques and methods, to examine the most effective mitigatory measures in order to avoid, reduce or cancel the negative impacts and to use the best possible indicators for ensuring the biological integrity of the Natura 2000 network.
(Kramer, 2009). In the UK this aspect is reflected in regulation 61 of the Conservation of Species and Habitats Regulations 2010 (SI 2010 No.490) which states that the competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and is not directly connected with or necessary to the management of that site, must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.

The Marine report (EDF, 2011b) made references to ecological impact from the HPC development with the majority deemed to be _minor adverse_. However, there are no studies assessing the cumulative effects of the _minor adverse_ and _moderate adverse_ impacts. An area of concern expressed by the Environment Agency (EA, 2011) was the, as yet unknown, potential impact from both Hinkley Point B (HPB) and HPC operating at the same time. This is a theoretical possibility with HPB due for decommissioning in 2016. Any delay in that decommissioning could result in a combined impact from both power stations.

Concerns regarding this oversight were flagged by EA in their report stating that _under regulation 61 of the Conservation of Habitats and Species Regulations 2010, if the combined impacts cannot be concluded to have no adverse effect on the integrity of the Severn Estuary SAC (Annex II fish species), then compensation may be required under regulation 66 of the Conservation of Habitats and Species Regulations 2010” (EA, 2011).

4 Nuclear Economics

The World Nuclear Association (WNA) believes that nuclear power is competitive against other methods of electricity production in terms of costs (World Nuclear Association (WNA), 2011) and Government consultants Mott Macdonald project nuclear to be the least cost option in longer term, assuming DECC’s central fuel and carbon assumptions” (Mott Macdonald, 2010).

4.1 Uncertainty of Capital Construction Costs

In a 2008 White Paper on Nuclear Power, the UK Government originally forecast the construction costs of a new _first of kind_ reactor with capacity of 1.6GW to be £1250/KW(BERR,2008). EDF Energy, who are consulting on plans to build 4 new European Pressurised Water Reactors (EPR’s) by 2025 have forecast the costs to be much higher. EDF Energy's forecasts on their plans to construct two reactors at Hinkley Point, show costs of £9bn to produce a capacity of 3260MW, equating to a cost of £2760/KW (more than double the Government's 2008 forecast)(EDF Energy 2010 ). Horizon Nuclear Power (a joint venture between E.ON UK and RWE) plan to invest £15bn in new facilities to generate 6000MW of electricity, with up to 3 new Pressurised Water Reactors (PWR’s) at Oldbury producing 3300MW(Horizon, 2011).

The capital construction cost of reactors is the greatest proportion of cost for nuclear power (70%) (Thomas, 2009), with the fuel cost being relatively low. Nuclear fuel costs make up only a small proportion (around 10%) of the overall plant running costs, compared to gas plant where fuel costs represent around 70% of running costs” (Horizon, 2011). As such, the assumptions made in the appraisal of such long term energy projects can have a huge effect on the financial viability and performance.

When comparing the economic costs and benefits of different technologies, it is important to have a common measure in which to express this comparison. The levelised cost expressed in £/MWh represents _the lifetime discounted cost of ownership of using a generation asset...expressed in cost per unit of energy produced”_ (Mott Macdonald, 2010). The 2008 White Paper forecast an overall positive Net Present Value (NPV) of £15bn, on plans to generate an extra 10GW of electricity using nuclear power. The central scenario used in this forecast (using a 10% discount rate) resulted in levelised costs of £38/MWh for nuclear power, although this varied between £31/MWh - £42/MWh when different discount rates were applied over a 40 year period(BERR,2008). Given the
uncertainty surrounding the capital costs of construction, the levelised costs/MWh could be far higher than detailed in the 2008 White Paper.

The UK Government’s own 2010 study into the Severn Tidal Barrage scheme showed that nuclear power compared favourably against other low carbon technologies. However, the levelised costs/MWh projected by consultants Mott Macdonald for that study, were significantly higher than originally thought. Using the Government’s central scenario of a 10% cost of capital (to reflect the return required by a private investor), Nuclear Power was forecast to cost £69/MWh, as against Coal with Carbon Capture and Storage at £110/MWh and Offshore Wind at £129MWh (DECC 2010a).

However the modelling undertaken by Mott Macdonald produced a wide range of estimates dependent on the discount rate used, the start date of the project and whether the technology represented First of a Kind (FOAK) or Nth of a Kind (NOAK). Under their ‘medium’ scenario for a FOAK PWR, the projected cost increased to £3744/KW and then fell to £2913/KW as the learning curve took effect. Mott Macdonald caution however, that although the NOAK costs are much less, they are ‘not applicable this decade’ (Mott Macdonald, 2010).

The DECC now estimates that plans to provide 16GW of new capacity in the form of 10 new reactors, will require some £40bn of investment (DECC, 2011). However, given the uncertainty of forecasting, this may be many billions higher.

4.2 Decommissioning Cost Concerns

The costs of decommissioning are also of key concern when assessing the relative competitiveness of nuclear power against other forms of low carbon energy. Decommissioning and waste disposal costs are forecasted as being approximately 9-15% of the capital construction cost of a nuclear plant (Semple Fraser 2011). In its Annual Report and Accounts for 2009/10, the Nuclear Decommissioning Authority (NDA) shows existing discounted decommissioning and clean-up liabilities of over £45bn (NDA 2010). Public concern exists that the costs of decommissioning are being stored up for future generations to deal with and that the burden will fall on the taxpayer. The 2008 White Paper makes clear that in addition to energy companies funding the development and building of new nuclear power stations, the full burden of decommissioning and waste management will lie with those energy companies (BERR, 2008). The argument is made that decommissioning costs are factored into the initial investment appraisal process. Decommissioning and waste costs (of £1.27bn for an example individual reactor) were included as part of the Government’s 2008 forecasts. When discounted over a 40 year period, these costs added only £0.31/MWh to the overall cost (BERR, 2008).

However, Mott Macdonald’s 2010 projections used a standard discounted increase of £2.1/MWh to account for decommissioning and waste costs in all scenarios, providing a levelised cost incorporating a ‘cradle to grave aspect’ (Mott Macdonald, 2010). These wide ranging forecasts highlight the uncertainty surrounding the provision of adequate resources to fund these future decommissioning costs, whether from the energy companies themselves or ultimately through the taxpayer.

4.3 Proposals to Meet Decommissioning Costs

The UK Government is currently consulting on proposals to introduce a Funded Decommissioning Programme (FDP) which will establish a framework for financing the eventual decommissioning and waste management of the new nuclear facilities. Final guidance on this is expected to be published in the latter part of 2011. The purpose of the FDP is to ensure that energy companies are able to meet the full cost of decommissioning and their full share of waste management and waste disposal costs” (DECC, 2010b). Each energy company will be required to set up an approved fund, making regular payments to contribute sufficient resources over the lifetime operation of the nuclear plant. An appropriate investment strategy will be required to generate sufficient returns to cover the estimated costs of decommissioning, waste management and disposal, with arrangements to be made in the event of shortfall in the fund value. However the fairly recent problems associated with endowment mortgages within the financial services industry, illustrate perfectly the problems of
ensuring adequate financial performance of investments when projecting decades into the future. Volatile market performance, wide ranging growth estimates and highly uncertain future costs, create a difficult environment for the operation of the fund. The flaw within the endowment mortgage industry was overambitious growth projections and therefore highly prudent financial planning will be the key to successful accumulation of sufficient funds to meet the eventual liabilities. This of course is not an insurmountable problem given the financial instruments available for financial planning. Low risk, undated government stock with a current redemption yield of 4.91% could be employed to calculate the required annual contribution to the fund. Changes in the contribution would be required when yields change to keep the fund on track. Long dated government stock (15 years+ to redemption) could be used towards the end of the operation of the plants, with maturity coinciding with plant closure. Potentially, ultra-long dated stock running for say a 40-50 year period might even be available, although yields are not necessarily attractive over such a long time frame(Telegraph 2011). Fund assets will be periodically compared to the target value of the fund and appropriate action required should a shortfall be evident. Protection against a material shortfall may take the form of insurance, financial instruments or an upfront endowment (DECC 2010 b).

4.4 Uncertainty Surrounding Cost Assumptions and Potential Final Liabilities

The government will assume liability for the eventual spent fuel disposal, with the money from the fund being used as compensation for this service. The government proposes to set an index-linked 'Final Price' for the provision of this waste disposal service. This final price will be set at the end of a deferral period (30 years into the operation of the plant) when it is believed that there will be less uncertainty over waste disposal costs (DECC 2010 c). This final price will take the form of a variable cost per unit expressed as £/tU (pounds per tonne of uranium). The government plans to introduce a maximum cap to this final price for the disposal costs of spent fuel, to create a degree of certainty for the energy companies. Using an example 1.35GW PWR operating for 40 years, this cap would be set at £1,104m(DECC 2010 c) based on a cap price of £978k/tU. However concern exists that the cap price may prove to be insufficient to meet the eventual waste disposal costs and that the taxpayer will end up heavily subsidising the industry. Analysis of NDA liabilities shows that spent fuel disposal costs are rising at 4.5% above inflation(Jackson,2011). Using this information, it can be forecasted that the spent fuel disposal base cost (being used by the government) of £193k/tU will rise above the cap price by the year 2047. For a reactor operating over a 40 year period between the years 2020-2060, this will lead to a £131m shortfall in the amount necessary to cover the full cost of decommissioning and waste disposal. Jackson (2011) forecasts even greater subsidy requirements of £1,127m for a 60 year PWR. A second concern highlighted by analysts, is that the government's base cost of £193k/tU for the disposal costs of new nuclear waste is based on optimistic assumptions when compared to the disposal costs of existing nuclear waste. Jackson(Jackson,2011) believes that it is likely that disposal costs of Advanced Gas Cooled Reactor (AGR) and PWR spent fuels will be very similar and that disposal costs of PWR spent fuels may have been significantly underestimated and may need a public subsidy. This is evident when comparing the spent fuel disposal cost of AGR at £659k/tU against the government's base cost for PWR of only £193k/tU. This variation comes about from the government's questionable assumption that PWR spent fuel will cost 50% less to dispose of than AGR spent fuel, with a further 42% reduction applied for economies of scale arising from a 10 reactor new nuclear build programme(Jackson,2011). In an independent report for Greenpeace, Jackson(Jackson,2011) quantifies the underestimation of the actual disposal cost of spent fuel for PWR at £280k/tU, leading to a further required subsidy of £296m (for a 40 year PWR) or £445m (for a 60 year PWR). The uncertainties involved in both government and independent forecasts, cast doubt on whether by setting a maximum cap, the full costs of decommissioning and waste disposal will actually be met by the nuclear operators despite strong assurances from the government. Any indirect subsidy for the nuclear industry actually penalises other forms of renewable energy as they suffer cost comparison on a potentially unfair basis. The risk is, that in the desire to create energy security
using the (so called) least cost option, more truly sustainable forms of energy may be overlooked with economic and environmental legacies left for the next generation to tackle.

5 Future Generations

We have up to now looked at the environmental implications and the economic aspects of nuclear energy related to this case study. The focus has been on the effects that new nuclear development will have for the current generation. However, in order to fully appreciate the issue of sustainability and legacies we need to turn our attention to the effects on future generations.

As mentioned earlier one of the groundbreaking aspects of the Brundtland report was putting the very long-term onto the environmental policy agenda as reflected in the Rio Declaration. "The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations" (Rio Declaration, 1992). This aspect was further reinforced by the Johannesburg Declaration which contained references to "the generations that will inherit this earth" (Johannesburg Declaration 2002) and "a long-term perspective" (Johannesburg Declaration 2002 at para 26). Much of the theoretical debate on future generations revolves around the feasibility of formulating duties and rights in respect of people who do not yet exist (Carter, 2001).

Furthermore, it is still unclear how normative concepts like "obligations", "rights" or "harm" may be interpreted when applied to the intergenerational context. It is suggested that in the absence of a coherent ethical theory most people tend to attribute moral importance to the lives of future generations and the discussion on the matter is typically a rights based one. If you declare universal human rights for every individual, why should individuals born tomorrow not impose obligations on present individuals? It seems appropriate to consider future people as right bearers—even in the absence of a clear definition of what this implies for the present generation practically and legally (Gopel, and Arhelger, 2010). Furthermore reference to future generations from a European Union perspective is moving gradually from the implicit and non-binding level to an explicit and more binding one. Comparing references with regard to future generations in the Commission's 1974 recommendation concerning the protection of birds and their habitats (Commission Recommendation 75/66) and that seen in the Aarhus Convention (Aarhus Convention, 1998). The former is a good example of an indirect reference to future generations reflected in the statement that "public opinion is coming to consider migratory birds more and more as common heritage" (Commission Recommendation 75/66) and the latter 1998 Convention contains specific description of how rights of future generations transformed into present duties "every person has the right to live in an environment adequate to her or his health and well-being, and the duty, both individually and in association with others, to protect and improve the environment for the benefit of present and future generations" (Aarhus Convention, 1998 Art. 1). It should be noted that European environmental legislation to date has only referred to future generations randomly and inconsistently (Gopel, and Arhelger, 2010 pg 4).

6 Conclusion

As stated earlier future needs and preferences are themselves dependent on several factors and therefore may make it difficult to evaluate. However thanks to the spread of sustainable development policies there is emerging a fundamental norm concerning the relationships across generations which requires each generation to pass the planet on in no worse condition than it received and provide equitable access to its resources and benefits (Weeramantry, 2011). In order for the nuclear energy sector to declare itself "sustainable" its environmental and economic legacies must be assessed from the perspective of "respecting the limits of the planet's environment, resources and biodiversity" (DEFRA, 2005) together with the cumulative effects of ALL the new nuclear power stations.

Indeed as Ambassador Frans Van Haren noted with regard to the responsibilities faced in relation to the environment:
We are its custodians. If we destroy the Earth wilfully through greed or through ignorance we will destroy life. There is therefore also a normative, or if you prefer, an ethical aspect to environmental policy formulation and planning’ (Van Haren, 2003).

7 Acknowledgement

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8 References


The Commission’s recommendation to the Council in support of ratification of Ramsar and Paris Convention stated, “public opinion is coming to consider migratory birds more and more as a common heritage and not as the exclusive property of the country where they may be at any given time.” Commission Recommendation 75/66 to Member States Concerning the Protection of Birds and Their Habitats, 1974 O.J. (L 21) 24, 25 [hereinafter Commission Recommendation 75/66]


International Treaties

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 3 March 1973, Preamble (1), (2), available at: http://www.cites.org/eng/disc/text.shtml. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 3 March 1973, Preamble (1), (2), available at: http://www.cites.org/eng/disc/text.shtml. CITES also known as the Washington Convention was adopted in 1973 and came into force on July 1, 1975. It is an intergovernmental treaty, with 175 parties that provides the necessary framework for regulating trading threatened species of wildlife. The overriding goal of the convention is to ensure that the international trade in specimens of wildlife does not affect the survival of species, and to demonstrate that the effective and sound management of resources may be beneficial to the conservation of species and ecosystems and the development of local communities.


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UK Legislation
Legal Research Symposium: Environmental Regulation in Mexico City
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Abstract
Lately, as the population in the big cities has increased, it has become necessary to pay attention to some environmental situations, perhaps not very harmful in past years, but that now can cause very serious and irreversible health problems to population. The industrial development in these urban areas has released very high levels of pollution, and it has become necessary that the regulations and public policies respond to the new environmental conditions, initiating a new culture of protection of the ecology.

Keywords: ecology, environment, habitat, Mexico, pollution

1 Introduction
It is mandatory, indeed, that the government reviews the conditions in Mexico City, the ninth most populated urban area in the world. The lack of zoning restrictions and emission controls have aggravated the problems of overcrowding, a high pollution level, and the degradation of the health of the individuals. The government has promoted the issuance of legal ordinances, as well as the implementation of diverse actions and public policies, in order to prevent and control the problem.

2 The problem of the contamination in Mexico City.
A clean environment for a healthy development of individuals is considered, without a doubt, a right of those who live in this planet. The conservation and restoration of the ecological conditions that protect all the living species is an activity that must be important to all, government, individuals, and companies in general.

By nature, the species grow and develop in natural environments, and these provide the elements that encourage their procreation and perpetuity, with the unique reservation of the proper changes of the evolutionary process. The environment also can be managed, to a degree, so that some species, as in humans, can develop to fulfill their natural assignment and provide the satisfaction of their own needs. Independent of whether it is a natural or managed environment, it is the right and obligation to accomplish these actions and to maintain, whenever possible, the standard of life and development within a concept of dignity and well-being.

Cullet, (Cullet, 2011), considers that the right of the people to a healthy environment can be located in the context of the human rights. On this matter, he points out that international environmental law and human rights law, have intertwined objectives and ultimately strive to produce better conditions of life on earth…they both seek to challenge universal that must often be solved at the same time at the individual and global levels…”

Without a doubt, a healthy atmosphere improves the well-being of individuals and tends to protect the primary value, which is life, as well as its natural or managed habitat for existence and subsistence. This can be translated into a human right, from this point of view.
At present, it is important to mention that the protection of the environment is not included in the Universal Declaration of Human rights. For that reason its legal standing, according to the doctrines and regulations, at this time, does not establish a legal instrument that allows its enforcement when the environmental laws are violated. Although some countries do not regulate the preservation, conservation and restoration of the environment like a human right, it is necessary to state that the degradation and reduction in the conditions of the environment, can impact seriously on health, food and life, which is part of the Universal Declaration of Human rights, therefore, indispensable its observance so that the individuals reach a worthwhile life.

Mexico is a country that in the last 50 years has increased the industrial activity, as well as the growth of the population. Therefore, this is the subject of the highest priority for the government to protect the environment by setting the congruence in industrial activities, population increase and environmental protection.

In Mexico, since the seventies, the ecological subject has reached a paramount importance, and preoccupation at the same time. The topic of the environment had its highest world-wide level, and environmental laws were issued in all of the states. Many public actions were accomplished. Public policies were implemented by the Federal government as well as international treaties were signed, in order to avoid or control the contamination. The important subjects that have been handled in this matter are, for example, the management of toxic waste from the industries; moderation in the use of automotive vehicles; official environmental opinions about polluting agents as a mandatory requirement for those who wish to initiate an industry; high fines to the violators of the ecological regulations; establishment of minimum quality standards for products and services in order to avoid contamination; national and local urban and ecological plans; proper zoning of industrial areas, etc.

The problem of deterioration of the environment in Mexico, was aggravated by the disorderly migration of people, from the rural areas towards urbanized zones, where they thought that it was easier to obtain the satisfaction of their needs that their native places of origin did not provide to them. One of the reasons for the movement of farm workers to the larger cities was the inability to endure the rising costs and interest rates that the government organizations and banking institutions charged them for working the ground in better conditions, reaching, therefore, a greater productivity. There is no doubt that the urban centers of the industrialized countries with their disproportionate population growth contribute to the deterioration of their environment. That is the reason why they need to take sufficient measures to avoid or to lessen the impact of an irresponsible activity, as well as a deficient environmental regulation.

Therefore, the Mexican legislation, from the seventies, began to see the necessity to maintain an environment healthy where their population can be developed under favorable conditions.

### 2.1 Regulation about settlements of human groups.

In 1976, the federal government issued a general law regulating the population to settle down irregularly across the country. Some changes, to date have been made to this original regulation. The intention was that the population centers, irregular and disorderly established in the different cities and towns across the country, would stop becoming a potential or real danger for the environment. As a result of mistaken or insufficient planning of the urban zones, the needs of the increasing population, such as education, housing, services, entertainment, food, employment and others were not addressed adequately.

In order to establish the modalities in the real estate zoning determining the form to take best advantage of the soil and the conservation and restoration of the environment, the Political Constitution of the Mexican United States was modified, creating the legal frame of this new subject.¹

¹ Article 27.
The General Constitution\(^1\) was modified, as needed, in order to define the congruence between the federal government and the states for regulating the population across the country, setting a concurrent coordination among them all.

The law about the regulation of populace\(^2\) has as a main objective, to plan the arrangement and stabilization of the population in the country, therefore, the establishment of the basic norms for the foundation, conservation, improvement and growth of the populated centers.

The figures about provisions, uses, reserves and destinies were created, as a means for the rational use of urban areas, now and in the future. It is in this law where the subject regarding the environmental protection is introduced, with the fundamental objective to maintain the balance of the ecological conditions and the conservation of the natural resources.

Therefore, as an indirect result of the control and stabilization of the population groups inside the Mexican Republic, it was an important and necessary issue to regulate the environmental protection. In the capital city, the Federal District, DF, the subject of the population density was regulated by the Law of the Urban Development of the Federal District, in 1999, with some reforms at the present.

By this law, the basics for the planning, programming and regulation of the territorial ordinances, as well as the development, improvement, conservation and urban growth in the zone are taken into consideration. It also has the intention to protect, conserve, recover and consolidate the urban landscape of the DF and the elements that integrate it.

### 2.2 Environmental regulation

Mexico is considered a developing economy, and although its industry does not reflect high tech standards, it accomplishes several types of manufacturing activities, many of them produce a high index of pollution and are harmful to the environment by all kind of emissions, with irreversible consequences in the health, natural resources, and resulting, in some cases, with an alteration in the genetics in foods.

Therefore, there is a need for creating a new cultural behavior in the care of the environment. In that context, the Federal Constitution is modified once more in 1987 creating the legal framework for the environmental protection, preservation and restoration of the ecological balance.\(^3\)

According to changes in the Constitution, the congruency between the federal government and the states was made. This constitutional reform established the legal support, so in 1982 the General Law of the Ecological Balance and Protection to the Atmosphere\(^4\), was issued by the Congress. The objectives of this law are:

1. To guarantee the right of the people to live in an suitable atmosphere for their development, health and well being.
2. To define the principles of the environmental policy and the instruments for its application.
3. Preservation, restoration and improvement of the environment.
4. Preservation and protection of the biodiversity, as well as the establishment and administration of the protected natural areas.
5. Prevention and control of the water, airborne and soil contamination.
6. To involve the people in the task of protection of the environment.
7. Establishment of measures of control and security to fulfill enforcing the administrative and criminal penalties that may be deserved.

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\(^1\) Article 73, XXIX, C.

\(^2\) Original title: Ley General de Asentamientos Humanos.

\(^3\) Article 73, XXIX, G.

\(^4\) In 1971 there was a background of this law in Mexico City, it was the Federal Law to Prevent and Control Contamination
It is important to notice that the DF is one of the most populated cities on the planet, with excessive urbanization, even in the areas considered as ecological reserves, and rating a very high contamination index.

As pointed out earlier, the migration from the farms to the cities, particularly towards the center of the country, contributed to the overpopulated condition. In the year 2000 the Environmental Law of the Federal District was issued, as a measurement to mediate the problem and to lessen its aggravation, which as of now, has not been effective in diminishing the emission of polluting agents in the zone.

The reasons are mainly the high population index, the lack of a committed environmental culture of the inhabitants, and suitable handling and implementation of the public policies.

The capital city, the DF, is a political boundary, but the growth of the urban area has extended into other bordering localities and has formed a geographic continuity called conurbation, named technically as Metropolitan Zone of the Valley of Mexico.\(^1\)

The metropolitan zone, according to the last population census of 2010,\(^2\) has around 21 million inhabitants, in a surface of 7815 square kilometers, which makes it an area of extreme population density, which means that there is an average of almost 2800 inhabitants per kilometer.\(^3\)

These data is not totally indicative, because the more affluent economic zones have a smaller population density, unlike those of lower income that have bigger number of inhabitants by square kilometer. If the environmental quality is based on the population index, the geography of the city that is surrounded by hills and prevents the circulation of the air aggravates it. The establishment in zones of high risk, like gorges, the deforestation, the erosion of the ground, contamination of the water, the illegal toxic waste handling, the apathy of the public servants to enforce the ecological public policies, the excessive number of automobiles with high smog emissions, excessive and irregular operation of the water-bearing mantles that produce the drought of the wooded zones, lacking of technology in the treatment of the domestic wastes, as well as a lack of awareness of the inhabitants, it is easy to imagine the great environmental deterioration in the metropolitan area.

The main polluting agents emitted to the air in the capital city are ozone (O₃), sulphur dioxide (SO₂), nitrous oxide (NOₓ), carbon monoxide (CO), lead (Pb) and other particulates of soot and dust, all of them highly harmful to the health of the people and almost all coming from automotive vehicles; besides the proliferation of factories in the city and constant maintenance work in the streets and the avenues.

An Atmospheric Monitoring System was established, by means of which a scale is set to measure the pollution levels in the DF, denominated Metropolitan Index of Quality of the Air, better well known by its abbreviations IMECA. This indicator measures from 0 to 500 the concentrations of polluting agents based on the repercussion that they can produce on the health of an individual when breathing the contaminated air.

A scale of 50 IMECA is equivalent to a quality of air not harmful to the health of the people, whereas 300 IMECA means serious damages to the respiratory system and to health in the general. It is considered highly contaminated air and in that case, the government of the city can implement emergency measures to control the overall impact. Also colors have been used to warn the people on the levels of the airborne contamination in the city. This means that the representative fraction of the IMECA indicates the pollution level of the air, and the color, the degree of risk to which the health of the population in the city is exposed.

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\(^1\) At the present, there are 55 metropolitan zones in all the country.

\(^2\) Source: Nacional Geography and Statistic Institute, INEGI.

\(^3\) The whole country, continental and insular areas included, has a surface of 1 964 375 of kilometers squared, with a population, to 2010, of 112,3 million inhabitants.
The values of IMECA are as follow:
1. From 0 to 50 IMECA: The quality of the air is good and has yellow color.
2. From 51 to 100 IMECA: The air continues being acceptable and has green color.
3. 101 to 150 IMECA: The quality of the air is not appropriate for certain sensitive groups, like people with respiratory or cardiovascular conditions; or children and elderly people. Outdoor activities that imply a vigorous exercise should be limited when the color orange is issued. IMECA or more: The phase of environmental pre contingency is activated by the existence of organic or inorganic particles in the air. In a greater level than 175 IMECA, phase I of the program of environmental contingency activates.
4. From 201 to 250 IMECA, is represented by the purple color. In this situation, the quality of the air represents a serious danger for the health of the people.
5. More than 250 IMECA, represents a serious risk to health, and the government of the city will declare an environmental alarm and activate phase II of the environmental contingency program.

This subject is regulated by the Environmental Law of the Federal District, issued on1996, whose main object is to protect the environment, as well as the limitation and control of contamination and the restoration and ecological conservation of the zone. By this law any action or omission, that become a potential or real risk to the health of the people, may be punished and a compensation can be claimed as a repayment of the deterioration caused by any work or activity, when the previous situation cannot be restored.

This law is innovative because it introduces a series of ecological concepts and introduces as a public policy, the figure of the environmental verification to businesses and factories, and the obligation to make a environmental impact report when opening.

3 Environmental programs

The public policies concerning the environment issued by the city government have not been effective in bringing about an acceptable air quality. Before that, the city government had created the Program of Environmental Contingency, with two important policies established in order to diminish the problem of the contamination.

These programs are as follow:
1. Program —Does not circulate today”
2. Program of mandatory vehicle verification

The program —Does not circulate today” initiated by the end of 1989 restricts the circulation of one fifth of the automobiles with registry in Mexico City and the surrounding urban area of the metropolitan zone, from Monday through Friday, on the basis of the last digit of the vehicle plate number.

Initially the program was implemented for winters only, subsequent to rains. That was when the phenomenon of the thermal inversion in the city was most significant. It was at that time that the number of polluting particles in the atmosphere was heaviest. In 1990 it was extended to a permanent program.

In this program, only the automobiles 1993 or newer that do not meet the limits of polluting emissions allowed and those of model previous to the 2004 destined to public service, stop circulating one day of the week. Emergency vehicles, or those whose motors use liquefied petroleum gas, LPG, or vehicles used for the transportation of stolen, wrecked vehicles or vehicles needing repair, as well as in the case of people with permission by reasons for incapacity, are excused of this restriction.
For the operation of this program, a label of a determined color is adhered in the windshield to indicate what vehicles must not circulate on certain days of the week, from 0500 to the 2200 hours, as it is shown next:

<table>
<thead>
<tr>
<th>Day</th>
<th>Last plate number</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>5 or 6</td>
<td>yellow</td>
</tr>
<tr>
<td>Tuesday</td>
<td>7 or 8</td>
<td>rose</td>
</tr>
<tr>
<td>Wednesday</td>
<td>3 or 4</td>
<td>red</td>
</tr>
<tr>
<td>Thursday</td>
<td>1 or 2</td>
<td>green</td>
</tr>
<tr>
<td>Friday</td>
<td>9 or permissions and plates without a number</td>
<td>blue</td>
</tr>
</tbody>
</table>

A modification to the program is the “Does not circulate on Saturday”, effective from 2008, because a high level of IMECA is registered on Saturdays.

This program is for those vehicles of internal combustion and works as follows:

1. First Saturday of every month, vehicles with plates ending in 5 and 6, do not circulate;
2. Second Saturday of every month, vehicles with plates ending in 7 and 8;
3. The third Saturday of every month the vehicles with plates ending in 3 and 4;
4. Fourth Saturday of every month the vehicles plates ending in 1 and 2;
5. Fifth Saturday, when the month has one, the vehicles with plates ending in 9 and 0, as well as circulating permissions for cars that do not have a plate number.

The program is not mandatory on holidays and Sundays; all automobiles are allowed to circulate, unless a severe environmental contingency appears unusually. Also, the holograms with plates ending double 00 “zero” or 0 “zero” are exempted of the program.

The program “Does not circulate today” is also for vehicles with registry in other states of the Mexican Republic or other countries. There is a table for them so they can follow the rules of the program. For those who do not obey the program “Does not circulate today”, fines can be levied and the automobile can be towed away, at their own expense.

b) The mandatory vehicle verification program establishes the calendar and the rules according to which all the registered automotive vehicles of internal combustion in the Federal District will have their emissions tested during the first semester of year 2011, except the motorcycles, the automotive hybrids (gasoline - electricity) that by their technological characteristics are impossible to apply established protocols to them, according to the Official Mexican Norm NOM-047-SEMARNAT-1999, automobiles for collection and the agricultural tractors, the machinery dedicated to the mining and construction industries.\(^1\) are exempt.

The obligation to verify the vehicles extends to owners, possessors and in general, to any driver of an automotive vehicle. The units whose plates end in 00 “double zero”, are verified every two years because they fulfill the required conditions to avoid the airborne contamination, according to the rules of the program.

For the operation of the mandatory verification, “verifying centers”,\(^2\) have been created in the city, and they must adhere to the established protocols of the NOM.

Each verification center has cameras in order to prevent maneuvers taking place for disobeying the environmental dispositions that rule this program. The verification procedure consists of three stages:

a) Visual inspection of the systems and devices of the vehicle such as filter of activated charcoal, air filter, seals of the oil and fuel tanks.

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2 Mandatory Vehicle Emission Verification Centers.
b) Measurement of the smoke emissions and its coloration in order to determine the level of polluting agents that the unit produces.  
c) Measurement of hydrocarbon emissions and carbon monoxide, through technical tests.  

Besides the verification, there are also some control operative actions in the streets and avenues, such as mandatory supervision and monitoring of the verification centers; inspection of the operation, procedures and proper handling of documents and official labels; accreditation of factories and evaluation of the technical quality.

4 Legal aspects of the environmental regulation in Mexico City.

As was mentioned before, the protection of the environment in Mexico is not considered a human right, but “diffused” right. This means that the right for a clean environment is not entitled to a certain person, but to an undefined group of people, in this case, to all the inhabitants of Mexico City.

In other words, there is not an entitled person who can claim a legal standing to his right for a clean environment, and cannot demand it through a judicial procedure, since the environmental affectation appears at a general level, not individually or personalized.

This affectation does not occur to a single person but all throughout the world, which means that it has expansive effects towards the communities of a city. The environmental rights also denominated by “third generation” or collective rights of the towns or groups. The protection to the environment, in the Mexican legal doctrine, is considered a right, when claimed, does not have a procedural support that the affected people can make valid in a trial, even though an administrative regulation about environment exists.

The aspects that the environmental laws regulate in Mexico, have to do with periodic inspections by the administrative authorities to industries and the power to fine them, or close them, when the NOM\(^1\) is not observed. Also, the deterioration of the environment can have criminal repercussions and the violation of the effective environmental legislation, can constitute a serious corporal penalty.

As mentioned before, by constitutional disposition, there is a legislative concurrence in the environmental regulation, therefore, it is considered a non centralized function, which means that each state is allowed to enforce the dispositions that its independent power considers advisable to protect the environment.

The capital city, DF, Environmental Law establishes several obligations for the individuals, for example, an obligatory official opinion about prevention, risk and impact to the environment of a new factory to be opened bordering the protected zones, or constructions in lots bigger than 5,000 square meters, or the management of dangerous and toxic residuals in companies with industrial activities. This regulation also establishes penalties for those that do not fulfill these dispositions, nevertheless, does not indicate a jurisdictional action for the rest of the people by which they can demand the reestablishment of the ecological order when the environmental laws and regulations are violated.

This means that it is an imperfect or incomplete right, since there is not a procedure that allows the inhabitants of the city to exercise this prerogative. In other words, there is not a guarantee in the environmental laws for claiming a violation to their right in this subject. The inhabitants of the capital city can only report to the authority any disobedience to the ecological regulation, but more severe and effective public policies are required, enforced and entitled to the population, in order to obtain and keep a healthier environment, providing all needed legal tools.

\(^{11}\) Mexican Official Norm, NOM, are mandatory dispositions that establish standards of values, measures and characteristics, maximums and minimums to that they must subject the production of benefit or consumer goods of services, to guarantee the quality of the same. The NOM are regulated in article 3, fraction X of the Federal Law on Metrology and Normalization. The NOM are equivalent to ISO (International Standard Organization)
It is necessary to continue presenting populace campaigns for creating consciousness among the people and authorities for observing all environmental regulations, not because of a fine but by conviction; to enforce the recycling systems; rationing of natural resources; reduction in the use of automotive vehicles, and understand that this is the only place we have and it is our responsibility to take care of it.

5 References


http://www.ielrc.org/content/a9502.pdf, viewed May 15th, 2011.


Abstract:
Carbon dioxide capture and storage (CCS) is a relatively new technology in the context of climate change mitigation strategies. Its legal and regulatory implications are not yet wholly developed. This paper takes a brief comparative look at the regulatory principles in Finland and UK especially relevant to the Article 21 of the CCS Directive that regulates so called third party access to CCS infrastructures. The Article 21 of the CCS Directive provides regulations of a third party access regime for both CO2 transportation and storage infrastructure. Third party access regulations are essential when promoting co-operation between owners and potential users both on the construction and use of CO2 infrastructure. What is more, regulations try to ensure that smaller third parties are not disadvantaged or overcharged when seeking access to storage sites or pipelines and that infrastructure resources are brought forward in a way that reflects likely foreseeable future demand. Creating an effective fit for purpose regulatory regime is also crucial to the demonstration of CCS. National and EU legislation has been agreed to address this. An (European Union) EU CCS Directive contains requirements to ensure that third parties are able to access CO2 transportation and storage sites in a transparent and non-discriminatory manner.

Keywords:
CCS, CCS Directive, Finland, Third Party Access, UK

1 Introduction

Creating an effective fit for purpose regulatory regime is also crucial to the demonstration of CCS. National and EU legislation has been agreed to address this. An EU CCS Directive contains requirements to ensure that third parties are able to access CO2 transportation and storage sites in a transparent and non-discriminatory manner.

Arrangements for third party access are important because there are considerable up-front costs and economies of scale in pipeline construction. Access to CO2 infrastructure could also become a significant competitive factor in the power generation and other high emitting industries. This could lead to a conflict between the efficient use of resources and wish for greater competition. There are currently no CCS pipelines or storage sites in the UK and CCS is not currently a commercially demonstrated technology. Economic factors will also be important in determining the timing and scale of investment in CCS infrastructure.

Arrangements for potential users to obtain fair, open and non-discriminatory access to carbon dioxide (CO2) transport networks and storage sites are required because such access could become a condition for entry into, or competitive operation within, the internal electricity and heat market, depending on the relative prices of carbon and carbon capture and storage (CCS).

The current regulations involve the establishment, as required by Article 22 of the CCS Directive, of a dispute settlement mechanism to enable expeditious settlement of disputes regarding access to
CO2 transport networks and storage sites which recognises the transport and storage capacity which is available or can reasonably be made available.

In the UK, demonstration of the full chain of CCS – capture, transport and storage – at commercial scale is the vital next step, the various technological stages of the CCS chain have been shown to work but have not yet been demonstrated end-to-end at large scale on a power station. In Finland there are no storage places so the chain of CCS will be restricted to capture and transport. On the other hand, it is probable that the importance of effective transport will emphasize.

The introduction section should provide an overview of the article as well as the background and context of the paper. Starting from general to provide the ‘big picture’ moving down to specifics, this section should provide a rationale that justifies the research, i.e. why there is a necessity to conduct a research on this particular subject. This can be done by providing evidences of problems that needs solution and/or identified knowledge gap in a specific domain, level, geographical location, society, sector, industry, and so on supported by key references. As the response, a clear research agenda can be described specifying research aim and objectives in order to clarify the purpose of conducting the investigation.

Following this, the author needs to describe in general how the research can be or had been done to satisfy the aim and objectives, i.e. a brief discussion on the research methodology. This should highlight the research design, data collection methods and data analysis conducted or to be conducted in the research. Research limitations, scopes and boundaries should be explained as well to manage the expectations of the readers/audience.

The findings of the research at this stage have to be outlined here emphasising on the originality and general contributions of the investigation and preferably specific contributions of this paper. It is also a good practice to clarify who exactly will or expected to benefit from such investigation. This should be closely linked to the research rationale, aim and objectives.

2 Literature Review: Current CCS Legislation

2.1 Legislation in the UK

The UK already has a legal framework which covers pipelines. This is set out in the Petroleum Act 1998 (offshore pipelines) and the Pipe-lines Act 1962 (long distance onshore pipelines) in combination with the Planning Act 2008. While these Acts are not specific to CO2, their provisions extend to pipelines carrying CO2 and already go a very long way to meeting the Directive’s requirements in relation to pipelines. There is currently no equivalent legislation for CO2 storage sites.

The existing arrangements for pipelines essentially allow regulatory intervention to require modification of a pipeline prior to construction where this would avoid the construction of an additional pipeline and also to secure access for third parties to existing spare capacity. In both cases the consenting authority is also able to determine the associated financial arrangements. In more detail, the existing legislation on pipelines prohibits the construction of a pipeline without consent, allows the consenting authority to require the modification of the design of a pipeline to provide additional capacity to convey the same or similar material or, for an offshore pipeline, to change its route, determines the financial arrangements for any modification, provides for the consenting authority to be able to secure access by a third party to an existing pipeline designed for the purpose of conveying the substance in question and set the conditions under which that access should be granted.

Under these arrangements the onus is on the parties to reach agreement on commercial terms on the joint development of, or access to, pipelines but if the process of commercial negotiation fails then the consenting authority has the power to intervene to ensure fair access. These arrangements also protect the rights of pipeline owners. For example under the Pipe lines Act 1962, modifications to a proposed pipeline (by way of conditions in a pipeline construction authorisation) can be required only where the consenting authority is satisfied that there is evidence of demanding existing or likely to arise over the same or a similar route. And, when imposing
requirements related to third party access to an existing pipeline, the consenting authority must be satisfied that granting such access would not prejudice the proper and efficient operation of the pipeline for the owner's use.

2.2 Legislation in Finland

In Finland the Act on the Redemption of Immoveable Property and Special Rights (603/1977) regulates situations where regulatory intervention is required to be done in the case of “common needs of the society”. According to Article 1, in the case of Redemption of Immoveable Property and Special Rights that law must be followed if no other regulation says otherwise. So far there is no other regulations that could meet the requirements of the CCS Directive and its third party access regulations. According to the Article 3, immoveable property and special rights can be gained with the redemption or make restrictions to one's rights to use one's property. Article 4 states, that redemption of the property or the special rights is allowed when common needs of the society requires so. It is not allowed when the same target could be reached with another means or if the negative consequences of the redemption are bigger than the profits.

Both neither UK or Finland, there is currently no equivalent legislation for CO2 storage sites. In order to transpose the Directive's obligations in relation to storage sites the intention is to introduce arrangements based on those for pipelines. The main additional burden from implementing the Directive will thus come from the extension of the pipeline arrangements to storage sites. Depending on how those powers are discharged they could require a storage site to be expanded, or a third party to be given access to an existing site, and also determine the financial terms on which this will take place. Such an intervention could significantly change the financial risk profile for an investor in a storage project, especially in relation to contingent storage liabilities. The exercise of these powers will therefore be constrained (as they already are for pipelines) in order to ensure that the integrity of the infrastructure is maintained, the owners reasonable needs are protected and any determination strikes a reasonable balance between the interests of the parties and the risks they are bearing.

However, if the redemption would be done for building gaspipes or something that could be compared to those and noone opposes these plans or it is case of less significant redemption the allowance will granted by local authority (local surveying office.) Also if some other allowance also alouds redemption at the same time other allowances aren’t needed.

The preferred option is to extend existing legislation to bring them in line with the EU Directive on geological storage of carbon dioxide. Regulations of on pipelines and storage sites using the principles already contained in UK pipeline third party access legislation, including new provisions on making information available on capacity and technical specification to meet transparency requirements. The do nothing- option is not tenable as it would not implement the CCS Directive and thus leave the UK Government open to infraction proceedings.

It is believed that only in rare cases would a third party be seeking to access capacity on another's storage site at a time when its capacity was capable of being modified economically. A dispute over the terms for that access would be most likely if both parties were electricity generators and the owner saw advantage in restricting supply in that market by refusing access to a competitor. Whether that happens in practice would depend on the scale of the generators and which generation plant was expected to be price setting.

2.3 CCS And The Third Party Access From The Point Of View Of Competition

Where there is competition for limited capacity then the consenting authority is unlikely to require the owner to make the capacity available to a prospective user who values the capacity less than other prospective users.
In practice this means that in most cases the terms that would be determined by the Secretary of State are likely to be in line with those that would be offered by infrastructure owners were they to face effective competition from other infrastructure owners who also have sufficient spare capacity to store or transport carbon dioxide.

The terms determined by the consenting authority would also reflect the risks borne by the parties. For example, one of the issues that will have a significant impact on the cost of storage is the extent to which the contingent liabilities (that might arise in circumstances where the storage site requires remediation after it has closed for example) would be shared between the storage site operator and the originator of the CO2 or the owner of the additional pipeline or storage site capacity. Whilst the CCS Directive makes the storage site permit holder legally responsible for such events, this would not stop the emitter and the storage site operator reaching agreement to share the cost in the unlikely event that such remediation was required. The extent that such risk sharing is practical will depend on the financial strength of the parties involved and the availability of risk transfer instruments, such as insurance. Clearly the balance of risk in such circumstances would have an impact on the commercial terms of storage. Any determination by the consenting authority, where one of the parties assumed risks for the remediation of the site, would be very different from the terms in circumstances where those risks are shared. The consenting authority would use its judgement in such circumstances having regard to the specific commercial, financial and technical circumstances of the projects the come forward for determination.

In Finnish legislation, according to Article 5 of the Act on the Redemption of Immoveable Property and Special Rights the redemption can only be done with the allowance of the government. However, if the redemption would be done for building gaspipes or something that could be compared to those and noone opposes these plans or it is case of less significant redemption the allowance will granted by local authority( local surveying office.) Also if some other allowance also alouds redemption at the same time other allowances aren't needed.

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CCS and clean fossil fuel technologies must be encouraged in the EU so that the Member States who choose to can keep carbon-based sources in their energy mix. The challenge facing European Union is the need to complete the fair internal energy market. Many national energy markets are still beleaguered by protectionism and these national reflexes keep energy infrastructure of the EU uncompetitive and possibilities to energy related activities unequal.

The Member States have their own competence to determine the rules of the CCS storage permits while they fall in the scope of energy policy. As there will be commercial inducements involved, it becomes a matter of internal market and competition too, in which the EU has an exclusive competence.

The situation concerning the division of the competences between the Member States and the EU is indefinite when it comes to CCS as a part of both competition and energy policies. When defining competences in energy policies, internal energy market and competition issues relating especially to CCS storage places, there could be more equal competition between energy companies at European level and CCS technologies, security and competitiveness of the energy supply in Europe can be guaranteed better.
According to the TFEU 26 Article The Union shall adopt measures with the aim of establishing or ensuring the functioning of the internal market and the internal market shall comprise an area without internal frontiers in which the free movement of goods and services. Free movement of goods and services include also CCS-infrastructures and technologies. Reliable energy supplies at reasonable prices for businesses and consumers and with the minimum environmental impact are crucial to the European internal market and economy. The European Union has therefore identified energy as one of its priorities (COM(2006) 10). During the 1990s, when most of the national electricity and natural gas markets were still monopolised the European Union and the Member States decided to open these markets to competition gradually. CCS-directive (Directive 2009/31/EC on the geological storage of carbon dioxide) sets criteria for the national competences to define eligibility to CCS storage permits in order to secure equal treatment of the energy suppliers. Member States do not need to set admission criteria for procedures for granting exploration permits, but where they do, they should at least ensure that the procedures for the granting of exploration permits are open to all entities possessing the necessary capacities. Member States should also ensure that the permits are granted on the basis of objective, published and non-discriminatory criteria. In order to protect and encourage exploration investments, exploration permits should be granted for a limited volume area and for a limited time during which the holder of the permit should have the sole right to explore the potential CO2 storage complex. Member States should ensure that no conflicting uses of the complex are permitted during this time. If no activities are carried out within a reasonable time, Member States should ensure that the exploration permit is withdrawn and can be granted to other entities. Chapter 5 of the CCS-directive regulates the third-party access to member states’ own storage sites. Member States shall take the necessary measures to ensure that potential users are able to obtain access to transport networks and to storage sites for the purposes of geological storage of the produced and captured CO2. Member States shall ensure that the procedures for the granting of storage permits are open to all entities possessing the necessary capacities and that the permits are granted on the basis of objective, published and transparent criteria. The CCS-directive defines the common criteria in Articles 5-8 that must be obeyed when considering whether to accept potential users’ exploration or storage applications. The access shall be provided in a transparent and non-discriminatory manner determined by the Member State. The Member State shall apply the objectives of fair and open access, taking into account the storage capacity which is or can reasonably be made available and the transport capacity which is or can reasonably be made available, the proportion of its CO2 reduction obligations pursuant to international legal instruments and to Community legislation that it intends to meet through capture and geological storage of CO2, the need to refuse access where there is an incompatibility of technical specifications which cannot be reasonably overcome and the need to respect the duly substantiated reasonable needs of the owner or operator of the storage site or of the transport network and the interests of all other users of the storage or the network or relevant processing or handling facilities who may be affected.

On the other hand, the right to have an access to another Member State’s storage site does not have to be absolute or unconditional. As it is said in Article 8 of the CCS-directive, transport network operators and operators of storage sites may refuse access on the grounds of lack of capacity. Duly substantiated reasons shall be given for any refusal. Member States shall take the measures necessary to ensure that the operator refusing access on the grounds of lack of capacity or a lack of connection makes any necessary enhancements as far as it is economic to do so or when a potential customer is willing to pay for them, provided this would not negatively impact on the environmental security of transport and geological storage of CO2. It must be acknowledged, that the geological CCS-storage sites may be subject to high level competition in the future because of their rather limited number that are not divided constantly through the Europe or the World. Naturally, this can have an effect on the functioning of the energy market in common. Hesitations whether there will be storage sites to utilize, may limit energy production with co2 emissions and due to this also technical development of CCS.
So, as a Summary of the proposed Third Party Access Regime it gives a frame that covers CO2 transportation and storage infrastructure pre and post construction. It also suggests examples of access are modification of existing or planned infrastructure include increasing capacity, extending or adding taps to allow access. What is more, access should not be denied for lack of capacity or lack of connection if it is economic or the applicant is willing to pay for necessary enhancements. The first point is of course that the developer and applicant negotiate the terms of access. In UK, applicant can refer the issue to the Secretary of State for resolution but in Finland that is not confirmed yet.

3 Research Methodology

The starting point of the research is the national legislative environment of Finland. Legislative evaluation will make use of research methodology of legal dogmatics and environmental policy instruments research tradition. The problem-based point of view is highlighted in the sense that the research seeks to find a theoretical approach for analyzing the impacts of environmental legislation on innovation on the CCS technologies. The sources for the research are mainly the traditional sources of legal studies including sources such as national and international legal literature and scientific articles, the preparatory works of legislation and case-law. The challenges set by the evolvement of environmental innovations on legislation are studied also by means of legal comparison. Additionally interviews are conducted in order to fully understand the complex issues involved in innovation forces in the environment sector. This research project centralized in legal policy instruments supporting CCS innovations in order to mitigate the climate change is a part of a planned larger scale programme concentrating on climate law and regulative means of mitigating climate change.

4 Findings and Discussion

If becoming more and more essential technology in the context of climate change mitigation strategies, it is important that CCS can be deployed without unnecessary regulatory hindrances. Starting point for the CCS functions between the actors is surely voluntariness and freedom of contract. It might be expected that CCS actors will want to work together to exploit economies of scale in sharing CO2 infrastructure and maximise the value out of the assets they have invested in. There may however be circumstances where developers are more reticent about sharing their infrastructure, drag out negotiations and seek overly high terms. These could be as developers may be competing upstream with applicants and could achieve commercial advantage through refusing access. It may also be the case that a local monopoly develops which could exploit other potential users. As such, the opportunity to refer a negotiation to an independent party is likely to help support timely and fair negotiations. This will promote efficient use of infrastructure, realise economies of scale, help prevent multiple pipelines along similar routes and thereby reduce the environmental impact.

Failure to transpose these elements leads of course both Finland and UK open to infraction proceedings for not implementing the EU Directive on geological storage of carbon dioxide.

5 Conclusion and Further Research

Where there is competition for limited capacity then the consenting authority is unlikely to require the owner to make the capacity available to a prospective user who values the capacity less than other prospective users. In practice this means that in most cases the terms that would be determined by the Secretary of State are likely to be in line with those that would be offered by infrastructure owners were they to
face effective competition from other infrastructure owners who also have sufficient spare capacity to store or transport carbon dioxide.

The terms determined by the consenting authority would also reflect the risks borne by the parties. For example, one of the issues that will have a significant impact on the cost of storage is the extent to which the contingent liabilities (that might arise in circumstances where the storage site requires remediation after it has closed for example) would be shared between the storage site operator and the originator of the CO2 or the owner of the additional pipeline or storage site capacity. Whilst the CCS Directive makes the storage site permit holder legally responsible for such events, this would not stop the emitter and the storage site operator reaching agreement to share the cost in the unlikely event that such remediation was required. The extent that such risk sharing is practical will depend on the financial strength of the parties involved and the availability of risk transfer instruments, such as insurance. Clearly the balance of risk in such circumstances would have an impact on the commercial terms of storage. Any determination by the consenting authority, where one of the parties assumed risks for the remediation of the site, would be very different from the terms in circumstances where those risks are shared. The consenting authority would use its judgement in such circumstances having regard to the specific commercial, financial and technical circumstances of the projects the come forward for determination.

In Finnish legislation, according to Article 5 of the Act on the Redemption of Immoveable Property and Special Rights the redemption can only be done with the allowance of the government. However, if the redemption would be done for building gaspipes or something that could be compared to those and none opposes these plans or it is case of less significant redemption the allowance will granted by local authority(local surveying office.) Also if some other allowance also alouds redemption at the same time other allowances aren’t needed.

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It is believed that only in rare cases would a third party be seeking to access capacity on another's storage site at a time when its capacity was capable of being modified economically. A dispute over the terms for that access would be most likely if both parties were electricity generators and the owner saw advantage in restricting supply in that market by refusing access to a competitor. Whether that would happen in practice depends on the scale of the generators and which generation plant was expected to be price setting.

In Finland, this how the CCS Directive is still not implemented. In addition to this as CCS becomes much more widespread in the future, competition is likely to But would be there a develop which would limit the need for intervention. eel there is sufficient evidence that the benefits of a more interventionist approach is justified by the additional regulatory burden.

CCS and clean fossil fuel technologies must be encouraged in the EU so that the Member States who choose to can keep carbon-based sources in their energy mix. The challenge facing European Union is the need to complete the fair internal energy market. Many national energy markets are still beleaguered by protectionism and these national reflexes keep energy infrastructure of the EU uncompetitive and possibilities to energy related activities unequal.

The Member States have their own competence to determine the rules of the CCS storage permits while they fall in the scope of energy policy. As there will be commercial inducements involved, it becomes a matter of internal market and competition too, in which the EU has an exclusive competence.

The situation concerning the division of the competences between the Member States and the EU is indefinite when it comes to CCS as a part of both competition and energy policies. When defining competences in energy policies, internal energy market and competition issues relating especially to CCS storage places, there could be more equal competition between energy companies at European
level and CCS technologies, security and competitiveness of the energy supply in Europe can be guaranteed better.

According to the TFEU 26 Article The Union shall adopt measures with the aim of establishing or ensuring the functioning of the internal market and the internal market shall comprise an area without internal frontiers in which the free movement of goods and services.

Free movement of goods and services include also CCS-infrastructures and technologies. Reliable energy supplies at reasonable prices for businesses and consumers and with the minimum environmental impact are crucial to the European internal market and economy. The European Union has therefore identified energy as one of its priorities (COM(2006) 10). During the 1990s, when most of the national electricity and natural gas markets were still monopolised the European Union and the Member States decided to open these markets to competition gradually.

CCS-directive (Directive 2009/31/EC on the geological storage of carbon dioxide) sets criteria for the national competences to define eligibility to CCS storage permits in order to secure equal treatment of the energy suppliers. Member States do not need to set admission criteria for procedures for granting exploration permits, but where they do, they should at least ensure that the procedures for the granting of exploration permits are open to all entities possessing the necessary capacities. Member States should also ensure that the permits are granted on the basis of objective, published and non-discriminatory criteria. In order to protect and encourage exploration investments, exploration permits should be granted for a limited volume area and for a limited time during which the holder of the permit should have the sole right to explore the potential CO2 storage complex. Member States should ensure that no conflicting uses of the complex are permitted during this time. If no activities are carried out within a reasonable time, Member States should ensure that the exploration permit is withdrawn and can be granted to other entities.

Chapter 5 of the CCS-directive regulates the third-party access to member states' own storage sites. Member States shall take the necessary measures to ensure that potential users are able to obtain access to transport networks and to storage sites for the purposes of geological storage of the produced and captured CO2. Member States shall ensure that the procedures for the granting of storage permits are open to all entities possessing the necessary capacities and that the permits are granted on the basis of objective, published and transparent criteria.

The CCS-directive defines the common criteria in Articles 5-8 that must be obeyed when considering whether to accept potential users‘ exploration or storage applications. The access shall be provided in a transparent and non-discriminatory manner determined by the Member State. The Member State shall apply the objectives of fair and open access, taking into account the storage capacity which is or can reasonably be made available and the transport capacity which is or can reasonably be made available, the proportion of its CO2 reduction obligations pursuant to international legal instruments and to Community legislation that it intends to meet through capture and geological storage of CO2, the need to refuse access where there is an incompatibility of technical specifications which cannot be reasonably overcome and the need to respect the duly substantiated reasonable needs of the owner or operator of the storage site or of the transport network and the interests of all other users of the storage or the network or relevant processing or handling facilities who may be affected.

On the other hand, the right to have an access to another Member State’s storage site does not have to be absolute or unconditional. As it is said in Article 8 of the CCS-directive, transport network operators and operators of storage sites may refuse access on the grounds of lack of capacity. Duly substantiated reasons shall be given for any refusal. Member States shall take the measures necessary to ensure that the operator refusing access on the grounds of lack of capacity or a lack of connection makes any necessary enhancements as far as it is economic to do so or when a potential customer is willing to pay for them, provided this would not negatively impact on the environmental security of transport and geological storage of CO2.

It must be acknowledged, that the geological CCS-storage sites may be subject to high level competition in the future because of their rather limited number that are not divided constantly through the Europe or the World. Naturally, this can have an effect on the functioning of the energy
market in common. Hesitations whether there will be storage sites to utilize, may limit energy production with CO2 emissions and due to this also technical development of CCS. So, as a Summary of the proposed Third Party Access Regime only gives a frame that covers CO2 transportation and storage infrastructure pre and post construction. It also suggests examples of access are modification of existing or planned infrastructure include increasing capacity, extending or adding taps to allow access. What is more, access should not be denied for lack of capacity or lack of connection if it is economic or the applicant is willing to pay for necessary enhancements. The first point is of course that the developer and applicant negotiate the terms of access. In UK, applicant can refer the issue to the Secretary of State for resolution but in Finland that is not confirmed yet.

6 Acknowledgement

This paper is a part of a larger research project. The larger research project deals with environmental innovations, CCS techniques as one example of them, and how they play a central role when it comes to climate change mitigation.

7 References

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Abstract:
Eco-innovations play a central role when it comes to achieving climate change mitigation targets and more sustainable use of natural resources. The purpose of this paper is to further develop the understanding of the interaction between environmental regulation and eco-innovation. This interaction is highlighted in strongly regulated fields with high innovation potential such as pollution control or waste legislation. Focusing on waste policy issues, innovations may improve the material and energy efficiency of industrial processes, lead to the creation of new products from re-used or recycled materials, and cut down the overall dependence on virgin materials. In evaluating the impacts of regulation, e.g. clarity, predictability, high standards and flexibility in achieving these standards have been pointed out as elements of legislation supporting innovation policy. Additionally, legal research based on jurisprudential theory may reveal unintentional innovation effects rising from provisions where innovation considerations have not been taken into account. This paper will provide an insight into the innovation effects of the concept of waste as defined in the Waste Framework Directive (2008/98/EC). The concept of waste is linked with incentives for innovation as it defines the general scope of waste management obligations, which has an effect on the legal prerequisites for using residue materials in different contexts and commercial conditions for such use. Clarifying the definition of waste in a way which would safeguard the environmental protection and health targets of waste legislation without unnecessary restrictions to the utilization of residues is a challenge. As this paper intends to demonstrate, taking material efficiency considerations more widely into account in waste management policy, and bringing product design and waste legislation closer together could, as a regulation model, contribute to more sustainable use of natural resources and promote climate change mitigation targets.

Keywords:

1 Introduction

Eco-innovations play a central role when it comes to achieving climate change mitigation targets and more sustainable use of natural resources. The growing relevance of eco-innovation in all sectors of the economy is reflected e.g. in different fields of European Union's (EU) policy fields promoting eco-innovation initiatives. Innovation is, by definition, a broad concept incorporating e.g. new products, technology, services, business models, and even innovative regulative frameworks. Eco-innovations, on the other hand, are innovations with an environmental twist. They reduce the environmental burden of activities and contribute to achieving a higher level of environmental protection whilst improving resource-efficiency in the economy, providing business opportunities and supporting green growth.

The growing scarcity of natural resources and rising raw material prices, in addition to increasing awareness of environmental issues, has led to considering waste more and more often as a resource instead of disposable material. Reducing the amount of waste generated in the society is also the first priority of EU’s waste policy and highlighted in the waste hierarchy defined in the Waste Framework Directive 2008/98 (WFD, art. 4). The innovation potential of the waste sector has been acknowledged e.g. in the recent report on the Thematic Strategy on the Prevention and Recycling of Waste (COM/2011/0013 final). It emphasizes the need to support innovation and to better incorporate life-cycle thinking in policy development which would, e.g., imply more consistency between waste and product design policies. Innovations related to waste and waste management may e.g. improve the material and energy efficiency of industrial processes, lead to the creation of new products from re-used or recycled materials, and cut down the overall dependence on virgin materials.

Understanding the interaction between environmental regulation and eco-innovation is crucial when designing policy instruments for supporting innovation activities. This interaction is highlighted in strongly regulated fields with high innovation potential such as pollution control or waste legislation. The operational environment of the activities in these fields is considerably influenced by the regulative framework. However, it is clear that innovations are promoted mainly by other than regulative means. Economic incentives to support innovation, such as environmental taxes or subsidies, and the creation of lead markets, such as EU’s lead market initiatives e.g. in the field of recycling, are in the core of (eco)innovation policy. The role of regulation in advancing and supporting eco-innovations must be seen against this background. In the end, consumer demand for more sustainable products and services leads companies to develop innovative solutions which, besides being financially lucrative, may contribute to the implementation of environmental policy targets.

Identifying the role of regulation in supporting innovation activities is a challenge for legal research. A regulatory approach to the issue addressing the impacts of regulation (e.g. Similä 2007) can be supplemented by normative legal research. Focusing on waste policy issues having vast environmental implications, the purpose of this paper is to analyze the interaction of eco-innovation and environmental regulation by providing an insight into the innovation effects of the concept of waste as defined in the Waste Framework Directive 2008/98. The focus is deliberately narrow in order to pinpoint legal impediments for innovation. As the Government Bill concerning the new Waste Act of Finland (HE 199/2010, p. 50) stated, the legal environment is one factor, amongst others, having an effect on innovations. In the Bill, innovation effects of legislation were referred to more in detail in relation to issues regarding the distribution of liability concerning waste management operations (Government Bill HE 199/2010, p. 36). Ownership of waste is clearly linked with incentives for innovation.

In any case, the definitions of waste (WFD, art. 3) and by-products (WFD, art. 5) as well as the interpretation of the end-of-waste criteria (WFD, art. 6) incorporated in the Waste Framework Directive 2008/98 strongly affect incentives for eco-innovation in various fields from earthworks to energy production. Before addressing the issue, a brief overview concerning the framework for analyzing the interaction between eco-innovation and environmental regulation will be provided followed by an overview concerning waste regulation in the EU. The innovation effects of defining waste are illustrated by examples, and the conclusion of the analysis recommends further development of the concept of waste accompanied by taking material efficiency considerations more widely into account in waste management policy and bringing product design and waste legislation closer together.

3 European Commission, Enterprise and Industry, 2011.
2 Eco-innovations and waste legislation – a starting point

2.1 Analyzing the interaction between environmental regulation and eco-innovation

Incentives for eco-innovation may be substantially influenced by regulation which should be taken into account more widely in legislative work and legal interpretation. However, the complex interaction between environmental regulation and eco-innovation can be studied from various perspectives (e.g. Porter and van der Linde 1995; Hildén et al. 2002; Similä 2002a; Similä 2007; Mickwitz et al. 2008; Leitner et al. 2010). In general, e.g. clarity, predictability (Government Bill HE 199/2010, p. 36), flexibility (Mickwitz et al. 2008, p.169), and stringency of environmental regulation (e.g. Leitner et al. 2010, p. 1029) have been pointed out as elements of legislation supporting innovation policy. Evaluation criteria for the analysis may also include, e.g., the dynamic effects of regulation, as eco-innovations contribute to improving, not stabilizing, the level of environmental protection (Similä 2002b).

Figure 1 displays a simplified way of representing the different aspects from which the relationship of regulative instruments and eco-innovations are addressed in this paper. The figure is solely intended to serve demonstrative purposes and, as such, is non-exhaustive bearing in mind that legislation is only one factor having an effect on the operational environment of different actors. Furthermore, combining regulative measures with, e.g., economic incentives to support environmental objectives may achieve a better overall outcome when compared to, e.g., mere administrative compulsion (e.g. Suvantola and Lankinen 2008, p. 10).

Firstly, impacts of regulation on innovation can be assessed in advance and taken into account in legislative work. E.g. traditional command-and-control legislation banning the use of certain products or substances may be expected to lead, as a technology forcing measure, to the creation of substitutive products or substances (Similä 2002b, p.190). Furthermore, e.g. the requirement for adapting best available technique (BAT), outlined in the BAT reference documents (BREF’s), in operations requiring an environmental permit under the Industrial Emissions Directive 2010/75, may also lead to innovations due to e.g. the first-mover advantage for companies contributing to regulatory standards (Leitner et al. 2010, p. 1032). However, BAT has also been claimed to hinder advancements in technology (Sunstein 1990, p. 420-421). If fulfilling the BAT standard is sufficient from the point of view of permit obligations, even though BAT is intended to represent the most effective and advanced stage of technological development, an operator does not necessarily have incentives for innovations (see Similä 2002b, p. 190-191). As an alternative or complement to such command-and control measures, legislation implementing economic incentives, such as taxes or subsidies, may be used to support prerequisites for innovation.

Secondly, legislative measures aimed at supporting eco-innovation initiatives may be complemented by analysis of environmental legislation in force in order to pinpoint impediments for innovation. In other words, innovation effects of regulation may also be addressed

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retrospectively by studying the regulative environment affecting different operations in diverse contexts. The “quality” of environmental legislation may suffer due to e.g. the complicated nature of environmental problems, uncertainty of causal links between problems and responses, and highly technical nature of regulation (Similä 2007, p. 11). Applying e.g. waste legislation to innovative product solutions may reveal unintentional innovation effects also in provisions where innovation considerations have not explicitly been taken into account. In the end, whilst environmental legislation may intend to boost innovations, innovations may also give rise to legislative amendments.

Assessing the influence of regulative measures on innovation may, however, turn out as complicated due to the large amount of variables affecting the issue. According to the so-called *impact problem*, determining the role of regulation is not always straightforward even with empirical data on, e.g., reducing emission levels in a certain industry field. Besides emission limit values, also the operators own business derived reasons, such as cutting costs, contribute to emission reductions (Similä 2002b, p.179; Similä 2007, p. 28). Furthermore, it may turn out very difficult to point out the decisive role of regulation in promoting innovations in these cases. Studying further the interaction between eco-innovation and environmental regulation, and including in it case-by-case analyses concerning the effects of regulation on incentives for innovation, may contribute to this understanding.

### 2.2 Framework for European Union’s waste legislation

EU’s waste legislation is built on the Waste Framework Directive 2008/98 which lays down the basic requirements for the management of waste in EU Member States. It is complemented by legislation governing e.g. specific waste-streams, such as packaging and packaging waste\(^1\), and wastes from certain activities, such as on the management of waste from extractive industries\(^2\). The waste hierarchy defined in article 4 of the Waste Framework Directive 2008/98 lays down a priority order of what constitutes the best overall environmental option in waste legislation and policy. According to the hierarchy, waste prevention is the first priority of waste management operations. Waste prevention refers to measures taken before a substance or material or product has become waste, that is to say before fulfilling the definition of waste. Waste prevention reduces the quantity of waste, including through re-use of products or the extension of the life span of products; the adverse impacts of the generated waste on the environment and human health; or the content of harmful substances in materials and products (WFD, art. 3(12)). In practice, waste prevention and material efficiency targets are closely interlinked. In addition to reducing the amount of waste generated in the society, material efficiency can cut down the need for virgin raw materials that may have an effect on the overall dependence on natural resources and the environmental impacts of products assessed by a life-cycle approach (Ahvenharju (ed) 2011, p. 18; see also Ministry of the Environment 2009).

If the generation of waste cannot be avoided, the waste hierarchy promotes re-use and recycling of waste materials which are preferred before other recovery operations, such as energy recovery. Disposal is the last waste management option. However, departing from the hierarchy may be justified for reasons of, inter alia, technical feasibility, economic viability and environmental protection (Introduction to the WFD, scenes 7 and 31), and recoverable waste must obviously fulfil certain quality standards assessed by ecological, health etc. criteria. Innovations related to waste and waste management enforce the waste hierarchy e.g. by promoting the recovery of residues and reducing the amount of waste ending up to landfill. Optimally the quantity of disposable waste is minimized. The waste hierarchy is a general guideline that must be complied with by authorities and all other actors in touch with waste issues. Furthermore, it has an effect on both legislative work and the interpretation of law. However, the hierarchy cannot be

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enforced as such. It cannot, e.g., establish a right for waste in a landfill sight, even for the purpose of recovery, nor can the hierarchy be used as grounds for, e.g., the use of administrative compulsion (Government Bill HE 199/2010, p. 70).

Consequently, regulative means for implementing the objectives of the waste hierarchy are required. These include a wide range of instruments. Restrictions regarding the landfill of waste suitable for recovery are a basic example of traditional command-and-control regulation aiming at supporting the realization of recycling targets. Also economic instruments, such as waste tax as set by the Finnish Waste Tax Act, are used to reduce the amount of waste intended to landfill. The Act is applied to waste which on technical and environmental grounds could have been recovered. The actor operating the landfill site is liable to concede to the tax with no relevance given to the public or private nature of the operator. However, the Act is not applied to hazardous waste (section 1) which may have implications on the realization of the waste hierarchy.

3 Innovation effects of defining waste

3.1 Defining waste in EU legislation

The scope of EU’s waste regulation is, in general, delimited to materials and substances defined as waste in accordance with article 3(1) of the Waste Framework Directive 2008/98. According to it, ‘waste’ means any substance or object which the holder discards or intends or is required to discard. The definition is concretized by the Commission Decision 2000/532 establishing a list of waste, but the list is indicative in the sense that substances and objects mentioned in it are considered to be waste only if fulfilling the general definition of waste of article 3 of the Waste Framework Directive 2008/98. The decisive element of the definition is the concept of ‘discard’. In any case, the definition of waste is to be interpreted widely in order to reach a high level of environmental protection, as consistently stated by the European Court of Justice.

The influence of waste regulation on sustainable product policy is clear. Drawing the line between materials and substances regarded as waste and ones classified as non-waste, i.e. products, is a salient point in this context and links the definition of waste with incentives for innovation. The correct classification of wastes and non-waste materials is considered extremely important from an environmental point of view. Both products and wastes can contain toxic materials and be a risk to human health and the environment if badly handled or controlled, as stated in the Interpretative Communication on Waste and By-products (COM(2007) 59 final), but the characteristics of wastes may pose particular risks for the environment, when compared with products. Whereas the content of products is generally specifically designed and controlled, the composition of wastes may be less clear (COM(2007) 59 final).

Clarifying the definitions of waste and encouraging the recovery of waste and the use of recovered materials were one of the main objectives of the revision of the Waste Framework Directive 2008/98 in 2008 (Introduction to the WFD, scene 8), but the waste concept had been challenged in numerous cases of the European Court of Justice already before this. This case-law still remains relevant (Eloneva et al. 2010). In practice, defining waste starts from separating the actual products

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2 Taxable waste is specified by references to the list of waste based on the Ministry of the Environment Decree on the list of the most common wastes and of hazardous wastes 1129/2001 and the Commission Decision (EC) 2000/532 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste [2000] OJ L 226. As an example, wastes from the iron and steel industry fall into the scope of the Act (with an exception concerning waste from the processing of slag (10 02 01)). See also the Government Bill concerning the Waste Tax Act (HE 159/2010).
4 E.g. Case C-418/97 Arco Chemie Nederland Ltd [2000] and Case C-419/97 Epon [2000]; Case C-9/00 Palin Granit Oy [2002].
of a production process from production residues (COM(2007) 59 final).\(^1\) As demonstrated in Figure 2, these residues may, in turn, fall either in the sphere of waste legislation or product legislation. Consequently, the waste status of materials has a strong effect on considerations concerning residue utilization.

![Figure 24. Applying waste and product legislation to production residues](image)

Safeguarding environmental protection and health targets requires that the definition of waste is sufficiently broad, but as stated in the Interpretative Communication on Waste and By-products (COM(2007) 59 final), an excessively wide interpretation of the definition of waste imposes unnecessary costs on the businesses concerned, and can reduce the attractiveness of materials that would otherwise be returned into the economy. The utilization of waste based materials is strongly regulated when compared to products, which may lead to higher administrative burdens and economic impacts, but as stressed in the aforementioned communication, an excessively narrow interpretation could lead to environmental damage, and undermine Community waste law and common standards for waste in the EU.

In the renewal of the Waste Framework Directive 2008/98, the concept of waste incorporated in article 3 of the directive was not modified in itself, but supplemented by definitions of by-product (WFD, art. 5) and end-of-waste criteria (WFD, art. 6) composed in the case-law of the European Court of Justice. Both of these concepts intend to differentiate residues fulfilling product standards from waste materials. In the case of by-products the question is, by definition, about non-waste. When materials are defined as waste, the end-of-waste criteria define the prerequisites for losing this waste status. Materials that do not fulfil the by-product or end-of-waste requirements can still be recycled and reused, but only under the waste regime.

In the case of by-products, the evaluation criteria concerning the waste or by-product status of materials have been referred to in detail in the aforementioned Communication on the Interpretative Communication on Waste and By-products (COM(2007) 59 final). Correspondingly defined in article 5(1) of the Waste Framework Directive 2008/98, a substance or object, resulting from a production process, the primary aim of which is not the production of that item, may be regarded as not being waste referred to in point (1) of article 3 of the Waste Framework Directive 2008/98 but as being a by-product only if further use of the substance or object is certain; the substance or object can be used directly without any further processing other than normal industrial practice; the substance or object is produced as an integral part of a production process; and further use is lawful, i.e. the substance or object fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts.

The Waste Framework Directive 2008/98 specifies the procedure in which measures may be adopted to determine the criteria to be met for specific substances or objects to be regarded as a by-

\(^{1}\)Case C-9/00 Palin Granit Oy [2002]; Case C-235/02 Saetti and Frediani [2004].
product and not as waste (WFD, art. 5(2)). The procedure is relatively similar in the case of the end-of-waste criteria defined in article 6 of the directive (WFD, art. 6). The end-of-waste criteria are based on a waste-stream specific assessment on the prerequisites for losing the waste status of materials. As stated in article 6 of the Waste Framework Directive 2008/98, certain specified waste shall cease to be waste within the meaning of point (1) of article 3 of the directive when it has undergone a recovery, including recycling, operation and complies with specific criteria to be developed in accordance with the following conditions: the substance or object is commonly used for specific purposes; a market or demand exists for such a substance or object; the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and the use of the substance or object will not lead to overall adverse environmental or human health impacts.

In Finland, the Waste Framework Directive 2008/98 has been implemented mainly by the Waste Act which has been revised lately. The definitions of waste, by-product and end-of-waste criteria are all incorporated in section 5 of the Act, and the latter two concepts will be further specified by Government Decree. The definitions of by-product and end-of-waste criteria were highlighted as one of the possible factors affecting innovations in a study conducted in relation of the work of the environmental innovation panel established by the Ministry of the Environment of Finland (Ahvenharju (ed.) 2011). Amongst other issues, the panel assessed the role of regulatory measures in promoting environmental innovations especially from the point of view of material efficiency and preventing waste generation (Saarnilehto (ed) 2011). Furthermore, a questionnaire was carried out in relation to a study identifying the needs for eco-innovation related to material efficiency and waste reduction in which one of the outcomes was that e.g. the fertilizer and metal industry found the waste status hindering the possibilities of recovery as it prevented the export of useful materials (Mattila et al. 2011, p. 29, 33, and 37).

3.2 Linking innovation considerations and the definition of waste

Stressing waste prevention, recycling and material efficiency issues in waste legislation and policy is reflected e.g. by the Thematic Strategy on the Prevention and Recycling of Waste (COM (2005) 666) which sets a goal for the EU to become a recycling society seeking to avoid waste and to use waste as a resource. However, the waste regulation regime faces a challenge as innovative ways of utilizing residues and recovering waste materials continually emerge and waste is being regarded more and more as a resource instead of disposable material. One aspect of these challenges is the clarification of the concept of waste defined in the Waste Framework Directive 2008/98 in a way which would safeguard the environmental protection and health targets without unnecessary restrictions to the utilization of residues. This would reduce the amount of waste generated in different processes, contribute to the implementation of the waste hierarchy and, amongst other objectives, support innovation policy targets.

The challenge has been addressed by complementing the general notion of waste (WFD, art. 3) by definitions of by-product (WFD, art. 5) and end-of-waste criteria (WFD, art. 6), which clarify the grounds for separating waste from other production residues and for losing waste status in certain cases. Furthermore, on the basis of the definition of waste and in order to promote certainty and consistency, the Commission may adopt guidelines to specify in certain cases when substances and objects become waste, such as regarding electrical and electronic equipment and vehicles (Introduction to the WFD, scene 24). From the point of view of legal certainty, well-defined regulations separating waste from non-waste assure that unforeseeable interpretations concerning the waste status do not impede investments in novel applications. However, adapting innovative product or material solutions to excessively rigid regulative structures may be a challenge and call for further legislative development.

For instance, the question on whether the end-of-waste criteria incorporated in article 6 of the Waste Framework Directive 2008/98 facilitate or inhibit the introduction and dissemination of new

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1 Approved in March 2011 (official reference number not yet available).
production methods, technologies and products was presented in conjunction with the study concerning the future EU-level technical proposals for end-of-waste criteria (European Communities, Joint Research Centre, 2009). The scope of the criteria is delimited to certain waste-streams, and the criteria themselves are set either in accordance with the regulatory procedure referred to in article 39(2) of the Waste Framework Directive 2008/98 (art. 6 (2) and art. 6(4)) or, in cases where criteria have not been set at EU level, nationally in EU member states. The first EU-level technical proposals for the criteria were completed in 2010 concerning ferrous scrap and aluminium scrap. Additionally, proposals on copper scrap metal, paper, glass, biodegradable waste, and waste plastics have been initiated. The end-of-waste criteria are expected to facilitate and promote recycling, ensure a high level of environmental protection, reduce the consumption of natural resources and the amount of waste sent for disposal (European Communities, Joint Research Centre, 2009).

However, as presented by Mäkelä et al. (2011), extending the end of waste criteria to cover a full range of recycled products independent of their raw material sources and their streams could, as a regulation model, incorporate a more effective product focused and innovation oriented approach to waste management. This would further encourage the sustainable use of natural resources and material efficiency of industrial processes. Mäkelä et al. (2011) analyzed inter-industry utilization of solid residues for soil amendment by combining mixer slag, fly ash, paper mill sludge and lime waste arising within the steel, pulp and paper industries. The end-of-waste criteria incorporated in the Waste Framework Directive 2008/98 cannot be applied in such cases where the potential product consists of several residues, which, in practice, may impede the introduction of a novel residue utilization concept.

The diverse environmental and economical interests related to defining waste require well-defined provisions for telling apart products from production residues and, further on, classifying residues as waste and non-waste materials. However, the aforementioned case raises the question that if there exists an economic interest in utilizing waste based materials or substances in a way that safeguards environmental and health targets and fulfils requirements imposed by product based legislation and standards, should this be enabled by waste legislation? Even though the waste regime would not necessarily restrain the use of waste materials, the economic burdens associated with the waste status, when compared to products, may impede residue utilization. These implications were reflected, e.g., in a ruling by the Supreme Administrative Court of Finland (KHO:2009:61).

In the aforementioned case (KHO:2009:61) the operator of a horse stable had applied for an environmental permit for utilizing briquettes composed of horse manure and bedding material as an energy source to heat the stables and other buildings on site. The Supreme Administrative Court stated that such a mixture of manure and bedding material, as well as briquettes composed of these materials, was to be considered as waste as defined in the Waste Act1 of Finland. Furthermore, horse manure could not be considered as vegetable waste from agriculture, but rather waste in general, which signified that the Government Decree on Waste Incineration (362/2003), implementing the Directive 2000/76/EC on the Incineration of Waste2, would be applicable in the case. The operator intended to prove that the mixture should be considered as biofuel produced as a by-product of the operating activities. Defining the mixture as waste easily signifies that small-scale use of horse manure and bedding mixture in energy production becomes economically unfeasible due to waste incineration provisions requiring, e.g., investments in measuring equipment (Puheloinen and Ekroos, 2010).

As stated in a dissenting opinion to the decision, the process as a whole would have represented a worthwhile resolution from the point of view of environmental protection. According to the opinion, the mixture of horse manure and bedding should be defined as waste only on the floor of the stalls, but as a valuable residual product used for energy production after the process of briquetting would be completed. Amongst other issues, the statement highlighted the fact that horse

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1 Waste Act 1072/1993 (to be repealed; new Waste Act approved in March 2011).
manure does not contain harmful substances for human health. Furthermore, as argued by Puheloinen and Ekroos (2010) in a detailed analysis of the case, using horse manure and bedding material as an energy source is an option that deserves consideration in the context of the EU objectives for increasing the use of energy from renewable sources and mitigating climate change, and may require legislative amendments.

4 Conclusion

The Waste Framework Directive 2008/98 modernised the concept of waste to encourage a life cycle approach, for example, by clarifying the distinction between wastes and by-products and introducing end-of-waste criteria clarifying when waste ceases to be waste (COM (2011) 0013). However, how could innovative waste utilization options, such as the ones described above, be taken into account in regulation in advance so that environmentally and economically favourable recovery solutions would not be hindered? Developing the definition of waste to promote waste prevention targets and to better incorporate a life-cycle approach in waste management (e.g. Suvantola and Lankinen 2008, p. 85) would encourage sustainable residue utilization.

Sustainable use of natural resources and material efficiency are closely interlinked with waste prevention and the re-use and recycling of waste materials. Promoting eco-innovations and understanding the dynamics behind eco-innovation and regulation contributes to achieving these targets and reducing the overall environmental impact generated by waste. As this paper intends to demonstrate, addressing environmental challenges may require, amongst other issues, further development of the legal notion of waste. Besides legal prerequisites for residue utilization, the waste status of materials may strongly influence operators' decisions concerning such utilization due to considerations related to economic and administrative impacts. In order to fully understand the different implications of regulative measures on incentives for eco-innovation, a well-functioning dialogical connection between regulators, operators and all other actors in touch with waste management issues is required. Taking material efficiency considerations more widely into account in waste management policy, and bringing product design and waste legislation closer together could, as a regulation model, contribute to sustainable use of natural resources and promote climate change mitigation targets.

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Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and The Committee of the Regions - Taking sustainable use of resources forward - A Thematic Strategy on the prevention and recycling of waste (COM(2005) 666 final) [2005].


Planning Law
Expert Evidence and Expertise in Dispute Resolution

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Abstract:
Courts and tribunals determining environmental, planning, and land use disputes routinely rely on expert evidence from a range of disciplines. The decision maker may themselves have expertise which frames the perspective through which expert evidence is viewed. The approach adopted by a particular court or tribunal to the admissibility of expert evidence, and the form in which it is provided, may depend less on whether the dispute resolution process takes an adversarial form than on other factors, including the nature of the issues in dispute and the constitution of the decision-making body. The challenges posed by environmental and land use disputes, including the diversity and complexity of the issues raised, make it imperative that expert evidence is focussed on assisting the decision-maker to reach a sound and justifiable outcome. Specialist environmental courts and tribunals are not unique in seeking more effective ways to elicit and manage expert evidence than have traditionally been adopted in adversarial dispute resolution. Australian environmental courts and tribunals have been active in implementing procedural reforms relating to expert evidence, including court-appointed experts, joint conferencing, and concurrent evidence.

Keywords:
dispute resolution, environmental law, expert evidence, planning law

1 Introduction
The purpose of this paper is to identify the challenges for the provision of expert evidence in environmental and planning disputes, and to consider how reforms to civil procedure have impacted on provision of expert evidence across a broad range of adversarial dispute resolution processes. Australian specialist environmental courts and tribunals, in particular the Land and Environment Court of New South Wales (LEC), and the generalist Administrative Appeals Tribunal (AAT), have adopted many civil procedure reforms relating to expert evidence, including single experts, joint conferencing, and concurrent evidence. There is limited research on whether these reforms have achieved the desired efficiencies in cost and time, and whether they have contributed to an increase in impartiality and value of expert evidence to the dispute resolution process.

2 Expert evidence in environmental and land use disputes
Australia has a well developed system for the hearing of appeals in relation to environmental and land use decisions made at all levels of government, from Commonwealth or State Ministers through to local authorities. In most instances, such appeals are appeals de novo, where the reviewing court or tribunal is not limited to the evidence before the decision maker, and has the power to substitute a new decision for that of the original decision maker, based on evidence presented to it which may include expert evidence. Such appeals are generally determined at the Commonwealth level by the AAT, established in 1975 and deriving its jurisdiction from a range of
legislation.\(^1\) Appeals in respect of decision making at the local, State and Territory levels are heard by a variety of separately established courts or tribunals.\(^2\) In addition to the review of administrative decisions by courts or tribunals, Australian courts hear and determine environmental civil enforcement and judicial review proceedings, and criminal proceedings, which may also require the presentation of expert evidence.

There is a developing body of literature on specialist environmental courts and tribunals (Pring & Pring, 2009), and a detailed consideration is beyond the scope of this paper. This paper focuses on one such court, the LEC, and a generalist tribunal that hears environmental disputes. The LEC is a specialist environmental court, established in 1980 as a superior court of record.\(^3\) Classes 1, 2 and 3 of its jurisdiction include appeals heard de novo and a number of other civil disputes; Class 4 is the civil enforcement and judicial review jurisdiction; criminal prosecutions are heard in Class 5; Classes 6 and 7 are appeals from the local court; and Class 8 is a relatively recently conferred jurisdiction relating to mining matters. The LEC exercises both administrative power and judicial power, depending on the nature of the proceedings and the class of jurisdiction. In contrast, the AAT is a general merits review tribunal which exercises only executive power in reviewing decisions of Commonwealth government officials and agencies. In common with many other specialist environmental courts and tribunals, both the AAT and the LEC include among their members persons with specialist qualifications and expertise in areas other than law; and those members appointed without such specialist qualifications soon acquire through the course of decision making experience and expertise in areas other than law.

In most instances Australian courts and tribunals determining merits appeals are not bound by the rules of evidence. However, the rules of evidence, now codified to some extent in legislation,\(^4\) provide the framework within which decisions are made as to which evidence to admit and how much weight to give it. Courts hearing civil enforcement, criminal, and judicial review proceedings are bound by the rules of evidence. Those rules prohibit the provision of opinion evidence, subject to some exceptions, including the provision of evidence by a person with "specialised knowledge based on the person’s training, study or experience".\(^5\)

The need for expert evidence arises as a consequence of the nature of disputes presented to the courts and tribunals hearing environmental and land use disputes. A major part of the LEC caseload comprises appeals from decisions of local authorities refusing consent to proposed development, or imposing conditions, or making orders directing landholders to do or refrain from carrying out certain activities (such as using premises for a purpose without development consent). Such appeals may require the court (usually constituted by a Commissioner) to decide both threshold legal issues, such as permissibility of proposed development, and issues going to the merits of the application such as whether the proposed development should be approved and on what conditions. Merits issues routinely require consideration of planning issues such as consistency with the objectives of applicable planning instruments, and often include assessment of noise impacts, social impacts (eg in relation to operation of licensed premises), ecological issues (eg impacts on threatened species), bushfire protection, and engineering questions (eg adequacy of drainage). All of these issues are matters on which the Court will usually be assisted by expert evidence. Criminal prosecutions can require expert evidence to assist the Court to determine issues such as whether vegetation cleared allegedly in breach of the applicable legislative prohibition is in fact “native vegetation”.\(^6\) Judicial review proceedings can require the Court to determine, as a jurisdictional fact, whether or not a

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1 The central Commonwealth environmental legislation is the *Environment Protection and Biodiversity Conservation Act* 1999; other legislation conferring jurisdiction on the AAT includes the *Great Barrier Reef Marine Park Act* 1975.

2 The Australian Capital Territory Administrative Appeals Tribunal, the Land and Environment Court of NSW, the Planning and Environment Court of Queensland, the Environment, Resources and Development Court of South Australia, the Tasmanian Resource Management and Planning Appeals Tribunal, the Victorian Civil and Administrative Tribunal, and the Western Australian State Administrative Tribunal.

3 Land and Environment Court Act 1979 (NSW).

4 The *Evidence Act* 1995 (Cth) is the model which has been adopted elsewhere, including in NSW: *Evidence Act* 1995 (NSW).

5 *Evidence Act* 1995 (NSW) s79.

proposed development is likely to significantly affect threatened species, as part of its determination whether a development consent was validly granted.  

The challenges of environmental and land use dispute resolution include the broad diversity of issues that may require provision of expert evidence; the complexity of some of the issues (such as urban ecology: Taylor & Ives, 2009); a relatively small pool of individuals who might be qualified to give expert evidence in some areas; and simply a lack of reliable data and research.  

One example which illustrates the complexity of environmental dispute resolution was a decision of Preston J, the Chief Judge of the LEC, Newcastle & Hunter Valley Speleological Society Inc v Upper Hunter Shire Council & Stoneco Pty Ltd [2010] NSWLEC 48, which was a challenge to the granting by the council of consent for a limestone quarry. The issues in the appeal included whether the proposal was likely to significantly affect the White Box Yellow Box Blakely's Red Gum Woodland (White Box EEC), which was an endangered ecological community, and the habitat of the Squirrel Glider (a threatened species); and whether the limestone on the site was likely to contain caves and other karst features and cave-dwelling fauna, such that the proposal was likely to cause serious or irreversible damage to those karst features and fauna. The Court (constituted by Preston J, assisted by an Acting Commissioner with qualifications in ecology) heard evidence from experts on vegetation and soils in order to determine whether or not the vegetation on the project site comprised the White Box EEC as defined, and in determining whether or not the project was likely to have a significant effect on the EEC. On the limestone issues, the Court heard evidence from experts in geology, concluding:

177 In the present matter, although there is an absence of site-specific information on biota in the limestone, the presence of biota in caves and groundwater in the near vicinity of the site and the increasing number of studies elsewhere that establish the presence of biota in limestone, make it scientifically likely that some form of biota will be found within the limestone on the site. Without being able to predict the particular species which would be present, it is beyond a mere possibility that biota will be present. This scientific likelihood is sufficient to engage the precautionary principle…

178 If there is biota present then, at least within the extraction area, the biota will be harmed by quarrying. Such harm would constitute serious and irreversible environmental damage. There is uncertainty as to the threat of environmental damage flowing from the uncertainty as to the presence of voids and fissures, with available water, to support biota. However, the threat of environmental damage is scientifically likely; there is reasonable scientific plausibility that there are voids and fissures, with available water, to support biota, which would be damaged by quarrying: Telstra Corporation Ltd v Hornsby Shire Council [2006] NSWLEC 133; (2006) 67 NSWLR 256; (2006) 146 LGERA 10 at [148]. The Court concluded that an appropriate response to the threat of environmental damage to biota within the limestone was to implement an adaptive management approach through conditions of consent requiring monitoring linked to adaptive management.

3 Requirements for expert evidence

The now common reliance by courts and tribunals on expert evidence from a range of disciplines is a relatively recent development. During the 19th and early 20th centuries the courts were mistrustful of evidence given by scientific experts, who were often perceived to be in support of the cause in which they were embarked, and in favour of the person employing them (Bergin, 2011). As recently as 1963 the NSW Supreme Court referred to expert scientists being "affected in greater or less degree by the kind of unconscious bias which is a well known characteristic of expert evidence".  

1 Environmental Planning and Assessment Act 1979 (NSW) s78A(8).

2 Miller Steamship Co Pty Ltd v Overseas Tankship (UK) Ltd [1963] NSWR 737 at 753.
Both the United Kingdom and Australia have made significant reforms to expert evidence procedures in recent years. The UK reforms have their origin in the reports of Lord Woolf in 1995 and 1996 which led to Part 35 of the Civil Procedure Rules 1998 (UK) (CPR). The reforms in New South Wales built on those reforms, and the relevant legislation applicable to NSW courts and tribunals is the Civil Procedure Act 2005 and the Uniform Civil Procedure Rules 2005 (UCPR). These reforms were driven in part by a perceived need to reduce costs and complexity in civil litigation, and also by a desire to improve the quality of expert evidence and its provision.

The threshold question in any proceedings is whether expert evidence is admissible. Expert opinion evidence given by someone with “specialised knowledge based on training, study or experience” can only be given where the opinion of that person is wholly or substantially based on that knowledge.\(^1\) If a person without experience in the area would be able to form an opinion on the matter without the assistance of a person possessing specialised knowledge, expert evidence is not admissible (Pepper, 2011). The critical issues will be that the expert have specialised knowledge based on their training study or experience; that the field be sufficiently recognised as a reliable body of knowledge; that the evidence be based on that specialised knowledge; that the facts or assumptions on which the opinion is provided are established or are made explicit; and that the reasoning engaged in to arrive at the conclusions is set out (Pepper, 2011).

Australian courts and tribunals share with the UK a reliance on what Dwyer has described as “notions of decent conduct and fair play” (Dwyer, 2008:347): that is, imposing on experts an overriding duty to assist the court, which finds its expression in express statements in the applicable rules.\(^2\) In NSW expert witnesses are required to agree to be bound by a code of conduct, and to acknowledge that agreement in their written report, failing which their report may not be admitted, and their oral evidence not received, without leave of the court.\(^3\)

4  Particular issues

There are two distinctive features of environmental and land use dispute resolution in the LEC and the AAT which may impact on the expert evidence provided to, and required by, those bodies.

4.1 Council staff as experts

It is not uncommon in appeals heard by the LEC from decisions of a local authority for the council to lead expert evidence from one of its employees, commonly from planning officers or other officers with engineering or building qualifications. Resource limitations mean that many councils only retain the services of external experts where their own staff have recommended approval of a proposed development and would as a consequence be unable to give expert evidence in support of the council’s case in an appeal against refusal of consent. The general proposition is that an employee is not precluded from giving expert evidence; however, their evidence may be given less weight.\(^4\) The issue is whether the expert has the required degree of impartiality.\(^5\) For example, in one matter the LEC rejected evidence from a council officer who had been involved in the proposal for the development and whose report contained not only facts but partisan opinions.\(^6\) It can be difficult to determine the point at which a council officer ceases to be able to provide impartial expert evidence and demonstrates the degree of connection with the subject matter that precludes them from giving expert evidence.

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2. CPR r35.3: Dwyer 2008.
3. UCPR r31.23.
6. Willoughby City Council v Transport Infrastructure Development Corporation (No 2) [2008] NSWLEC 238.
4.2 Expertise of decision maker

Both the LEC and the AAT are required to consider the question of expertise in constituting the court or tribunal for particular matters. The qualifications for appointment of a Commissioner of the LEC are specified in s12 of the Land and Environment Court Act, and include qualifications and experience in planning, valuation, engineering, and architecture. For members of the AAT, the relevant provision is s7 of the AAT Act which includes a similarly broad range of disciplines and expertise. Section 30(2) of the Land and Environment Court Act requires the Chief Judge to have regard to the knowledge, experience and qualifications of the Commissioners and to the nature of the matters involved in the proceedings in determining the Commissioner or Commissioners who is or are to exercise the jurisdiction of the Court in relation to any proceedings. In Classes 1, 2 and 3 of the Court's jurisdiction a Judge may sit with the assistance of a Commissioner with particular relevant qualifications. A similar requirement to consider the type of expertise that may be relevant applies to constitution of the AAT.1 Both the AAT and LEC have part time members with a diverse range of expertise: in the AAT, that includes expertise in aviation, engineering, environmental science, medicine, pharmacology, military affairs and public administration (Downes, 2011).

Consideration of how an AAT member or an LEC Commissioner who has specific expertise relevant to the issues in dispute can make use of that expertise has generally been framed in terms of procedural fairness. The parties must be alerted to information derived from that expertise where the decision-maker proposes to reach a conclusion based on their knowledge of a particular fact, or relying on a particular expertise.2 Beyond this constraint, there appears to be acceptance that a decision-maker appointed because of their expertise should be able to use it in the decision-making process;3 the unresolved issues are the extent to which such knowledge should be contestable by the parties (Cane, 2009: 241), and precisely how that expertise is used by the decision-maker. At the least a decision-maker with expertise should be better able to evaluate competing expert evidence, or at least know what questions need to be asked of the expert witnesses. The LEC makes use of the expertise of Commissioners in conciliation of many of the matters that are appealed to the Court (Preston, 2007).

5 Procedural matters

In NSW, the main purposes for the provision of expert evidence are set out in r31.17 of the UCPR:
(a) to ensure that the court has control over the giving of expert evidence;
(b) to restrict expert evidence in proceedings to that which is reasonably required to resolve the proceedings,
(c) to avoid unnecessary costs associated with parties to proceedings retaining different experts,
(d) if it is practicable to do so without compromising the interests of justice, to enable expert evidence to be given on an issue in proceedings by a single expert engaged by the parties or appointed by the court,
(e) if it is necessary to do so to ensure a fair trial of proceedings, to allow for more than one expert (but no more than are necessary) to give evidence on an issue in the proceedings,
(f) to declare the duty of an expert witness in relation to the court and the parties to proceedings.

The LEC Practice Directions set out the requirements for when, and how, expert evidence is provided in each of the classes of the Court's jurisdiction.4 Distinctive features of the LEC's approach to expert evidence include the requirement that the parties first consider whether expert evidence is required on a particular issue; appointment of single experts if appropriate; routine joint conferencing of parties' experts; and provision of oral evidence by experts as concurrent evidence. These are discussed in more detail below, however it is worth noting here that the adoption of

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1 Administrative Appeals Tribunal Act 1975 (Cth) s23B.
4 Practice Directions are authorised by r31.20 of the UCPR. LEC Practice Directions are available at: http://www.lawlink.nsw.gov.au/lawlink/lec/ll_lec.nsf/pages/LEC_practicedirections.
procedures such as these is entirely consistent with the prevailing trends in civil litigation more generally, both in Australia and elsewhere. Dwyer argues that the changes contained in the CPR are an attempt to provide more efficient use of resources, both state and party, through more active case management, and that the significant change in the use of experts under CPR Pt 35 and the nature of expert roles is a reflection of broader changes in the culture of civil procedure (Dwyer, 2008: 210). That is consistent with the NSW experience, where the Civil Procedure Act states as the overriding purpose of the Act and the rules as being to facilitate the just, quick and cheap resolution of the real issues in the dispute or proceedings1.1 This statement of overriding purpose is supplemented by a legislative statement of the objects of case management (s57); and directions that the court act in accordance with the dictates of justice (s58), eliminate delay (s59), and implement procedures with the object of resolving the issues between the parties in such a way that the cost to the parties is proportionate to the importance and complexity of the subject-matter in dispute (s60).

5.1 Single experts

The LEC Practice Directions provide that parties must first consider whether expert evidence is genuinely necessary to resolve the issues in dispute.2 Where expert evidence is necessary, the Practice Directions encourage consideration of whether a single expert is appropriate, by reference to:

(a) the importance and complexity of the subject matter in dispute in the proceedings;
(b) the likely cost of obtaining expert evidence from a parties’ single expert compared to the alternative of obtaining expert evidence from individual experts engaged by each of the parties;
(c) the proportionality of the cost in (b) to the importance and complexity of the subject matter in (a);
(d) whether the use of a parties’ single expert in relation to an issue is reasonably likely either to narrow the scope of the issue or resolve the issue;
(e) the nature of the issue, including:
   (i) whether the issue is capable of being answered in an objectively verifiable manner;
   (ii) whether the issue involves the application of accepted criteria (such as Australian Standards) to ascertainable facts;
   (iii) whether the issue is likely to involve a genuine division of expert opinion on methodology, or schools of thought in the discipline; and
   (iv) whether the issue relates to the adequacy or sufficiency of information provided in the development appeal application;
(f) whether the evidence of the parties’ single expert involves the provision of aids to assist in the assessment of a development appeal application (such as shadow diagrams, view lines or photo montages);
(g) whether the parties’ single expert would be required independently to obtain further information or to undertake monitoring, surveys or other means of obtaining data before being able to provide expert evidence;
(h) whether the parties are prepared at the time to proceed to hearing on the basis of a parties’ single expert report about the issue and no other expert evidence about that issue;
(i) whether the integrity of expert evidence on the issue is likely to be enhanced by evidence being provided by a parties’ single expert instead of by individual experts engaged by the parties; and
(j) whether the Court is likely to be better assisted by expert evidence on the issue being provided by a parties’ single expert instead of by individual experts engaged by the parties.

The parties may agree on an expert (“parties’ single expert”) or the court may decide to appoint a “court appointed expert”. The Court must be satisfied that it is practical to appoint a court appointed

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1 Civil Procedure Act 2005, s56(1).
2 Practice Note Class 1 Development Appeals at [42]; Practice Note Class 1 Residential Development Appeals at [53]; Practice Note Classes 1, 2 and 3 Miscellaneous Appeals at [30]; Practice Note Class 3 Valuation Objections at [34].

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expert, and that it is in the interests of justice to do so.1 The parties require leave of the Court to adduce evidence of another expert on an issue where a single expert has been appointed to provide evidence on that issue.

A single expert (whether engaged by the parties or court-appointed) may not be appropriate where the relevant discipline recognises that there may be more than one school of thought on an issue and where a single expert may employ only one method of analysis (Pepper, 2011). Appointment of a single expert may not assist in reducing time and associated costs for the parties if the parties engage their own experts to "shadow" a single expert (Livingstone, 2008: 47). The use of single experts in the LEC, whether parties' single experts or court-appointed experts, has declined in recent years: while between March 2004 and April 2005 there were 171 court-appointed experts in the LEC, in 2010 there were only 5 parties' single experts and no court-appointed experts (Pepper, 2011). That may be because the LEC routinely utilises Commissioners with expertise in certain areas (Pepper, 2011); or it may reflect concerns that there are more fundamental limitations with this mode of expert evidence, including concern that it is not possible to test whether the views provided in this form are correct in the absence of evidence to the contrary (Livingstone, 2008: 48; Rackemann, 2011).

5.2 Conferencing

A routine feature of litigation in the LEC is a requirement for joint conferencing of experts, with the provision to the Court of a joint report which "must specify matters agreed and matters not agreed and the reasons for any disagreement".2 The LEC's further requirements for a joint report are:3

If experts are directed by the Court to confer, experts are to ensure that their joint conference is a genuine dialogue between experts in a common effort to reach agreement with the other expert witness about the relevant facts and issues. Any joint report is to be a product of this genuine dialogue and is not to be a mere summary or compilation of the pre-existing positions of the experts.

Lawyers are not permitted to attend a joint conference, or be involved in the preparation of a joint report, without the leave of the Court.

Joint conferencing may not necessarily reduce time and costs to the parties (Livingstone, 2008: 57). Reservations have been expressed as to whether joint conferencing improves the quality and impartiality of evidence, in particular whether the process can be hindered by entrenched or inflexible views, hostility between experts, or domination of the process by more senior or experienced experts (Livingstone, 2008: 55). There is an added difficulty where an expert later withdraws or modifies agreement reached in the joint conferencing process, and in identifying when it is appropriate to grant a party leave to adduce additional evidence from another expert (Livingstone, 2008: 56). On a more practical level, joint conferencing is of limited assistance where the experts fail, or refuse, to engage with each other to identify areas where agreement can be reached.

5.3 Concurrent evidence

There is some debate as to its origins (Bergin, 2011; Livingstone, 2008), however concurrent evidence (or "hot tubbing" as it is sometimes referred to) is now an accepted aspect of the provision of oral evidence in the course of proceedings in many Australian courts, including the LEC, and in the AAT. The earliest use of concurrent evidence in the AAT was in 1994 (Administrative Appeals Tribunal, 2005). The LEC commenced routine use of concurrent evidence in March 2004 (Administrative Appeals Tribunal, 2005), and the LEC's Practice Notes assume that where expert evidence is given from more than one expert in the same discipline it will be given concurrently.

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1 UCPR r31.17(d).
2 UCPR r31.26(2).
3 Practice Note Class 1 Development Appeals at [54]; Practice Note Class 1 Residential Development Appeals at [61]; Practice Note Classes 1, 2 and 3 Miscellaneous Appeals at [42]; Practice Note Class 3 Valuation Objections at [46]; Practice Note Class 4 Proceedings at [46].
unless the hearing Judge or Commissioner orders to the contrary. There is no express reference to concurrent evidence in the UCPR, and in the LEC the procedure is as directed by the Judge or Commissioner hearing the matter. The procedure was described by McClellan J in BGP Properties Pty Ltd v Lake Macquarie City Council [2004] NSWLEC 399:

121 The issues which were ultimately defined in the proceedings required resolution of the different views of experts in relation to a number of significant matters. As will become commonplace in proceedings in this Court, the oral testimony of the experts was taken by a process of concurrent evidence. This involved the swearing in of the experts with similar expertise, who then gave evidence in relation to particular issues at the same time. Before giving evidence, the experts had completed the joint conferencing process, which enabled the court to identify the differences which remained and which required resolution through the oral evidence. Each witness was then given an opportunity to explain their position on an issue and provided with an opportunity to question the other witness or witnesses about their position. Questions were also asked by counsel for the parties. In effect, the evidence was given through a discussion in which all of the experts, the advocates and the Court participated.

An example of an appeal in the AAT involving concurrent expert evidence was The International Fund for Animal Welfare (Australia) Pty Ltd and Ors and Minister for Environment and Heritage and Ors [2005] AATA 1210, a challenge to the Minister’s decision to grant permits for the import of eight Asian elephants (listed in the Convention on International Trade in Endangered Species of Wildlife, Fauna and Flora (CITES)) to two Australian zoos.2 The issues requiring determination included whether the elephants were being imported "for the purposes of conservation breeding or propagation"; whether the zoos were "suitably equipped to manage, confine and care for the animals, including meeting the behavioural and biological needs of the animals"; and whether the importation of the elephants would "be detrimental to, or contribute to trade which is detrimental to ... the survival ...or ...recovery in nature of" Asian elephants. There were 17 expert witnesses, with qualifications and expertise in areas ranging from veterinary science, ecology, to animal behaviour. The means by which the evidence was provided is described as follows:

43. The means by which most of the evidence was taken was the process now frequently used in the Tribunal which the Tribunal has called "concurrent evidence". All of the witnesses prepared reports or made affidavits. The reports and affidavits were admitted without objection except as to relevance. Prior to giving evidence witnesses whose evidence related to similar areas of expert knowledge conferred with one another. This process involved up to four witnesses at a time. Legal representatives were not present. Sometimes the meeting was wholly or partly by telephone including international telephone calls. Witnesses who gave evidence on more than one area of expert knowledge were involved in more than one meeting. The witnesses who took part in this process included the chief executive officers and other employees of the zoos. The chief executive officers were also cross examined conventionally on non expert issues. During their meetings the experts were asked to isolate the matters on which they reached agreement and the matters on which they continued to disagree. They were asked to reduce this to writing. So far as the Tribunal is aware this process took place without any intervention from the legal representatives except, perhaps, in the provision of typing facilities.

44. Each group of witnesses took an oath or affirmation to be truthful. They sat alongside one another. Not all witnesses were in the hearing room. Some were overseas. They joined the concurrent evidence session by video link. In one case (Mr Kumar) the evidence was received by telephone. Dr Atkinson and Dr Stevenson gave evidence concurrently from the United Kingdom by video link. At the time they were in separate parts of the country.

45. At the beginning of each session the agreed statements were received in evidence. The witnesses were then asked, in turn, to state succinctly what they wished to stress as the essential parts of their

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1 For example, Practice Note Class 1 Development Appeals at [56]; Practice Note Class 4 Proceedings at [48].

2 Another case involving a large number of experts of different areas of expertise in the AAT is No Ship Action Group Inc and Minister for Sustainability, Environment, Water, Population and Communities and State of New South Wales (Joined Party) [2010] AATA 702, a challenge to the Minister’s decision to grant a permit for the scuttling of a former navy frigate in the coastal waters off New South Wales.
evidence. Some of the witnesses accepted this opportunity. Others did not. They were then asked, in turn, whether they wished to ask any of the other witnesses questions or to comment on what the other witnesses had said. Counsel for the parties were then invited to ask questions of any of the witnesses. During all this time members of the Tribunal asked questions when they thought it was appropriate.

The hearing ran for seven days; it is not possible to determine how many days might have been required for more traditional presentation of the expert evidence.

The benefits of concurrent evidence are said to be that it enhances the quality of the court’s decision by identifying the fundamental issues and providing the material necessary to resolve them, and that it saves time; and that it helps to narrow the issues in dispute (Pepper, 2011). There is disagreement as to whether concurrent evidence assists the less articulate expert in presenting their evidence. McClellan J when Chief Judge of the LEC was of the view that it does, and thereby both assists communication between the experts and assists the court in deciding which expert to accept (McClellan 2005); however Davies J was not persuaded that it would prevent the court being unwittingly convinced by the more articulate or authoritative personality (Pepper, 2011). There is dispute as to whether it reduces the likelihood of adversarial bias. Edmond, for example, doubts whether simply allowing experts to respond during the same session rather than a day or week later can produce a demonstrable change in behaviour (Edmond, 2009:172). On a more fundamental level, Edmond questions whether adversarial bias is deliberate or necessarily detrimental - after all, experts may be selected by the parties because they already adhere to particular assumptions or commitments, and experts do not enter into disputes without some professional, institutional or ideological "baggage" (Edmond, 2009:173). It may be impossible for the decision maker to determine whether an expert's reluctance to agree with others is because of legitimate professional differences, or simply because of a desire to advance the cause of the party engaging them (Edmond, 2009:174).

At its minimum, there seems to be agreement that concurrent evidence enhances communication and comprehension in court. As Edmond notes (2009: 174):

If nothing else, concurrent-evidence procedures require the experts to meet and talk, they enable expert witnesses to give longer explanations using their own words, they encourage experts to comment directly on the testimony of others, and they provide a forum where judges are less restricted in their questioning of witnesses and enable fact finders to observe the interaction between experts.

Edmond cautions, however, that there are no guarantees that concurrent evidence can narrow disagreement or encourage co-operation, or make decision-making easier, less controversial or more accurate (Edmond, 2009: 174-5). It also needs to be noted that whatever the benefits of the concurrent evidence model for adducing evidence at trial, it should not be considered a substitute for appropriate pre-trial management to obtain the benefit of expert discourse at an earlier time (Rackemann, 2011).

There has been limited empirical research into concurrent evidence. That which has been conducted suggests that concurrent evidence is supported by judges and tribunal members (Livingstone, 2008: 50-51), less so by legal practitioners and by expert witnesses (Edmond, 2009:182-185; Rackemann, 2011). The AAT reviewed its use of concurrent evidence in 2005, finding that tribunal members considered that concurrent evidence enhanced the decision-making process by identifying areas of contention, distilling issues and making technical issues easier to understand (88.1% of tribunal members), and that it had improved the objectivity of evidence presentation (73.7%). However, tribunal members considered that while in approximately 30% of cases the experts spent less time giving evidence and the hearing was shorter, in approximately 50% of cases it was about the same, and in 20% of cases it was longer (Administrative Appeals Tribunal, 2005). Edmond's study based on interviews in 2007 and 2008 (which included practitioners and experts appearing in the LEC) found that lawyers disliked idiosyncratic implementation of concurrent evidence procedures, and that experts, while generally favourably disposed toward

1 BGP Properties Pty Ltd v Lake Macquarie City Council [2004] NSWLEC 399 at [122].
concurrent evidence were more ambivalent about the pretrial joint conferences (Edmond, 2009). It is worth noting that Edmond's study was conducted not long after concurrent evidence became the norm in the LEC, and it may be that attitudes have changed with more familiarity, and hopefully more consistency in practice.

6 Value of expert evidence

The suggested benefits of joint conferencing and concurrent evidence include that they enable experts to engage directly with each other. A joint report, or questioning during concurrent evidence, may lead to the expression of agreement for example as to methodology, modelling, or the relevant criteria to be applied, or it may lead in a more fundamental way to agreement as to outcome. Sometimes all that can be agreed is that adoption of a particular methodology (rather than another) will lead to an agreed outcome, while adoption of another methodology will lead to a different (agreed) outcome: the decision-maker will still be required to decide which (or whose) methodology is the appropriate one to adopt. Lack of willingness of experts to engage with each other and make appropriate concessions may relate both to personal and professional factors, and to the adversarial context within which court and tribunal processes are framed. The recent decision of the Supreme Court of the United Kingdom to abolish the immunity previously enjoyed by expert witnesses may add another factor, at least in the UK (there being no suggestion at this stage that the Australian courts are likely to follow suit). Professional reputation, and perhaps a desire to continue to be engaged by litigants, may have a more significant impact on an expert's willingness to make concessions in the course of conferring.

The courts and tribunals which have adopted procedural reforms such as joint conferencing and concurrent evidence have done so in the belief that this may help counter adversarial bias, improve efficiency of court and tribunal hearings, and enhance both the quality of the expert evidence and the ultimate decision. There is clearly a need for empirical research, based on the now substantial experience in the LEC and the AAT, into whether these procedural reforms have promoted better decision-making.

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Urban Planning Legislation in New Zealand: Resource Management Act Stage Two Reforms

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Abstract:
The Resource Management Act (RMA) 1991 is a major piece of legislation underpinning urban development in New Zealand and is considered as a fundamental legal framework governing the built environment. The Act is administered by the Ministry for the Environment and has the intention “to promote the sustainable management of natural and physical resources” in the country.

The purpose of this paper is to examine the current RMA Stage Two Reforms, a process that began in 2010 with the appointment of two Technical Advisory Groups (TAGs), the Urban TAG and the Infrastructure TAG. Both bodies were commissioned to produce independent reports for the Minister for the Environment and advise on the viability of further reforms of the RMA. In October 2010 The Ministry for the Environment launched a Discussion Document “Building Competitive Cities: Reform of the urban and infrastructure planning system” building on these two reports. New legislation will be introduced by the Government as a consequence of the two expert reports and the public, individual and group submissions. This paper analyses the recently launched Discussion Document and evaluates some of its major recommendations to address planning coordination and process efficiency in relation to the urban environment.

The paper concludes that the main focus of the new Discussion Document should be on the urban environment, which until now has been completely unrecognised in the Act. Some of the proposed initiatives offer potential to significantly improve planning and urban design outcomes.

Keywords:
planning legislation, Resource Management Act, urban planning

8 Introduction

The Resource Management Act (RMA) 1991 is a major piece of legislation underpinning urban development in New Zealand and is considered as a fundamental legal framework governing the built environment. The Act is administered by the Ministry for the Environment and has the intention “to promote the sustainable management of natural and physical resources” in the country.

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process efficiency in relation to the urban environment. In addition a summary of the official submissions of two key professional bodies, the New Zealand Institute of Architects (NZIA) and the New Zealand Planning Institute (NZPI) are also included in the paper to illustrate some of the feedback provided to the Ministry for the Environment.

9 An Overview of the Resource Management Act (RMA) 1991

The RMA 1991 is a major piece of legislation underpinning urban development in New Zealand and is considered as a fundamental legal framework governing the built environment. The Act is administered by the Ministry for the Environment and has the intention to promote the sustainable management of natural and physical resources in the country. At the time of its inception the RMA was hailed as a world first for its freedom, flexibility and focus on effects-based environmental management (Oram, 2007, p.11), as an innovative, brave attempt to devise a planning system capable of delivering sustainable development” (Barton, 1998, p.453) and a pioneering example of legislating for sustainability” (Jackson & Dixon, 2007, p.107).

The scope of this national legislation is quite wide as it integrates previous pieces of legislation dealing with a diverse range of fields: land use planning and control of the built environment under the Town and Country Planning Act 1977 (TCPA); management of certain natural resources from the Water and Soil Conservation Act 1967 and Geothermal Energy Act 1953; and environmental regulation functions of the Clean Air Act 1971 and various other acts regulating hazardous materials. For example, Part 3 of the Act, Duties and restrictions under this Act has separate sections dealing with land, coastal marine area, river and lake beds, water, discharges, and noise. Part 2 of the Act, Purpose and principles, section 5, provides a definition of sustainable development [which] means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety. The same section identifies three key conditions that enable sustainable development defined by the Act: sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations; safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and avoiding, remediying, or mitigating any adverse effects of activities on the environment.

9.1 The RMA and its Amendments

The eighteen subsequent amendments to the Resource Management Act 1991 that were introduced over the past twenty years, from 1993, 1994, 1996, 1997, 2002, 2003, 2004, 2005, 2007, 2008 and 2009, have strived to improve existing practices and ultimately the overall quality of the urban environment in New Zealand. Some of the main amendments deal with a diverse range of issues. The 1993 amendment, No 65, introduced changes to a number of administrative and process issues regarding subdivisions. The 1996 amendment, No 160, covered areas such as marine farming, coastal occupation and a range of technical issues. The 2003 amendment, No 29, was concerned with streamlining RMA processes at all levels including the development of National Policy Statements. Furthermore, Regional Policy Statements and Regional and District Plans were required to reflect those. The six 2004 amendments, No 2, No 5, No 46, No 77, No 94 and No 103 were limited in scope and scale to energy and climate change issues and had a large impact on Regional Policy Statements. The 2005 amendment, No 87, was considered the most significant as it intended to improve various management processes such as national leadership, decision making, local policy and plan making as well as Environment Court operations.

Whether the particular planning aims and intentions of the RMA and its eighteen amendments have been achieved over the past two decades remains highly debatable. Oram (2007) argues that while the RMA works well for small, local consents … it is inadequate for dealing with wide area, long-term and strategic issues of urban development” (p.3). Overall the RMA does radically shift the weight of planning legislation towards sustainable resource management” (Barton, 1998, p.454). Jay (1999) identifies some of the major problems with this piece of national legislation whose
primary focus is “on the effects and impacts of development rather than on the nature or scale of development” (p.468). As sustainable management seems to take precedence over the process of sustainable development and biophysical issues play a central role, “this places the Act at a significant distance from issues of urban planning and development (Hunt, 2008, p.9).

An additional problem is presented by “the exclusion of social and economic matters” (Jay, 1999, p.468) which is believed to have been dictated by the prevailing market forces in New Zealand central government circles. “The RMA carefully stresses the physical variables, leaving social variables, including equity in resource distribution, largely to look after themselves” (Barton, 1998, p.454). As a consequence “the reduced emphasis on socio-economic effects within land-use development plans has impeded the promotion of sustainable spatial development strategies” (Jackson & Dixon, 2007, p.107). The “market forces emphasis remains at odds with processes that deliver high quality urban design outcomes” (Hunt, 2008, p.2). In summary, the powers vested in the RMA become seriously compromised when it comes to “control over the nature or scale of resource use, provided that detrimental effects on the biophysical environment are avoided, remedied, or mitigated” (Jay, 1999, p.468). Barton (1998) concludes that the RMA “does integrate in one compendious Act a host of environmental legislation … and it does display, in the text at least, a naive idealism which can inspire respect” (p.453).

9.2 The RMA and Functions, Powers and Duties of Central and Local Government

The introduction of the RMA in 1991 was accompanied by changes at central and local government levels. Part 4 of the Act is dedicated to the “Functions, powers and duties of central and local government”. Section 24 defines the functions of the Minister for the Environment, who is in charge of issuing National Policy Statements and making of National Environmental Standards. Section 28 defines the functions of the Minister of Conservation, who is in charge of the preparation and recommendation of New Zealand Coastal Policy Statements and the approval of Regional Coastal Plans.

On a local government level New Zealand has a two-tier system that consists of 12 regional councils and city or district councils. Section 30 (a) defines the functions of the regional councils, who are in charge of “the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the natural and physical resources of the region”. In general, the regional councils were given responsibility for managing water, soil, air, coasts, natural hazards, and hazardous-waste mitigation, the discharge of contaminants, and land-transport planning. They are also required to produce Regional Policy Statements, a Regional Coastal Plan and a Regional Plan. Section 31 (a) defines the functions of the territorial authorities, who are in charge of “the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district”. The territorial authorities or the district and city councils are in charge of district planning, noise control, hazard mitigation, and land subdivision and are required to produce District Plans under the RMA.

9.3 The RMA and Planning Practice in New Zealand

All proposals for the use and development of land in New Zealand fall within the jurisdiction of the RMA 1991. Every proposal not identified as permitted activities in the relevant District or Regional Plans requires the lodgement of a resource consent application at the local district or city council. The local territorial authorities (TAs) are responsible for developing District Plans based on the guidelines provided in Part 5 of the RMA – Standards, policy statements and plans. Section 72 states the purpose of the District Plans: “The purpose of the preparation, implementation, and administration of District Plans is to assist territorial authorities to carry out their functions in order to achieve the purpose of this Act”. As “the 1991 New Zealand Resource Management Act established an effects-based planning system intended to safeguard the biophysical resource base” (Jackson & Dixon, 2007, p.107), one of the functions of the TAs under the Act as stated in Part 4, Section 31 (1) (a) is “to achieve integrated
management of the effects of the use, development, or protection of land and associated natural and physical resources of the district. The types of zones developed in the District Plans are related to the types of effects generated by activities, rather than types of uses" (Jay, 1999, p.468). Similarly Miller (2000) agrees that "the emphasis was very clearly on the control of the effects on the environment rather than the activity itself" (p.129). Overall, an examination of District Plans reveals a consistent reliance on rules and regulatory instruments (Miller, 2000).

Planning practice in New Zealand requires the local councils to check resource consent applications to establish compliance with the District Plan rules. If the proposal is deemed to have no significant detrimental environmental effects and if the assessment of potential environmental effects is satisfactory, then resource consent is granted. One major deficiency of this generally rigorous process is the complete lack of consideration of the proposed activity with its associated aesthetic characteristics. As long as a proposal is perceived as harmless and having only a minor environmental effect, this guarantees the favourable outcome of the resource consent application. Hunt (2008) contends that traditionally, analysis of effects has focused on biophysical effects, and issues of design quality have not been considered which "highlights the limited basis on which visual effects have typically been assessed under the RMA" (p.5). The need to shift the focus and include urban design issues when evaluating resource consent applications led to the establishment of the Urban Design Panel at Auckland City Council in 2003. Although this was a non-statutory initiative, the role of the Panel is mainly to ensure high quality urban design of large scale central city developments and make recommendations included as part of the resource consent process.

There are three major options when evaluating resource consent applications. The first and most straightforward one is when the proposed activity complies entirely with the District Plan rules. The second option can be a non-notified resource consent which requires the signatures of all affected parties in the cases when there is some degree of deviation from the District Plan rules for that particular area. The third and most time-consuming option is a notified resource consent which requires public notification and the opportunity for members of the public to make submissions.

Hunt (2008) poses the question whether the District Plans based on the requirements of the RMA 1991 are able to accommodate measures that will ultimately lead to quality urban design and development. In the absence of city by laws and the fact that the RMA is a piece of national legislation governing all urban development in the country, any urban design initiatives that sit outside this legislation remain non-mandatory. In recent years the need to introduce statutory measures has become more compelling which has led to the RMA Stage One and Two Reforms.

10 The RMA Stage Two Reforms

The latest Resource Management (Simplifying and Streamlining) Amendment Act 2009 No 31 was passed by the Government in 2009 to improve some of the aspects of the resource consent process. This Amendment Act constituted the Stage One Reforms undertaken by the Government. Currently the Stage Two Reforms is underway, a process that began in 2010 with the appointment of two TAGs (Technical Advisory Groups), the Urban Technical Advisory Group and the Infrastructure Technical Advisory Group. Both bodies were commissioned to produce independent reports for the Minister for the Environment and advise on the viability of further reforms of the Resource Management Act. In October 2010 The Ministry for the Environment launched a discussion document Building Competitive Cities building on these two reports. The intention was to invite feedback from various professional bodies as well as the general public, a process, which had a deadline by 17 December 2010. New legislation will be introduced by the Government as a consequence of the two expert reports and the public, individual and group submissions.

10.1 Building Competitive Cities: An overview of the Discussion Document

The document has a clear structure and consists of five sections: 1. Introduction; 2. Problems with the planning system; 3. Options for change: Planning and urban design; 4. Options for change: Social and economic infrastructure development; and 5. Consultation process. The current
problems with urban planning and infrastructure are clearly identified in section 2. The suggested possible solutions are listed in two separate sections: section 3 is dedicated to options for change in planning and urban design and section 4 deals with possible options for change in social and economic infrastructure development.

The purpose of the document is clearly stated in the Introduction section: “to improve our knowledge and understanding of the issues facing planning and urban design and infrastructure development in New Zealand” (p.1). The document seeks feedback on the options for reform and how they could improve the status quo. As 85 per cent of New Zealanders live and work in urban areas, it becomes even more important to build attractive and competitive cities that will contribute to the country’s economic growth. Being the largest city in New Zealand, Auckland plays a special role in the country’s economy with an average productivity, which is 45 per cent greater than the rest of the country (Mare, 2008). Hence the focus of the suggested changes in the planning system as well as in social and economic infrastructure is on Auckland first. One example is the spatial planning currently taking place in Auckland as a result of the amendments to the Local Government Act (LGA). Similar spatial planning principles could also be applied to other New Zealand cities and towns.

10.2 Problems with Urban Planning and Infrastructure

The New Zealand urban planning system is complex and is guided by three different pieces of legislation: the Resource Management Act (RMA) 1991, the Local Government Act (LGA) 2002 and the Land Transport Management Act (LTMA) 2003. In addition the Historic Places Act 1993 also plays a role in certain urban areas. The three major pieces of legislation governing the urban environment have “different legal purposes, processes and criteria, which were not actively designed to work together” (p.5). The Government has identified four potential problems with urban planning due to current legislation and practice that hinder the process of building competitive cities.

The first problem with urban planning is the inadequate recognition of urban environment in the RMA. This major piece of national legislation deals primarily with effects-based management of the natural environment and has limited capacity to assess the value-adding capabilities of potential urban developments. The achievement of long-term urban planning goals and good urban design outcomes is hindered by the existing legislation leading to the intrusive sprawl of ad hoc developments driven by quick return motives. The second problem with urban planning comes from the complex planning system that consists of the three separate Acts mentioned above and their complete lack of alignment and connection. As a consequence there is a complete lack of consistency in the decisions that have been made, which constitutes the third problem of the urban planning system. The multiple participants and decision-makers aggravate further the problems already identified: local and central government, the private sector, infrastructure providers, communities and various non-government organisations. Agreements reached among the participants operating within a single Act are not simultaneously integrated with agreements reached within the other Acts. The fourth problem with urban planning is the barriers to effective implementation: inconsistent implementation of national objectives and standards in plans; cost and time associated with preparing and changing plans; and the potential problems with various tools in practice.

Separate from the problems with the urban planning system, the Government has identified five problems with the infrastructure development in New Zealand. The first problem is the lack of clarity and consistency of national objectives and standards, such as National Policy Statements (NPS) and National Environmental Standards (NES). Due to the specific nature of large infrastructure projects, which often cross regional and local boundaries, NPSs and NESs become increasingly important to “articulate national priorities, provide national direction and facilitate consistency and certainty in the way resource management issues will be addressed” (p.12). The second problem refers to the mixed access to designations, which are special provisions in the District Plan which allow a public work, such as schools, airports, etc to be developed without the
need for land-use resource consent from the territorial authority. The complex and inflexible approval processes constitute the third problem with issues ranging from the level of detail required for new designations to the multiple approval processes and appeal routes. The fourth identified problem with the infrastructure development is the lack of robust and integrated decision-making and the fifth one is the inefficient and inadequate land acquisition which deals with issues when land is acquired for public works and compensation provisions are required.

10.3 Proposed Changes for Urban Planning and Design

The third chapter of the document *Building Competitive Cities* proposes specific changes in the urban planning system that are structured around the problems identified in the previous chapter. The recommendations are outlined in four categories corresponding to the relevant problems. The first category deals with the recognition for the urban environment in the RMA framework. Ensuring a stronger focus on the urban environment necessitates the modification of two definitions: of “environment” to specifically include the urban environment and of “amenity values” to put more emphasis on the quality of the urban environment. The second category of proposed changes addresses issues of greater national direction and clarity. The feedback received when the NPS on Urban Design was introduced in 2008 suggests that the NPS needs to include principles of good urban planning that result in a quality urban environment on all levels from cities and towns to individual spaces and buildings. The option that is put forward suggests extending the scope of the proposed NPS to require local authorities to provide an adequate supply of land to meet future urban growth demands and include policies considering housing affordability. The third category of suggested options is dedicated to spatial planning. The new Auckland Council that came into being on the 1st November 2010 as a result of the merge of the seven Councils in the Auckland Region has been charged with the task of developing a spatial plan for Auckland to provide an overarching vision for Auckland. The 2010 Amendment to the LGA defined the requirements for Auckland spatial plan. Careful consideration has been given to the possibility of applying the spatial plan tool to other areas in New Zealand and also to be given an appropriate level of statutory influence on RMA, LGA and LTMA plans. The fourth category of suggested options deals with the improvement of tools to develop and maintain a quality urban environment: introduce a national standardised template for local and regional plans, developed by central government; produce a single document with a combined NPS and NES as a clear expression of national direction; establish a National Urban Design Panel and a Government Architect to improve the quality of urban design; and improve land assembly to create large areas of land in specific places that require regeneration.

10.4 Proposed Changes for Social and Economic Infrastructure Development

The fourth chapter of the document *Building Competitive Cities* proposes specific changes addressing infrastructure issues that are structured around the problems identified in the previous chapter. The recommendations are outlined in six categories corresponding to the relevant problems. The first category deals with the recommendation for greater national direction and consistency through the systematic use of NPSs and NESs that will outline the Government’s priority areas of economic, social and environmental significance under the RMA. The second category includes recommendations for changed access to the designation system by extending eligibility for designations to a broader range of infrastructure types, such as ports and electricity generation. The third category deals with improved approval processes. Some of the detailed recommendations specify the eligibility criteria for concept designations and define the level of detail required with applications. Integrating current multiple approval processes into a single process and removing duplicated processes is seen by the Government as an efficient way to streamline approval processes. The fourth category is dedicated to the enhanced decision-making framework with the aim to make decision-making more independent, transparent and integrated. Under the current system, decisions on different infrastructure projects are made by different decision-makers in isolation from each other. The fifth category of proposed changes describes an
efficient compensation process under the Public Works Act (PWA) 1981 in the cases of land acquisition from private property owners. The suggested options outline a reasonable list of compensation measures for land acquired under the PWA. The sixth category of recommendations deals with transitional provisions which may be needed to manage the change and to ensure that investment in existing infrastructure is maintained and continued.

10.5 New Zealand Institute of Architects (NZIA) Submission on Building Competitive Cities Discussion Document

NZIA's submission summarises the strong views of the architectural profession of the complete lack of recognition of the urban environment in the current version of the RMA 1991. As discussed above, this major piece of national legislation which defines the legal framework governing the built environment in New Zealand focuses predominantly on planning coordination and process efficiency and remains completely ignorant to the fundamental changes in New Zealand's urban environment and infrastructure over the past twenty years. The Stage Two Reforms and the launch of the Building Competitive Cities Discussion Document are seen by the Institute as an opportunity for an adjustment of the RMA to reflect the urban reality in the country. NZIA's submission suggests six initiatives to significantly improve planning and urban design outcomes (NZIA, 2010).

10.6 Explicitly Recognise the Urban Environment in the RMA (NZIA, 2010)

The NZIA provides its strong support to the adequate recognition of the urban environment in the RMA framework. The Purpose of the Act may be extended to include recognition of the built environment, and consider both the beneficial and adverse effects on it. Another area where the Institute feels strongly that improvements can be made is "amenity values". New Zealand cities and towns have undergone major transformations over the past twenty years since the RMA was first introduced in 1991 and yet the concept of "aesthetic coherence" has not, still providing little guidance as to how desirable design outcomes can be achieved. The possible inclusion of other qualities relevant to amenities, such as "sense of place, contribution to vitality and social interaction" (NZIA, 2010, p.1), are seen by the Institute as having the potential to overcome past and current urban design and planning issues resulting from the inadequacies in the current version of the RMA.

One major concern expressed by the Institute is the differentiation between the natural and urban environment. While the RMA seeks to actively protect the natural environment by minimising the adverse effects on it, a major characteristic of the urban environment is its constant change and development. This characteristic needs to be considered by the revised RMA to encourage good urban development on a national scale.

Another recommendation of the Institute is the formulation of a new definition of heritage either within the RMA or as a supplementary document outside the RMA. New Zealand is a young country and requires recognition of its modern heritage, which is different from the historic heritage connected to the history of the country, which "is thinly spread in our young country" (NZIA, 2010, p.1).

10.7 Ensure the Spatial Plan for Auckland replaces the current multiple overlapping planning processes and guides a Unitary Plan (NZIA, 2010)

The proposed Auckland Spatial Plan must integrate the Regional Policy Statement and the Regional Land Transport Strategy in order to be effective according to the NZIA. Under the current legislative system a suite of District Plans, based on the RMA, are in operation. Before the 1st November 2010 when the new Super City in Auckland came into being, there were seven Councils in the Auckland Region (Rodney, North Shore, Auckland Central, Waitakere, Manukau, Franklin and Papakura) using their own District Plans. The necessity to introduce a single Unitary Plan with a single set of definitions, policies and controls that apply across wider Auckland is strongly supported by the Institute. While the role of the Spatial Plan is seen as providing "vision for the
city, lower order plans, including a Unitary Plan, should be consistent with it, rather than being required to give effect to the Spatial Plan” (NZIA, 2010, p.2).

10.8 Establish a National Policy Statement on the Urban Environment (NZIA, 2010)

The formulation of a National Policy Statement (NPS) is seen as a “simple means of setting expectations for the planning and design of the urban environment and ensuring their consistent application nationwide” (NZIA, 2010, p.3). The scope of this NPS is quite wide including diverse areas, such as: intelligent growth management that integrates transportation and land use; response to local conditions and context, distinctive sense of place, ecological responsiveness, mix of densities and network of connections to and within an area, mixed use areas and achieving high quality public realm and great places to live.

10.9 Establish a National Urban Design Panel (NZIA, 2010)

The NZIA believes that the establishment of a National Urban Design Panel (NUDP) will assist “better, higher value design outcomes” (NZIA, 2010, p.3). It should be administered by the Government Architect and work with regional and local panels. The Urban Design Panel at the former Auckland City Council had an advisory role and made recommendations that were not mandatory. Similarly, the new proposed NUDP will not be a decision-making group but the recommendation is that its findings should have standing in RMA related processes.

10.10 Establish a Government Architect (NZIA, 2010)

The NZIA believes that establishing a position of Government Architect “would assist New Zealand in achieving a level of design excellence and sustainability performance in the built environment that will enrich the lives of all New Zealanders” (NZIA, 2010, p.3). The New Zealand architectural profession has been under severe criticism over Auckland’s urban environment and the almost complete lack of urban planning considerations. Although well understood, good urban design principles seem to remain an enigma for urban planners in Auckland, resulting in the ubiquitous proliferation of mediocre architecture and urban spaces. “… Auckland lacks a collective sense of creative energy and focus; … has poor urban design and planning; and … is developing with little attention to aesthetic considerations” (p.9).

The argument that NZIA puts forward is that “Government plays a vital role in shaping our built environment” (NZIA, 2010, p.4) through the erection of various social and institutional buildings, such as town halls, museums, schools, hospitals, courts and the Parliament buildings, hence the necessity to lead by example.

10.11 Ensure efficiencies in the planning and resource consent process are achieved (NZIA, 2010)

The NZIA places more emphasis on the resolution of conflicts at a planning and design level thus avoiding the involvement of legal mechanisms that prove to be costly and time consuming. Ensuring efficiencies is seen through a range of measures: the establishment of the National Policy Statement on Urban Development; the introduction of a Unitary Plan in Auckland in order to simplify and coordinate the planning process; and the establishment of a National Urban Design Panel in conjunction with regional and local panels, whose recommendations become an integral part of consent processes.

10.12 New Zealand Planning Institute (NZPI) Submission on Building Competitive Cities Discussion Document

The NZPI’s submission is structured around the questions posed in the official feedback form prepared by the Ministry for the Environment. The Institute provides detailed answers to twenty out of the twenty three questions in the form.
10.13 Urban Planning System and Infrastructure Development

The NZPI strongly agrees that the current planning system is unduly complicated and there is a lack of consistency in decisions and some barriers to effective implementation” (NZPI, 2010, p.4). The view on the infrastructure development is somehow vague and rather short calling for stronger alignment of strategic goals and governance structures from the national to regional and local entities” (NZPI, 2010, p.4). More surprisingly, unlike the NZIA submission, which strongly supports the adequate and explicit recognition of the urban environment in the RMA framework, the NZPI takes the stance that the current legislation recognises the environment and its various aspects: social, cultural and economic. The argument that is put forward is that the existing concept of environment already incorporates the concepts of urban environment and amenity values and that the proposed amendments to their definitions would not necessarily lead to good urban design and planning. The view of NZPI is that the RMA does not require alteration to give greater recognition to the urban environment” (NZPI, 2010, p.6). What is suggested instead is the further refinement of the various mechanisms and tools available to the planning community to address the urban or built environment” (NZPI, 2010, p.6).

According to the NZPI the current problems arise from the interpretation and implementation of the various statutes and rules in the current legislation, which is permissive and allows for variations in the practice of planning” (NZPI, 2010). The submission does not distinguish though between the natural and built environment, which are two separate components in the context of any town or city. According to the NZPI the provision of guidance notes to aid planning practice could help improve the quality of future urban developments. The possibility to put in place special mechanisms or urban panels to help urban planning practice is not perceived as necessary (NZPI, 2010).

The NZPI also believes that it is not possible to legislate for good planning and suggests stronger leadership, direction and guidance at a national level” (NZPI, 2010, p.6). As the current RMA 1991 is concerned mainly with assessing the effects of a potential development and minimising the harm to the natural environment, it remains unclear how maintaining the status quo can solve the massive urban design and planning problems in Auckland. The reality is that the magnificent natural setting seems to have been wasted with developments driven primarily by greedy property developers trying to make a quick return. Such developments of non-descript nature all seem to lack aesthetic qualities and vision.

10.14 Spatial Planning in Auckland

Similarly to the views of the NZIA in their submission, the NZPI supports incorporating the Auckland Regional Land Transport Strategy (RLTS) and Auckland Regional Policy Statement (RPS) to avoid inconsistencies between the two and encourage integrated transport and land use planning. As there is certain criticism towards the existing RMA plans in Auckland, associated with the lack of consideration to growth, economic development, transport or environmental outcomes, the NZPI recommends the development of plans in close collaboration with communities, individual citizens, organised groups and other government agencies. Similarly to the NZIA, the NZPI also supports the development of a single Unitary Plan from the perspective of best practice” (NZPI, 2010, p.8). The Institute believes that the effectiveness of the Auckland Spatial Plan could be improved by giving it an appropriate level of statutory influence and by achieving a level of consistency with other pieces of national legislation, such as the Resource Management Act (RMA), Local Government Act (LGA) and Local Transport Management Act (LTMA). It also needs to be developed in close consultation with all the stakeholders in the Auckland area, such as central government agencies and departments (NZPI, 2010).

10.15 Greater National Direction and Consistency

The NZPI’s view that a strong National Policy Statement (NPS) should be prepared to clarify national direction on urban planning is similar to the NZIA’s one. Central government should direct
the content of plans though this NPS and associated National Environmental Standard (NES). The NZPI believes that the development of a national template would be useful in achieving alignment and at the same time facilitating the inclusion of local and regional interests and needs. The purpose of the NPS is seen as a mechanism that ensures the seamless integration of district and regional planning with local planning, which is usually broader by nature (NZPI, 2010).

11 Conclusion

The *Building Competitive Cities* Discussion Document launched by the Ministry for the Environment in October 2010 is a long overdue adjustment of the Resource Management Act (RMA) 1991. The document sets out four problems with urban planning and five problems with the infrastructure development in New Zealand and provides a number of options to address the identified issues. Three of these topics directly relate to urban design: recognition of the built environment in the RMA; National Policy Statement on urban design; and additional tools aiming at the provision of more direction on the content of plans, increase government involvement in urban design through the appointment of a government architect and improve the ability for councils to acquire and assemble land.

The Discussion Document outlines four options aiming at specific changes in urban planning and urban design and six options for change in the social and economic infrastructure development. Some of these proposals put forward will definitely make a positive change in the urban environment but the fairly limited extent of these changes suggests that they might play only a small role in the process of making cities more sustainable, competitive and economically successful.

12 References


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Is capturing the “unearned increment” in land value still a viable idea? A cross-national analysis

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Abstract*
The financial aspects linked to planning regulations impact the built environment. The idea that the public should reap the “unearned increment” or the “plus value” of land is by no means new. The underlying rationale is that much of the value of real property is created not by the landowner’s work, but by government policies that grant development rights or by broad economic and social trends.

Drawing on the author’s comparative research on the laws and practices in 13 advanced-economy countries around the world, the paper addresses the degree to which recapture of the “unearned increment” is indeed a useful approach that policymakers should adopt for financing or incentivizing the delivery of public services and affordable housing.

The idea of value capture in its pure form has failed to catch on widely among advanced economies, but the basic idea has not died away. In recent decades, several “mutations” of this idea have been gaining popularity in many countries, but in widely different forms and degrees.

Keywords: betterment tax, development control, planning law, real-property taxation, value capture

1 Introduction

The built environment is shaped not only by the direct regulatory instruments that planning law provides, but also by the ancillary financial aspects. These deserve more attention. Few issues in land-use planning are as universal as the bipolar relationship between planning regulation and property values. This issue carries deep economic, social, and distributive-justice implications. Do governments have the right to reap some of the increment in value attributable to planning decisions? And the corollary: Do governments have an obligation to compensate private landowners for value decline due to land-use regulations?

* A somewhat different and expanded version of this paper is forthcoming (2011) under the title: Land use regulations and property values: The ‘Windfalls Capture’ Idea Revisited”. Chapter 33, pp. 755-786 in: The Oxford Handbook of Urban Economics and Planning, edited by Nancy Brooks, Kieran Donaghy and Gerrit-Jan Knaap

regulations? Two American scholars have whimsically tabbed this issue as “windfalls” and “wipeouts” (Hagman and Misczynski 1978). This topic has trailed planning policy for a long time, yet is no closer today to being resolved in a politically or legally sustainable manner. This paper revisits the upward side of the land-value coin: How relevant is it today around the world, and especially among advanced-economy countries? The idea that landowners should share some of the increased value of their land with society encompasses a wide range of situations and policies. I will first address the issue broadly and then focus on one specific type of value capture—where the rise in property values is due to land-use regulations or public works. This topic has not
benefited from enough comparative research.\footnote{Despite the ubiquity of the land-value issue, it has not benefited from much systematic comparative research. The only major academic work that looks at both sides of this issue comparatively is the seminal book by Hagman and Misczynski (1977). It surveyed five English-speaking countries (the United States, Canada, Australia, New Zealand, and England) and contributed considerably to the theoretical framing of the issue. Another book, by McCluskey and Franzsen (2005), focuses mostly on developing countries. The “wipeouts” side—called “regulatory takings” in American lingo—has recently benefited from greater comparative attention. My recent book (Alterman 2010) presents an in-depth comparative analysis of the laws and policies of thirteen countries. Alexander’s 2006 book analyses four countries in depth.} By analyzing the experiences of a large sample of advanced-economy countries, this paper seeks to contribute to knowledge sharing on this important issue.

2 The Idea of Land-Value Capture

The idea that the value of land is created by society and should therefore be reaped for the public is by no means new. The brief survey reported here first looks at the evolution of the notion of the “uneared increment” in land in general, and then specifically at the idea of capturing increments created by land-use regulation.

2.1 Henry George and the “Single Tax” Idea

In\footnote{For an example of one of the movement’s organizations, see http://www.henrygeorgefoundation.org/. See also http://www.earthrights.net/wg/wg1.html.} 1879 the American thinker Henry George famously proposed the “single tax” idea in his book Progress and Poverty. He argued that if the rent from land alone (without the buildings and other “improvements”) were to be paid to the government authority on an ongoing basis, it would suffice to finance the entire set of society’s public needs (Andelson 2000, xxii -xxiv). A tax on land would avoid causing the kind of economic turbulence that taxes on labor and mobile or financial capital inevitably create. This latter view is supported by many economists (Ingram and Hong 2007; England 2007; Netzer 1998). George (1962) argued that public capturing of land values represents “a takings by the community, for the use of the community, of that value which is the creation of the community” (421). At the time, his proposal did not link value capture with land-use regulation because he wrote the book long before these were established in their modern format. The “Georgian movement” still draws dedicated followers around the world (as well as many critics; see Andelson 2004).\footnote{As well as many critics; see Andelson 2004.} However, as attractive as the Henry George theory may be, 130 years after he published his seminal book, the “vote” around the world is clear: “no” to the single-tax idea, with a few small local exceptions. Yet the underlying rationale of the Georgian argument is still compelling to many. It is often cited in support of the idea that the added value specifically created by land-use regulation decisions should be shared with the public.

2.2 Value Capture and Land-Use Regulation: The “Betterment Capture” Idea

Historically, Britain led the way in the world discussion about the nexus between planning regulations and property values. The phrases that the British coined for the issue—“betterment and compensation” or “betterment and worsement” (or “worsenment”)—date back to the late nineteenth century (Baumann 1894). In 1909 a British prime minister made the following eloquent statement when introducing a national betterment capture levy as part of the world’s first national planning act (Housing, Town Planning, Etc. Act 1909 (c. 44)): “It is undoubtedly one of the worst evils of our present system of land that instead of reaping the benefit of the common Endeavour of its citizens a
community has always to pay a heavy penalty to its ground landlords for putting up the value of their land.”

The failure of this British experiment cannot be attributed to lack of enthusiasm. Unlike the United States, Britain has had a long tradition of legislative responses to both sides of the property value effects. Subsequent legislation tried various other formulas, and these ideas were exported to many of the colonies (McAuslan 2003; Home 1997). However, neither side ever worked satisfactorily (Grant 1999), as discussed in section 4.

Since World War II the betterment and compensation sides have been decoupled in Britain. During the height of the war, the British government appointed the Expert Committee on Compensation and Betterment to guide the government in the laws and policies it should adopt for postwar reconstruction. The influential Uthwatt Committee Report introduced two important concepts—shifting value” and “floating value” (Replogle 1978; Tichelar 2003). Shifting value” assumes that the demand for any given type of land use in a particular region is finite. Land-use restrictions in one municipality (or in one part of a city) may cause downward value changes, but at the same time may increase the value of land in another locality where the regulations do permit development. “Floating value” refers to the speculative nature of potential land values. Landowners tend to assume that if only planning regulations did not stand in their way, a lucrative type of development would “land” on their own plot of land. However, the notion of shifting value implies that even if land-use regulations were to be abolished, not all landowners would benefit from development (Moore 2005, 3). The assumption that landowners are entitled to compensation for reduction in development rights was thus shaken, while the justification for capturing the added value was reinforced.

Based on this thinking, the UK Town and Country Planning Act of 1947 reformed the entire system. It discarded the idea of “development rights” granted by plans years in advance and substituted a system whereby each development is approved “case by case” through a “planning permission” (Booth 2003). Local government must prepare local plans, but their function is to guide decisions, not to grant development rights. Thus, the very notion of entitlement to compensation was abolished (Purdue 2010). At the same time, the other side of the coin—capturing the betterment value—was fortified. For several decades hence, the United Kingdom seemed to have “volunteered” to serve as the world’s laboratory for testing the betterment capture idea, as detailed in section 4.

2.3 Is There Symmetry between Windfalls and Wipeouts?

The UK story brings to mind an obvious question: If landowners are required to share the windfall derived from land-use decisions, should they also have the right to compensation for decrease in property values due to such regulations? And the converse: If landowners are allowed to keep the windfalls, then symmetry of logic would hold that they should absorb the wipeouts and not be eligible to compensation from the public purse.

However, my recent thirteen-country comparative analysis has produced some counterintuitive findings: In most countries, the two sides of the coin are not symmetric either in law or in practice (Alterman 2010, 3–5). The lack of symmetry is usually not even a public or legal issue, except as a teaser by proponents of one side of the debate who wish to highlight the other side’s ostensibly faulted logic. In all but two among the sample countries (Poland and Israel), the two sides of the land-value coin are currently disassociated. Thus real-life laws and policies do not operate according to the axioms of pure logic.

The following sections take a closer look at specific instruments for value capture, with a particular focus on those directly targeted to capturing value created by land-use regulatory decisions.

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1 Hansard (1909).

2 The British Expert Committee on Compensation and Betterment, Cmd 6386 (1942). This report is known by the name of its chair, as the Uthwatt Report. Its importance in shaping British recovery is recognized not only by planners and lawyers but also by historians of British history. See Tichelar (2003).
Three Types of Value Capture: Macro, Direct, and Indirect

Despite considerable scholarly literature, value capture remains an open-ended term, variously defined and used. Some use the generic term value capture to cover any type of policy or legal instruments whose purpose is to tap any form of ‘unearned increment,’ regardless of the cause of the value rise. Others use the same term to denote only the policy instruments targeted at value arising directly from land-use regulation or public works. The most direct term available to denote the latter type of value increase is betterment—a word that originated in British English and still has no specific American English counterpart. There is also considerable vagueness in the literature on whether a policy should be classified as value capture based on its purpose or its outcome. Some policies not primarily or overtly intended to reap the unearned increment do in fact exact from landowners or developers monetary or money-equivalent contributions. To provide a more level field for research and knowledge exchange, I propose a distinction among three sets of policy instruments that relate to value capture: (1) macro, (2) direct, and (3) indirect instruments.

3.1 Macro Value Capture Embedded in Broader Land Regimes

Macro value capture instruments are not freestanding. They are embedded in some overarching land policy regime, motivated by some broader rationale and ideology. These regimes are assumed to provide a better land and development policy than a market regime. Four major types of land policy regimes have value capture embedded in them—at least in theory. Some authors regard these macro land policies as value capture instruments (e.g., Smolka and Amborski 2007). The four are: 1. Nationalization of all land and direct government control over its use; 2. Substitution of private property by long-term public leaseholds; 3. Land banking; 4. Land readjustment. Because these macro land policies don't feature value capture overtly, they will not be discussed further in this paper.

3.2 Direct Value Capture

Direct instruments for value capture are policies that seek to capture all or some of the value rise in real property under the explicit rationale that it is a legal or moral obligation for landowners to contribute a share of their community-derived wealth to the public pocket. As a wealth redistribution instrument, direct value capture is often regarded as a tax and requires legislative authority. Direct instruments do not need to seek any additional rationales—for example, they do not need to show that the funds are necessary to mitigate negative impacts of the project, or that the properties that generated the funds will also benefit from the services financed by them. The rationale for direct value capture stands in its own right.

Direct value capture may be divided into two subtypes, and the second subtype is further divided into two subtypes:

- **a. Capture of the unearned increment**: Where the value rise is not linked to a specific government decision but rather to general economic or community trends.

- **b. Capture of betterment**: Where the value rise is due to a specific government decisions is directly caused by specific types of land-use regulatory decisions or by the execution of public infrastructure.

The betterment levy, too, may be further divided into two subtypes. Confusingly, both are often denoted by the same term: betterment. I propose to dedicate specific terms for these two types:

- **b1. Development-rights-based betterment**: Where the value rise is due to a planning or development-control decision that applies directly to the land parcel in question and raises its value.

- **b2. Infrastructure-based betterment**: Where the value rise is due to positive externalities from a government decision to approve or execute public infrastructure, parks, or other services.
Capture of the unearned increment type may take many forms, including a capital gains tax on land or real property, an “unearned increment” tax upon transfer of title, sometimes time-adjusted to curb speculation, or an annual property tax that is closely tuned to the rise in property values. Taxation of the unearned increment is found in several countries. Americans know the examples of Vermont and Pennsylvania (Daniels, Daniels, and Lapping 1986 and by Gihring 1999). In the Far East reported cases are Taiwan (Lam and Tsui 1998), Hong Kong, and Singapore (Hui, Ho, and Ho, 2004) . . . This paper focuses on the second subtype—capture of betterment arising from government land-use decisions. In sections 4 and 5 I will report on the international experience.

3.3 Indirect Value Capture

The rationale of the indirect instruments differs from the direct ones. The indirect instruments do not seek to capture the added value for its own sake, because it is “unearned,” but in order to generate revenues (or in-kind substitutes) for specific public services. Indirect instruments are usually practiced on the local government level. The objectives behind the indirect tools are usually more pragmatic and less ideological than the objective behind either the macro or the direct capture instruments. To survive legal and political challenge, the indirect instruments usually need the “cover” of other rationales beyond the desire to capture the unearned increment. It is easy to confuse the indirect instruments with the direct ones because both types harness the same source of wealth—the additional value of real property derived from government land-use and development decisions.

Unlike the direct instruments, indirect value capture is an ever-evolving category of policies that varies greatly among countries and localities. This topic merits its own comparative research. In section 6 I will discuss this topic only to contrast it with direct value capture.

4 Betterment Capture: The International Experience

How prevalent is direct betterment capture around the world? In this section and the following one I report on my international comparative research that focuses on betterment capture practices among advanced-economy countries (with a small detour to South America too).

Many types of government land-use or development decisions could serve as grounds for direct value capture. These vary from country to country and possibly also from one municipality to another. Infrastructure-based betterment levies are historically the earliest form of betterment capture. I will discuss this type first and then proceeding to focus on development-rights-based betterment capture instruments.

4.1 Infrastructure-Based Betterment Capture

The oldest types of the betterment capture instruments are “infrastructure-based.” They focus on value increase to neighboring properties caused by public infrastructure. Public works are a government function that preceded land-use planning laws by centuries. When the British enacted the first town planning act in 1909, they instituted a 50 percent levy on infrastructure-based betterment—an instrument that predated that act. This instrument migrated to many of the British colonies and protectorates but experienced many failures (Peterson 2009, 36–38; Grant 1999; Alterman 1982). Apparently, linking value rise to the execution of public works is not easy. The reasons may include difficulties of proving the causal relationship to the infrastructure works; difficulties in determining the geographic range of impact; and difficulties in levying the charge at a time frame reasonably close to the execution of the public works (because the windfall is usually not realized at that point in time).

1 In theory, other types of government decisions unrelated to land use could also be the cause of land value increases—for example, a new trade treaty that will influence a border town. However, these have not generated a significant body of law or scholarship and are not discussed here.
Yet this idea resurfaces from time to time. For example, in 2004 the Scottish government commissioned a report on whether betterment could be captured from value increase directly due to new transport facilities. Peterson (2009), writing for the World Bank, and Medda (2010) for the UN report on similar initiatives in both developing countries and advanced economies. These initiatives usually stand alone, unrelated to capture of development-rights-based betterment.

4.2 Development-Rights-Based Betterment Capture

Betterment capture policies may target a variety of land-use planning and development-control decisions. I do not know of any country or locality that has ever implemented value capture instruments to tap all the possible “stations” along the planning-to-permitting procedures. The international experience shows that only a few of these stations have ever served as grounds for this type of betterment capture.

As part of a large research project on compensation for value decrease (Alterman 2010), I also looked at the value capture side. The sample of countries encompasses fourteen advanced-economy and democratic jurisdictions (thirteen nations and an additional U.S. state). This sample constituted about 40 percent of the thirty-four members of the OECD in 2010. In alphabetical order the sample countries are Australia, Austria, Canada, Finland, France, Germany, Greece, Israel, the Netherlands, Poland, Sweden, the United Kingdom, and the United States (with additional focus on Oregon). The sample was selected to represent a variety of legal and geographic contexts: large and small countries located on four continents; federal and unitary jurisdictions; common-law as well as civil-law countries with varying degrees of constitutional protection of private property; countries belonging to the EU and those outside it; different cultural and language backgrounds, and so forth.

A finding that may surprise many is that most of the sample countries do not practice direct betterment capture today. There are only three countries in this sample with significant experience in direct betterment capture instruments: the United Kingdom in the past, and Israel and Poland currently. These countries applied a variety of capture policies, so cumulatively their experiences contain a wealth of potential lessons from which other countries may learn.

4.3 Britain: The World’s Former “Laboratory” of Betterment-Capture Instruments

Britain’s vicissitudes with various types of betterment capture policies make it the world’s most distinctive laboratory. Between 1909 and the early 1980s, Britain exhibited pendulum-like shifts in policies about compensation and betterment as power changed hands between Labor and the Conservatives (Tories; Cox 2002; Tiechelar 2003; Lichfield and Darin-Drabkin 1980, 144–145). These shifts were accompanied by ideological debates and significant public exposure.

The various policies adopted and repealed represent a large range of rates of recoupment: the 1909 Housing, Town Planning, Etc. Act and its successors imposed a 50 percent levy on betterment arising from the approval of a land-use plan (called “scheme” and functioning similarly to zoning). The British exported this instrument too to many of their colonies around the world. It too proved to be almost inoperable due to difficulties in exacting the levy from landowners at the time of approval of the scheme (Peterson 2009, 36–38; Grant 1999; Alterman 1982).

After World War II and the rethinking brought about by the Uthwatt Commission, Labor enacted the 1947 Town and Country Planning Act that imposed a 100 percent “development charge” on the full extent of betterment. The revenue was to go to central government (Grant 1999; Lichfield and Darin-Drabkin 1980, 136–142). The tax was ineffective (Williams and Hallett 1988, 119), but scholars remain divided about whether it might have succeeded with time (Lichfield and Darin-Drabkin 1980, 142–144). In 1953 the Tories abolished the act.

1 The United States, Canada, Australia, Germany, and Austria are federal jurisdictions.

2 The United Kingdom, Ireland, Canada, United States, Australia, and Israel have a common-law tradition (Israel is regarded as a mixed system, but in the area of planning and property law it resembles other common-law systems with former British influence). For an analysis of the constitutional protection of property in these countries, see Alterman (2010, 26–35).
When Labor returned to power, it enacted the 1967 Land Commission Act along with a new far-reaching plan: in the long run the national Land Commission would assemble a large national land bank by compulsorily purchasing all land coming in for development. In the short run, a 40 percent betterment levy was imposed on all land transacted on the open market, and the levy's rate was to go up gradually. The revenues were to go to the central government. However, this act too was repealed by the Tories, who came back to power in 1971 (Grant 1999; Lichfield and Darin-Drabkin 1980, 144–145; Tiechelar 2003).

Labor's last attempt (so far?) to institute a direct tax on the betterment value was made in the linked acts of 1975 and 1976. The 1975 Community Land Act was a local-government-based version of the Land Commission Act. It would have ultimately made it mandatory for local authorities to purchase all development land (Cornfield and Carnwath 1975; Lichfield and Darin-Drabkin 1980, 169–191; Tiechelar 2003). In the interim, the 1976 Development Land Tax Act (DLT) instituted an 80 percent charge on the betterment value. This time the municipalities were allowed to keep some of the tax revenues, but most still went to central government. A team of researchers commissioned to evaluate the DLT in "real time" found that its partial implementation was due to the lack of financial incentives for local governments to administer the tax effectively (Barrett, Bobby, and Stewart 1979; McAuslan 1980, 118–142).

The Tories kept the DLT in the books for a few years, making it the longest-surviving postwar betterment tax in Britain. However, the Tories broadened the exemptions clauses so much that the tax gradually became ineffective and was formally abolished in 1985 (Denyer-Green 1998, 274–275). Since then, Britain's policy has so far said "no" to betterment capture.

However, the issue is by no means dead. In 2004 the Labor government commissioned the Barker Report, which recommended reintroduction of a mandatory national betterment levy to be called the Planning Gain Supplement. It would have captured 20 percent of the increase in land values resulting from the grant of planning permission. This proposal was rejected, partially because developers feared that the indirect value capture would continue in addition, and partly because local governments would not have been the direct recipients of the proceeds. Instead of going dramatically back to the tradition of direct betterment capture, the Labor government preferred a hybrid type of levy—a graft of direct and indirect value capture called the Community Infrastructure Levy (CIL). Ironically, the new levy was to commence on April 6, 2010, on the eve of the national elections. The levy would be discretionary, based on a preset formula that reflects the additional floor space allowed by a planning permission rather than the property's additional value. There is flexibility in the types of infrastructure that may be financed by the levy, and the geographic range is broad. However, the new levy specifically excludes affordable housing, to continue to be delivered by means of "planning obligations" negotiated with developers—a well-established type of indirect value capture extensively used in the United Kingdom (Crook et al. 2002; see also section 6 of this paper). The Conservatives who gained power in the May 2010 elections had declared all along that they would abolish the levy, and the new cabinet decided to review it. Will the fate of the CIL be even more short-lived than its historic predecessors?

With this history, no direct betterment recapture policy (meaning, no Labor government) has yet lasted long enough for evaluation research to provide evidence for future policy makers. Since all betterment policies were adopted by Labor yet were altered by Labor itself at the next opportunity, it is clear that none were deemed good enough for re-adoption. Nevertheless, the British experience does provide some tentative lessons about why betterment capture policies may not work, to be summed up in section 5.

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1 UK Department for Communities and Local Government (2008).
4.4  Israel: A Sustainable Betterment Levy

Israel's experience with betterment capture is the longest-lasting current policy among the sample countries (or reported in the international literature). The betterment levy dates back to the 1930s during the British administration over the region. Like many other former British colonies and protectorates, Israel imported unworkable notions of a betterment tax similar to the old British laws. But in 1981, an extensive revision to the betterment tax was enacted that sets out clear and workable rules for levying the net betterment derived from land-use decisions. The law also provides several types of socially based exceptions, including deprived town and neighborhoods, urban regeneration areas, and individually built homes of modest size.

All local planning commissions are obliged to levy 50 percent of the real increment in land value, to be assessed parcel by parcel. Three types of planning and development-control decisions are the legal grounds for the levy: approval of a local or detailed plan, approval of a variance, and approval of a nonconforming use. A bill submitted to the Knesset in April 2010 would add approval of a subdivision plat. The law wisely separates out the grounds from the occasion for levying so as to avoid the mistakes of the old British legislation. The levy is paid upon the sale of the property or application for building permission. Importantly for a country where nationally owned land is more prevalent, the levy applies to both private land and public land on long-term leases (which in Israel function almost like freehold land; Alterman 2003).

In addition to the compulsory betterment levy, Israel also imposes a 25 percent unearned increment tax upon sale of a property to tap the added value in general (not necessarily linked to land-use decisions). Sale of a private residential unit is usually exempt. When both the betterment levy and the unearned increment tax apply, the two are offset against each other.

The Israeli betterment levy is an important though highly fluctuating source of income for local governments. Its success is partly due to the fact that the municipalities keep the full proceeds. However, this type of levy is not free of distributive-justice issues. On the intermunicipal level, the levy is inherently uneven because the opportunities for development are a matter of “luck,” depending on a town’s location, past development patterns, and vacant land. Any betterment such levy of this type would be inherently regressive because the revenues per unit of land will be higher in localities where land values are higher. The revenues are also intrinsically uneven over time because land reserves deplete whereas urban regeneration is slow to occur.

The success of the Israeli betterment levy has several additional reasons: its rationale is clear; the appraisal is plot-specific and provides for fair procedures; the rate is uniform, nondiscretionary, and high enough to justify administrative costs; there are reasonable socially based exceptions; and the revenues may be used for an open-ended set of public services. The levy has never become a major issue in national or local electoral campaigns. In addition to the betterment levy and unearned-increment tax, Israeli planning bodies also practice indirect capture mechanisms (exactions) in varying degrees (Alterman 1990, 2001, 2007). The Israeli example thus shows that, where the real estate market is vibrant, land values may be able to tolerate cumulative layers of value capture mechanisms.

4.5  Poland: A Nonoperational Betterment Levy

Poland too currently has a direct betterment capture mechanism. In the 1990s, after the demise of the Communist regime, Poland legislated a new planning law that introduced a levy on the betterment value created by the approval of an area plan. In view of the strong private property ideology that prevails in Poland, the adoption of the betterment levy at that junction was not a trivial decision. However, the levy as instituted was in fact destined to be barely operational. The legislators should have looked more closely at other countries’ experiences in order to avoid repeating mistakes.

Some aspects of the Polish levy are potentially robust. It taps only the real value increase by requiring parcel by parcel appraisal, and the local governments in charge of collection are also allowed to keep the revenues. But several factors weaken the Polish levy. First, the Polish legislature anchored the levy in the approval of a local land-use plan even though such plans did not
exist at the time, and still cover only a minority of the country. Most development decisions are
granted by means of ad hoc development permits to which the betterment levy does not apply.
Second, the law provides for a discretionary rate of between 0 and 30 percent, which may vary even
within a single plan. Thus a fairness criterion among landowners is not built in. If a rate lower than
30 percent is applied, the administrative costs may be too high. Third, the law leaves gaping
“escape loops” for landowners. The Polish legislators repeated the mistakes of the British Town and
Country Planning Act of 1932 by adopting the occasion of sale of the property as the only tax
collection point and by stipulating a maximum number of five years beyond which the authority to
tax would expire (Gdesz 2010).
Therefore, direct betterment levies in Poland exist largely on paper. When a legal framework is
weak, there is room for differential application (not to say favoritism and corruption). There is
currently some discussion in the Polish government about major revisions to the law.¹

4.6 The Spanish Tradition and Beyond

Spain is another OECD country that, although not in my sample of countries, merits a quick look at
its plus-value capture policy because the Spanish tradition, like the British one, has been influential
beyond its borders. The Spanish Constitution of 1978 enshrines the betterment capture principle:
“The community shall have a share in the benefits accruing from the town-planning policies of
public bodies” (section 47). The rate of the operative levies is about 10 to 15 percent—much lower
than those of the three countries discussed earlier in this paper (Calavita and Mallach 2009; Calavita
et al. 2010; Gielen 2008). Unlike Israel and Poland, in Spain the betterment levy is not necessarily
assessed parcel by parcel and may not reflect the real value increments of specific plots. In addition
to direct betterment capture, Spanish law obliges developers to finance a wide range of public
services as well as to dedicate land to the municipality.
The importance of Spain extends to South American countries, most of which are not OECD
members. In these countries, the discussion of the “plus value” as it is called in Spanish, often
occupies a high place in both political and scholarly discourse. Legislated instruments of various
types have been enacted (Furtado 2000; Smolka and Furtado 2001, 2003; Smolka and Amborski
2007). However, the evidence shows that actual implementation is weak due to the rampant
informal development and other administrative and governance weaknesses. Smolka and
Amborski’s (2007) comparative assessment of South America and North America leads to the
conclusion that the former is very strong in rhetoric about direct value capture, while the latter
shuns direct value capture but is strong on indirect value capture mechanisms.

What about the other advanced-economy countries not included in my sample? Because the sample
of OECD countries is large and varied, my tentative assessment is that not many other OECD
countries practice direct betterment capture. In developing countries, where public administration is
often weak, even where such levies are on the books (perhaps as relics from former colonial
status), they are unlikely to be effective in practice.

5 Distilling Lessons from the International Experience

Why have most countries avoided adopting direct betterment capture policies? Unless each country
insists on making its own mistakes, the experiences gained by Britain, Israel, and Poland should be
mined to draw out the relevant lessons. In the absence of any comparative empirical research on
outputs, outcomes, or impacts of betterment capture policies, I shall rely on the tentative
observations based on the analysis presented earlier. Here are some observations:

¹ Based on personal conversations with Polish government representatives during two visits as a guest of the Polish government in
spring and summer 2009. Based also on ongoing conversations with Dr. Mirosław Gdesz, an administrative court judge in
Warsaw.
• The rationale for plus-value policy is not as easy to sell to politicians and voters as may seem from the logic of the argument. The British experience is a real-life laboratory of how the absence of political support can lead to the rise and demise of betterment capture policies along with shuffles in the ruling parties. To adopt a successful betterment-capture policy, proponents must be able to package a rationale that transcends party ideologies. This of course is no easy task, but it is a sine qua non. In the Israeli and Polish cases, the betterment tax has not been a party-political issue and thus has escaped the tug-of-war that its British counterparts have experienced.

• One of the arguments used against direct betterment-capture policies is that they may raise real-property prices because the price of land component would rise. If that were true, it would erode some of the justification for recapture policies. The British experience has not generated much evidence on this issue despite the experimentation with a broad range of tax rates. All of Britain’s direct value capture policies installed between 1909 and the mid-1980s were too short-lived to enable systematic evaluation. Nor has the Israeli experience delivered reliable empirical evidence because the 50 percent rate has been uniform over time and place (unless exceptions apply). Thus there has never been a control group to analyze. The scholarly literature on related taxes and exactions indicates that their effect on property values depends on a variety of extraneous market and contextual variables (Skaburskis and Qadeer 1992; Evans-Cowley and Lawhon 2003). Empirical research has shown, for example, that the impact may differ between raw land and built-up areas and that these may offset each other (Ihlanfeldt and Shaughnessy 2004). Since the authority to tax must usually be derived from primary legislation and applied equally, policy makers have little flexibility to adjust the level of the levy and its grounds to accommodate market fluctuations. In considering betterment capture it is important to conduct as much prior economic modeling as feasible (see also Vickars 2003).

• The British experience also teaches us that in order to sustain a betterment capture policy; there should probably be a direct link between the government authority charged with collecting the tax and the one that benefits from the revenues. Research evidence conducted in real time during the life of the last British recapture policy in the latter 1970s indicates that when local governments had a lesser interest in the revenues, collection was not robust enough. In the Israeli and Polish cases, the levy is administered and kept by the local governments, and they have been its major watchdogs.

• In order to retain public support, the legislation should determine in advance which public services may be financed by the levy and should expose this to the public. However, there is built-in tension between this objective and the need to maintain flexibility to accommodate changing needs for public services or changing public perceptions about what services merit public support. The traditional services such as linear infrastructure and educational facilities may compete with newer items on the list such as environmental conservation, historic preservation, or affordable housing. There are always many mouths to feed, while the potential income from a betterment levy is finite. It is difficult to square the circle and resolve this inherent tension between earmarking and flexibility.

• Developers are likely to argue that the revenues should be reinvested in public services for the benefit of the project that generated the funds. This argument should be resisted because it turns betterment recapture into an indirect value capture instrument with a rationale based on mitigation of negative impact or on indemnification of a burden on public services. If so, this type of value capture policy should be designed from the start as an indirect value capture instrument with an impacts-based rationale at its forefront.

• To retain its rationale, the betterment levy should be assessed parcel by parcel so as to capture only the real rise in value, as successfully applied in Israel (and potentially in Poland). However, this raises the administrative costs significantly. To allow a reasonable net yield, the rate of the levy must be relatively high. Public agencies might be tempted to
simplify the levy by adopting a preset charge based on some easy formula (such as per built-up area of per assumed average increase). This type of quasi-betterment levy was briefly proposed in Israel in 2006 but discarded following protest by the Association of Local Governments. Some scholars have recommended similar formula substitutes (Ihlenfeldt and Shaughnessy 2004; Gdesz 2005 for Poland). Such shortcuts gnaw away the very rationale of direct value capture and, with time, might lose the value capture justification and become just another tax.

- Direct value capture poses a tough distributive justice dilemma. Adoption of a uniform rate for all landowners and locations is fair in some ways but not in others. Although the rate may be ostensibly equal, the opportunities for revenue are never equal across place and time. Betterment levies also have inherent regressive attributes. Well-off towns where property values are usually high or where land reserves happen to be available will be able to reap higher revenues than less-advantaged or just historically unlucky towns. Thus an equal assessment rate by no means ensures equal revenues—by whatever indicator chosen.

- Finally, a similar ethical dilemma applies to the distribution of the revenues. On the one hand, the desire for local voter support justifies retention of the full revenues at the local level. But on the other hand, distributive justice considerations justify redistribution. Localities with high revenues do not necessarily need or merit the revenues most. Calibration of funds among municipalities could be done by means of the national or regional governments on the basis of various criteria. Two of the British postwar policies as well as the 2005 rejected proposal did incorporate a national-redistribution policy. However, these policies are deemed to have failed partly because they paid a price in lost local public support and in reduced efficiency in tax collection. This dilemma faces issues of both ethics and feasibility, and there is no sure and tested way to resolve it.

The fact that most countries have not adopted a direct form of betterment capture indicates that the shortfalls and dilemmas noted here are not easy to resolve. There are many built-in catch-22s and very little international experience from which to learn. Meantime, the indirect value capture instruments have been flourishing.

6 Indirect Value Capture

Even though direct betterment capture is not prevalent, the idea that government should reap the unearned increment on land has not died away; it has simply undergone various mutations. The need for innovative funding sources for public services has in fact increased in recent years. There are three well-known reasons for this increase: growing voter reluctance to pay higher taxes, higher costs of many services, and—at the same time—voters’ expectations for amplified services (Alterman 1988b; Altshuler and Gomez-Ibanez 1993, 1–4; Callies and Suarez 2003; Rosenberg 2006; Nelson et al. 2008, iv–xiv; 1–3).

Local governments therefore increasingly need to conjure up financial instruments that are less visible to voters than direct taxes or levies. The alternative is to leverage local governments’ authority to regulate land use, and solicit from landowners or developers money, land, or construction services in exchange for an affirmative decision or fast-track processing. But instead of doing so through the front door of direct betterment capture, local governments in many countries increasingly adopt a smorgasbord of indirect value capture instruments.

6.1 A Variety of Terms and Instruments

Indirect capture instruments vary from country to country and locality to locality. They are known by a variety of terms. A general term proposed by Alterman and Kayden (1988) is developer obligations. In the United States indirect value capture instruments are generically called exactions. In the United Kingdom they are known as planning gain, or, more recently, planning obligations. In France the term is participation. (Renard 1988). If based on preset formulas indirect instruments
may be called *impact fees* in the United States or *development charges* in Canada (Slack 2004). In the Netherlands the term (as translated into English) would be *cost retrieval* or *cost allocation.* The term *incentive zoning*—born in the United States but of recent international spread—refer to two-tier discretionary instruments whereby the developer may choose to grant the desired good or obtain lesser development rights.

### 6.2 Alternative Rationales for Indirect Value Capture

How do indirect value capture instruments relate to the direct ones? The same generator propels indirect and direct value capture—the increase in land values due to land-use decisions. However, the unearned-increment rationale remains only in the background. Under some legal regimes, such as the United Kingdom, to survive legal scrutiny, users of an indirect instrument may even have to prove that they are *not* motivated by the desire to recoup “betterment by stealth.” Alternative rationales must be conjured up. I propose the following classification (compare Healey, Purdue, and Ennis 1993):

- Indemnification of direct public costs of public services generated by the particular project (“cost recovery”). In cases where cost recovery is capped by the amount of betterment, the instrument becomes a hybrid between direct and indirect value capture.
- Need for public services, infrastructure, housing, or ecological services that are not met by the market or by existing funding sources.
- Internalization of negative externalities such as noise, radiation, or pollution.
- Mitigation of impacts on the natural environment or on historic buildings.
- Mitigation of perceived social injustices such as social exclusion or higher housing prices.

In practice, a mixture of these rationales may serve as the legal or public-policy ground. Real-life application of indirect instrument often contains ambiguities about which of the alternative notions is being applied in a particular case. Indirect instrument also vary in how the contribution is delivered: some are in money, others in kind whereby the developer constructs a public service, delivers mitigating technologies, supplies land, or builds housing.

### 6.3 An International View of Indirect Value Capture

Among the sample of thirteen OECD countries, all except Sweden and the Netherlands have decades-long experiences with shifting the costs of public services onto developers. Since the 1990s Sweden too has been gradually joining the group. The Netherlands is the last in the set to adopt indirect capture instruments, formally enabled for the first time by the 2008 Land Act. So even the Netherlands—with its uniquely strong tradition of direct government action in land purchase and development—must now rely more and more on land-use regulation and private developers as a source of financing for public services (Needham, 2007, 176–177).

Indirect instruments differ from direct ones in the way they emerge. Direct capture instruments are usually enacted or otherwise adopted “top down,” often for an entire jurisdiction. This is because in well-governed countries, authority for direct value capture may entail special enabling legislation (at times even constitutional amendments). By contrast, indirect instruments often emerge “from the bottom,” by dispersed locally grown policies. If the instruments are viewed as successful and survive legal challenges, they are likely to be copied by other localities. The United States has been an especially rich breeding ground for a wide variety of innovative value capture instruments that

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2 The official UK government circular on “planning obligations” states in section B7: “Planning obligations should never be used purely as a means of securing for the local community a share in the profits of development, i.e. as a means of securing a ‘betterment levy.’” (July 2005 Circular 05/2005, Office of the Deputy Prime Minister).
are recently being “exported” overseas (Alterman 2005; Spaans, van der Veen, and Janssen-Jansen 2008, 17–22).

Because the indirect instruments are usually locally determined and may not require explicit legislation, they have several advantages over direct betterment capture:

- They can more easily go “under the radar” of party-political debates and can therefore better survive changes in party ideology and voter resistance to new taxes.
- They can more easily be justified to the project’s consumers and to the general public if they are linked to the burden that the project would have otherwise placed on the public.
- They are more flexible for financing changing public needs because they are usually applied only when development is ripe.
- They can be fine-tuned to be politically more acceptable when sociopolitical positions change in the community.
- They may be adjusted to accommodate the changing economics of real estate so as not to drive away development.

Yet, indirect capture instruments are not a panacea. They are often applied case by case, without ensuring equality among landowners. These instruments are therefore open to political and legal challenges regarding bias and favoritism. The value of the financial or in-kind resources delivered by developers is often unpredictable because it depends on uncertainty about estimates of anticipated impact or on the success of negotiations. The extent of financial gains to the community may vary even among parallel projects. There is some evidence that the financial gains to the public may represent only a few percent of the unearned increment (Alterman 1988a).

### 6.4 Some Preconditions for Adoption of Indirect Value Capture

Indirect value capture policies are likely to expand and intensify around the world. Because of the complexity of these instruments, there is great need to exchange knowledge between jurisdictions, so more systematic comparative analysis is necessary. I hypothesize four preconditions for reasonably successful application of indirect modes of value capture:

- Governments should have well-trained professionals (planners or real estate experts) to negotiate with the developers or to develop preset formulas of impact assessment. The professionals need to be savvy in real estate economics to be able to assess the limits of how much may be exacted from the developer without “killing” the projects.
- Local government should conduct good monitoring of fluctuations in land prices in order to be able to challenge developers’ arguments that the exactions in fact raise the cost of housing or other products. This type of argument—not necessarily true in specific market situations—may generate public opposition.
- There should be enough transparency in negotiated exactions to help withstand legal challenges (yet full disclosure is often not possible in order to protect the legitimate economic interests of the developers).
- Countries or local authorities known for high levels of corruption should refrain from adopting value capture instruments with discretionary elements. A reasonable good level of trust in government is a precondition for their successful operation.

### 7 The Future of Direct and Indirect Value Capture

An obvious issue is the interrelationship between the two categories of value capture. In those few countries that do practice betterment capture, does it in fact replace the need for indirect capture instruments? The state of current knowledge does not provide empirical answers to this question, and the body of law is also skimpy. However, the underlying logic of the two modes leads me to conclude that they are not mutually exclusive. The indirect capture instruments are often open-
ended and evolving, and they possess the capacity to “fill in the holes.” So long as governments have insufficient resources for public services (as they often do) and so long as they have the authority to refuse permission to develop, indirect value capture, especially its negotiated modes, is likely to be practiced to some extent.

The experiences of the United Kingdom and Israel shed some light on this issue. In Israel, negotiated exactions are sometimes applied over and above the 50 percent betterment levy, and case law has not ruled them illegal. In the United Kingdom, negotiated planning gain (today called “planning obligations”) likely existed to some extent in parallel to the various direct betterment capture modes exercised until the early 1980s. The current debate surrounding the 2010 Community Infrastructure Levy illustrates the difficulties of drawing a solid boundary between the two modes of value capture. Although the policy statement makes an effort to restrain double charging, developers and the new Tory-led government are not yet convinced.

The bottom line is that the rationale for direct betterment capture may be convincing on paper, but it has not caught on widely across the world. At the same time, indirect value capture tools have proliferated. As counterintuitive as it may seem to those who have not walked through this paper, these instruments—with their “messy” rationales and exposure to legal challenges—hold the more realistic potential for funding public services than their elegant direct-capture siblings.

8 References


Professional Liability And Ethics
Just how smart is “smart regulation”: evolving architectures in the governance of regulation?

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Abstract:
Government endorses the idea of “smart regulation”, seeing it as an attractive wrapper for a business-friendly approach to regulation that could make savings to the public purse whilst offering improvements in consumer protection. The result is to bring the regulation of commercial providers of goods and services closer to previously privileged concepts of professional self-regulation on the basis that it offers “cost-free” regulation.

This paper examines whether smart regulation is just another manifestation of a “fictional commodity” enabling producers to cloak their activities in a favourable light. Alternatively, smart regulation could result in greater transparency, giving legitimacy to the providers of goods and services and better protection for consumers. The drama of smart regulation in disarray in the financial sector since the 2008 “crunch” provides one perspective, but the authors argue that now is the time to formulate a theory of regulation and governance that better captures recent developments.

Having published separately on disparate issues of regulation (including food law, statutory nuisance, professions, service charge management and financial accounting), the authors draw these together here. Our model is based on Gunningham’s (2009) concept of regulatory “architecture”. This has been developed further into a “Triptych” of regulatory processes that better describes the relations between regulator and the regulated.

Keywords:
smart regulation, regulation, self-regulation, governance, nuisance, building control

1 Introduction

The professions and business refer to, generally accept the need for, and may even promote regulation. The key issues are: who regulates and who pays? Self-regulation has the official support of government in the form of the Better Regulation Executive (BRE), an arm of the Department for Business, Innovation and Skills (BIS), whose brief is to lead the regulatory reform agenda across government as a whole. This apparatus could be seen as the swansong of a Labour Government profoundly discredited by the failure of regulatory institutions to regulate the financial sector effectively, so contributing to the “crunch” of 2008. But its roots go back to the 1990s and it has survived - at the time of writing (May 2011) - a year of centre-right Coalition Government.

Self-regulation provides an alternative to direct regulation by the regulator. It is closely linked to “smart regulation” which provides the focus to this paper. Smart regulation has its origins in the broader principles of deregulation, risk analysis and no-cost regulation - a process that has been exhaustively examined by a number of writers over the years. It is a somewhat broad concept: “used to refer to an emerging form of wide-angled regulation that seeks to harness not just governments but also business and third parties to provide policy alternatives that include, but also go beyond, direct regulation” (Gunningham 2009: 200).

These are very broad and ambitious claims. Smart regulation was originally developed in the context of environmental regulation in developed economies, in part as a response to the failure of state agencies to regulate pollution effectively, or to prevent exporting the collateral damage of industrial pollution to developing economies (Black 2007). Its smart characteristics are rooted in its
flexibility and diversity as distinct from “single instrument or single party approaches” (Gunningham 2009: 200). The overall purpose, then, is for smart regulation to: ...allow the implementation of complementary combinations of instruments and participants tailored to meet the imperatives of specific environmental issues, and will result in a more flexible, efficient and effective approach to environmental regulation than has so far been adopted in most circumstances (Gunningham 2009: 200).

The problem with attributing such broad aims and general applications to smart regulation is that it becomes a bit too vague, flexible and all-embracing. An advantage is that it provides a way of stepping back from the detail to examine the underlying structures of regulation. Gunningham’s analysis applies to changes in environmental regulation over time. It provides a useful way of understanding processes across national and regional boundaries as well as for evaluating changes in policy. But it also has a wider application for analysing changes within occupational and business structures. Thus, the modernising thrust of smart environmental regulation is to: ...embed environmental values and processes within corporate culture in such a way that it becomes self-regulating, relying on oversight from local communities and perhaps third-party auditors, to supplement or even replace direct regulation (Gunningham 2009: 202).

This framework invites comparison with other areas of regulation and in this paper we will examine an example of professional self-regulation and the Primary Authority Scheme for local authority enforcement. Both these examples reveal that high expectations are placed on making improvements to the process of regulation. Whether regulation is smarter as a result is in issue; if present, it needs to be specified what this actually entails.

1.1 Background to Deregulation

The background to deregulation has been extensively analysed and talked about. There is basic agreement that in the course of the 1980s and 1990s a crisis emerged in the developed economies over the role of the state and its executive agencies as regulator (Braithwaite 1999, 2008; Black 2007). This was accompanied by a strongly deregulatory rhetoric that included attacks by economically liberal politicians on the costs of over-regulation for businesses (Hutter 2005). The legalism and inflexibility of regulators were singled out for castigation. Sometimes this amounted to verbal abuse. For example, in the UK, Neil Hamilton, the Deregulation Minister, in addressing the October 1994 Conservative Party Conference, famously described the proper role of local government enforcement officers as “handmaidens of business – helping them to comply – rather than the local branch of the Gestapo” (Andrews 1998: 21). Interestingly, soon after the Deregulation and Contracting Out Act 1994 became law, section 37 was criticised for giving ministers dictatorial powers to use regulations to repeal legislation without requiring scrutiny by Parliament (Williams 1995).

The type of regulation that was castigated here was derived from “command and control”, where the system is based on the regulator making frequent inspections, with reliance on formal methods of enforcement, and showing a readiness to resort to prosecution for infringement of regulations (Hawkins 2002). The reality was somewhat different and the practice of state regulators, at least since the 1980s, has been to rely heavily on persuasion and encouragement to comply with regulatory requirements, with formal enforcement powers – particularly prosecution – being used only as a last resort (Hawkins 2002). But the underlying purpose of the Deregulation Minister’s jibe was to promote the superiority of techniques developed in the private sector. These were (and still are) very attractive to politicians, their advisers from business and to ministers’ policy advisers. Providing credibility to the deregulation agenda has been assisted by academics, who from the late-1990s were being nurtured by rich sources of funding drawn from both central government and business as a source of intellectual support to the ideology. The key private sector virtues incorporated into the regulatory agencies have included: the setting of explicit standards and measures of performance; a stress on private sector styles of management practice, including hands-
on professional management; and an emphasis on greater discipline and parsimony in resource use (Hood 1991: 4-5).

1.2 Professionals and Deregulation

Professions face particular problems in the ideological battle over regulation since they are the dominating example of a powerful elite allowed to self-regulate in anti-competitive and monopolistic forms. Therefore, theirs is a different experience to that of the wider business community. Whilst smart regulation does have similarities to self-regulation, this difference in experience creates a very different environment for professions. We have adopted the concept of late modernity to explain this context and the paradox it creates. The idea is taken by Reed (1996) in his discussion of expert power, where he describes professions as not only engaged in a battle to retain occupational control, but that they are losing (see for example Muzio 2004 on the legal profession). The rise of the knowledge-based economy and its new classes of worker are seen as a fundamentally new paradigm in social, political, economic and market contexts (see for example Evetts 2003a, 2003b) and are destroying traditional forms of occupational control.

Late modernity is drawn from the work of Lord Giddens (1990, 1991, 1994). He devised the concept to refer to the various ways in which a culture of radical scepticism and uncertainty has penetrated deep into the social fabric of everyday life in modern societies. The knowledge that underpins professions becomes submissive, provisional and abstract, rather than a body of expertise. Late modernity is characterised by uncertainty, powerlessness and the loss of determining authority.

There are no authorities which span the diverse fields within which expertise is claimed – another way of repeating the point that everyone in modern systems is a lay person in virtually all aspects of social activity (Giddens 1991: 195).

Organisations permanently monitor and control all operations and the application of knowledge through a process of institutional reflexivity. From this others have created the concept of a “post-bureaucratic” or neo-bureaucratic” state (for example Farrell and Morris 2003), which further strengthens the view of the expert as a servile functionary. What generates smart regulation is destroying self-regulation since it is not based upon expertise as much as a desire to engage as a collaborator with other parties on creating ‘safe’ goods and services.

Late modern, therefore, is used in this work to represent the erosion of traditional forms of respect together with a growing scepticism regarding the idea of an elite. It reflects the increasing orthodoxy towards depersonalised and managerialised professions, of fundamental technical changes within occupations that undermine the control of expertise and which traditionally form the foundations for the social superiority of the concept of profession. Giddens (1991) points to common themes of powerlessness, uncertainty and commodification within modernity. Whilst “smart regulation” provides an opportunity to create, or recreate, occupational control and establish a determining authority, reinforced and recognised by the State, it is also a threat. Whilst this is particularly an issue for professions, all forms of expertise are similarly affected and the concept of late modernity provides a useful background in which to explain the events discussed here.

1.3 Smart-regulating the Professions: the Case of Building Control

The particular problems faced by professions derive from the very meaning of a profession. Professions exist because they have created an occupational jurisdiction (Abbott 1981, 1986, 1988, 1991) recognised by clients and the State. Professional work requires the establishment of difference, of distance between professional and client (see, for example, Johnson 1972) and the creation of a fictional commodity (Larson 1977). The resulting dialogue of professional versus charlatan provides a particularly illustrative example of the importance of regulation to the concept of profession. It helps maintain occupational control, an authority that is swept away by internationalising modernity (see, for example, Giddens 1991) and, potentially, by smart regulation.
Building control was the very first profession to face directly the introduction of what we now know as smart regulation. The 1984 Building Act and the statements set out within the Building (Approved Inspectors etc) Regulations 1985 proved a key piece of legislation in developing the deregulation agenda within the building industry. It removed building control from within the domain of public sector Building Control Officers to a market-orientated competition between public and private sector provision. Government application of the Deregulation and Contracting Out 1994 Act led to the acceptance of approved private sector inspectors as clarified in the Building (Approved Inspectors) (Amendment) Regulations 1996. This removed the specialist nature of building control from its previously prescribed body of public sector professionals and opened the way to other operatives. Those seeking to operate as such must apply to the Designated Body, which the legislation created to ensure the maintenance of inspection standards. This body is currently the Construction Industry Council (CIC).

The particularly interesting development within building control is that the CIC awards the status Building Control Body (BCB) to those deemed worthy of carrying out building control work. The first body to be given approval was on 11th November 1985 to NHBC Building Control Services Ltd. As part of NHBC they obviously had prior experience of this line of work given the nature of the NHBC guarantee and their long experience of carrying out inspections. The legislation was originally intended to apply only to individuals since the Building (Approved Inspectors etc) Regulations 1985 required any corporate bodies seeking approved inspector status to apply directly to the Secretary of State for the Environment, Transport and the Regions, rather than to the CIC. An indication to revise this was given in a written response by Construction Minister, Nick Raynsford (DETR press release 1998: 188/ENV) on 11th March 1998. By this time, the number of inspectors had risen to seven companies and 30 individuals, increasing by July 1999 to 12 companies and 35 individuals.

Within building control and the general enforcement of Building Regulations there has been a consistent drive since the Building Act 1984 came into force to avoid the need (and expense) of inspecting building work. This led to the search for so called competent persons whose work is of a high quality that does not need checking and may be self-certified (DETR 1997). DETR (1999a: 3) places emphasis on cost, that “building control must also be efficient, to minimise cost and delay for those carrying out the building work.” The result was that membership of a professional body was deemed appropriate to qualify the expertise and regulate competence of building control service providers (DETR 1999a, 1999b). Of course, this returns to professions as regulators. Not exactly self-regulation, but close enough at the time to appease the wider professions whose private sector members saw business opportunities at the expense of their public sector colleagues. Similarly, the Royal Institution of Chartered Surveyors saw the opportunities for itself and its members in becoming the dominant professional authority under this new regulatory paradigm.

1.4 Self-regulation of Businesses

The Local Better Regulation Office (LBRO) sits in the vanguard of change in the relationship between local authority regulators and businesses. The Office was established under the Regulatory Enforcement and Sanctions Act 2008 as a public body accountable to the Department for Business, Innovation and Skills (BIS) through the Better Regulation Executive (BRE). The LBRO launched the Primary Authority scheme in April 2009, the essential objective being for local authorities and companies to reach agreements about how their regulatory relationship should operate (LBRO 2010). Instead of companies with many outlets having to deal with various local authority regulators, implementation of the agreement would simplify and centralise regulatory activity by funnelling advice and enforcement action. As a result, only one local authority acting as the Primary Authority enforces environmental health, licensing, health and safety, and trading standards law. The aim is that enforcement is carried out consistently by the primary authority with respect to many, if not all, of the activities of the company subject to regulation by local authorities. If successful, the regulatory model presaged by the Primary Authority Scheme produces benefits in
terms of rationality, legitimacy and effectiveness; and savings in the costs of regulation can be hoped for too.

The building up of a relationship of trust between the regulator and company is anticipated to mean that more of the regulatory burden is managed willingly by the company. The nature of the burden is legitimated, so that a climate is induced that allows self-regulation to flourish. The role of regulation thereby changes, with the regulator taking a less direct, more supervisory role, so resulting in cost savings. This process has been described as meta-regulation in which:

The role of regulation ceases to be primarily about inspectors or auditors checking compliance with rules, and becomes more about encouraging the industry or facility to put in place processes and managerial systems which are then scrutinised by regulators or corporate auditors (Gunningham 2007: 190-91).

All this regulatory goodness contrasts favourably with the vagaries that may ensue when individual local authorities are left to their own devices. Without the guidance and support provided by enlightened officials, such as those employed by the LBRO, local councils become liable to corporate drift, such as may occur when there is a mismatch between the agendas of local cabinets and the practices of council officials. Councils may be powered by inconsistent political agendas; they are structured as separate corporate entities and have a margin of discretion to formulate enforcement policies. These forms of particularism are not removed by the Better Regulation Agenda; and the Primary Authority Scheme has not been imposed by central Government, only promoted and led by the LBRO.

The Better Regulation Agenda calls for the regulator to change its behaviour – by operating more like a private company – and for the company to cooperate and become a party to the regulatory endeavour. This way of thinking goes back to the Enforcement Concordat (1998) which:

Signified an agreement between government, business and local authority regulators over the use of a risk-based approach to enforcement which was designed to be more business-friendly and in line with the prevailing deregulation ideology (Pointing 2009: 595).

The Better Regulation Agenda is very appealing to those wanting to change the ways local authorities have traditionally gone about their business. Responses to the Primary Authority Scheme have also been positive. Judging from published responses by key professional bodies, such as the Chartered Institute of Environmental Health (CIEH 2008), there seems to be wide support for smarter, risk-based models of enforcement as a better alternative to command and control (Hawkins 2002: 13-16) and other forms of direct regulation.

The benefits appear to be win-win for all concerned. With cooperation and partnership the gate is opened to simpler, more successful local regulation, based on a new relationship between businesses and local authorities (LBRO 2010: 2). Better regulation is directly equated with better relationships:

Better relationships between the regulated and the regulators mean better regulation. Primary Authority can increase the prosperity of businesses and communities, and offer protection for vulnerable consumers and traders facing unfair competition (LBRO 2010: 3).

Consistency in regulatory approach, better relationships and simplicity in dealings are the key watch words. The central state acts as the referee in this process, with the LBRO presiding as a helpful, enabling Dutch uncle who ratifies a successful relationship brokered between the regulator and firm. Should the need arise it even provides a dedicated dispute resolution service (LBRO 2010: 3).

2 “Better” Regulation?

Despite the intentions of government to free businesses from the burdens of over-regulation and all the talk about it, there has been little winding back of regulation in the longer term (Braithwaite 2008: ch 1). Indeed, Braithwaite (2008, Foreword) argues that there has been an explosion of regulation going back to the dark age of Reagan and Thatcher. This phenomenon has profoundly
changed the structure of social relations, amounting to a paradigm shift towards regulatory capitalism”. Such changes go beyond the regulatory state” not least because non-state regulators have proliferated not just ones deriving authority from governments.

Stepping back from the wider picture, in the environmental sphere, claims made in the 1990s that negotiated agreements would reduce administrative burdens have not been made out (OECD 2000:131). It is still too early to judge whether the agreements brokered by the LBRO will increase or decrease the amount of regulatory activity. But even if relations do improve between regulator and company this is not necessarily in the interests of the wider public. Better relationships, as distinct from better regulation, could result because the regulator has been “captured” by the company, perhaps dazzled or over-awed by the corporate power imbued in the company.

Sometimes the relationship between regulator and company becomes very fraught. An instance of this can be found in the case of Derrick Barr and Others v. Biffa Waste Services Ltd [2011] EWHC 1003(TCC). Here, the company did make initial attempts to engage with local residents and to keep them better informed about its land-fill operations which were causing a nuisance. The relationship deteriorated over time between the company and the regulator (the Environment Agency) and between the residents and both the EA and Biffa. Difficult nuisance problems to do with landfill sites, waste disposal facilities and sewerage works have a tendency to drag on for years. An acceptable solution to odour, noise and dust problems from such sites can be elusive, leaving one or more stakeholders dissatisfied, perhaps irreconcilably so.

Mr Justice Coulson heard the case over an 18-day period in the High Court. His Lordship was concerned about many aspects of the case in which Biffa were denying that any actionable nuisance had been caused from their operation of the waste site. The company asserted that they were entitled under the doctrine of statutory authority to operate the site as they wished, provided they did not do so negligently and acted in accordance with the terms of their waste licence. The case is a particularly interesting one because it reveals the drama of deteriorating relationships. His Lordship was “particularly troubled” by Biffa’s confrontational stance towards the Environment Agency (para. 570), finding that the company’s “unnecessarily aggressive approach” spilled over into the trial itself and created an “unfortunate impression” (paras. 572-3). On the other hand, the “pusillanimous attitude of the EA” came up for criticism, his Lordship finding that they “should have been much more forceful with Biffa” (paras.579-80). Over time, co-operation between the EA and Biffa was in “very short supply” (para. 580) and the interests of the public were hardly served at all. Indeed, the quality of relationships fell to just about the lowest point imaginable in a civilised society.

The judgment is a salutary lesson regarding the idealisation that permeates the Better Regulation Agenda when being promoted by government agencies. The notion that better relationships between regulators and businesses are closely linked to improvements in the system of regulation is an untested assumption, and possibly one that is simplistic and flawed. Further, the possibilities for self-regulation depend very much on the type of problem subject to regulation and on the nature of the business. A waste operation can be run by a highly organised, properly licensed, competent and professional company (one like Biffa). On the other hand, there are people running waste companies illegally, without a licence, who could be better described as serial fly-tippers than as businessmen. Obviously, the approach taken by the regulator towards these extremes will need to be different, with recourse to prosecution coming very early on in the relationship with the latter. A regulator may be operating in accordance with smart regulation principles, but just because it decides to prosecute a fly-by-night waste operator promptly for illegally depositing regulated waste does not mean there has been a paradigm shift back to “command and control”.

There are also substantive limits to the extension of Better Regulation methods which may be established in legislation. For example, section 80 of the Environmental Protection Act 1990 places a duty on a local authority to serve an abatement notice on the person responsible for causing a statutory nuisance in its area (Malcolm & Pointing 2011). The Act requires an opinion to be formed about whether a statutory nuisance exists, or is likely to occur or recur, before the notice can be served. Such an opinion is made on behalf of the council; if it is to be made properly that opinion
should be reached by an environmental health practitioner. The principle enshrined in the legislation is for the regulatory decisions to be made locally, not by another local authority under the Primary Authority Scheme. The Environmental Protection Act 1990 was deemed to come within the scope of the Primary Authority Scheme when the government published its consultation document (BERR 2008). The specifically local enforcement implications of the statutory nuisance regime may not have been fully appreciated by those who drafted this document.

3 **Towards an Architectural Triptych**

The model we are proposing for testing the smartness of regulation takes into account differences in the capacity of businesses or professional entities to engage with the regulatory process. It also takes on board the policies and modes of regulation being pursued by the regulatory body. The model has to accommodate differences in the capacities of the regulated entity to understand, relate to and accept the legitimacy of the regulatory process. Underpinning the model is the work of Gunningham (2009), in particular the concept of ‘shifting architectures’. This term is useful for putting changes over time into perspective. It also incorporates the trend towards indirect regulation in which the responsibility for, and costs of, regulation is increasingly internalised by the business or professional organisation.

Our model identifies three stages comprising a ‘triptych’, a term indicating that these stages are linked. Implicit within the dynamics of the triptych is that regulated entities will move through these levels.

**Neophyte**

All entities seek to self-regulate in some way, particularly when starting up. Neophytes need encouragement rather than penalisation, and will often seek guidance, advice and help from the regulator. Neophytes may be enthusiastic, but often lack confidence and skills. The approach of the smart regulator is to assist in providing neophytes with a path to the next level. Not all neophytes will want or be able to engage with this process. Some will be incompetent, dishonest, or even running criminal businesses that are ‘beyond regulation’ (Pointing 2005:49).

**Self-Improvers**

The second stage recognises that firms will learn and develop given appropriate support, guidance and help from the regulator. Recourse to intrusive types of enforcement – disciplinary action, serving of formal notices or prosecution – should not be necessary and smart regulators will use their powers sparingly and as a last resort. This is a transitionary stage, not an end result. Businesses and professional entities are assumed to be striving towards the next stage. This can be seen as a form of professionalization whereby firms are in the process of a transformation.

**Champions**

This is the ultimate end to the regulatory process. The steady-state stage of the model is that businesses and professional groups seek to establish themselves as self-regulating paragons. To reach this stage, the costs of regulation are largely met by the body being regulated; the regulator can adopt a removed, supervisory relationship that is only rarely visible. Professional associations reflect this ideal, but trade associations aim to reach similar status. Business champions can demonstrate a clear ‘difference’ between themselves and their less competent competitors. This allows them to create a ‘fictional commodity’ (Larson 1977) – incorporating branding and competitive advantage.

4 **Conclusions**

The paper identifies the philosophical (Late Modern) and legislative environment driving the ideas of smart regulation, concluding with a ‘Triptych’ modelling the agents upon whom it acts. We overviewed two examples, one as the first example of the ‘smartening’ of regulation (Building Control) and one that offers insight into its current form (the role of the LBRO).
Our adoption of Late Modernity allows us to draw attention to the competing authorities seeking to dominate legislation, whilst recognising that there is no single, determining authority. Government (local and national) is increasingly unable to “command and control” and traditional professional expertise is unacceptable for legitimising a right to self-regulate. Whilst it is tempting to describe LBRO as a determining authority, it is exactly the opposite, depending upon voluntary adoption and a willingness to learn from mistakes – rather than a determination to enforce and punish. Late Modernity offers intriguing insights into self- versus smart regulation.

Our Triptych emphasises the role of the regulated rather than the enforcer. It illuminates the role of encouragement, negotiation and an acceptance that mistakes happen. One obvious area for further development is those entities – “beyond regulation” since the model presumes some degree of engagement and a willingness to comply. This requires consideration of the dynamics of change and the basis of the desire to self-regulate.

There is a need for empirical data to flesh out both the model and the principles of smart regulation. Objectively, is smart regulation “better” and/or cheaper, or is it a surrender of independence to vested interests? Is cost-free to the consumer actually a cheaper option? Such questions will be the subject of future work as we develop our ideas and create data to test them.

One case study identified for further work concerns Somali shop owners in Hayes, whose encouragement is derived from an engaged local authority and local community champion. In the case of trade associations, whilst some are little more than “badge associations”, others engage their membership in moving through the Triptych. This process by which trade associations “professionalise” through a variety of actions (enforced CPD and PII, for example) as well as regulatory control provides a particular organisation as the driver of change. Whilst professional firms might be expected to be champions within the Triptych framework, due to professional regulation this possibility is inconsistent, as shown by recent work into service charge management (see, for example, Eccles and Holt 2009). This shows the need for the model to engage with a wider secondary literature, such as Di Maggio and Powell (1983) on why firms change and the role of smart regulation in inducing change. Equally, the grounded theory being developed must be taken into the real world of the specific, and tested and fleshed out against empirical studies. This is our next endeavour.

5 References


Professional Liability of the Construction Professional as an Expert Witness in the Spanish Legal Framework

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Abstract:
Inside COBRA 2011 RICS International Research Conference, the present paper is linked to analyze the liability of the construction professional in his practice as an expert witness in the Spanish legal framework. In a large number of legal procedures related to the building it is necessary the intervention of the expert witness to report on the subject of litigation, and to give an opinion about possible causes and solutions. This field is increasingly importantly for the practice of construction professional that requires an important specialization. The expert provides his knowledge to the judge in the matter he is dealing with (construction, planning, assessment, legal, ...), providing arguments or reasons as the base for his case and acting as part of the evidence. Although the importance of expert intervention in the judicial process, the responsibilities arising from their activity is a slightly studied field. Therefore, the study has as purpose to think about the regulation of professional activities raising different aims. The first is to define the action of the construction professional-expert witness and the need for expert evidence, establishing the legal implications of this professional activity. The different types of responsibilities (the civil, criminal and administrative) have been established as well as the economic, penal or disciplinary damages that can be derived from the expert report.

Keywords:
expert report, expert witness, law of evidence, professional liability

1 Introduction

In a large number of judicial processes relating to the building is required the intervention of an Expert witness to report on the subject of litigation, giving an informed view on possible causes and solutions (Sido, 2005). An expert can only bring to the attention of the judge matters of fact, so dominant that can only be issued by anyone who is trained in a particular branch of knowledge, whether scientific, artistic, technical, or a particular practice. The expert provides the judge the knowledge he is not required to master (building, planning, valuations, legal architecture, ...), providing arguments or reasons for the building of his trial thus acting as a test. Expert intervention is used as a means that can be used in court to assess the facts (Xiol, 2002). The survey will be made based on the mere knowledge of an expert, or rather the application of such knowledge in evaluating a particular test. The expert may be appointed judicially or proposed legal action by one or both parties. He may exercise the same influence on both the trial and his performance making his task indispensable in the investigation phase and the probative value on the course of proceedings.

This field is increasingly important for the professional practice of architects and other professionals related to construction, which requires significant expertise. The Civil law procedure (Article 340) defines the need. The same law states that experts should be legally qualified (article 457) by holding a university degree attesting to their expertise or not (Xiol, 2002), despite not having the same, proving to be versed in the speciality. According to Royal Decree 25/12/1977, of June 17 expert opinions are part of the professional work of the architect.
In spite of the importance of expert intervention in the judicial process, the responsibilities derived from his activities are a scarcely studied field. The responsibility can be defined as demand for compensation incase of damage or harm resulting from an act done freely (Gamble, 1987). Therefore, from the legal point of view, there must be accountability first, the course of damage, and secondly, personal conduct which could be attributed to the former. That is, there must be a causal or cause-effect relationship between a specific behaviour and the damage caused by it. This damage can result from breach of any law or any contractual obligation of the bond created by the free agreement of the parties to a contract. Therefore, to prove the causal relationship between a particular breach and expert performance it is essential to define the responsibility of the expert. Both situations action-damage provide a third element of responsibility, which involves the duty to indemnify or compensate the damage caused. The way in which it materializes depends on the origin of responsibility. Legally there are, broadly, three types of responsibilities, civil, penal and administrative, describing their nature and their damages (Gillardin, 1989).

2 Civil responsibility

2.1 Nature of civil liability

Expert's civil liability starts on voluntary or involuntary acts or omissions linked to his activity (Farr, 2005). These result in damage or harmful outcome which could have been avoided having acted diligently. This negligent conduct may occur in the content of the opinion, as the way to such issue (for example, the delay in the issuance) in operations involved in expert performance as the recognition of places (art. 345 LEC) or where appropriate, the assistance in the trial for oral ratification of the dictum. (art. 347 LEC).

Therefore the civil responsibility occurs within the scope of the activity of the experts in their individual relationships with the parties involved in the process. The judicial interpretation of such responsibility is based on the so-called 'theory of cost-benefit '. It states that anyone who takes advantage of an activity (in this case, which involves the provision of services as an expert), takes full responsibility in consequences resulting therefrom. Therefore the offended party does not need to prove the guilt of the perpetrator, but only the relationship between the damage and the conduct of the perpetrator. This theory is fully applicable to the professional activity of the expert.

From the practice of the whole profession we get enforcement of the lex artis, i.e, rules or obligations established for the exercise of a profession. Therefore, there is liability if there is damage or harm to the author of the commissioning of expert dictum or other persons resulting from a breach of those duties and standards. In any case, the expert's responsibility is not linked to the fact that the result of expertise is the cause of damage, but the latter is a consequence that the expert did not put the necessary means to obtain this result. This means performance rather than results:

"It is, in short, an obligation in the means used in the activity, not outcome, since it is not bound to the success of the action being taken but to exercise it appropriately (SSTS 8 June 2000 and 28 December 1996), it has been said that the provision of these professionals is the provision of means rather than result, therefore, for the obligation to be fulfilled, it is required stating that the practitioner has provided means to achieve the desired result, and these have been made in accordance with the lex artis, although the desired outcome has not been achieved (STS 7 February 2000) "(SAP Vizcaya of May 27, 2005 )

Therefore, for the expert to be held responsible it is necessary to prove that the damage is caused directly by his activity as such (Font, 2000). However, in the event that it was so, the damage is caused by a judicial ruling against the interests of the affected party, issued on the basis of expert opinion. If the court assesses the valuations according to the rules of sound criticism (art. 348 LEC), it is questionable whether the lack of a direct relationship between the report and the damage (by the mediation of the sentence, when it has been called the "judicial filter"). This would prevent the allocation of liability to the expert, since the damage is caused by the judicial decision and not an erroneous or false opinion, although that was based on the latter. However, the Supreme Court has
shown that the responsibility of the expert is independent from the evaluation of evidence by the court:
"The powers of the court under the law in order for the assessment of expert evidence, made in civil proceedings for a declaration does not exempt (...) of responsibilities to an expert opinion issued by the act in which he must act, according to their knowledge and belief, as the margin of discretion that the subjectivity of the expert with the legitimate claims and discrepancies with those of others who come, but always with the diligence of a good professional in knowledge, art or craft concerned and therefore subject to the lex artis of the profession he exercises, without making intention or negligence "(STS 16 October 1985)

2.2 Assumptions of civil responsibility

The general principle underlying the civil responsibility is determined by Article 1902 of the Civil Code (CC), it states: "Whoever by act or omission causes harm to another, intervening fault or negligence, is obliged to compensate the damage caused. "This principle governs the so-called 'contractual liability' (Xiol, 2002). There is also a 'contractual liability' determined by Article 1101 CC, which occurs when the damage comes from the breach of the terms of a contract. In practice, the difference between the two types of liability, contractual or tort, is defined primarily by the various periods of prescription for action to demand accountability (Gillardin, 1989). The limitation period is the period of time the affected party legally exercises the right to claim for damages. This period begins to run from the time of manifestation of the damage (Article 1969 CC).

The Civil Code, Article 1968, states that the limitation period is one year if the tort liability incurred in nature. On the contrary, if the responsibility is contractual, it is charged under Section 1964, which states that personal actions have not been identified, special term of prescription expires after fifteen years. Thus, once defined the contractual or tort, the time to bring in proceedings will be 1 or 15 years from the date on which the said damage has been manifested.

Contractual liability cases are linked to the expert's report commissioned by one of the parts of the process, the expert being forced to do his job with due diligence, including the completion of the dictum within a reasonable time. Therefore, any loss or damage caused by breach of these commitments, intentionally or in bad faith, negligence or default (i.e, delay fault in compliance with agreed period or default delay (i.e, in the implementation of agreed at a reasonable period), is a breach of the terms of the contract."

"(...) regardless of official duties imposed by the position of the expert and public nature of the role, as is the case with lawyers or attorneys that link the relationship with your client or expert who is appointed from acceptance of the assignment, has a contractual nature, namely leasing of services by providing the required, according to their profession (...) "(STS 16 October 1985)

Part of the doctrine also esteems that there is contractual relationship between the expert appointed by the Judge and the parties involved in office. In this case, the expert voluntarily joins the listings of professional associations that he presents to courts and tribunals (art. 341.1 LEC), is appointed at the request of the plaintiff or defendant (art. 339 LEC). According to art. 342.3 LEC, the court-appointed expert may apply for funding on account of the final settlement of their fees, and all are satisfied all the requirements for the existence of a tenancy agreement for services as provided in Article . CC 1544.

However, for another sector of the doctrine, the liability of the court-appointed expert is not contractual in nature, but tort. In defense of this thesis argues that the acceptance and oath of office does not create any legal relationship between the expert and the parties, it remains possible that they require compensation or want amends of the damage caused, based on an inexistent contract. Finally, we can extend to the intervention of experts STS, 1 a, 16.12.1996 (RJ 8971) which deals with the tort activity of the lawyers. According to this the tort liability is reserved for those cases where their conduct falls outside the orbit of the contract by action, not under an onerous contract, but by relation of friendship or kinship, no consideration.
2.3 Damages or consequences of civil liability

Civil law seeks to redress the damage by paying monetary compensation or repair the damage. It is common practice by the expert from the obligation to indemnify a third party for damages caused by reason of the exercise of professional expert activity is covered by a policy ensuring civil liability expert (Gamble, 1987).

Contract guarantees are excluded, in general, the responsibilities arising from (Farr, 2005):
1. Intentional crimes criminally prosecuted for being established
2. Fines and penalties of any kind.
3. Inexcusable disregard of the rule book of good construction, rules and regulations related to the environment, town planning, building or safety, in this case, applied to the activity of the insured as an expert. Understood as 'inexcusable' deliberately violated that involves awareness of the harm likely and reckless acceptance without valid reason.

3 Penal responsibility

3.1 Nature of penal responsibility

Criminal liability arises from the breach of any legal or contractual obligation regulated in the Penal Code in relation to expert testimony. Note that the Penal Code (CP), approved by Law 10/1995, of November 23, amended by Law 15/2003 of 25 November-regulates crimes and offenses that are defined (Article 10 CP ) as fraudulent or negligent omissions punishable by law is considered willful act or omission that is committed with intent to cause harm. On the other hand, it is considered reckless omission of a duty of care or safety precautions needed to avoid harm, without any, in this case, intent on action.

The criminalization of the act or omission as a crime or offense provided for in Article 13 CP in terms of penalties, as provided in Article 33, amended by Law 15/2003- with those who are punished. Establishing the criminality in felonies, lesser offenses and offenses. The impact on the offense hits its limitation period, according to art. CP 131.

Penal law does not seek financial compensation to the injured, but social disapproval or punishment by penalizing the liable party. However, CP article 116 states that every person criminally responsible for crime or misdemeanor is also civilly liable if any damages arise. That is, criminal liability involves the liability of the person responsible, resulting in additional obligation to provide compensation for damages caused to the person or persons aggrieved by their professional performance. That it is determined by the lack of criminal responsibility does not imply, however, the absence of liability, but only the lack of criminal jurisdiction of the court to rule on it, in which case the injured party may initiate a lawsuit against the expert for recovery of civil damages.

3.2 Assumptions of penal responsibility

3.2.1 Crimes against the Administration of Justice

Title XX of the Criminal Code regulates crimes against the administration of justice and Chapter IV, relating to perjury, referring to the punishable acts of experts during the exercise of their profession. This rule has been interpreted by the Supreme Court warning that, to fall into the offense up for failure "to the truth maliciously" on the expert opinion is necessary:

- In objective terms, the sentiments expressed in the opinion or ratification be contrary to reality, not sufficiently motivated or alter the facts verified
- In subjective terms, conscious awareness and deliberately not telling the truth.

So says a ruling by the STS February 18, 2009.

"But if the designated document can not objectively prove the falsity of the defendant's expert report, much less can it prove that the alleged misrepresentation was malicious, willful and deliberate, that is, awareness and willingness to present as true and correct, as mentioned, is the subjective element of the crime charged." (STS of 18 February 2009)
Overall, the doctrine of this provision is contained in the following judgment:
"Under the doctrine of this Court (See STS de2-11-2005 [RJ 2006, 2556], no 1483/2005 of 30.1.1998 [RJ 1998, 388] and, 28/05/1992 [RJ 1992, 4392]) the actus reus of art. 459 (RCL 1995, RCL 3170 and 1996, 777) requires that the expert's statement be false, meaning that there is contradiction between the statements and reality, discrepancies and opinions are insufficient, as expressed in art. 459.

The basic element of the criminal activity listed in that provision (cf. STS 03.01.2005 [RJ 2005.3615], no. 265/2005 consists of missing the truth maliciously in the expert opinion given in court cases, so that the falsity must be apparent or manifested by the rest of the evidence. But along with this objective element, it requires the concurrence of a subjective element, the fraud, since this offense under the current Penal Code, is eminently intentional, excluding the reckless mode. The fraud in this type of crime is reflected in the intentional delivery of a statement or report forgers.

The reported crime rate has an inherent fraud that doesn't require anything more than cover the legal injury that may occur consciously and voluntarily, for the intentional characteristic of this crime, actually reach, without requiring additional intention of causing a particular injury in the Administration of Justice. The sentence of this Room of 5.5.1995 (RJ 1995, 4539) confirms this thesis, without requiring the author of these facts act with a special animosity or intent to injure any of the parties in dispute. The crime of perjury is a conscious and deliberate falsehood or lie of the witness's statement or a malicious lack of truth in the expert's report. But it requires not only the lack of objective truth in the statement or in the opinion but also the direct intent, consisting of discovering the falsehood and willing to express it. (STS of 15 June 2007).

3.2.2 Crimes against Public Administration

Among the offenses against public administration, the Penal Code includes the crime of bribery, that article CP 422 expressly extends to experts. The crime of bribery applies to those who "benefit for oneself or a third party, requests or receives, either directly or through intermediaries, gift or present or accept an offer or promise to perform in the exercise of his office an act or omission constituting crime "(art. 419 CP) This reference to experts should be considered extensible not only to the designated court, but also to those appointed by the parties, since the LEC equates to two (Article 335.1)

3.3 Damages or penalties resulting from penal liability

Criminal law, unlike civil law, seeking social disapproval of the individual whose conduct is covered or an offense under the Penal Code. The Code regulates various crimes or offenses that may be penalized by the imposition of sentences of imprisonment, disqualification from office of an expert, or the imposition of fines.

The offense is punishable by a penalty proportionate with the nature of the act or omission. In the case of expert testimony, the penalty can range from imprisonment (imprisonment and personal liability for unpaid fines subsidiary) to the deprivation of rights (specific disqualification from employment, public office or profession, in this case, his tenure as an expert) and the fine. The penalties to be imposed according to the offense would be the following:

- Felony. In the case of the expert it never happens because it is not accounted for in the penal code, prison terms of more than 5 years or total disqualification from office.
- Misdemeanour. In expert performance, the imprisonment of six months to six years to twelve years disqualifications and fines of more than three months.
- Faults. For the expert, the fine of ten days to two months, applicable for cases where the fines are proportional to the amounts defrauded.

In the case of economic damages (Article 50 CP, as amended by Organic Law 15/2003) they will be applied by the system of "day-fine", whose extension, in general, is at least 10 days and a maximum of two years, the have a minimum daily fee of 2 euros and a maximum of 400 euros the amount takes into account the economic situation of the defendant. In the art. CP 459 it establishes the
penalties imposed "to experts and interpreters who alter the truth maliciously in its opinion or translation." These penalties are given by the upper half of those in the art. 458.1 (imprisonment for six months to two years and a fine of three to six months), also "punishable with the penalty of disqualification from a profession or occupation, employment or public office, for a period of six to twelve years."

Moreover, Article 460 CP introduces a notion of false testimony (in this case calls the doctrine as "partial" or "improper"), establishing fines for six to twelve months and, where appropriate, suspends the expert in charge for six months to three years for certain cases: "When a witness, expert or interpreter, without failing substantially to tell the truth, alters reluctantly, inaccuracies or silencing relevant facts or data that were known, shall be punished with a fine of six to twelve months and, where appropriate, suspension of employment or public office, profession or occupation, six months to three years."

For the crime of bribery, the offense is punished with imprisonment from two to six years, a fine of three times the value of the donation and disqualification from office for a time of seven to 12 years without prejudice to the punishment for the crime committed because of the gift or promise (in this case, the false testimony of the arts. 459 and 460 PC). Art. 420 governs cases in which the wrongful act for which the expert receives compensation doesn’t constitute a crime, reducing the penalties to be imposed.

4 Administrative responsibility

4.1 Nature of administrative responsibility

Administrative responsibility has, in the case of expert testimony, a disciplinary character. It is caused by the infringement of legal provisions established both by the Administration of Justice and the professional bodies or organizations to which it is built by the expert. In general, the failure of the rule is penalized by a fine whose amount is imposed in each case depending on the seriousness of the violation or disciplinary action regarding the disqualification of the expert to exercise that capacity. This responsibility is entirely compatible with those of civil and criminal referring to the same event.

4.2 Assumptions of administrative responsability

4.2.1 Liability for breach of disciplinary rules in the Administration of Justice

Organic Law 6 / 1985 of 1 July, the judiciary, regulates in Article 193-1 (and, by reference to this, Article 192) to impose disciplinary measures to the experts who act incorrectly in the view and judicial acts. It establishes the possibility of expulsion from the room or fine when the consideration, respect and obedience due to judges, prosecutors, clerks and other personnel working for the Administration of Justice is not observed (Cristensen, 2004).

Within the civil and criminal jurisdiction it establishes the penalties applicable to the expert who breach their duty to appear before the judge. In addition, the Criminal Procedure Act allows damages for breach of certain duties by the expert. The expert must abstain from participating, and therefore does not accept the appointment by the courts, as specified in Article 105 of the LEC, when the circumstances indicated to the disqualification of expert witness in Section 124, which refers also to Article 219 of the Judicial Power Organization Act. The expert will be penalized if he accepts an appointment with prior knowledge that inconsistency is incurred for attending any of the circumstances:

- Technical failure to do the dictum

- Incompetence or favouritism manifested

- Assignment of responsibilities.
Expressing oneself on matters not related to the object nor direct relationship to them.

The experts appointed by the parties may only be subject to reproach for the reasons and in the manner provided for in Articles 343 and 344 of the LEC, but they can never be challenged by the parties, as provided in paragraph 2 of Article 124). On the other hand, you cannot provide expert opinion in everyone who has been offended.

4.2.2 Liability for breach of professional school rules

The Rules of Professional Conduct ethical standards of the Architects of CSCAE establishes certain assumptions applicable to professional architects and experts involved. Certain items are extended to the expert performance as part of the architect's own professional activities:

Article 12. The architect shall act with honesty and sincerity in all professional activities. When acting on a mission of experts, expert witness or juror, or where in any of its fields of activity, be issuing any kind of certification, support its discretion in those proven facts so warrant.

Article 23. No architect may violate professional obligations, and shall assume legal responsibility not only derived from their performances, but also those of occupational responsibilities inherent in accepting the job. Without prejudice to the legal liabilities that may incur, will also respond before the professional school for the damage that may be caused by incompetence, negligence, error, lack of foresight, risk, lack of adequate commitment or failure in its performance.

Furthermore, Article 51 may apply to the expert critical analysis that he is required to do, both in his own dictum and in the statements made in the ratification of other opinions into the process and have been drawn up by architects (art. 347. January 5th LEC) in conjunction with the formal content of such analysis:

Article 51. Every architect should be objective in his criticism of the works of his colleagues and accept criticism with the same objectivity. The architect must refrain from making statements that are personally offensive to their colleagues or to the profession. Shall, however, notify the school of any breach of professional duties that may arise.

4.3 Damages or penalties resulting from administrative responsibility

Therefore, damages or penalties resulting from administrative responsibility are economic or disciplinary action. As stated in Articles 192 and 193 of the CP, the expert may be sentenced to a fine of up to two months if he disrespects judges and other members of the Administration of Justice.

In turn, the Civil Procedure Law states in Article 292.1 of fines that will fall on the expert for breach of the obligation to appear at a hearing. Violation of this duty is punishable, upon hearing for five days, a fine of 180 to 600 euros (writing as RD 1417/2001)

In Article 420 CC states that if the expert resists to declare what he knew about the facts that might be asked he does not fall within the exemptions of the above items and will incur a fine of 200 to 5,000 euros, and if he persists in his resistance will be taken before the presence of the investigating judge by the agents of authority, and persecuted for the crime of obstruction of justice crime under article 463.1 of the Penal Code (cited below) In the second case he will also be pursued for serious disobedience to authority. The fine will be imposed when the breach is detected or done.

In Article 464 states, despite the expert being the offended party in the procedure, went ahead with the report without putting expert report before the judge who had appointed him he will incur a fine of 200 to 5,000 euros, unless the act produces a criminal liability. With respect to citations of experts in CP Article 175 establishes the obligation to attend the first appeal, under penalty of 200 to 5,000 euros, or longer if the second does occur, the to attend on pain of be prosecuted as liable of the crime of obstruction of justice crime under article 463.1 of the Penal Code (writing under Law 38/2002 of October 24). In turn, Article 463 of CC indicates that if referred to in legal form, fails to appear voluntarily without just cause, before a court or tribunal to convict in criminal proceedings on remand, causing the suspension of the trial, shall be punished with imprisonment for three to six months or a fine of six to 24 months. In the fine of six to 10 months will incur which, having been
warned, do it for the second time in a criminal case without defendant in prison, has caused or not the suspension. (Writing under Law 15/2003 of 25 November)

Moreover, the breach of the Rules of Professional Conduct ethical standards of Architects for professional expert witness may incur lower Experts List to periodically move the competent bodies such as professional associations to different courts. Before agreeing to be granted forced down the person concerned a hearing within 10 days for claiming in his defense as it sees fit. This will require you petition the competent judicial body prior to the Board of Governors, who's moved to the Ethics Commission or the complaint filed against the former directly by any party interested in the opinion or some college as it deems have been unfairly prejudiced by the expert's report. The low will be effective at the time that the penalty becomes final.

5 Conclusions

The professional who acts as an expert before the court intervenes as an expert in his discipline, so a lot is expected of him in the technical aspects related to the issue which prompted review. On the other hand, the technical opinion of the expert will form part of a process in which the judge must rule on the facts in accordance with the rules of law. The expert should be knowledgeable of the procedure that regulates his intervention before the court of law, whether they had been appointed by the judicial organ or his opinion had been brought to the process by the parties. And this responsibility takes place both in the field of criminal justice, civil and disciplinary, as in all of them may incur as a result.

6 References


Constructing Corporate Social Responsibility: Encouraging CSR through Legislation and Regulation

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Abstract:
This paper reports on the results of a series of interviews with industry leaders in the Australian construction industry, which explored industry perceptions of Corporate Social Responsibility (CSR), along with some of the barriers and facilitators for its adoption in the industry. The Australian construction industry has been accused of being "socially irresponsible" and some have argued that, compared with other industries, the building and construction industry is lagging behind in embracing the new paradigms of environmental sustainability (Fraser 2007). As such, the Australian construction industry is well-positioned to provide an interesting case study of the issues associated with instigating change in relation to CSR. This paper discusses the findings of this pilot research project, with a particular focus on implications for improving CSR in small to medium sized enterprises (SMEs) in the construction industry and what role (if any) can be played by legislation and regulation. The results suggest that a combination of harder legislative measures and softer approaches designed to build on the informal approaches of SMEs, would be appropriate to encourage the development of CSR in the industry.

Keywords:
Australia, construction, Corporate Social Responsibility (CSR), legislation, Small to Medium Sized Enterprises (SMEs)

1 Introduction

This paper reflects on the results of a preliminary research project, conducted at the University of South Australia, on CSR in the Australian construction industry. The project was designed to gauge the current level of understanding of CSR in the construction industry and explore how it was being applied (if at all) in SMEs in the Australian Construction Industry.

The paper begins by describing the background in which this research took place, with particular reference to the current status of CSR in the Australian construction industry. The authors then outline the methodology and results of the research, before embarking on a discussion of the implications of these results. The paper explores how CSR is understood in the industry and more generally in the research literature in this field. We then discuss the implications of the research findings in terms of the implementation of CSR in the Australian construction industry and what role (if any) can be played by regulation and legislation in encouraging its uptake.

The results suggest that a combination of measures and approaches would be appropriate to encourage the development of CSR in the industry. Such measures might include the introduction of mandatory reporting mechanisms and standards, an industry-wide code of ethics, and business incentives, along with other means of soft-regulation. Attention should also be paid to the clarification and simplification of existing legislation to improve compliance and further encourage CSR in the industry. These measures would be enhanced by informal initiatives designed to capitalise on the preference for informal CSR practices, which may be better suited to an
environment populated by SMEs. Such initiatives might include improved education around the concept of CSR, a focus on the role of small business champions for CSR and mechanisms for networking and exchange of information between firms. Further research may assist in determining the best form for such initiatives to take and which are more likely to succeed, as well as enabling a more nuanced understanding of how the applicability and effectiveness of such measures is likely to vary across the states and territories, industry sectors and different size businesses.

2 Literature Review

CSR has proven notoriously difficult to define with multiple understandings of the concept existing in the literature. However, in the context of construction, CSR can be defined as “the commitment to integrate socially responsible values and concerns of stakeholders into their operations in a manner that fulfils and exceeds current legal and commercial expectations” (Constructing Excellence 2004). While acknowledging that CSR is about more than legislation and regulation, this definition clearly indicates that they have a role to play in encouraging CSR in the industry. This paper seeks to explore how this role is currently being played in the Australian context, along with making some suggestions for future improvements.

As argued previously, (Chiveralls et al. 2011) the Australian construction industry has a poor reputation in terms of CSR. A recent study by Lingard et al. (2009: 378) concluded that the Australian construction industry is “fraudulent”, “corrupt” and “socially irresponsible”. With an average of 49 workers having been killed on Australian construction sites each year since 1997, construction is Australia’s third most dangerous industry (Fraser 2007). The Industry has been the subject of two controversial Royal Commissions (Gyles et al. 1992; Cole 2003). The final report of the Cole Royal Commission claimed that the industry was characterised by a pervasive “culture of lawlessness” (Cole 2003). However, this Commission has since been dismissed by some as an anti-union “political stunt” designed to boost the popularity of the then Liberal National Coalition Government (Lingard et al. 2009: 367). Nevertheless, the findings have clearly had an impact on perceptions of the industry, with the industry often being described by outsiders and in the media, as being populated by a bunch of “cowboys”, with no regard for the law (e.g. Bainbridge 2010). As part of the gendered mythology of the industry, it is likely that this image obscures as much as it exposes, as in reality the industry is neither the cowboy hero nor the villain (Miller, 2004). However, there is evidence that that the construction industry may be more socially responsible than it is generally given credence for and, at the very least, is beginning to make improvements in its commitments to CSR. For example, a recent report by the Australian Centre for Corporate Social Responsibility (ACCSR) found that the property development/construction industry recorded a slightly above average CSR budget relative to other industries (ACCSR 2011). It remains uncertain how these figures apply to SMEs and whether they are an accurate reflection of practice on the ground. Nevertheless, the report indicates a growing concern in the industry to improve its CSR performance. It is clear that the performance of the construction industry is crucial in addressing the economic, social and environmental sustainability of Australian cities. This is particularly the case as the pace of urbanisation, resource depletion and pollution increases. The construction industry produces physical infrastructure that alters our natural and built environment and helps to determine the nature, function and appearance of our cities, towns and regional areas, along with contributing to the formation of communities (Robinson et al. 2006; Myers 2005). In the process, it consumes materials and resources, changes the natural and built landscapes, emits pollutants, and impacts on the lives of communities both inside and outside of its structures (van Wyk & Chege 2004). The industry has the potential to be a significant contributor to sustainability as a major driver of activity in the Australian economy. The building and construction industry made up 6.4 per cent of Australia’s gross domestic product in the years 2005-06 with total activity during this period valued at $95.8 billion dollars, an increase of 13 per cent over the previous year (Zillante 2007). The construction industry also provides employment that underpins social and economic sustainability. In 2006-07, the industry employed 917,600 workers (4.7 per cent higher than the previous year),
which represented approximately 8.7 per cent of all employed persons in Australia (ABS 2008). The majority of construction industry employment during this period was in construction trade services (633,500 people or 69 per cent), which includes those engaged in earthmoving, concreting, bricklaying, roofing, plumbing, electrical, carpentry, painting, glazing and landscaping (ibid). However, the above figures are likely to be impacted by the recent contractions in the global economy caused by the global financial crisis. In order to harness its full potential, the industry will need to adapt in order to face new challenges, including addressing the matter of CSR and sustainability.

The performance of the construction industry in terms of CSR and sustainability also has significant implications in terms of environmental impacts as this sector consumes large quantities of energy derived from fossil fuels (Zuo & Zillante 2008). A study by Pricewaterhouse Coopers (2008) estimated that the construction industry accounts for half of all resource usage and up to 40 per cent of energy consumption. This energy is consumed during the whole life cycle, including the construction phase, the operation phase and during the process used to manufacture building materials (Pullen et al. 2006). Other related environmental issues include the reduction of CO2 emissions, minimizing of construction and demolition waste, and prevention of indoor air pollution (Alnaser & Flanagan 2007).

Due to the significance of the industry's impacts in terms of economic, social and environmental sustainability, there is a considerable need for quality research which explores the barriers and drivers towards the implementation of CSR in the industry across these three dimensions and beyond. We encourage academics of various disciplines to take up this research agenda with some urgency. While a number of studies have already been conducted on CSR in Australia (e.g. Quazi & O’Brien 2000; Anderson & Landau 2006), few studies have been undertaken to investigate CSR in the construction industry, especially in the Australian context. The majority of these studies focus on ethical behaviour within the built environment (e.g. Bowen et al. 2007; Liu et al. 2004; Suen et al. 2007). While not based on empirical research, there are also other studies which explore CSR from a construction management perspective (e.g. Barry 2003; Barthorpe et al. 2004; Rameezdeen 2007; Wilkinson et al. 2004). While Murray and Dainty (2009) provide a useful overview of the CSR concept in relation to the construction industry, their work is not prescriptive and with the exception of Lingard et al.‘s (2009) chapter, is not focused on the specific context of the Australian industry.

As we have argued elsewhere (Chiveralls et al 2011), the structure of the construction industry differentiates it from other industries which may have already progressed down the CSR route. The existing knowledge of CSR in the construction industry mainly comes from studies of large enterprises, many of which have taken action to address social and environmental issues (see Bovis Lend Lease n.d.; Colliers International 2008; Stockland 2008; Jones et al. 2006; Douglas et al. 2006; Petrovic-Lazarevic 2008) However, due to its use of the subcontracting approach, the Australian construction industry is overwhelmingly made up of small to medium sized firms. These SMEs contribute most of the industry's output and account for 99 per cent of the total number of enterprises (RCBCI 2002). As identified by Cole (2003) 36 per cent of all people employed in construction work for subcontractors and of these 94 per cent employ fewer than five employees. Therefore, any overall performance improvement of the industry is significantly influenced by the performance of SMEs and their subcontractors (Sexton & Barrett 2003). Considering the key role SMEs play in the construction industry, it is imperative to investigate how SMEs can be better engaged in the CSR implementation process. This research addresses a significant gap in the literature in exploring current CSR practices in SMEs in the Australian construction industry, and whether these could be improved through legislation and regulation.

3 Research Methodology

This paper reports on the results of a pilot study of CSR in SMEs in the South Australian construction industry. As outlined elsewhere (Chiveralls, 2011) the pilot study involved an
extensive literature review, along with the conduct and analysis of 10 semi-structured interviews on CSR with the directors or senior members (as senior as it was possible to arrange) of private sector building construction companies in the South Australian Construction Industry, within suburban and metropolitan Adelaide, which could be considered to be SMEs. While there is no clear definition of SMEs globally, it is generally acknowledged that SMEs employ less than 250 staff (Egbu et al. 2005). Six of the companies interviewed employed less than 50 employees (four of which employed 20 or less at 1, 2, 11 and 20 respectively), two employed between 50 and 100 and two between 150 and 250 employees in SA. However, it is noteworthy that while the rest of the companies operated primarily in SA, the three companies with the highest number of employees in SA, had recently expanded and commenced interstate operations and as a result had more than 250 employees Australia wide (at around 260, 300 and 600 respectively). As such, the team debated over whether they should be included in the sample as SMEs. However, as they employed less than 250 employees in SA and their inclusion provided an opportunity to explore how the expansion of SMEs may impact on their approach to CSR, we determined they should remain in the sample. This pilot study will be used to gather support for a much larger research project, which we plan to conduct to expand on the limitations of this research. In the future we hope to expand this research across Australia, to enable us to gain a wider picture of experiences in the industry across the nation and explore differences between the states. As this study was subject to limited coverage (located primarily within SA) and duration, findings are preliminary only.

Participants were recruited through snowballing, beginning with contacts from companies known to the School of Natural and Built Environments at the University of South Australia. Participants were contacted via email, provided with an information sheet and consent form about the project and asked if they would be willing to participate in an interview of around one hour’s duration at their place of work.

Interviews consisted of around 10 questions on CSR covering topics such as: participants’ understanding of CSR; major social impacts of the construction industry; relevance (if any) of CSR for their company; CSR initiatives adopted by their company; effectiveness of initiatives; and barriers, successes and drivers to implementing CSR for SMEs in the South Australian construction industry.

Interviews were noted, transcribed and analysed using the qualitative data analysis program NVivo® to highlight common themes and insights from the interview data. A qualitative approach to the research seemed appropriate, given the limited scope and duration of the project and our desire to explore in-depth the current understandings of industry leaders. While a full analysis of these results is beyond the scope of this paper, the results and discussion presented below focus on the implications of our findings in terms of barriers and facilitators to the implementation of CSR in the Australian Construction Industry and what role (if any) can be played industry regulation and legislation.

4 Findings and Discussion

4.1 Understanding CSR in the Australian Construction Industry

One of the main aims of this preliminary research project was to explore how CSR was currently understood by senior members of SMEs in the industry. As discussed previously (Chiveralls 2011), the results of our preliminary research project suggested that a lack of knowledge and awareness of the concept is one of the main barriers to the adoption of CSR by SMEs in the industry. These results reinforce the findings of the ACCCSR (2007) which identified a general lack of awareness of CSR within the organization as one of the main barriers to CSR success. Without exception, every person interviewed expressed some level of confusion over the meaning of the term CSR. When being asked about what CSR meant to them or how they understood the concept, interviewees replied with variations of “I really don’t,” “I’m not sure”, “Well I haven’t given it a lot of thought I can tell you” or “I was hoping you might tell me”. One participant remarked that when they see the
abbreviation CSR they don’t think of Corporate Social Responsibility but of a company called CSR Building Materials. Another commented:

After 30 years experience at all levels in my industry, really any thoughts about corporate social responsibility...up until this point in time have never really entered into my head.

Despite obvious levels of uncertainty and an apparent lack of knowledge about the concept, most interviewees seemed eager to discuss the concept and interested to hear about how it might apply to them and the everyday practice of their businesses. Through discussion of examples of CSR initiatives in the companies they worked for and how these related to the wider social impacts of the industry, much of the initial trepidation in discussing the concept was overcome, revealing a more nuanced and complex understanding of the concept than first imagined. On reflecting on the meaning of the term, interviewees provided a wide range of responses, commensurate with the variety of definitions and theoretical understandings of the concept. Participants also described a wide variety of initiatives and practices as falling under the banner of CSR and all participants were able to describe at least one practice in their organisation that they could relate back to CSR. These responses and initiatives will be analysed and discussed in detail in future papers. As discussed in previous papers, our results clearly suggest that a lack of understanding of CSR is contributing to a fragmented and ad-hoc approach to its implementation in SMEs in the Australian construction industry (Chiveralls et al. 2011). However, in this paper, we focus our analysis of research results on the barriers and drivers to the implementation of CSR and what role (if any) can be played by legislation and regulation.

4.2 Improving CSR in the Australian Construction Industry through Formal Regulation

The current state of regulation of CSR in the Australian construction industry can best be described as a state of soft regulation. This approach has accordance with dominant perspectives which view CSR as a primarily voluntary endeavour that should not be allowed to interfere with the other objectives of business (Green 2009). Soft regulation approaches include the establishment of voluntary standards of behaviour and encouragement for voluntary action, for example through social standards such as accountability 8000, the European Corporate Sustainability Framework and the International Standards Organisation’s ISO2600 standard on social responsibility published in November of 2010. As pointed out by Lingard et al. (2009), a formal framework for CSR in Australia has been published in the form of Standard AS800302003 (Standards Australia 2003b). The standard forms part of a suite of Australian standards relating to corporate governance, which also includes standards on corporate fraud, corruption control and whistle-blower protection programmes, and is designed to provide guidance for organisations to establish, implement and manage CSR programmes. While the standard references Australian Standard AS8306-1998, which outlines principles for effective compliance programmes to promote compliance with laws and regulations, application of the standard remains voluntary and is unlikely to be widespread in the industry (Lingard et al. 2009).

This contention was supported by our preliminary research findings in that only one of the SMEs involved in the study (the largest in the sample) had an official policy document which mentioned the term and none had official policies dedicated to CSR. A couple of interviewees described CSR practices in the organisation with reference to official policies in other areas (like Occupational Health and Safety [OH&S] and the Environment). For example, one participant stated that he didn’t see a need to have Australian standards on CSR because it was already covered by areas like Quality, the Environment and OH&S, which all had Australian Standards which their company utilised. However, the companies that fell into this category were the largest companies in the sample, and most interviewees who expressed support for CSR, tended to describe it as a kind of informal “business culture”. Jenkins (2006) also found that SME were more likely to be characterised by relationships established on a more informal trusting basis and characterised by more personal intuitive engagement. It may be this informal nature which makes SMEs more resistant to regulation and less inclined to use formal instruments (such as codes of conduct) to
foster ethical behaviour within the organisation” (Jenkins, 2006: 243). Accordingly, interviewees seemed resistant to the regulation of CSR, particularly through legislation. In fact, interviewees had a clear preference for CSR to exist as an informal, unwritten practice. There was a general sentiment that the industry was already overregulated. Interviewees expressed fears that legislating CSR would threaten the economic survival of their companies, by restricting their ability to vary participation in CSR according to affordability and viability, as determined by their current financial capacity and stage of business development.

However, interviewee comments with regard to the cause of past improvements in the industry revealed contradictions in their attitudes toward the legislation of CSR. The Australian construction industry has shown that it is capable of significant change, having made improvements across a number of areas in recent years. For example, in the area of OH&S, many construction companies now place a high importance on safety (Bovis Lend Lease n.d.; Mohamed 2002; Fraser 2007). In recent years, further change has been embraced to avoid adversarial relationships and a poor contractual culture, which has resulted in improvements with regard to the effectiveness and competitiveness of the industry (Zuo 2008; RCBCI 2002). Interviewees clearly indicated that they thought legislation and regulation played a key role in motivating these shifts. For example, one interviewee commented, that these changes had resulted from an “Australia-wide politically driven process” which had been “enacted through Parliament” as a “factor of government”. He stated that people were unlikely to implement change unless it became a governance matter but that once legislation was in place “people run with it”. Similarly, another participant commented that a lot of the changes that have happened in the industry occurred because “they’ve been driven by government and social processes”. He stated, “...once it’s been enacted we have been able to respond.” He explained that because of the competitive nature of the industry, which has very small profit margins, “the only way you will get those kind of changes is through policy – so they are required to incorporate it”. However, when asked if he thought there was a similar role for government in legislating CSR, the same participant replied, “No, definitely not. It’s [CSR is] what you want to do.”

Despite the reticence expressed by interviewees, there is a clear role for legislation in improving CSR performance. While Lingard et al. (2009: 378) state that change will only come about through “general cultural and societal moral and ethical change”, they rely on a laissez faire definition of CSR, understanding CSR as a voluntary act (2009: 351). Such a “soft” definition of CSR is at odds with their dismal picture of CSR in the Australian construction industry and one might question how successful voluntary adoption would be in this milieu. If the industry is so behind in CSR practices, it would seem that the informal, voluntary approach to CSR is not working, and that government regulated standards are required. Lingard et al. (2009) could go further in their recommendation that all construction firms, public and private, should adopt the Australian Standard on Fraud and Corruption Control, and recommend regulated, mandatory adoption of CSR standards (Standards Australia 2003c). While none of the companies involved in our research project had official policies on CSR, the fact that a couple of the interviewees stated that they could demonstrate formal compliance with CSR principles by reference to other Australian Standards, suggests that the adoption of the Australian Standard on CSR is far from impossible.

Even without the introduction of mandatory standards on CSR, it could be encouraged indirectly through alteration to planning and regulatory requirements in specific areas. For example, the current National Construction Code (ABCB 2011) does not encourage the use of recycled building materials. One suggested policy mechanism to encourage reduction in volumes of construction and demolition waste is the increase of landfill taxes and introduction of reuse subsidies. Another may be the mandated introduction of sorting bins for recycling on construction sites, perhaps backed by government funding or provision. The drive for legislative change is supported by the findings of a study by Zillante and Zuo (2008), which assessed the awareness of small construction firms of waste management systems. The study concluded that there is not enough pressure on firms to create behavioural change. While in the past, legal commitments have mainly been allocated to
contractors, research suggests that compulsory measures are necessary to ensure that all project stakeholders play an active role (Tam et al. 2010).

However, there is also an urgent need to tighten and simplify existing legislation and regulation in order to improve compliance and enable improvements in CSR. For example, in 2004, the Australian Government introduced a mandatory regulation for all new homes across the country to have an energy rating of a minimum of three to four stars. Six years later, this compulsory rating has been raised to a minimum of five stars with Victoria, Queensland, South Australia and the ACT having already moved to a six-star rating (Western Australia is due to follow suit next year). However, the star ratings have been found to be potentially misleading, with wide variations in their measurement and results and no research or regulation having been developed to prove that they’re accurate (ABC, 2011). Similar difficulties have been reported in relation to establishing compliance with regulation for recycled materials (e.g. Tam 2009). Without uniform enforcement of specific codes, specifications, standards and guidelines, it is likely to be difficult for businesses to see investment in recycled materials (including purchasing necessary equipment, planning, checking compliance and convincing clients) as worthwhile (ibid).

A lack of uniform standards and reporting frameworks raises serious issues for accountability and CSR across the industry. The issues discussed above are just two examples of this. Without strict reporting requirements or regulations, there remains a risk that CSR will amount to little more than a marketing tactic or a corporate exercise in “white- or green-washing” (Finger & Kilcoyne 1997; Crowther 2002; Barth & Wolff 2009). These views were also supported by interviewees, who expressed concerns that CSR should be measured/monitored and that people should not be able to make claims about CSR without being able to “prove it”.

Interviewees also saw the introduction of targeted business incentives as an effective mechanism for improving CSR in the industry. For example one interviewee remarked:

The only way smaller size companies are going to do it is if there was a reward for doing it...If big business and government put in rewards for companies to meet some goals then it can happen.

Interviewees frequently stated that government tenders are now looking to see what businesses are prepared to do in terms of CSR and community engagement. For example, one interviewee stated that if the tender was for a project in an area with a large Indigenous population it would help if the company could demonstrate how the project would help contribute to Indigenous well-being or that the company was committed to improving Indigenous well-being in other ways. As one interviewee commented, “track record helps” with this process if you are able to demonstrate that you have done this in the past and it is a part of normal business practice rather than just a response to the requirements of the tender. However, at this stage most interviewees argued that this component of government tendering was “not a deal breaker” but was likely to “value-add” to the tender and “give you an edge”.

The Australian Government has also introduced business incentives which indirectly encourage CSR in the industry. For example, the Federal Government established the Australian Government Building and Construction OH&S Accreditation Scheme which is administered by the Office of the Federal Safety Commissioner. The scheme requires that all construction contractors engaged on public sector construction projects have satisfactory levels of OH&S performance and management processes and establishes strict accreditation requirements for all head contractors engaged on government agency contracts (Lingard et al. 2009). While the scheme creates a strong business incentive for the implementation of CSR in relation to OH&S, the dominance of the private sector restricts the impacts of such schemes on the industry as a whole. For example in 2002-2003 the reported income of construction business in Australia was $140.9 billion, of which only 11 per cent was accounted for by federal state and local government organisation, with the householders and other organisations accounting for 82 per cent of this income (Lingard et al. 2009).

In order for such schemes to have a dramatic impact on CSR performance in the industry, they would need to be extended to the private sector. The increase and introduction of further levies for
landfill and subsidies for the use of recycled materials is just one example of how government could introduce business incentives which encourage the improvement of CSR across the industry (Tam 2009). Consumer demand is also likely to play a significant role in determining levels of CSR adoption by companies in the industry. Thus, efforts aimed at cultural change must focus not only on the industry, but also on clients and the general public. For example, evidence suggests that negative perceptions and lack of information regarding reused products from a client’s perspective tend to hinder its use in the construction industry (da Rocha and Sattler 2009). Accordingly, education, training and the provision of accurate information and adequate support structures are key elements in enabling improvements in CSR in the industry.

4.3 Informal Mechanisms to Improve CSR in the Australian Construction Industry

The legislative measures discussed above would clearly be enhanced by initiatives which seek to build on the informal approach to CSR adopted by SMEs and capitalise on the CSR →business cultures” they have already developed. For example, the main drivers to CSR identified by interviewees were proprietor motivation and business culture. These findings support those of the ACCCSR (2007) which identified lack of management support as another major obstacle to CSR success. For example, one participant commented that SMEs need someone in their organisation that →has a heart for the community” and that this →has to be genuine or it won’t work”. These findings are supported Jenkins’ (2006) argument about the importance of proprietor motivation in driving CSR. In his study of –Small Business Champions” in the UK, Jenkins (2006: 251) argued that:

In order for CSR to work in a company, it must have an internal champion; top-level management commitment is crucial to its success.

As in Jenkins’ study, we found that in all of the companies interviewed, the senior partner or owner-manager were seen as directly responsible for directing CSR principles and →moulding the company culture in their own beliefs” (ibid). For example, one interviewee remarked that the →value system starts at the top” and permeates down the businesses with managers and senior managers →to make sure CSR is part of the culture and the value system.” Similarly, interviewees also mentioned the importance of getting →buy-in‘ from the employees. One manager stated →I couldn’t do it if I didn’t have others around me that cared also”. Various strategies were discussed to increase employee attachment to CSR, including involving them in CSR decisions and targeting initiatives of immediate interest to employees. Effective CSR strategies should seek to involve and motivate owner-managers and encourage them to integrate CSR into their →business culture” as part of →the way we do business”. As argued by Jenkins (2006:253):

SMEs can also exert pressure themselves through the supply chain by championing CSR and encouraging suppliers and customers to adopt socially and environmentally responsible behaviour.

Initiatives to improve CSR performance in the industry also need to take into account the specific barriers and pressures faced by SMEs. Our research found that the major barrier to CSR identified by interviewees was cost in terms of time and money. These findings again support those of the ACCCSR (2007) which identified limited financial and human resources as the final major barrier to CSR success. Interview responses confirmed Lingard et al.’s (2009) contention that the focus of SMEs →is often on business survival”, and that these smaller companies are unlikely to dedicate the required time and energy into the development of such policies and practices. However, while SMEs are unlikely to have the resources to provide leadership in this area, interviewees frequently acknowledged a willingness to work closely with training and professional bodies to make necessary improvements.

Similarly, there was a clear sense in the interviews that many interviewees saw CSR responsibilities as being more appropriately dealt with by others in the building and construction procurement chain. One participant stated that by the time a building project came down to them, all the
important decisions had usually already been made by others involved in the process including: clients, architects, and engineers. As such there was a feeling that the extent to which SMEs and construction companies in general could engage in CSR was “very limited by the other people working on the project.” For example, dealing with subcontractors or others involved in the process was the next most commonly identified barrier to CSR identified by interviewees. As one interviewee stated industry structure was a big issue in:

the way that it sort of sub-contracts most things out these days – in the old days I would provide my own labour that I employed – in the old days it would have been a lot easier to control your impact on corporate social responsibility because you have more control over your resources - but these days it all gets watered down – a builder has so few resources on any job these days that he can’t guarantee that...

There is a clear role here for professional organisations and training bodies to assist in promoting a more co-ordinated and unified approach to CSR in the industry. The major employer associations and groups in the Australian construction industry include: the Australian Constructors Association (ACA); Master Builders of Australia Inc. (MBA); Civil Contractors Federation (CCF); Housing Industry Association Limited (HIA); and Australian Industry Group (AIG) (Lingard et al. 2009). Membership varies from large companies to single person providers and across diverse sectors including housing, commercial building and civil engineering projects (ibid). While Lingard et al. (ibid) identified the fragmented nature of the industry, as reflected in the diversity of professional associations, as a barrier to CSR these same factors also mean that professional associations and bodies have a wide reach in the industry. The establishment of an industry wide code of ethics, incorporating CSR principles, which could be promoted through all professional and training organisations in the industry, would go a long way towards addressing many of the issues with CSR, which result from the fragmentation of the industry. Professional organisations and training bodies also play a key networking role which could be leveraged to promote CSR. Through professional bodies companies could share examples of CSR initiatives and policies they have developed, a process which could be encouraged through the hosting of CSR awards nights. Education and training in relation to CSR is a key issue within the industry, as demonstrated by the lack of knowledge in relation to the topic and one interviewee’s comments that they had never attended a lecture or seminar on CSR. One participant suggested that CSR should be one of the subjects taught at University as part of the Built Environment degrees and there is definite scope for them to be included in the seminar series’ of professional groups and organisations.

It would also be prudent to involve trade unions in the development, monitoring and implementation of such a code. The Australian Council of Trade Unions (ACTU) consists of 46 affiliated unions representing 1.8 million workers (Cole 2003 cited in Lingard et al. 2009). The Construction, Forestry, Mining and Energy Union (CFMEU) is the largest and most active in the construction industry. Others include the Communications, Electrical, Electronic, Energy, Information, Postal, Plumbing and Allied Services Union of Australia (CEPU); the Australian Worker’s Union (AWU) and the Australian Manufacturers Workers Union (AMWU). As pointed out by Lingard et al. (2009), unions have historically played a strong role in advancing CSR in the industry. Unions played a key role during the ‘green bans’ of the 1970s, when construction workers refused to work on constructions sites which involved the demolition of heritage sites for high-rise developments. Areas saved during the ‘green bans’ include the Rocks, Centennial Park and the Botanic Gardens in Sydney. Unions have already demonstrated their potential to play a major role in contributing to improvement of CSR adoption in the industry by ensuring there is employee “buy-in”, and encouraging compliance with legislation as well as the adoption of informal CSR practices.
5 Conclusion and Further Research

This paper has reported on a preliminary research project which explored how CSR was understood by industry leaders in SMEs in the Australian industry. Our results prompted us to suggest that a combination of measures and approaches would be appropriate to encourage the development of CSR in the industry. Despite an obvious preference among interviewees for CSR to remain as a kind of voluntary and informal “business culture”, our research suggests that there is a clear role to be played by regulation and legislation in encouraging the improvement of CSR in the industry. Such measures might include the introduction of mandatory reporting mechanisms and standards, an industry-wide code of ethics, and various business incentives, along with other means of soft-regulation. There is also evidence to suggest that there is a need to clarify and simplify existing legislation to improve compliance and further encourage CSR in the industry. However, our research suggests that such measures would be enhanced by the introduction of more informal initiatives designed to capitalise on the preference for informal CSR practices among SMEs in the industry. Such initiatives might include: improved education around the concept of CSR and a focus on the role of small business champions, along with mechanisms for networking and exchange of information between firms through professional bodies, unions and training organisations.

Further research may assist in determining the best form for such initiatives to take and which are more likely to succeed, as well as enable a more nuanced understanding of how the applicability and effectiveness of such measures is likely to vary across industry sectors and different size businesses. Future studies on CSR in the Australian construction industry could investigate the differences between the Australian states and territories as there are clear differences in legislative approaches and outcomes in terms of CSR. Research should also seek to provide benchmarks to compare CSR practices and performance across the industry. We recommend the development of a model to assist policymakers and contractors make “socially responsible” decisions and enable the monitoring of the implementation of CSR in the industry. We invite scholars who have an interest in CSR in the construction industry to join us in furthering this research agenda and contributing towards a more economically, environmentally and socially sustainable industry.

6 References


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Property Law
“A pub, a field and some signs” – a case study on the pragmatics of proprietorship and legal cognition.

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Abstract:

This paper uses a case study on the management of the grounds of a city-fringe pub to explore land and premises owners' perception of, and responses to, the legal requirements and risks of public access to their property. The paper examines how an approximate lay notion of occupiers' liability is acquired and used from an actor's internal point of view (Hart 1994).

The study set out to empirically explore the suggestion (e.g. Jones 1984; Bennett & Crowe 2008) that landowners' expressions of concern about potential occupiers' liability for visitor injuries may function as a polite and acceptable proxy for a more visceral (and less publically expressible) sense of proprietorship but actually found something more prosaic. In the case study the liability risk theme was invoked through copious cautionary signage by a premises manager who showed little overt anxiety about liability or safety and no strong proprietorial orientation towards his land.

To make sense of this conundrum the paper develops a theoretically informed interpretation of the case study which draws upon Bourdieu's notion of the guiding hand of habitus (2005), Mutch's (2000, 2001 and 2003) and Pratten's (2007 a, b and c) work on the constancies and changes within UK pub management, Berger & Luckmann's (1971) concept of the sedimentation of knowledge, Delaney's (2010) call for holistic, multi-disciplinary, nomopheric investigations when studying spatio-legal behaviour, Sack's (1986) notion of the space clearing function of territoriality and Altman's (1975) highlighting of the importance of express normative declarations for ambiguous secondary territories that are neither wholly public nor private.

Through this synthesis insight is given into how a form of thinking and acting about law, liability and proprietorship can become embedded and replicated without needing at any stage a consciously developed self-understanding of that action. The paper considers the implications of this for land and premises management and the study of legal cognition within lay professional communities.

Keywords:

habitus, occupiers liability, land management, legal cognition, public houses

1 Introduction

This paper is a continuation of my recent research projects (Bennett, 2009, 2010, 2011, Bennett & Gibbeson, 2010) in which I have sought to examine the processes by which the abstract conceptual doctrines of the law are translated by lay communities such as cemetery managers or tree owners and applied into their day to day management of their physical environment. These studies have centred upon investigating the common sense lay interpretation of the Occupiers Liability Acts 1957 and 1984 and specifically, how important that legal cognition actually is in land and premises management practice.
This journey started in the summer of 2008 when my colleague Lynne Crowe and I were commissioned by member agencies\(^1\) of the Countryside Recreation Network\(^2\) to conduct a scoping study to identify any existing research on the question of whether landowner anxieties about public liability towards recreational visitors affected the extent to which they allowed (or tried to curb) public access to their land. The study also involved 21 semi-structured interviews of predominantly public sector landowning bodies. The literature review found only a few existing studies on this issue, and these mostly related to the North American experience (e.g. Teasley et al (1997), Gentle et al (1999), Wright et al (2002) and Henderson (2007)). Our interviews suggested that, for large pro-access public landowners at least, the risk of liability for any injuries sustained by recreational visitors was something viewed pragmatically, and to be taken ‘in their stride’ by those managers and their organisations. Our scoping study (Bennett & Crowe 2008) thus found no direct evidence of a withdrawal of access to private land as a result of fears of Britain’s so called ‘compensation culture’ (Williams, 2005).

In our report we conjectured that the strength of, and effect of, such fear might be greater for smaller organisations, particularly those with no vested interest in facilitating access. We wondered whether away from the calming influence of the mutual support bodies like the Visitor Safety in the Countryside Group (VSCG, 2005) anxieties and misperceptions about the risk of liability for any eventualities that might afflict recreational visitors to their lands might have more power and effect. This conjecture chimed with commentators who had previously noted that whenever changes are proposed to the legislative frameworks by which access rights are imposed upon property owners (most recently in England in the form of the coastal path right of access under the Marine and Coastal Access Act 2009) anxious landowners and their representative associations raise the spectre of civil liability towards injured recreational visitors as a key concern, and justification, for opposing the legislative change as presented to them. We found ourselves in agreement with Jones (1984), who, writing on the eve of implementation of the Occupiers Liability Act 1984\(^3\), surmised that:

> ‘The refusal of access by country landowners probably has more to do with the depredations inflicted by the uncaring public, or an unbridled sense of proprietorship, than the fear of potential liability for accidental injuries’ (726).

This paper reports on some of the further steps that I have taken to explore the relationship between landowners’ perceptions of their duties and liabilities and their approach to public access to their land and premises. In doing so it will touch on the related themes of territoriality and proprietorship and delve deeper into the pragmatic and performative aspects of lay legal cognition. After briefly reviewing existing studies I will turn to consider a single-site case study warning signage at an urban-fringe pub. This empirical example raises some counter-intuitive questions (and possibly insights) into these processes.

2 Existing studies of occupiers’ liability perception and exclusionary territoriality

The North American studies alluded to above (e.g. Teasley et al (1997), Gentle et al (1999), Wright et al (2002) and Henderson (2007)) centred their empirical enquiry around why, given that legislative concessions have already been made in order to insulate landowners against occupiers’ liability for injuries sustained by recreational trespassers upon their land, landowners continue to express high levels of fear about potential liability. I do not have space to review this research in detail (see Bennett & Crowe 2008 for more), however Gentle et al’s (1999) investigation of whether

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1 The Forestry Commission, the Scottish Government, Sport Northern Ireland, and the Northern Ireland Environment Agency.

2 http://www.countrysiderecreation.org.uk/

3 Which introduced a qualified duty of care to be owned to trespassers, in addition to the duty imposed by the 1957 Act for the protection of lawful visitors.
the different political and cultural heritage of various US States influenced landowners attitudes towards provision of access can help in summary. Gentle et al found no clear patterns other than a general finding that:

"Landowners are much more comfortable with the use of their land by friends and family, rather than by strangers." (Gentle et al 1999, 57)

and that a history of "unpleasant experiences with recreationists"(62), rather than socio-economic differences or differences between rural and urban fringe settings, were the most important influencing factor in landowners' decisions on whether or not to prohibit access to their land. Meanwhile Teasley et al (1997) found respondents giving a variety of reasons for prohibiting access to their land, many of which could be grouped under a collective heading of "keeping land private", with only 28% agreeing that their decision was in whole or in part "to protect me from lawsuits". There has been little research in the UK upon the role of fear of liability in shaping landowners' attitudes to access and the ways in which they express their proprietorship. The limited UK research evidence found did suggest that fear of liability may be a much lesser influence than perceptions of privacy and control, for example a study of woodland owners' attitudes to access in the South East of England for the Forestry Commission (2005) found that one third of private non-forestry business owners felt that their woodlands were important for personal privacy, with over 75% of this group reporting a perceived "loss of control" if public access was allowed. These privacy and control issues (which I take to be the core of ‘proprietorship’) showed more strength of feeling than whether liability for visitors was perceived as a factor of significance. In this regard none of the respondents reported "insurance claims" as a "very severe" problem, with 77% of the respondents reporting "no problems" in relation to this factor.

Our 2008 study explored the apparent disconnect between a prevailing public discourse that claims landowners to be fearful of the alleged compensation culture and landowners failing individually to rate fear of liability as a significant influence upon their land management practices in these studies. It appeared from the US studies that a more general anxiety related to proprietorship was being presented in public as a fear of liability, because that was a more publically acceptable discourse. Furthermore, we noted that the existing studies and anecdotal examples from access policy changes in the United Kingdom and New Zealand all suggest that expressed anxieties about landowner liability risk appear to amplify at times where the landowner community is experiencing the threat of change to access regimes (and/or other uncertainties).

Our study also highlighted the approximateness with which liability issues are perceived and invoked by landowners, and the ways in which other preoccupations and anxieties appeared to weave into their stances on access control. Understanding landowner liability perception therefore appears to require an understanding of this wider fear/anxiety and the circumstance specific nature of each landowner's understanding of, and response to, his legal obligations.

A number of commentators (for example Landry (2005), Bauman (2006), Philippopoulos-Mihalopoulos (2007)) point to the contemporary dominance of what might be called ‘anticipatory fear’ – a future focussed, risk assessment shaped, attempt to prescribe for the adversities of the (near) future. Commentators also note the ways in which such anxieties are (at least in part) constructed by those who suffer them (Wildavsky & Dake, 1990). For example, whilst a landowner may describe that which he fears as external to him and (and imposed upon him) there is a willed, selective, dimension, at least as regards the actor having decided either “this is what I need to worry about” or “this is how I will explain my feeling of unease about public access”. In short, the likelihood is that if you get a landowner to think about access issues he will do so within a narrative framework that makes sense to him in terms of his wider anxieties and tends towards telling you what he thinks you want to hear.

Accordingly, it may be no surprise that respondents to a survey by the Country Landowners and Business Association (CLA, 2007) aimed at raising landowners’ concerns about the feared impacts of the Marine and Coastal Access Act’s coastal ‘right to roam’ paraded the following colourful
illustrations of contemporary folk devils: feared liability for burglars, doggers (and also dog walkers), paedophiles, vandalism, unexploded bombs, errant golf balls and the perils of coastal erosion. This list of worries testifies to the diversity of rural (and coastal) landowners and the myriad ways in which anxiety about a change in access legislation may be expressed in, amongst other things, the language of safety and liability fears. The majority of our 2008 interviewees were large, pro-access landowners. A minority of bodies representing small and/or private landowners were included. The respondents largely said (in effect) “we’re not worried about liability; we take it in our stride. We manage the risk”. They then volunteered the following suggestions on what might make smaller landowners more susceptible to liability fears and consequent access restricting behaviours:

1) **Isolation and fear of liability.** It was felt that the more a landowner was connected into a support network in which a ‘reasonable’ approach to the understanding of liability risk could be collectively set and defended, the less the level of anxiety likely to be stirred up by sensationalist sources (e.g. the general media and its ‘compensation culture’ focus);

2) **Marginal survival.** That liability anxieties might be expected to be at their greatest where the business was (due to other pressures) struggling to survive, and access would be seen as ‘something else to worry about’. In particular landowners with single site operations may be particularly vulnerable as they will not have the experience of adapting abstract legal requirements and applying them to the (inevitably) different physical circumstances;

3) **No gain from access.** That landowners with no direct (or indirect) benefit from the public and their access to their land might be less likely to feel comfortable;

4) **Something valuable to protect.** That landowners would be more concerned about access control in situations where the land or premises comprises valuable assets which could be stolen or damaged by visitors; and

5) **A prior history of bad experiences with public access.**

In the case study that follows I will refer to these collectively as _the Five Traits_.

Scholarship to date has observed a fairly rigid distinction between rural and urban investigations, with empirical studies of the control of recreational access to the countryside on the one hand and more theoretically inclined studies of urban enclosure processes on the other. In contrast to the land management focus of the countryside research, the urban studies have tended to focus either on ‘bunkerization’ (Trigg 2008: 554) by homeowners or the grievances of those excluded from the land in question. The urban studies have not directly enquired into the legal cognition of non-residential landowners. Such studies have tended to focus on ‘gated’ residential communities and access control to shopping malls with these studies pointing towards that enclosure being driven by urban fears of crime and ‘others’ (see for example Low (2003), Sandercock (2005) Minton (2005; 2009) and Layard (2010)) rather than an owners’ fear of potential liability for the injury of members of the public who may access his land.

In reality much land lies between the extremes of rural idyll and dense city block. Indeed, as Farley and Symonds-Roberts (2011) note, the greatest level of contestation over day to day access to land may actually lie in the ambiguous ‘edgelands’ – the car parks, urban-fringe fields and woodlands, wastelands and ruins at which neat and stable classification of such spaces as unquestionably _rural_ or _urban_ or exclusively _public_ or _private_ will often prove unworkable.

This paper therefore seeks to contribute towards breaking down this polarisation by studying a city-fringe premises, part of the grounds of a pub, as its case study point of focus and by drawing from both the empirical tradition of the rural studies and the theoretical sophistication of the urban investigations in the following analysis.

### 3 Is there actually any story to uncover? – a case study

Our 2008 report recommended further research to specifically enquire into the ways in which individual landowners interpret occupiers’ liability law and apply that interpretation to their day to
day management of their land. This work is ongoing, focussed around individual sites and their owners.

The remainder of this paper will present a case study of one urban/rural fringe plot of land and its owner. The case study appears to question the Five Traits conjectured above. Whilst this paper cannot postulate rules or generalisations from one case study, an attempt will be made to interpret (and theorise) the case study’s findings.

Looking back on our 2008 study I was conscious of the limitations of interviewing senior executives about their organisation’s land management practice and decided that the follow-up work needed to be more _micro_ level and interpretive in its empirical focus. I need to understand how lay individuals come to understand the principles of occupiers’ liability law and render them workable for themselves. In my view this (for present purposes at least) requires an open, exploratory research methodology, essentially a hermeneutic approach in which the researcher tries to see the world through the respondent’s eyes, at least in so far as that is relevant to understanding how his perception of risks, liability and recreational visitors shapes his land management practices.

As part of my search for case studies in this vein I decided to approach and interview the owner-manager of an urban-fringe countryside pub which I have been aware of for eight years, and which during that time has passed through a number of different owners. This pub has a grassed area (which I will call "the Field"). It comprises a small wooden fenced plot bordering the pub car park. It is generally level and contains a couple of old but functional wooden picnic tables. There are no obvious hazards in the Field. Yet I have observed that over the years each successive owner has sought to discourage the pub's clientele from using this area. During this time I have noticed ever-more cautionary signage appearing on the fence and gate that demarks the boundary between the pub car park and the Field (Figure 1).

Through my existing observational knowledge and face to face exploratory interview I hoped to explore with the current owner-manager (hereafter "the Landlord") why had he adopted the cautionary access strategy, his own understanding of occupiers’ liability risks and what he based those views on.

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1 It was described by the Landlord as ‘the Paddock’, although no horses have been there for at least 10 years.
Having regard to the ‘Five Traits’ I thought that the Landlord would be able to provide a conscious explanation of the signage – perhaps by recounting a previous accident in, or complaint about, the Field area which had set the whole process off. I also thought there might be some indication, in the Landlord’s account, of safety/liability fears presenting as a proxy for a deeper set of proprietorial concerns (e.g. privacy and/or fear of loss of ‘control’). I also anticipated that his approach towards the management of space at his pub would be consciously conditioned by external requirements derived from law (in particular premises licence, planning and insurance requirements).

4 So what was the story of the Field?

Well, there didn’t appear to be a clear cut story so far as the Landlord could account. Whilst he echoed contemporary ‘common sense’ discourse about the self perpetuating nature of safety regulation and by expressing the view that we live in an era of increasing (and spurious) compensation claims he did not appear fearful of any such claims. He had had no personal experience of such regulatory intervention or claims, and appeared confident in his ability to manage people and situations through his own ‘good host’ nature (rather than stating an affinity for forms, barriers or notices). Neither ‘insurer requirements’ nor even the requirements of his premises licence appeared to have much effect upon how he shaped his approach to management of the Field. The Landlord did not appear to be haunted by a fear of his patrons and what they might get up to around his pub. Indeed he appeared to have a particularly optimistic worldview, appraising the likely behaviour of those who may come into the vicinity of his pub by reference to his own behaviour and dispositions.
Yet despite all of this the Field was plastered with cautionary signs and disclaimers and gave every appearance of it being a place into which the public was not invited (Figure 2) and the Landlord's best account of his actions in ‘losing' the Field was that the area was "untidy" and not somewhere that he would use himself at the moment. The signs were "just a risk assessment…just health warnings".

The following extract from my interview with the Landlord shows the inchoate nature of the Landlord's vague exclusionary territoriality over the Field. After describing the picnic tables in that area and its occasional use for themed events like Halloween and Bonfire night (the interview took place in February 2009), the interview continued thus (the numbers in brackets denote length of pause):

**Interviewer** so - you haven't got a problem with people going into that area?

**Landlord** well I do have, at the moment, because it's, erm (0.2), it's (0.1) it's not how I want it (0.2)

**Interviewer** in what sense?

**Landlord** it's a bit untidy...because it's overgrown (0.2) and there's like pieces of wood about and it's not really ideal for, especially from this, especially from this time since Bonfire night, in the Winter, it's not really - I probably wouldn't use it...

**Interviewer** so what about your signage up there, you've got quite a lot of signage up there?

**Landlord** yeah, it's just a risk assessment, it's just health warnings, 'cause I don't really want like (0.2) anyone on there really, 'cause it's not (0.3) it's not ideal, I don't think, at the moment, well it's untidy, and it's not really ideal, I don't feel (0.1) and I'd rather
use that, as and when it's like (0.2) as everything's perfect (0.2).

5 Interpreting the story

It became clear in the interview that the Field is an area of the Landlord's pub that is not at the forefront of his mind or the forefront of his plans for his business. He would turn his attention to that area someday. Until then he'd written it off in his mind as untidy and not somewhere that he would want to go if he were visiting this pub as a customer. I felt that he regarded it as a non-place (Augé, 1996), in his mind, focussed as it is on building a viable business at this rather marginal location, it was (or at least he wanted it to be) out of mind$, and because it was meaningless space to him he could not comprehend that anyone else might properly find that space desirable at the moment. Yet, for some unarticulated reason he felt compelled to reinforce the abandonment of that space by recourse to signifiers of risk and liability.

How can we account for this behaviour? If we reflect on the Five Traits' mapped out above the Landlord does not score particularly highly. The Landlord presented himself as a relatively laid back landowner, someone confident in his people skills' and steeped in the publican's service ethos. He had had no unpleasant experiences with public access in the past and the Field is of little current use to him (so his actions are not seemingly borne of a defensive urge). Yet, without conscious sense of exclusionary purpose, the Landlord has been routinely adding ever greater layers of cautionary signage to an unremarkable small grassed field.

I believe that the answer to this lies in the power of what had become conventional at this place. At a number of points in the interview the Landlord mentioned the inevitability and/or the business advantage of taking things on as they are - and not seeking to change everything from the start; for example:

"…Here you've got to be kid friendly where we are, in like the Tap Room you've got to be dog friendly: because that's how it’s always been…so it's easy for me to come and say "I'm not having any dogs in there" - but it’s not; its part and parcel of this, the history of the pub I suppose" (emphasis added)

This, in the spirit of Bourdieu (1987; 2005), suggests a form of habitus, an embedded physical manner of use of a place by its owner and its patrons which it is difficult - or unadvisable - to change. In business parlance this could be called goodwill, it is embedded history and knowledge that makes the place what it is. In that sense it is cultural, laying down a normative order to a place and encounters within it.

The story of the Field, such as there is one, may well be that the signified conditions of the Field (the signage and appearance of exclusion) have been inherited circumstantially from previous owners via the existing manner of physical arrangement of the property. There is no great thought behind it. It exists, remains and is added to because there has been no event or cause to alter that status quo or challenge its appropriateness.

At this pub this habitus appears primarily encoded and transmitted between successive owners through the physical arrangement of the place, for there was minimal induction of the Landlord by the previous owners on hand-over). The Landlord thus appears, via a process of sedimentation” (Berger & Luckmann 1971, 85), to have added his extra layers of signage, recycling, repeating or adapting phrases inherited from his predecessors' notices (see Figures 3 & 4).
In this regard it is worth noting that the signs observed in 2007 (before the Landlord took over) are worded remarkably similarly to those installed in the era of the Landlord and furthermore that those signs, in 2011, still remain at the entry to the Field despite the departure of the Landlord and the arrival of yet another owner, who – presumably because he also has other more pressing things to think about – passively perpetuates the exclusionary effect of this accumulated layers of warning signage (Figure 5).
A pub’s habitus; a publican’s habitus

For Bourdieu habitus can reside in both places and people, and in both cases habitus is at least partially external to the local situation. Wider socio-economic (and other normative) influences will play their part in setting the appropriate dispositions for those people in that place.

If we return to the ‘Five Traits’ for a moment we can find in the socio-economic (and normative) context of the pub some potential pointers to factors that may have contributed towards this Landlord’s dispositions regarding signage and the Field.

The recent history of the pub industry is one of rapid (and externally imposed) structural change as Mutch (2000, 2001 and 2003) and Pratten (2007a, b & c) show. In 1913 95% of licensed properties were brewery owned (Pratten 2007a, 336) but during the twentieth century this domination progressively declined. The process accelerated following a Monopoly & Mergers Commission investigation in 1989 (MMC 1989) that led to large brewers being forced to cease brewing or release from purchasing tie half of the pubs that they owned over a national allowance of 2,000 each by November 1992.

This wave of divestment prompted the creation of new, smaller pub portfolio owning groupings (‘Pubcos’), many funded by investors from outside the brewing industry. As Pratten (2007c, 614) notes, since the early 1990s the pub sector has been subject to multiple waves of ownership change as banks, venture capitalists and entrepreneurs have regularly traded Pubco portfolios. The rising market share of supermarket alcohol sales and waves of legislative change such as the 2007 indoor smoking ban and the liberalisation of the hours of pub opening over the last decade have also contributed to the atmosphere of constant change within the sector.

Set against this sea of externally imposed change publicans have struggled to keep their pubs open. The restructuring of the 1990s and first decade of the present century saw marginal pubs either close or float out into independent, owner-run, ‘Free House’ status.

We may conjecture that the co-ordination offered by an area and regional management structure for brewery owned or tied pubs may have operated in the past to reduce anxiety about liability risks within their outdoor zones and/or that, based on experience, publicans and their patrons did not need to be told what was and was not safe or acceptable use of the pub’s environs. However due to the intercession of Pubcos and increased Free House ownership, owners and managers drawing from their prior experience outside the pub industry may have imported standards (or a sense of liability anxiety) characteristic of other industries, culminating in the installation of warning signs like those now visible at the case study pub and now embodied in this pub’s ongoing habitus.

Mutch’s work can also help us to think about the ways in which a publican’s habitus is formed. Mutch’s work confirms the Landlord’s own biography and viewpoint – namely that publicans tend to come from publican families, they are likely to have little if any formal training for the job, some supervision may be exercised where the pub is owned by a brewery or similar but even in those parts of the trade the degree of directional supervision has been in decline. The modern way is to control (and incentivise) employed managers via their financial accountability rather than mandating controls over the spatial arrangement of the pub and its surroundings. Thus the trend has been towards leaving managers to make their own sense of what they must do to manage their pub.

However, the publican’s freedom of action is tempered by the habitus of the pub itself. As Cavan (1966) and Pratten (2007 a) each show, a pub is a complex set of ordained spaces – often with distinct designated bar areas (the ‘public bar’, the ‘tap room’ and the ‘lounge’) each customarily assigned different decor, physical arrangement, customer expectations and behavioural norms. Add to that the temporal and activity-regulating aspects of the Licensing Acts and it becomes clear that running a pub is all about knowing how to respect and reproduce the ‘expected’ designation of times and spaces, and the control of activities and uses, within that place. Perhaps not surprisingly,

\[1\] A ‘Free House’ is an establishment that is not ‘tied’ to a brewer and contractually obliged to purchase stock only from that sole brewer. The pub featured in this case study was, at the time of the interview, a ‘Free House’.
the first place a new manager will look for guidance on what he must do, is the material culture and existing arrangement of the pub itself, as an embodiment of those normative codes and expectations.

So, in terms of the Five Traits, we find an industry sector built firmly upon habitus. An industry framed in unwritten tradition and an expectation of the publican ‘learning on the job’ yet now under siege from cumulative waves of recent externally imposed change and competition. Once understood in this light it will come as no surprise to reveal that the Landlord spent a lot of the interview alluding to difficulty he was facing in making his business venture a success. Talking about the Field, and asking him to account for how he was perceiving and managing liability risk for this ‘non-place’ must have felt perplexing to him. Despite my dogged line of questioning the economic pressures and uncertainties continually irrupted during the interview. Within months of the interview the Landlord’s venture was at an end, and the pub had new owners.

However, and in testament to the inertial power of the pub’s habitus, this change of ownership wasn’t easy to spot. The incoming owners made no changes to the physical arrangement of the place, the brasses, the games box, the tables, the ancient photos of the pub in times past, along with the Field’s signage, all remained there, unaltered. In this pub, the owners come and go but the place, courtesy of its habitus, lives on unchanged.

7 What can this case study tell us about legal cognition?

Both the 2008 interviews and case study presented here were intended to illuminate the extent of (and techniques by which) landowners acquire and apply their lay understanding of occupiers’ liability law. The outcome of these studies suggests that it would be dangerous to assume (as lawyers might well by training be tempted to do) that all landowners have a coherent understanding of occupiers’ liability law and/or base their action upon it.

H.L.A. Hart (1994) sought to promote a ‘sociological jurisprudence’ which would pay serious attention to the effect of law as internalised by those subjected to it, an approach which sought an understanding of law’s interpretation from the actor’s internal point of view. This case study leaves me wondering whether Hart’s rationalist view of the role of legal cognition in the shaping of lay pragmatic action in ‘the real world’ is too optimistic. For upon empirically enquiring into legal cognition and the law’s subjectively received ‘internal aspect’ it becomes something rather nebulous, approximate and – to the lawyer’s consternation – not as important as we like to think in the shaping of spatial activity.

As Andrews (2000) has noted (in relation to the ritual behaviours comprised in company directors’ compliance with their disclosure duties under UK Company Law) what may actually be driving apparent compliance is a learned performativity, a ritualised behaviour, rather than an internalisation of the law itself. Thus just as company directors learn how to remember to fill in the appropriate forms, so landowners learn how to perform adherence to the conventional behaviours of territorial demarcation and risk management, but this is borne more of ritual than deep understanding of the law’s conceptual doctrines.

Thus, when we look, we may find that law’s concepts and symbols are deployed in day to day discourse in a distinctly approximate and incidental way. I find support for this viewpoint in two related strands of socio-legal scholarship.

First, the study of ‘legal consciousness’ in the work of Ewick & Sibley (1998) and Sibley (2005) which emphasises the dangers of assuming too close a correspondence between the law as extolled in juridical concepts and textbooks and the public appreciation of, adaptation to and application of, ‘the law’ in the everyday world. For them, law is an available schema, likely to be drawn upon pragmatically by citizens in order to make sense of their everyday lives, but it does not present a singular controlling code of living. Upon investigation law is commonly encountered as subordinate to other normative (and situational) influences shaping conduct.

Secondly, recent work within the ‘Law and Geography’ collaborative field, influenced as it is by the socio-spatial theorising of de Certeau (1988), Lefebvre (1991) and others, emphasises that ‘the
legal’ and the spatial (and the socio-cultural milieu) are co-productive and that the focus of that production is pragmatic action. Thus territorial behaviour is a co-production of the actor’s engagement with (and constraint imposed upon him by):

i) the physical reality of the specific space;

ii) the habituated and/or expressly known legal and other normative structures available to govern that space; and

iii) the purpose of that action – it’s circumstances and contingencies.

Delaney (2010) in support of this ‘intertwined’ reading of the production of places within human action, calls for ‘nomospheric investigations’(48) that strive to read the factors contributing to this co-production in a way that does not (through the conventions of rigid disciplinarity) privilege one contributory factor over any other. In short, the role of the law in this is important, but not omnipotent. It is in this spirit that I have sought to make sense of this case study. Hogg (2002, 34) encapsulates the required reorientation of the angle of analysis thus:

→ if we were to take the spatiality of legal practices seriously ...we should cease to look upon law as a closed, formal and acontextual system and see it instead as an assemblage of heterogeneous elements, discursive, social and technical. These elements include distinctive physical structures, spatial arrangements and rituals as well as texts and rules.”

8 Why do the signs invoke the language of risk and danger?

This paper has sought to focus upon understanding the landowner’s role in restricting access, and the possible ways in which the discourse of liability, risk or danger may be being invoked as a publicly acceptable proxy for proprietorship. The case study has taken us away from that question and has suggested that, in this pub at least, neither fear of liability nor proprietorship are the main drivers of this behaviour. We can, though find some insight into the role of a risk and liability discourse within the chosen signage.

Scollon & Wong Scollon (2003) and Delaney (2005; 2010) both seek to show the indexicality of expressions of territoriality. Delaney (2005, 30) shows how a ‘no trespassing’ sign alludes to, draws upon, and ‘implicate[s] complex relations of power” in that the sign invokes the apparatus of legal rights to which the landowner may potentially have recourse (not necessarily cheaply or with certainty) in order to control access to that territory. Yet the widespread persistence across the UK of exclusionary signs incorrectly declaring that ‘Trespassers will be prosecuted’ (trespass is not generally a crime in the UK and thus is more commonly a civil wrong for which the transgressor might be sued in the civil courts, rather than prosecuted in the criminal courts) is testimony to the approximateness of that invocation of the formalities of the law. Such signs create (and defend) territory as much by their normative appeal to moral and habitual (i.e. learned) notions of public and private space than to those signs’ (correct or incorrect) appeals to the authority of the law.

Such signage (and the appearance of exclusionary intent) also has an inferential dimension for the public. For signage to work successfully as an access control the public in the vicinity of such land must choose to take the warning signs in a conventional way, and not put the landowner to proof of their legal efficacy. The sign’s audience must have either a habituated pre-understanding of how it is appropriate to respond in the face of such signs or alternatively those signs must spell out the rules explicitly. Thus the habitus of pubs shapes the way in which these places, and encounters in and about them, are likely to play out. The signs will be noticed, but not normally read. In that sense it often doesn’t matter what the signs actually say. Such notices are probably only attentively read by ‘nomospheric technicians’ (Delaney, 2010, 158) such as legal scholars with an over developed interest lay understanding of occupiers’ liability law or claimant lawyers following an accident (Figure 6).
But why do the signs not simply say “keep out”? Well, this may seem too brutal (or total) a prohibition given the “welcoming” context that a pub will generally be expected to provide. Moore & Bottomley (2007) note the trend away from physical exclusion within city centre “privatised” spaces, towards a more collaborative “governance” based approach. Governance here is a term derived from Foucault (Lupton, 1999), which notes that the modern way of governing subjects is increasingly less achieved through barriers, official violence or even direct imposition of law, but rather relies upon processes by which subjects are conditioned to respond to ever more subtle cues of control. The discourse of risk is a particularly ascendant “disciplinary” discourse (Landry, 2005). In short, using the language of risk and danger may be a particularly contemporary, polite and effective way to achieve access control.

The fundamental point with the Field is that the landlord cannot currently conceive of any other usage for that space. He would not want to go there (as a customer), he is not currently “providing” that space (in the sense of offering it as part of his commercial realm). It is presently meaningless to him (but has the potential for meaning in the future). He needs to symbolically nullify it, to take it out of the picture and to deal with it “later”. Yet he expresses that in the “modern way” via the language of risk allocation and the persistence of inappropriate or mutated signs, that testify to a general deterrence, rather than a specific warning / thing of danger or an outright foreclosure of this space.

This process reveals an aspect of territoriality that may not seem obvious – something that Sack (1986) describes as “space clearing”. Sack describes this form of territoriality in rather abstract terms, but with the case of the Field we can see that territory can be a willed nullity. The Landlord has no current use for the space. Perhaps he can see some potentiality in it, but for the time being it is surplus to requirements.
As Sack (1986) notes, territoriality may be a relatively cheap and effort free approach to managing a spatial problem (in this case a spatial surplus). It is easier to deter the public from an area by affixing a few mildly unwelcoming signs than spending the time to render it “tidy”. And to extend the analysis here, it is easier to for the Landlord to deter via a sign that invokes law, risk and danger (because people are more likely to take notice of that sign) than it would be to erect a sign that says (as might have been more accurate):

—Please don’t enter this area because I’ve not had chance yet to get it how I want it to be, and I’d prefer it if you would use and enjoy the other parts of the pub that I have spent time and effort getting to a state that I’m proud of and I want you to enjoy”.

Remember here that the Landlord appears not to have any particular danger in mind other than “untidiness”. For him (if conscious at all) the role of the signage is to help keep the Field off his list of things to worry about. It needs to be symbolically declared a “non-place” for the time being whilst he focuses on trying to develop the pub’s core spatial zone (the pub’s bar rooms and its contiguous courtyard). The Field now lies beyond that spatially shrivelled core, it’s ageing picnic tables a legacy of a previous expansionist era at this pub, an era during which – these remnants would suggest - an unsuccessful attempt was made to commercially colonise this marginal zone. Here we see the creation of waste-land, a process of neglect underscored by a low-thought, low-cost, low-effort technique for declaring it empty and (in a commercial sense) not currently part of the pub. Yet, all the Landlord has to do is declare it a temporary “Beer Garden” on special occasions and it springs back into being as a willed part of the pub. Moore & Bottomley (2007) have noted the increasing blurring of any rigid distinction between “public” and “private” space – instead spaces become multifunctional. Thus the Field is neither “private” nor “public” in any static sense, instead it fluctuates and the borders that it sets up are porous because of the commercial imperative (and potential of the Field on occasion, and perhaps more so in some indeterminate future) to be a space of commerce. In such situations the Field can become (both physically and symbolically) “opened for business”.

Altman (1975) defines such places as “secondary territories”, places characterised by the ambiguity of their access status, due to their being neither for all time nor in all circumstances unequivocally “private” nor “public” space. These are places into which the public may enter sometimes. The rules of sometimes are complex and may need spelling out in notices and declarations of express conditions of access if the habitus of the place does not create clear normative guidance. Yet, perhaps ironically (as we have seen) the signs themselves can – via sedimentation - subsequently become “locked” within the pub and publican’s habitus, they become part of the “normality” of the pub and its physical arrangement.

Significantly, at this place, the local habitus does not appear to provide a clear framework for the removal of this signage. Instead it is left to accrue and the visitor must make their own sense of these notices. Most will vaguely notice these ambiguous signs, but will not stop to read them. They will ascribe to them a general prohibitory intent and not venture into the Field. This seems to be consistent with what the Landlord wants – but (as we have seen) his sense of proprietorship over this area is currently weak and this space is controlled by circumstance, rather than by conscious direction on his part. There is no cynical exclusionary strategy here. Instead the process plays out by default. Here these signs themselves control space, control visitors and – in the sense of habitus explored above – also appear to exert some control over the successive owners of this place.

My best guess is that this process was set in hand a number of years ago under an earlier owner’s initiative. When I first became aware of the Field in 2002 there were vestiges of a rather rudimentary “adventure playground” in the Field. The “take care for your children in this place” trope may have been, at that time, specifically directed to then non-standard feature of this space (and reflect the anxiety and legal interventions around child safety in playgrounds that was at the fore in the late 1980s as chronicled by Ball (2002)). The sign shown in Figure 7 may therefore represent the “root” meme (Dawkins 1989: 192) of this now rather self-perpetuating semiotic rash, for this
(long broken) printed sign suggests a more specific and slightly institutional origin than the _home-made_ paper offspring now accompanying it.

Figure 7 - The root meme? (Nov 2008)

9 Conclusion

My experience of trying to interpret this case study has forced me to examine the limitations of a traditional _legalistic_ approach to investigating both proprietorship and legal cognition. A visit to the pub would give the impression that the Field is a small area in comparison to the footprint occupied by the pub building and its courtyard. But in preparing this paper (and trying to find out what had happened to the Landlord) I obtained a copy of the title plan from the Land Registry and was surprised to see that the Field is almost exactly the same size as the pub and its courtyard. As Korzybski (1933: 58) has noted in a different context: _The map is not the territory_ but it does usually capture at least part of its essence. The title plan shows that both areas are held under the same registered land title, and subject to the same covenants. Yet for the Landlord one part of the title (the pub building) is the anxious commercial focus of his working life whilst the other (the Field) is a surplus, _non-place_ barely noticed by him. A conveyancer reading these title documents would get no sense of the differential level of dwelling with which these two parcels are currently invested. The symbolic manipulations of the Field and its flip flop in and out of an actively possessed and enjoyed state registers little, if at all, at this formal level of title. Yes, physical possession via occupancy and use is an important feature of proving and sustaining ownership, but as Gray and Francis-Gray (1998) and Grear (2003) note, the notion of ownership at common law is conceptually muddled and the legal rules of possession would pay little heed to the subtle totems of nullification and non-place making identified in this case study. For these are matters of something non-legal: differential degrees of dwelling (in the sense of a space being loved and thought about, or not).
To understand proprietorship – and its effect upon access control - we have to take a more holistic approach and follow Delaney (2010), Hogg's (2002) and Trigg's (2005) exhortations, and move away from interpreting land use solely through the disciplinary gazes of either law or spatiality, because focus on only one dimension will miss some of the story. Instead, Delaney recommends a holistic scholarship that should seek to study how:

—-onomic traces are provisionally inscribed and anchored to segments of the world. Participants in social situations, whether routine or extraordinary, avail themselves of such traces as they see pragmatically relevant to the tasks at hand (the right to exclude in order... the right not to be excluded in order to ...). Traces such as rules or rights are not simply free-floating bits of discourse. They are spatialized signifiers that may be deployed as reasons or justifications for acting this way or that, one way or another.” (Delaney 2010: 60 – emphasis in original)

The accumulated signs at the perimeter of the Field are such —onomic traces” (Figure 8). In part they perpetuate because of the inertial effect of the pub's habitus and the dispositions that that engenders in successive publicans (and patrons) who come to the site (and this may be amplified by structural adversity such as recent history of the pub industry). On occasion they are the results of actively willed behaviour, whether deployed pragmatically towards specific ends by the landowner (e.g. declaration of Beer Garden events) or are imposed by some external event or requirement (e.g. playground safety standards or the indoor smoking ban).

But in all of these circumstances the shaping influence of the law is enacted (it is performed by a succession of owners and their respective patrons) via approximate and intertwined notions of law and liability, territoriality, proprietorship, embodied custom (i.e. habitus of the place, its owner and patrons) and feelings and dispositions about a place. This is a complex cocktail that requires us as lawyers¹ to step into a wider frame of analysis if we are to understand lay perception (and pragmatic use of) the law and the contribution of the law in shaping how premises are used and managed.

Clearly, a single case study cannot prove or disprove that a conscious anxiety about liability haunts other landowners, or that such behaviour is really a mask for a rawer sense of proprietorship, but it is hoped that the analysis set out in this paper offers some pointers to techniques, levels of analysis and disciplines to be engaged in the pursuit of this question.

¹ Similarly (and following Delaney 2010) the geographer (or other social scientist) reader should equally take heed not to ignore the important constitutive role of the law in the construction of the pub, the publican and his patrons via matters of title, leasehold and planning obligations, premises licences, brewery ties, anti-monopolistic restructuring, public health controls, fire ordinances, occupiers' liability, insurer requirements and employment legislation to name but a few.
Figure 8 – Decaying signs left as nomic traces, legacies of prior action yet still operative (May 2011)

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Politics of Property Law in India
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Abstract:
The right to property has often been derided as the "least defensible" right in a socialist democracy. It is very absorbing to note that Right to Property has induced the most number of amendments to Indian Constitution and has formed the core from which some commendable and historic decisions have emerged from the Indian judiciary. It delves into the intricacies of the transition of "the right to property" from a ―fundamental right" to a ―legal right‖. The research shall be grounded in numerous cause célèbre; landmark decisions as well as large number of amendments shall also be analyzed. The researchers would strive to critically examine the development and interplay between important articles like 14, which states the rule of equality before the law and other important articles such as 19(1) (f), 31 and 300, which are critical to the debate on property rights in India. The study highlights the importance of property rights in a person's life as well as the extreme and innovative means he/she could come up with to defend it. The second part of the paper discusses the social restrictions placed on the right in the form of Land Acquisition Act and its controversial provision dealing with "public purpose". In conclusion, the researchers suggest mechanisms to counter the gross violation of fundamental rights in this field of property rights by analyzing different bills.

Keywords: constitutional aspect; Indian perspective; Right to Property.

1 Introduction

―One will excuse the murderer of his own father but not the person who will take away his property‖ said the great Machiavelli. These words best describe the poignant state of affairs of landless masses of the nation. _Property rights' expose the bedrock of Indian socialism propounded by the great Jawaharlal Nehru, the first Prime Minister of the nation. The conflicting views of the legislature and the judiciary over this subject led to the experience of judicial review during the last fifty years and the vicesstitudes of judicial activism in the realm of property. The colonial Land Acquisition Act, 1894 (hereinafter referred to as _the Act_), a legal instrument devised to acquire land, stipulated only monetary compensation at market rate¹, ignoring local self-governments, communal property rights and the environment. It allowed the government to forcibly acquire land from private landholders for projects of _public purposes²_.

This paper delves into the transition of the status of right to property from that of a _fundamental' right guaranteed by the state to its citizen, to that of a _statutory' right where land could not be acquired save by authority of law. It traces such transition and its outcome which led to the _tragedy of commons³_ in the form of mass displacement of the poor and illiterate under the garb of acquisition of land for the purposes of _development'. The unique economic policy of liberalization caused a furor as the government permitted acquisition of land based on the archaic Act.

¹ Land Acquisition Act 1894, s 23
² Land Acquisition Act 1894, s 3(f)
Amendment Bill proposed by the government contains the skewed 70:30 ratio of acquisition. It shall persist to aggravate the poor living conditions of the hapless farmers and landless laborers as the government shall continue to ‘grab’ their land for industrial purposes. The existing Act has witnessed maximum litigation by the poor asserting their right to property and demanding the restoration of the original status of the right to property. Needless to say, those evicted were deprived of their basic human right and social security.

2 Tracing the historical background of Land Rights in India

2.1 Pre-Constitutional Position

The Constitution of India derived its foundation largely from Section 299 of the Government of India Act, 1935. It secured the right to property and contained safeguards against expropriation without compensation and against acquisition for a non-public purpose. In –Constituent Assembly of India, Constitutional precedents (Third Series)” (1947), it is stated, –Broadly speaking, the rights declared in the Constitutions relate to equality before the law, freedom of speech, freedom of religion, freedom of assembly, freedom of association, security of person and security of property. Within limits these are all well recognized rights.”

2.2 Post- Constitutional Developments

A scrutiny of the relevant provisions of the Indian Constitution as they stood on January 26, 1950 is necessary for a holistic understanding of the developments to this controversial right. They are Articles 14, 19(1)(f), 19(5), 31, 32, 39(b) and (c), 226 and 265. The gist of the said provisions may be briefly stated thus: Every citizen has the individual right to acquire, to hold and dispose of property. A duty is implicit in this right, namely that it should be so reasonably exercised as not to interfere with similar rights of other citizens. The exercise of it, therefore, should be reasonable and in accordance with public interest. The Directive Principles of State Policy laid down the relevant principles through which the State was directed to secure the ownership and control of the material resources of the community for the common good. It also specified that the operation of the economic system should not result in the concentration of wealth and means of production to the common detriment.

The conflict between the citizen’s right and the State’s power to implement the said principles were reconciled by putting limitations both on the right and the power. The said fundamental right was not absolute. It was subject to the law of reasonable restrictions in the interest of the general public. The State’s power was also subject to the condition that the law made by it in so far as it infringed the said fundamental right should stand the double test of reasonableness and public interest. Thus, it vested in the State the power to acquire the land of a citizen for a public purpose after paying compensation along with the power to impose taxation on a person for his property. We rejected the Russian theory of Socialism but accepted the doctrine of individual right to property subject to the laws of social control. These laws of social control were restrictions imposed on the absolute "right to property" of individuals. The Government implemented these laws through the Land Acquisition Act, when dealing with cases of public purpose. The right to property was conditioned by the social responsibility. The higher judiciary was made the arbiter to maintain the just balance between

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1 Land Acquisition (Amendment) Bill 2007
2 Land Acquisition Case For Three Categories Resettlement And Rehabilitation Bill
4 The Constitution of India 1950, Part IV
private rights and public interests. After the Constitution of India came into force, the following agrarian reforms\(^1\) were introduced as follows:

(1) Intermediaries were abolished
(2) Ceiling was fixed on land holdings
(3) The cultivating tenant within the ceiling secured permanent rights
(4) In some states, the share of the landlord was regulated by the law
(5) In one state, the tiller of the soil secured cultivating rights against the absentee landlord, and in some states, the rural economy was re-adjusted in such a way, that the scattered bits of land of each tenant were consolidated in one place by a process of statutory exchange.

Thus, these reforms implemented the Directive Principles of State Policy and socialist Nehru enacted the aforementioned ceiling legislations to confiscate lands following the socialists' objective to attain economic equality by robbing Peter to pay Paul.

2.3 Judiciary v. Legislature: The Trouble Begins

Parliament and the Supreme Court clashed on their interpretations of the provisions on the right to property. Although the Constituent Assembly had taken utmost care to avoid judicial interference in the program of economic reforms to which the Congress Party had been committed since the days of the National Movement, the courts did hold the laws authorizing changes in property relations unconstitutional. The First Amendment Act, 1951 introduced Article 31-A and Article 31-B which spawned the saga of legislative manipulation of right to property. Article 31-A defined “Estate” and continued by further amendments to extend its meaning so as to include practically the entire agricultural land in the rural area including waste lands, forest lands, lands for pasture or sites of buildings. Under the said amendment, no law providing for acquisition by the state of an estate so defined or any rights therein of the extinguishment or modification of such rights could be questioned on the ground that it was inconsistent with or took away or abridged the right to equality contained in article 14, right to various freedoms contained in article 19, and the right to property contained in article 31\(^2\).

The subsequent amendments introducing Article 31-B and the Ninth Schedule were an attempt to usurp the judicial power. It was an innovation introduced in the Indian Constitution which was unheard of in any other part of the democratic world. The legislature made void laws offending fundamental rights and included it in the Ninth Schedule, which were later extended from time to time as per the whims and fancies of the ruling political party. Article 31-B declared that none of the acts or regulations specified in either the Schedule or any of the provisions thereof shall be deemed to be void on the ground that they are inconsistent with Part III, notwithstanding any judgment, decree or order of any court or tribunal to the contrary. A further amendment disclosed a cynical attitude towards the rule of law and autocratic power of legislature was thus sustained by democratic processes. The amendments in the realm of property substituted the Constitutional ideology with totalitarian ideology. This totalitarian ideology was articulated by the deliberate use of amendments to add more and more laws to the Ninth Schedule. Originally 64 laws were added to the Ninth Schedule and more acts were added by the 4th, 17th and 29th Amendment Act; the 34th Amendment added 17 more Acts. The 66th Amendment added 55 Acts raising the total number of laws excluded from the purview of judicial review to 257. The 76th Amendment Act, 1994 added the Tamil Nadu Act\(^3\) providing for 69 percent reservation for backward classes under the Ninth Schedule. This was a clear misuse of the Ninth Schedule for political gains as the object of the

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\(^1\) M L Dantwala, “Land Reforms in India” 66 Int’l Lab. Rev. 419 (1952)  
\(^2\) The Constitution of India 1950  
\(^3\) Tamil Nadu Panchayats Act 1994
Ninth Schedule of the Constitution was to protect only land reform laws from being challenged in court.¹

The Supreme Court held in a series of decisions viz. State of West Bengal v Mrs. Bella Banerjee², W.B v Subodh Gopal³ and State of Madras v Namasivaya Muralidar⁴ that Article 31, clauses (1) and (2) provided for the doctrine of eminent domain⁵ and under clause (2) a person must be deemed to be deprived of his property if he was ―substantially dispossessed” or his right to use and enjoy the property was ―seriously impaired” by the impugned law. According to this interpretation, the two clauses of Article 31 dealt only with acquisition of property in the sense explained by the court, and that under Article 31(1) the state could not make a law depriving a person of his property without complying with the provisions of Article 31(2).

It was the decision in the Bella Banerjee case which induced the government to resort to the Fourth Amendment. In this landmark case the Apex Court insisted on payment of compensation in every case of compulsory deprivation of property by the state. It was held that clause (1) and (2) of Article 31 dealt with the same subject of deprivation of private property. Further the court held that the word ―compensation” meant ―just compensation” i.e. just equivalent of ―what the owner had been deprived of.”⁶

Such form of judicial activism was met with attempts to curb the power of the courts as well as access to them.⁷ Various indirect methods, adopted by the legislature to discipline the judiciary included the supersession of judges⁸ and the transfer of inconvenient judges⁹.

2.3.1 The ‘Locus Classicus’ that saved the Constitution but murdered the right to property

Keshavananda Bharti v State of Kerala¹⁰ has been a milestone in the history of Indian legal jurisprudence. The judgment was handed down by a panel of thirteen judges, the largest panel created for any judicial hearing in India. This cause célèbre had the petitioners challenge the validity of Kerala Land Reforms Act 1963 during the pendency of which the impugned Act was amended in 1971 and placed under the Ninth Schedule by the 29th Amendment Act. The question that arose was the extent of the amending power conferred by Article 368 of the Constitution.¹¹ The Government of India claimed that it had the right as a matter of law to change or destroy the entire fabric of the Constitution through the instrumentality of Parliament’s amending powers. Ironically, seventy years earlier, Hitler had asserted and exercised such a right by invoking the amending power of the German legislature, and there were no judicial pronouncement to restrain that dictator. Such was the emotive power of this case that the judgment witnessed the retirement of six senior judges of the Supreme Court (Chief Justice S M Sikri, a day after the judgment was delivered; Justices J M Shelat, K S Hegde and A N Grover who were superseded to the office of the Chief Justice of India for choosing to abide by their conscience and Justices P Jaganmohan Reddy and A K Mukherjea) who had held as follows:

Firstly, the Parliament’s amending power was limited. While Parliament was entitled to abridge any fundamental right or amend any provision of the Constitution, the amending power did not extend to damaging or destroying any of the essential features of the Constitution. The fundamental rights are among the essential features of the Constitution. Therefore, while they may be abridged, the abridgment cannot extend to the point of damage to or destruction of their core. Secondly, article 31C was void since it took away invaluable fundamental rights, even those unrelated with property.

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¹ Supra Note 8
² State of West Bengal v Mrs. Bella Banerjee [1954] SCR 558
³ W.B v Subodh Gopal [1954] SCR 587
⁴ State of Madras v Namasivaya Muralidar [1964] 6 SCR 35
⁸ N.A.Palkhivala, Judiciary Made to Measure (first published 1973)
⁹ S.H.Sheth v India [1976] 17 G.L.R 1017
¹⁰ Keshavananda Bharti v State of Kerala [1973] AIR SC 1461

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Whereas Justices A N Ray, D G Palekar, K K Mathew, M H Beg, S N Dwivedi and Y V Chandrachud held the power of the Parliament to amend to be unlimited and article 31C to be valid. Out of the thirteen judges six decided the case in favor of the citizen and the other six in favor of the state. Justice H R Khanna did not completely agree with any of these twelve judges and held that (a) the power of amendment is limited; it did not enable Parliament to alter the basic structure of the Constitution; (b) the substantive provision of Article 31C, which abrogated the fundamental rights, was valid on the ground that it did not alter the basic structure of the Constitution; and (c) the latter part of Article 31C, which ousted the jurisdiction of the Court, was void. He went a part of the way along with judgment in favor of citizens and thus this constituted the majority view of the Supreme Court. It became law of the land.

Khanna J, spelt catastrophe to 19(1) (f), when he held that Right to Property could not be a part of the basic structure of the Constitution. Thus, this demonstrated to the people of India that their Parliament was in reality property friendly and not people friendly.

2.3.2 The Forty-fourth Amendment Act, 1979: the final blow

The Janata Party which attained majority at the Centre sought to remove the contentious property rights by introducing this act. The Forty-Fourth Amendment Act removed the right to property from the Part III (Chapter on Fundamental Rights) by deleting Articles 19(1) (f) and Article 31 along with subsequent amendments, and inserted in Part XII the following new chapter: Chapter IV (Right to Property), Article 300A which stated: Persons not to be deprived of property save by authority of law—no person shall be deprived of his property save by authority of law.” It is pertinent to note the contents of the aforementioned amendment:

3. “In view of the special position sought to be given to fundamental rights, the right to property, which has been the occasion for more than one Amendment of the Constitution, would cease to be a fundamental right and become only a legal right. Necessary amendments for this purpose are being made to Article 19 and Article 31 is being deleted. It would however be ensured that the removal of property from the list of fundamental rights would not affect the rights of the minorities to establish and administer educational institutions of their choice.

4. Similarly, the right of persons holding land for personal cultivation and within ceiling limit to receive market compensation at the market value will not be affected.

5. Property, while ceasing to be a fundamental right, would, however, be given express recognition as a legal right, provisions being made that no person shall be deprived of his property save in accordance with law.” This controversial amendment witnessed the right to property’ being asserted not by the rich but by the poor. Now it is being asserted by the evictees whose lands have been acquired by the State in the garb of ‘development’ by using the archaic Land Acquisition Act, 1894.

3 Land Acquisition, the law of social control

Land acquisition, the core of politics of property in India is the process by which government expropriates private property for public purpose, different from just market purchase of land. The discretion of the state to forcibly acquire land is expressed as ‘eminent domain’. Conventionally it

2 Upendra Baxi, ‘Judicial Activism: Usurpation or Re-Democratization?’ vol 47 pp. 346
3 The Constitution (Forty-Fourth Amendment Act) 1978, s 6
5 Sanjeev Sabhlok, ‘No property rights in India – its most potent indicator of lack of freedom’ (Bad Ideas!, India, 5 March 2011) accessed 31 May 2011
6 Supra Note 20
denoted that the state was permitted to use the property of the citizens only in cases of extreme necessity and in furtherance of public utility. Thus, legitimizing sovereign intervention in relation to private rights, this principle evolved into Article 39 of the Constitution, in the Directive Principles of State Policy, commanding the state to direct its policy towards securing ownership and control of the material resources of the community keeping in mind that distribution which best sub-serves the common good. Land Acquisition in India comprises three crucial features that allow the government to legitimately steal land from the poverty-stricken farmers. Firstly, the farmers that are forcibly evicted have no title over their land, secondly a feeling of insecurity permeates into the lower strata and finally the amount paid as compensation is meager and arbitrary.

3.1 Land Acquisition Act, 1894

The archaic Land Acquisition Act 1894, formulated in the British era, was meant to further their colonial commercial interests. The primary complaint of the civil society against this legislation was that it allowed arbitrary acquisition in the name of _public purpose_ without clearly defining it, thus augmenting the scope of its misuse. The ambiguity of the phrase attracted political discord and litigation. The Supreme Court recently held that “_Public purpose is bound to vary with times and prevailing conditions in the community or locality and, therefore, the legislature has left it to the state (government) to decide what is public purpose and also to declare the need of a given land for the purpose. The legislature has left the discretion to the government regarding public purpose. The government has sole and absolute discretion in the matter._”

The negative impact of such discretion can be exemplified by the _Tata Motor-Singur_ controversy. The Supreme Court had earlier admitted that the expression _public purpose_ was incapable of having a precise definition and had no rigid meaning as the issue underlying each case was whether the acquisition was in the general interest of the community as distinguished from the private interest of the individual. As per the Apex Courts judgment in _Babu Barkya v State of Bombay_, public purpose is any purpose in which “_even a fraction of the community may be interested or by which it may be benefited._” Yet, in _Satya Narain v District Engineer_, it was elucidated that a pure business undertaking though run by the government cannot be classified as public service. If the activity entailed the possibility of being carried on by a private individual, then it would not qualify to be termed as _public purpose_. However some of the common grounds considered as _public purpose_ are the provision of land for planned development from public funds in pursuance of any scheme of the government, provision of land for a corporation owned and controlled by the state and provision of land for any other scheme of development sponsored by the government, or with the prior approval of the appropriate government, by the local authority.

Initially the concerns were raised over the fact that citizens could not question the purpose of acquisition, only the compensation and the route taken to compute the market value fixed for the land. However, with time, increasing governmental interference and subjective compensation became the chief worry. Similarly in the instances of Special Economic Zones land had been usurped from property owners, using the Act, at prices lower than the alleged market value of the properties. This had snowballed into local protest movements against the State Governments. It was also argued that, even in the case of projects which were undertaken genuinely for public purposes, there was a considerable difference between the market value of the property and the value which the land acquisition officer ultimately paid the land owners.

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2. _Daulat Singh Surana & Others v First Land Acquisition Collector & Others_ 2007(1) SCC 641
3. _State of Bihar v Kameshwar Singh_ [1951] AIR [1951], Pat.91
7. Land Acquisition Act, 1894, s 3(d)
Unfortunately projects for construction of golf courses and commercial complexes had also been termed as public purpose¹. The exasperating issue continues to be the extent to which the government shall continue to stoop in order to fulfill the objective of industrialization masked behind altruistic development policies? The case in example is the _Tata Nano-Singur_ project², a prominent controversy that garnered international media attention, when Tata Motors decided to construct a factory manufacturing $2,500 car at Singur. The Communist Party of India-Marxist ruled State Government of West Bengal used the doctrine of eminent domain to capture 997 acres of fertile farmland.³ The justification offered by the government for acting as brokers for private companies was that West Bengal being an industrial graveyard, a morass of economic stagnation, needed fresh investment to revive its economic solidity. They conceived it as an immediate fulfillment of the electoral promises and an initiation towards an escalation in industrial growth rate. However the site allotted was the most fertile and agriculturally productive areas of West Bengal.⁴ Thus law as a tool of legitimized oppression provided the state to take over land for public purposes in the guise of developing private businesses. Even though the Kolkata High Court declared the acquisition prima facie legal, it conceded to the illegality of purpose behind this acquisition. The land earmarked was fenced off by the state administration to prevent protestors from entering and the large contingents of policemen guarding the site were accused of raping and pillaging the villagers, burning them to death. Further the landless labourers and farmers were given inadequate compensation, evicted, and the housing facilities offered were delayed. The population of the subjugated was approximately 15,000 while only jobs for 1000 would be created, most expected to go to outsiders.⁵ The suspicious behavior of the State Government came under scanner when the Chief Minister furnished false information in the Legislative assembly. The concessions given to Tata Motors were not publicly revealed, while false claims of land being acquired through voluntary consent of the owners without the use of force were made.

3.2 Land Acquisition Bill – Boon or Bane?

The Land Acquisition (Amendment) 2007 Bill, along with Rehabilitation and Resettlement Bill, 2007 was designed to address compensation and resettlement of the displaced persons and all such concerns associated with land acquisition. Superficially, the Bills seem to be advantageous, _but on further examination_ the numerous fallacies and uncertain provisions in the Bills that needed to be rectified are identified.

In the case of the Land Acquisition Amendment Bill, the erasure of all references to companies creates a false impression that any acquisition by the state for private parties is being abolished. The original Act is worded _"for a public purpose or for a company"_; the new bill has omitted the words _"or for a company"_ from the long title as well as the preamble of the act but the definition of _"public purpose"_ itself has been changed to include an (ancillary) acquisition for _"a person (including a company, association of persons incorporated or not)"_.⁶ Thus making the modification seem insincere as the rationale behind it was to make the law more public oriented.⁷ If a private party purchases 70 per cent of the required land through negotiation, the balance 30 per cent can still be acquired by the government from unwilling owners, for that party. This implies a sovereign

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² Kenneth Bo Nielsen, _Contesting India's Development? Industrialisation, Land Acquisition and Protest in West Bengal_ (2010) 7(5) Journal of Norwegian Institute of International Affairs and Norwegian Association for Development <http://www.informaworld.com/smpp/content~db=all~content=a922044572~tab=content~order=page> accessed 31 May 2011
³ _Nano Wars_ The Economist (US edition, 30 August 2008)
⁶ Ramaswamy R. Iyer, _Land Acquisition (Amendment) Bill: A slow but sure step forward_, The Hindu (Bangalore, 7 August 2009)
⁷ D. Bandyopadhyaya, _Why We Must Oppose the Land Acquisition (Amendment) Bill, 2009_, (Mainstream, 15 August 2009) <http://www.mainstreamweekly.net/article1586.html> accessed 2 May 2011
compulsion being enacted on those not inclined to sell their land, and consequently the show of state sponsorship for industrial houses can be maintained.\footnote{Subodh Ghidyal, "Even Golf Courses have been built by forcibly acquiring land" \textit{Times of India} (Delhi, 16 May 2011)} This is definitely an improvement from the current legal provision, wherein 100 percent of the land required for a private project can be acquired by the State. Critics of the Bill like Mamata Bannerjee ("TMC"), an ally of the ruling party and Rashtriya Lok Dal leader Ajit Singh, have emphasized that allowing the government to acquire 10-15 percent of the required land after the rest had been brought through free market ought to serve the purpose.\footnote{Ibid} Nevertheless the definition has been widened to include projects for defense purposes and infrastructure.\footnote{PRS Website, Why is Land Acquisition so controversial? < http://prsindia.org/theprsblog/?s=why+is+land+acquisition+so+controversial%3F> accesses 31 May 2011} However, it does not provide any provision that ensures that rural communities are not taken advantage of by corporate bodies in unequal negotiations. It contains a provision for compensation if the land is acquired under urgency without defining the term _urgency_.\footnote{Administrator, "Land Acquisition laws to further Colonial Interests" < http://blog.propertynice.com/land-acquisition-laws-meant-to-further-colonial-interests/?accessed 31 May 2011} The proposed Land Acquisition Compensation Dispute Settlement Authority dealing with compensation issues is a reasonable solution yet maybe not at the cost of a bar on the jurisdiction of the civil courts in these matters.

The objective of the Rehabilitation Bill is to prevent or minimize forced displacement of people by promoting non-displacing or least displacing alternatives. The provision for a Social Impact Assessment ("SIA") seems acceptable, but the calculated impacts have been narrowed down to physical assets like buildings, temples, institutions, etc only. Whereas, social impacts like identity loss; the disappearance of a lifestyle; the breakdown of communities have been ignored. The SIA planned to be reviewed by an independent multi-disciplinary expert body, must also be prepared by a similar body.\footnote{Supra Note 52} To avoid its misuse cases of displacement of people must get clearance from an independent statutory authority and not from the bureaucracy. The clearance must be conditional and revocable in the event of non-compliance or lapses. The perturbing issue remains that implementation of terms like _minimum displacement_ and _non-displacing alternative_ are entrusted to the bureaucracy and are to be used only as a last option.\footnote{R.C .Cooper v. India, AIR [1970] SC 564} On reviewing these bills, it can be safely said that opposition to the bills is warranted and that continues to be the rationale for it not emerging into a reality.

### 3.3 Arbitrary Compensation

Arbitrary compensation has been a cause of much grief and the motive behind local protests. The judiciary has more often than not, locked horns with the government over this issue. The first instance\footnote{Supra Note 13} of challenge was seen in 1951, when the Patna High Court upheld the objection that the differential rates of compensation provided under the land reform legislation, whereby the rates of compensation tapered down as the value of the land went up, were discriminatory. The judiciary extended the definition of amount of compensation to that equivalent to market value of such property, as provided in the Act.\footnote{State of West Bengal v Bella Bannerji AIR [1954] SCC 170} Even when the property was not vested in the state but was merely regulated or its use restricted, thereby depriving the owner of full enjoyment of his property, adequate compensation was to be paid.\footnote{State of West Bengal v Subodh Gopal AIR [1954] SC 92} While in England, it was held that private property could not be acquired without compensation\footnote{Attorney General v De keyser's Royal Hotel [1920] AC 508}, the same principle was reiterated in India.\footnote{R.C .Cooper v. India, AIR [1970] SC 564} According to the much critiqued Act, Section 23 emphasizes that the market value of the property must be

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1. Subodh Ghidyal, "Even Golf Courses have been built by forcibly acquiring land" \textit{Times of India} (Delhi, 16 May 2011)
2. Ibid
3. PRS Website, Why is Land Acquisition so controversial? < http://prsindia.org/theprsblog/?s=why+is+land+acquisition+so+controversial%3F> accesses 31 May 2011
6. Supra Note 52
7. Supra Note 13
10. Attorney General v De keyser's Royal Hotel [1920] AC 508
considered while determining compensation. Section 34 of the Act ensures an interest of 9% per annum if the compensation is not paid before or on possession of land. The interest is calculated from the date of possession till the compensation is paid. If the delay exceeds a year then an interest rate of 15% per annum will be calculated payable from the date of expiry of one year on the amount of compensation or part thereof which is due. It is unfortunate that even with the affirmation of the letter of law and the overt favor by the judiciary, the government and local authorities have managed to deny men their rights of adequate compensation, thus grossly violating basic rights of life, dignity and livelihood of people.

4 Conclusion

Rajiv Kumar, the current Secretary General of Federation of Indian Chambers of Commerce and Industry ("FICCI") observed that, "Politics on Land Acquisition amendment may affect the development of the country." A more accurate statement cannot be made.

To escape the clutches of greed, corruption and blatant disobedience of rules, certain alternatives suggested can be experimented with. Firstly, the issue should be discussed with the different sections of society, especially those affected. An Ombudsman, as was provided in the Rehabilitation and Resettlement Bill, 2007 is a good option. However the term "grievance" that has been narrowly defined to encompass those that are not being offered the benefits, should be widened to include various other factors. For instance non-participatory project decisions taken, failures of consultation, non-compliance with the minimum displacement condition, non-inclusion of a person affected in the 'affected' category, etc. Hence, effective appointment of Ombudsman and its functionalities must be prescribed in both the bills.

Another sound proposal that had been made in the Land Acquisition (Amendment) Bill, 2007 was the provision for the state government to offer sellers a compensation package in two parts: a minimum lump sum amount related to the recent average market value of the agricultural land and an annuity or a monthly pension for the farmers retirement, from an all India trust fund where some shares of the new company are vested. Additionally, the authors believe that jobs for members of the displaced families or at least training or skill development that would enable them to earn a livelihood must be considered.

Further, complete rehabilitation should precede submergence, and the recommendation by the present Rehabilitation and Resettlement Bill, 2007 of "adequate progress in rehabilitation" prior to displacement of thousands, is not acceptable or satisfactory. The vagueness of the word "adequate" will prevent actual progress in rehabilitation thus empowering the bureaucracy with the scope of its misuse. In the event of deliberate or inadvertent lapses or non-compliance or deviations, certain sanctions must be enforced, to prevent future exploitation.

Another unique solution is "land titling", also known as "Torrens Title". Most dislocated farmers do not possess a title over their land, thus facilitating "land grabbing" by the greedy. Establishing a "titling system" is taxing as the title has to be traced back to its original roots, with absolutely no guarantee of final ownership. But the Rural Development Ministry's Department of Land Resources' has drafted "Land Titling Bill 2010" to bring uniformity across the country and replace the existing deeds system fraught with excessive litigation due to inaccuracies in property records.

There is no deficiency in agencies involved in such maintenance but the lack of interconnectivity leads to differing processes of updating of property records, resulting in inaccuracies in the ultimate records. ‘Bhoomi project’ is an example of implementation of this bill, it is an attempt made by Karnataka State Government for computerization of land records. This project funded by the Ministry of Rural Development, Government of India and State Government of Karnataka, is accountable for 20 million land records of 6.7 million land owners in 176 taluks of Karnataka that have been computerized.  

Some of the chief components include – the computer centre responsible for the mutation (change in land title) and updating, using tools like fingerprint authentication and scanning of important documents to ensure vigorous and secured system.  

Lastly, one of the other major objectives of this program is to aid farmers to pursue land concerned litigation in courts. As the government has received much censure for the definition of the term ‘public purpose’, the Land Acquisition (Amendment) Bill 2011 proposes to let the matter be decided by the States.

Also often, projects are abandoned once the land is acquired. This has been illustrated in the case of Birla’s when 750 acres of land had been acquired by the West Bengal Government in the 1950s for an automobile project. But since then only 300 acres have been used. Under the 2011 Bill, if the private project for which the land is acquired is unused for 5 years, then the land reverts to the State. Moreover this will not stop private persons from starting the project to avoid the implementation of this provision and then abandoning it at a later stage. The Bill generously permits the original owners to buy back the land at compensation rates if no progress on the project has been made for five years.

But one wonders if that is really possible. Thus to conclude, optimism prevails as, the government is contemplating the formation of a rehabilitation law and amending the Land Acquisition Act which is an achievement for the landless masses. It has taken more than two decades for the debate to reach this stage. Any opposition made towards the Bills should be cautiously moderated so that there is only progress ahead. Thus even with the demise of Fundamental Right to Property, the hope for the survival of Right to Property continues.

## References


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3 ‘Centre plans to introduce bill on Land Acquisition: Chidambaram’, *(The Statesman, 12 May 2011)*


8 Ibid

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