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Promotion of administrative justice in decision-making on town planning matters

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Abstract:

The aim with the paper will be to compare the processes to adjudicate land use applications, and comments / objections thereon, as prescribed in the various ordinances and acts in South Africa, with the requirements laid down in the Promotion of Administrative Justice Act. Reason for this being that it is the submission that processes followed by municipalities when adjudicating land use applications not always adheres to the requirements of the Promotion of Administrative Justice Act – thereby not adhering to Constitutional requirements.

Keywords:

Planning law, administrative justice, South Africa Constitution, South Africa planning laws and ordinances

1 Introduction

The purpose with this paper is to investigate the effect and implications of the provisions of the Promotion of Administrative Justice Act, Act 3 of 2000 on procedures and decision-making processes followed by administrative organs of state, with specific reference to local government, when taking decisions on town planning matters.

In order to address this, attention will be given to the following matters, namely:

▷ Constitutional provisions on administrative justice;
▷ Provisions of the Promotion of Administrative Justice Act;
▷ Administrative arrangements in town planning legislation;
▷ Cases serving as examples;
▷ Practical examples; and
▷ Proposals / Conclusion.

2 Constitutional provisions on administrative justice

Section 33 of the Constitution of the Republic of South Africa, Act 108 of 1996 (Constitution) deals with just administrative action. The Section reads as follows:

33(1) Everyone has the right to administrative action that is lawful, reasonable and procedurally fair.
(2) Everyone whose rights have been adversely affected by administrative action has the right to be given written reasons.

(3) National legislation must be enacted to give effect to these rights, and must
   a. Provide for the review of administrative action by a court or, where appropriate, an independent and impartial tribunal;
   b. Impose a duty of the state to give effect to the rights in subsections (1) and (2); and
   c. Promote an efficient administration.

This paper concentrates on the impact and/or influence of the right to lawful, reasonable and procedurally fair administrative action.

Section 33 of the Constitution is part of Chapter 2: Bill of Rights. It is therefore clear that just administrative justice is a basic human right in terms of the Constitution.

Section 33 – or the right to lawful, reasonable and procedurally fair administrative action - can also be classified as a first generation of human rights. This implies that this right’s function is to protect individuals against the State and the misuse of powers by the State. Against this background it is clear that the provisions of this Section should have an important influence on administrative actions being part of approval processes in town-planning matters.

3 Provisions of the Promotion of Administrative Justice Act, Act 3 of 2000

It is important to note that prior the commencement of the Promotion of Administrative Justice Act (‘the PAJA’), challenges to the validity of administrative action were constitutional challenges, based on the rights to administrative justice in the Bill of Rights.

The enactment of the PAJA gives effect to the constitutional rights referred to in Section 33 of the Constitution. The effect of this being that the PAJA makes these rights effective by providing an elaborated and detailed expression of the rights to just administrative action and providing remedies to vindicate them.

According to the long title of the Promotion of Administrative Justice Act (Act 3 of 2000), this act was enacted in order to give effect to the right to administrative action that is lawful, reasonable and procedurally fair and to the right to written reasons for administrative action as contemplated in Section 33 of the Constitution.

Further to this, it is also mentioned in the preamble to the Act that the aim with the act is to create a culture of accountability, openness and transparency in the public administration or in the exercise of a public power or the performance of a public function, by giving effect to the right to just administrative action.
In this regard ‘administrative action’ is defined as any decision taken, or any failure to take a decision, by:

(a) an organ of state (defined below), when:
   (i) exercising a power in terms of the Constitution or a provincial constitution; or
   (ii) exercising a public power or performing a public function in terms of any legislation; or

(b) a natural or juristic person, other than an organ of state, when exercising a public power or performing a public function in terms of an empowering provision, which adversely affects the rights of any person and which has a direct, external legal effect.

As indicated above, the definition of ‘organ of state’ is also of importance. ‘Organ of state’ is defined in Section 239 of the Constitution as:

(a) any department of state or administration in the national, provincial or local sphere of government; or

(b) any other functionary or institution-
   (i) exercising a power or performing a function in terms of the Constitution or a provincial constitution; or
   (ii) exercising a public power or performing a public function in terms of any legislation,
       but does not include a court or a judicial officer.

Procedurally fair actions are one of the cornerstones of this Act. In this regard ‘procedurally fair administrative action’ is defined as administrative action which materially and adversely affects the rights or legitimate expectations of any person and this must be procedurally fair. It is further stated that in order to give effect to the right to procedurally fair administrative action, an administrator, must give a person adequate notice of the nature and purpose of the proposed administrative action; a reasonable opportunity to make representations; a clear statement of the administrative action; adequate notice of any right of review or internal appeal, where applicable; and adequate notice of the right to request reasons in terms of section 5.

The issues of importance for this paper are the following, relating to town planning matters being considered:

In deciding a town planning matter, whether in terms of national or provincial legislation, or in terms of an Ordinance, administrative action is taking place.

In most cases referred to, these administrative actions are taken by an organ of state since a municipality is considered to be an organ of state, as defined above.
Since applications are made to ‘organs of state’, the applicants are entitled to ‘procedurally fair administrative actions’ when decisions on such applications are taken.

4 Administrative arrangements in town planning legislation

Town Planning legislation, such as the various ordinances, with specific reference to the Transvaal Town Planning and Townships Ordinance, as well as the Development Facilitation Act, also deals to some extent with the issue of administrative justice. In these cases there are specific references to actions required as and when decisions on town planning matters are to be taken.

The following extracts are of importance, namely from the:

- Town Planning and Townships Ordinance;
- Gauteng Planning and Development Act;
- Gauteng Removal of Restrictions Act;
- Development Facilitation Act; and
- Practical examples.

4.1 Town Planning and Townships Ordinance (Ordinance 15 of 1986)

Section 56(9) of the Town Planning and Townships Ordinance, where rezoning applications are dealt with, is of importance for this paper. This section deals with the evaluation of applications and in this regard it is stated that:

‘having considered the application in terms of subsection (8) (of the Ordinance), the authorized local authority may:

(a) approve the application subject to any amendment which it may, after consultation with the applicant, deem fit or refuse it; or
(b) postpone a decision on the application, either wholly or in part.

In this instance the authorized local authority is considered to be the organ of state, and the action to be taken, namely considering the application, is viewed to be the administrative action.

In Section 56(10) it is provided that the authorized local authority shall without delay and in writing notify the applicant, an objector or any person who has made representations, of its decision.

Although this Ordinance was enacted in 1986, it is important to note that Section 56 provides for fair administrative action by means of the provision that an application may approve an application, only after consultation with the applicant. Therefore a procedurally fair administrative action is provided for.

Whether this is taking place in practice remains another question.
4.2 **Gauteng Planning and Development Act (Act 3 of 2003)**

Chapter 2 of the Gauteng Planning and Development Act deals with principles for development. In this regard Section 9(1) specifically refers to principles on administrative fairness, decision-making and dispute resolution. In this regard it is stated that:

9. (1) Policy, administrative practice and law shall ensure that administrative procedures are lawful, reasonable and fair, by:
   a. providing clear laws and procedures and access to information for those who are likely to be affected by it;
   b. promoting trust and acceptance among those likely to be affected by it; and
   c. giving further content to the fundamental rights as set out in the Constitution.

(2) Planning and development procedures and decisions made by an organ of state shall be consistent with the general principles of this Act and adhere to the provisions of the Promotion of Administrative Justice Act, 2000 (Act 3 of 2000).

Specific reference is therefore made in this Act that procedures and decision-making should be in accordance with the provisions of the Promotion of Administrative Justice Act, and therefore also be in line with Section 33 of the Constitution.

Although this Act was enacted it is not yet in operation since the Regulations have not yet been finalised.

It is, however, clear that provision should be made in the Regulations for procedurally fair administrative action, since direct reference is made to constitutional provisions on this matter.

4.3 **Gauteng Removal of Restrictions Act**

In this Act, in terms of which applicants can apply for the removal of restrictive title conditions and/or the rezoning of a property, an application procedure is prescribed.

According to this, all applications should be published in the press as well as on-site, whereby persons wishing to, can object against applications. When objections have been received the local authority should inform the applicant of objections received, and provide the applicant with an opportunity to react on these, where applicable.

4.4 **Development Facilitation Act (Act 67 of 1995)**

Referring to administrative justice, as provided for in the Development Facilitation Act, Section 35 is of importance. This Section deals with the amendment of land development applications and conditions of establishment; division of land development areas; and the
continuation of land development applications by another land development applicant. According to this Section:

(a) a land development application may be amended;
(b) any condition of establishment may be amended or deleted;
(c) a land development area may be divided into two or more land development areas; and
(d) another land development applicant may continue with the land development application in the place of the original or a subsequent land development applicant.

It should be noted that in accordance with the above an applicant is entitled to request an amendment to an application any time during the hearing process. This possibility provides a measure of flexibility and a wise applicant would by no doubt make amendments during the course of a difficult hearing in order to procure an approval of the amended application.

A further issue of importance for administrative justice is that the applicant and interested or affected parties, also known as objectors, are provided the opportunity to attend both the Pre-Hearing Conference, as well as the Hearing itself. Regulation 21(24) provides that the applicant and every person intending to appear at the tribunal hearing must attend the pre-hearing conference. During the pre-hearing conference the various parties, if there are objectors, should, amongst others, attempt to reach consensus on issues such as means by which disputes may be settled and identify facts which are common cause and in dispute.

**4.5 Practical examples**

Local and Metropolitan Municipalities, as established in accordance with the Constitution, adopts policies for consideration of land use applications within their specific areas of jurisdiction.

In most cases a Committee of Council, specifically dealing with town-planning or related matters, is responsible for this function. In order to give effect to the *audi alterem partem*-dictum the ideal should be that the following parties be present when any application not in line with policy, or where objections have been received, should be present, namely the applicant, the objectors and the Committee. In this regard the objectors can either be interested and affected parties, or, where officials contest the application, be the relevant officials at the municipality. The applicant should be afforded to state his case, then the objectors can raise their issues of concern, after which the applicant can once again reply. Thereafter the Committee of Council should be in a position to make an informed decision on the matter.

This ‘ideal’ situation is, however, not always applied.
Examples exist where the views of the officials on an application are not expressed to the Committee of Council during a town-planning hearing. The effect of this being that the applicant is not afforded an opportunity to reply to Council on the views expressed by officials.

In other instances applications are refused if not 100% in line with Council policy. Applicants are not afforded the opportunity to present their views to Council on such issues.

It is clear, as will also be outlined in the next section, that the above examples is not in line with the objectives of the Constitution or the PAJA.

5 Administrative justice as per cases

In this case specific reference is made to the following case, namely South African Heritage Resources Agency (SAHRA) v Arniston Hotel Property1.

In this application the applicant (SAHRA) sought an order, under Section 29(1) of the National Heritage Resources Act 25 of 1999 (‘Heritage Act’), interdicting the respondents (Arniston Hotel) from continuing with building work on the hotel owned and operated by the respondents. The respondents contended that the provisional protection order was invalid on several grounds. For this paper the important one being that the procedure that had been adopted before the making of the decision to issue the order was not procedurally fair because the respondents had not been afforded an opportunity to be heard before the decision to issue the order was made.

In deciding the matter the Court held that while the procedure prescribed in Section 29 of the Heritage Act for the issuing of a provisional protection order did not require the owner of the property to be consulted prior to the issuing of the order, Section 10 of the Heritage Act gave effect to the provisions of Section 33(1) of the Constitution of the Republic of South Africa, 1996, which enshrined the right to administrative action which was lawful, reasonable and procedurally fair.

It was further held that fairness sometimes required that a person who might be adversely affected by a decision be granted the opportunity to make representations before the decision was made.

One of the issues of discussion was that once a decision was taken the applicants would not be able to apply for a new permit within a period of two years from issuing of the decision. Therefore, when the timing of the order was considered, the respondents had been entitled to be heard prior to the making of the decision to issue the order.

It was also held that the applicant's conduct also constituted administrative action and failed to meet the standards for procedurally fair administrative

1 South African Heritage Resources Agency v Arniston Hotel Property (Pty) Ltd and Another 2007 (2) SA 461 (C)
action set out in Sections 3(1) and (2) of the PAJA, including a reasonable opportunity to make representations and adequate notice of any right to an internal review and of the proposed period of the order.

It was finally held that the applicant's conduct failed to comply with the provisions of Section 10 of the PAJA in that the respondents were denied the right of appearance at the meeting at which the executive committee of the local authority made the decision to issue the order.

Of importance for this paper is that it was held that, in the particular circumstances of the present case, the respondents had been entitled to a hearing prior to the making of the decision to issue the order and, in not affording them that right, the decision was not procedurally fair.

It is clear that the Heritage Act does not specifically provides for an opportunity for a hearing, but that, according to the findings in this case, it was the view of the Court that the respondents should have been provided with the opportunity to present their case to SAHRA before a decision on the matter was taken.

6 Proposals

As indicated above certain town planning acts does not provide specifically for a hearing procedure to be followed. Further to this, procedures adopted by certain councils do not provide applicants, and in some cases even objectors, with a reasonable and fair opportunity to present their cases to the meeting.

In this instance reference to the Arniston-case is of importance. As pointed out above, it was, amongst others, held that, although the Heritage Act does not specifically provides for an opportunity for a hearing, it was the view of the Court that the respondents should have been provided with the opportunity to present their case to the organ of state to decide on this matter, before a decision on the matter was taken.

As pointed out above, the Town Planning and Townships Ordinance of 1986 does not specifically refers to the 1996-Constitution since it was enacted prior to that. Therefore the question could be raised whether provision should be made in municipal processes for hearings and/or interviews before a municipality takes a decision on town planning matters.

It is clear from this paper that a municipality is, as provided for in the PAJA, an organ of state and is therefore bound by the provisions of the PAJA. This was also clearly pointed out in the Arnison-case where the Act did not provide for certain administrative actions, but the Court was of the view that the provisions of the PAJA should be applied.

Back to the practical question – an application was made for the rezoning of a certain land parcel and Council is not in support of this, or there are objections against this – what procedure should be followed? The following should address this:
a) The applicant is entitled to a ‘procedurally fair administrative action’;
b) In addition to this, if there are objectors or parties opposing the application, they are also entitled to the same; and
c) In accordance with the provisions of the PAJA and the relevant Act or Ordinance, provision should be made for such hearing to take place.

Further issues could be raised as to what will be considered to be fair procedural administrative action. For the purpose of this, it is proposed that the *audi alteram partem*-rule should be applied – therefore both parties cases / representations should be heard and only after that a final decision could be made. Therefore, in practical terms the applicant should be provided an opportunity to present his / her case, thereafter the objector should be provided to do the same, and, in cases where municipal officials hold their view on a matter, they should also be afforded an opportunity to present their case. After this, the applicant should be provided an opportunity to respond, and then the municipal council / committee thereof should be in a position to take a decision on the matter.

7 Conclusion

It is clear that the Constitution, as well as the PAJA provides in no uncertain terms for procedurally fair administrative action to be taken when deciding on matters.

It was also pointed out that the fact that an act or Ordinance does not specifically provide for procedurally fair administrative action, the Arniston-case addressed this matter and pointed out that respondents should be provided with the opportunity to present their case to a decision-making body before a decision on a matter is taken. This is not only by means of a formal application lodged, but by means of a hearing / meeting where issues could be clarified.

8 References

8.2 Promotion of Administrative Justice Act, Act 3 of 2000
8.3 Town Planning and Townships Ordinance, Ordinance 15 of 1986
8.4 Gauteng Planning and Development Act, Act 3 of 2003
8.5 Gauteng Removal of Restrictions Act, Act 3 of 1996
8.6 Development Facilitation Act, Act 67 of 1995
An investigation of the factors influencing dispute frequency in construction projects

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Abstract:
Management of disputes is one of the most important processes that determine the performance of a construction project, and successful management of disputes depends highly on a well understanding of the factors influencing the occurrence of disputes. Although the topic of dispute resolution has been widely discussed in the literature, few studies have been conducted with respect to the identification of the interrelations between disputes and project factors based on empirical data. In this study, an analysis is made of quantitative data obtained from a survey with fifty project managers who are working in on-going projects in Turkey. The findings reveal the interrelations between frequency of disputes and thirteen factors regarding the project, project manager and the upper management.

Keywords:
Construction industry, correlation analysis, frequency of disputes.

1 Introduction

The importance of the construction sector in national economies has often been touched on in the literature. Kumaraswamy (1998) explained the special attention the construction industry attracted with being the only manufacturing industry where the ‘factory’ goes to the customer’s site and the uniqueness of each product, stressing the need for re-tracing the roots of industry problems regularly due to the ever-changing conditions. These features require extensive and continuous research on each and every process of construction for an overall performance improvement in the industry. Dispute management is one of these important and complex processes that determine the performance of the projects and consequently the industry.

Almost all researchers in the field agree that disputes are inevitable and may become destructive in the construction projects. Ellis and Baiden (2008) stated that disputes between project participants have been identified as the principal causes of poor performance in construction projects and that disputes very often lead to prolonged delays in implementation, interruptions and sometimes suspensions. Matyas et al (1996) drew attention to the substantial dilution of effort, delays, and diversion of capital arising from the large number and magnitude of disputes between contractors and
clients in construction. Chan and Suen (2005) listed the detrimental effects of construction disputes as project delays, undermining the team spirit, increase in project costs, and, above all, damaging business relationships.

In this context, a better understanding of the interrelations between disputes and the factors related to the project, project manager and the upper management is invaluable. However, despite the fact that dispute resolution has been a widely discussed topic in the literature, few empirical studies have been conducted with respect to identification of these interrelations in order to justify the theories suggested in the literature.

This paper presents principal findings of a survey carried out in 2009 among fifty project managers in the Turkish construction industry and tracks the factors influencing the frequency of disputes in construction projects. Despite limitations of coverage, the determination of these patterns is seen to suggest managerial strategies for preventing the avoidable disputes.

2 Construction Disputes

The difference between conflict and dispute is often unclear, and these two terms have been used interchangeably especially in the construction industry (Acharya et al., 2006). However, according to Fenn et al. (1997) the terms ‘conflict’ and ‘dispute’ are two distinct notations.

Kumaraswamy (1997) described the necessary semantic differentiation between conflicts, claims and disputes in the context of construction. While disagreements or differences of opinion lead to conflict, such conflict could be beneficial in generating alternatives, thus conflict management would seek to encourage such constructive conflict, while curtailing destructive conflicts that could involve personality clashes or assertions of a non-negotiable nature.

Citing Powell-Smith and Stephenson (1994), Kumaraswamy (1997) described claim as an assertion of a right to money, property or a remedy which includes ‘extension of time’ in construction. Disputes, on the other hand, are defined as rejection of claims or assertions made by one party where this rejection is not accepted in return.

Rubin et al (1992) stated that the scenario for construction disputes is invariably written right into the contract documents long before men and machines reach the job site and conditions for disputes have often been signed by both parties. For instance, procurement type, method of payment, finance or the contract type affects the frequency of the disputes as well as the types of disputes that occur in a project.

3 A Study of Construction Disputes

The unit of analysis in this research was the construction project. Data were collected through a questionnaire directed to fifty respondents consisting of engineers and architects working as project managers in on-going projects in Turkey, each with a contract amount of 1 Million USD or over.
3.1 The Sample
Quota sampling method was adopted in the study with the aim of obtaining as closest results to population as possible, where ‘project type’ and ‘ownership’ was used to determine the segments. Quotas for the sample were calculated from the volumes of segments determined in the population, which were obtained from The Building Information Centre On-going Projects Report (2008). The survey questions were prepared based on preliminary semi-structured interviews undertaken with 35 contractors, whose findings were previously reported (Ilter and Dikbas, 2009).

3.2 Variables and Measures
The first set of variables was designed to provide data on several aspects of the projects investigated as well as the project managers and their firms. These are procurement type, method of payment, project type, ownership, finance, contract type, project value, project duration, professional experience of the project manager, firm age, the openness of the upper management to alternative dispute resolution processes, number of partners acting as main contractor in the project and firm size.

The second set involves dispute frequency and dispute types occurred in the projects based on the judgement of the managers of the projects investigated. The findings regarding the factors influencing dispute frequency is given in the next section, however, those on the dispute types will be discussed in a separate study.

The interrelations between the first set of variables and the second set of variables are analysed by descriptive statistics and correlation analysis depending on the level of measurement. Average collective ratings for each item were calculated by computing the arithmetic means in each category. This research methodology is potentially applicable for benchmarking studies and can serve to elicit regime-specific patterns in different countries (Kumaraswamy, 1998).

4 Analysis of Data
Table 1 shows the result of the analysis of the first set of variables in the projects investigated. It can be seen that the sample is quite balanced in terms of its distribution over the categories of the variables related to projects, project managers and their firms.

In project duration, category ‘1-2 years’ dominate the sample, however this is understandable since most of the construction projects’ duration are in this range. A similar result is obtained with the ‘number of partners acting as main contractors in the project’ variable. Category ‘1’ dominate the sample and this is also understandable since most of the construction projects’ are undertaken by a single main contractor (instead of partnerships such as joint ventures).

The distributions over the categories of project type and ownership variables reflect the segments in the population as explained in Section 3.1. The interrelations between the first set of variables and the second set of variables is discussed below.
Table 1. Profiles of the projects, project managers and firms analysed

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Value (Million USD)</td>
<td>1-10</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>11-50</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>51-100</td>
<td>4</td>
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<td></td>
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<tr>
<td>Procurement type</td>
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<td></td>
<td>Design-Build</td>
<td>19</td>
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<tr>
<td>Method of payment</td>
<td>Unit price</td>
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<tr>
<td></td>
<td>Lump-sum</td>
<td>27</td>
</tr>
<tr>
<td>Project type</td>
<td>Residential projects</td>
<td>18</td>
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<tr>
<td></td>
<td>Institutional projects</td>
<td>13</td>
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<tr>
<td></td>
<td>Commercial projects</td>
<td>10</td>
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<td>Engineering / Transportation projects</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Industrial projects</td>
<td>5</td>
</tr>
<tr>
<td>Project duration</td>
<td>&lt;1</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>1-2</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>2-3</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>&gt;3</td>
<td>9</td>
</tr>
<tr>
<td>Number of partners acting as main contractor in the project</td>
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<td>Finance</td>
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<td></td>
<td>Partnership</td>
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<tr>
<td>Firm age</td>
<td>1-5</td>
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<td>8</td>
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<td></td>
<td>11-15</td>
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<td></td>
<td>16-20</td>
<td>3</td>
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<tr>
<td></td>
<td>&gt;20</td>
<td>20</td>
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<td>The openness of the upper management to alternative dispute resolution processes</td>
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<td></td>
<td>Open</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Very open</td>
<td>15</td>
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<tr>
<td>Firm size (annual turnover in Million Turkish Lira)*</td>
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<td>15</td>
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<td>50-50</td>
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<td></td>
<td>Private</td>
<td>15</td>
</tr>
<tr>
<td>Professional experience of the project manager</td>
<td>1-5</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>6-10</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>11-15</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>16-20</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>&gt;20</td>
<td>12</td>
</tr>
</tbody>
</table>

Figures 1-6 shows the average frequency of disputes based on procurement method, method of payment, project type, ownership, finance and contract type.
Figure 1. Average frequency of disputes by procurement method

Figure 1 shows that disputes occur 8% more frequently in ‘design-build’ procurements compared to ‘build’ procurements.

Figure 2. Average frequency of disputes by method of payment

Similarly, Figure 2 shows that ‘lump-sum’ payment causes dispute occurrences 9% more frequently compared to ‘unit price’ payments.

Figure 3. Average frequency of disputes by project type

Figure 3 shows the average frequency of disputes by project type. The analysis shows that industrial projects cause far more disputes than residential, institutional, transportation/engineering and commercial projects. The dispute occurrence in
residential, institutional and transportation/engineering projects are very close, whereas there are less disputes in commercial projects.

Figure 4. Average frequency of disputes by ownership
Figure 4 shows that disputes occur 7.5% more frequently in public projects compared to private projects.

Figure 5. Average frequency of disputes by finance
Figure 5 shows that financing the project with a bank credit causes disputes to occur more frequently compared to partnerships or using equity capital. This is quite predictable, given the extra pressure of credit payments on time and budget.

Figure 6. Average frequency of disputes by contract type
Figure 6 shows the average frequency of disputes by contract type. This analysis shows that World Bank (WB) standard contracts cause more disputes than other types of contracts. However, there is a strong possibility that this figure may change if a larger sample is analysed, since there are very few WB projects in the projects analysed. The frequency of disputes in other contract types are close, however, government contracts used in public, municipality and housing works are found to cause more disputes than private (where no standard form of contracts are used) and FIDIC contracts.

Table 2. Correlation between variables

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Project size</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Project duration</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 PM experience</td>
<td>0.2912**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Firm age</td>
<td>-0.0584</td>
<td>-0.2175</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Openness of the upper management</td>
<td>0.1822</td>
<td>0.1980</td>
<td>-0.1495</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 No of partners</td>
<td>0.7407***</td>
<td>0.0802</td>
<td>-0.1886</td>
<td>-0.0626</td>
<td>-0.0860</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7 Firm size</td>
<td>0.3172**</td>
<td>0.5117***</td>
<td>-0.1929</td>
<td>0.4359***</td>
<td>-0.2940</td>
<td>0.1971</td>
<td>1</td>
</tr>
<tr>
<td>8 Frequency of disputes</td>
<td>0.1741</td>
<td>0.3223**</td>
<td>-0.0627</td>
<td>0.2019</td>
<td>-0.2571*</td>
<td>0</td>
<td>0.4353***</td>
</tr>
</tbody>
</table>

*Signif. LE .1  ** Signif. LE .05  ***Signif. LE .01 (2-tailed)

The intercorrelations matrix of the variables in the study is reported in Table 2. There are expected results of correlation in between the first set of variables. For example, it can be seen that the higher the project size, the higher the project duration, the number of partners and the firm size. There is also a positive association between the project duration and the firm size. Not surprisingly, firm size and firm age also seem to have a quite high positive correlation.

It is interesting to note that there is a significant negative correlation between the frequency of disputes and the openness of the upper management to alternative dispute resolution processes. This finding might show that some of the disputes are avoided or resolved in their early stages by alternative dispute resolution methods in some of the projects. Another noteworthy finding is the significant positive correlation between the frequency of disputes and the size of the contractor organisation. This finding might show that larger contractors defend their positions in disputes more unreservedly compared to smaller contractors, who tend to endure the disputes resolutely just to maintain their relationships with the employers. It can also be seen in Table 2 that there is a significant correlation between the frequency of disputes and the project duration. This is understandable given that longer projects are more complex in many aspects and it gets harder to keep up with the schedules as time passes. However an analysis on the
types of disputes occurred in the projects is required to understand what factors cause which types of disputes.

5 Conclusion

Based on the findings of a survey carried out in 2009 among project managers in the Turkish construction industry, this paper discusses the interrelations between the frequency of disputes and thirteen factors regarding the project, project manager and the upper management. The influence of these factors on the frequency of disputes was explored through descriptive statistics and correlation analysis depending on the level of measurement. As far as the frequency of disputes in a project is concerned, it was found that ‘design build’ procurement method causes 8% more disputes compared to ‘build’; ‘lump-sum’ payments cause 9% more disputes compared to ‘unit-price’; industrial projects cause more disputes compared to other types of projects, public projects cause 9% more disputes compared to private owned projects; financing the project with a bank credit causes more disputes compared to partnerships or using equity capital and government contracts used in public, municipality and housing works are found to cause more disputes compared to private (where no standard form of contracts are used) and FIDIC contracts.

As a result of the correlation analysis, it was found that the frequency of disputes in a project is positively correlated with the size of the contractor organisation and negatively correlated with the openness of the upper management to alternative dispute resolution processes. Another noteworthy finding is the significant correlation between the frequency of disputes and the project duration. This may be explained with the fact that longer projects are more complex in many aspects and it gets harder to keep up with the schedules as time passes. However an analysis on the types of disputes occurred in the projects is required to understand what factors cause which types of disputes.

An empirical analysis of the common types of disputes and the interrelations between the types of disputes with the factors regarding the project, project manager and the upper management will be presented as a further research.

6 References


Has Mission Drift rendered Statutory Adjudication in NSW open to valid criticisms?
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Abstract:

In recent years, the NSW courts have decided that claimed amounts under the NSW Building and Construction Industry Security of Payment Act 1999 may include items for delay damages. This was not the original intent of the Act and, as such, represents mission drift. This paper reviews the key decisions which have led to this mission drift, and considers criticisms which have been levelled at the Act in the light of such drift from the legislative intent. It is concluded that the criticisms are only valid due to the occurrence of mission drift and, therefore, the drift must be corrected by the courts or Parliament if the effectiveness of the Act and respect for its adjudication scheme are not to be eroded.

Keywords: Security of Payment, Statutory Adjudication, Mission Drift, New South Wales

1 Introduction

New South Wales (NSW) was the first Australian jurisdiction to enact security of payments legislation¹ which came into force on 26 March 2000. Initially, the Act proved ineffective primarily due to the original option provided for a respondent to an adjudication to provide security by way of guarantee² to the successful claimant in lieu of payment, pending the final determination (e.g. by arbitration or litigation) of the matters in dispute between the parties. However after the 2002 amendments to the Act³ corrected this problem, the uptake of statutory adjudication was rapid for the first 3 years (see Table 1) before dropping off.

² For example, by way of an unconditional promise by a recognised financial institution to pay to the claimant; or, by payment of the adjudicated amount into a designated trust account – see s 23(2) of unamended NSW Act.
³ Which came into force on 3 March 2003.
Despite the statistical evidence pointing to significant use of the statutory adjudication process in the NSW construction industry, the NSW legislative model has been criticised in some quarters as an undesirable alternative with many unintended and inequitable consequences. Additionally, it has been suggested that, conceptually, the equivalent construction industry payments legislation subsequently enacted in Western Australia (WA) and the Northern Territory (NT) is preferable (Stenning & Associates 2006: 39).

<table>
<thead>
<tr>
<th>Time period</th>
<th>Amounts claimed in adjudication</th>
<th>Average Amount Claimed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003(^7)</td>
<td>$178,238,581.77</td>
<td>$369,789.59</td>
</tr>
<tr>
<td>2004</td>
<td>$279,244,827.79</td>
<td>$355,273.32</td>
</tr>
<tr>
<td>2005</td>
<td>$867,026,763.99</td>
<td>$945,503.56</td>
</tr>
<tr>
<td>2006</td>
<td>$539,447,779.72</td>
<td>$586,994.32</td>
</tr>
<tr>
<td>2007</td>
<td>$263,230,279.20</td>
<td>$294,441.03</td>
</tr>
<tr>
<td>2008</td>
<td>$187,034,896.53</td>
<td>$198,973.29</td>
</tr>
</tbody>
</table>

This paper proposes that the criticisms levelled at the NSW model are only valid in the context of mission drift occurring from the initial objective of the legislation. Mission drift has been defined by Kennedy and Milligan (2007: 1) as:

a phrase often used to describe a tendency for the apparatus set up to tackle a specific task, to change over time to expand the range of tasks being addressed or indeed to address related but different tasks.

Mission drift in NSW has occurred in recent years due to the courts allowing adjudicators’ determinations to include monetary amounts for items of delay damages.

In other words, it is proposed that the criticisms of the NSW model would not be valid if the NSW courts had adhered to the more limited definition of the term ‘claimed amount’ in the Act when appraising the suitability of the prescribed adjudication procedure.

As such, this paper will, firstly consider the object of the Act in more detail. A consideration will then be made as to whether any mission drift has occurred from this object. Next, the criticisms levelled at the NSW statutory adjudication scheme will be

\(^4\) See Master Builders South Australia (2008: 2)
\(^5\) Construction Contracts Act 2004 (WA).
\(^6\) Construction Contracts (Security of Payments) Act 2004 (NT).
\(^7\) Reporting commenced 3 March 2003.
reviewed in light of any drift identified from the legislative object and parliamentary intent.

2 The Object and Intent of the NSW Act

The object of the 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.\(^8\)

The definition of "claimed amount" under s 4 of the Act is “an amount of a progress payment claimed to be due for construction work carried out, or for related goods and services supplied…”.

Under s 8 of the Act, a person who has undertaken to carry out construction under a construction contract or supply related goods and services under the contract is entitled to a progress payment. According to s 13(2)(a), the payment claim must identify the construction work, or related goods and services, to which the progress payment relates.

The object of the Act, thus, clearly relates to the swift recovery of progress payments by a claimant contractor. As such, the Act intends that claims brought to statutory adjudication be restricted to issues regarding valuation of construction work carried out, and/or goods and services supplied, under a construction contract during a payment period.

S 5 of the Act defines “construction work” under the Act, and s 6 defines “related goods and services”. All items of construction work described under s 5 are physical forms of construction, such as construction/repair of buildings, laying of foundations, and erection of scaffolding. All items of related goods and services described under s 6 are goods and services necessary for physical construction to take place, such as building materials, plant, architectural design and surveying.

The valuation of payment claims under the Act mirrors that provided in the construction contract agreed between the parties by virtue of s 9(a), which provides that the amount of a progress payment to which a person is entitled in respect of a construction contract is to be the amount calculated in accordance with the terms of the contract.

Therefore, as with contractually certified progress payments, adjudicated determinations of payment claims under the Act should not generally include amounts for debts and damages for which there is no express and immediate contractual entitlement. This applies equally to the contractor’s claims for damages or debts (e.g. delay and disruption costs) and any claims for damages or debts which the principal may attempt to set off against the payment claim (e.g. liquidated damages).

\(^8\) S 3(1) of the NSW Act.
In accordance with the object, the Act only permits claims to be made in statutory adjudication in one direction only, from the contractor or supplier to the principal. If the Act had intended for debts and damages associated with construction contracts to be determined in adjudication, then equitable considerations would dictate that the Act allow for claims to be made in both directions, both down the contractual stream as well as up.

Considering its object, Davenport (2007: 13) views the role of the adjudicator under the Act as mirroring that of the independent contractual certifier under a construction contract and, therefore, terms statutory adjudication under the Act as the ‘certification process’. The certification process ensures that the objective of the Act is fulfilled by, as Davenport (2007: 13) puts it:

ensuring that the person carrying out construction work or providing related goods and services is able to have the amount of progress payments decided quickly by an independent certifier and is able to obtain judgment for that amount.

Being in a certification role, therefore, it may be argued that an adjudicator under the Act is reasonably required to have expert knowledge about the construction process, contract administration and valuation of construction works – as would a certifier under a construction contract, a role often carried out by an architect or engineer. However, as a certifier, the adjudicator would not be expected to be an expert in the law acting in a judicial or quasi-judicial role.

According to Davenport (2007: 14), however:

Even when the adjudication is under a certification process, the courts see adjudication in their own image and consequently have regarded the role of an adjudicator as similar to the role of a judge, a magistrate or an arbitrator rather than a certifier.

It is this failure to distinguish between the certifier and quasi-judicial roles which led to mission drift in the Act shortly after it was first enacted and again in more recent times with respect to allowing claims for delay damages to be the subject of an adjudicator’s determination.

3 Mission Drift of Statutory Adjudication

Kennedy and Milligan (2007) reviewed mission drift in statutory adjudication particularly with respect to the UK Act. They found that the original mission of statutory adjudication in the UK, that of dealing with payment disputes to allow cash to flow, had drifted to a situation where statutory adjudication was being used for large and complex disputes likely not envisaged by Parliament (Kennedy and Milligan, 2007: 12). Such disputes involved large value contracts, contracts with many issues of a valuation, loss and expense and extension of time. According to Kennedy and Milligan (2007: 7) the use of adjudication for such disputes was encouraged by support from the courts for the upholding of adjudicators’ determinations notwithstanding containing errors of law and/or fact.

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*Housing Grants, Construction and Regeneration Act 1996.*
In NSW, Kennedy and Milligan (2007: 13) identified that mission drift had initially occurred in relation to the Act “as a result of judicial hostility (Uher and Brand 2007) as the courts found it radically different from anything they had experienced previously”. Drift, therefore, occurred in that the legislative objective was prevented from occurring by the courts allowing judicial review of adjudicators’ determinations which contained errors of law on the face of the record. This raised a question mark as to the validity of adjudicators’ determinations generally, and thereby faith in the statutory adjudication process as a whole, due to the high potential for errors of law in determinations made by adjudicators, who are not typically legally trained, within a restricted timeframe of only 10 business days under the Act.10

The NSW Court of Appeal’s decision in Brodyn Pty Limited T/as Time Cost and Quality v. Davenport & Anor,11 however, corrected the initial drift in NSW. Brodyn established that an adjudicator’s determination should not be held up to the same level of scrutiny as that of a judicial body. As such, Brodyn laid down five basic and essential requirements of the Act for the existence of a valid adjudicator’s determination as follows:12

1. The existence of a construction contract between the claimant and the respondent, to which the Act applies (ss.7 and 8).
2. The service by the claimant on the respondent of a payment claim (s.13).
3. The making of an adjudication application by the claimant to an authorised nominating authority (s.17).
4. The reference of the application to an eligible adjudicator, who accepts the application (ss.18 and 19).
5. The determination by the adjudicator of this application (ss.19(2) and 21(5), by determining the amount of the progress payment, the date on which it becomes or became due and the rate of interest payable (ss.22(1)) and the issue of a determination in writing (s.22(3)(a)).13

Therefore, errors of law concerning the more detailed provisions of the Act and construction contract no longer have the potential to invalidate the adjudicator’s determination in NSW.

Post Brodyn, there have been several cases in which the NSW courts have upheld adjudicators’ determinations of payment claims including items for delay damages. Such cases have involved an adjudicator determining the difference between the delay costs claimed by a contractor as a result of an extension of time being granted and the contractual certifier’s determination made in response to that claim. There is a strong body of opinion that the recovery of delay damages in progress claims was not the intention of the Act, and has resulted in a wider application of the adjudication scheme than intended (Davenport 2007: 14, Uher & Brand 2007: 2257).

In Coordinated Construction Co Pty Ltd v. JM Hargreaves Pty Ltd,14 the NSW Court of Appeal upheld the NSW Supreme Court’s decision15 to allow an amount by way of

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10 S 21(3)(a) of the Act.
12 The relevant sections of the Act are shown in brackets after each requirement.
13 Brodyn at [53].
14 [2005] NSWCA 228.
delay damages to be included in the adjudicator’s determination. The amount was in relation to an extension of time granted due to a compensable cause, claimed pursuant to an express provision of the construction contract. The Court of Appeal found the definition of “claimed amount”, that the progress payment must be for construction work carried out or for related goods and services supplied, should not be given a narrow construction or effect. The following considerations were instrumental in the Court’s reasoning:

(i) Neither s 8, dealing with rights to progress payments, or s 9, dealing with amount of progress payments, of the Act limit the payment to payment for construction work and/or related goods and services.

(ii) S 13(3) of the Act tells against the argument that the adjudicator can only include in progress payments amounts claimed to be due for construction work carried out and/or for related goods and services supplied. S 13(3) entitles a claimant to be paid for any loss or expenses resulting from removal of any work or supply under the contract by the respondent as a result of the claimant exercising its right to suspend the carrying out of construction work or the supply of related goods and services due to non-payment by the respondent of an amount due in a payment claim (where no payment schedule provided), payment schedule or adjudicator’s determination.

Accordingly, the Court of Appeal found that:

any amount that a construction contract requires to be paid as part of the total price of construction work is generally…an amount due for that construction work, even if the contract labels it as “damages” or “interest”.

The Court of Appeal also found that any amount which is truly payable as damages for breach of contract is generally not an amount due for that construction work.

In his decision, however, Hodgson JA did acknowledge the possibility that some delay damages claimed under a contract might possibly not be for construction work carried out or related goods and services supplied and, in such a situation,

it would be for the adjudicator to determine whether or not such amounts should be included in the amount determined, having regard to the particularity of s 9(a) and other provisions of the Act and the contract.

Thus it would appear that under the Act an adjudicator can determine their own jurisdiction with respect to determination of damages provided for in the contract. However, it is difficult to envisage that the original intention of Parliament was to allow payment claims in which the adjudicator, who is not acting in a judicial role nor

16 Coordinated Construction Co Pty Ltd v. JM Hargreaves Pty Ltd [2005] NSWCA 228 per Hodgson JA at [40].
17 Ibid at [38].
18 Ibid at [39].
19 See ss 15 (1), 16 (1) & 23 (2) of the Act respectively.
20 Coordinated Construction Co Pty Ltd v. JM Hargreaves Pty Ltd [2005] NSWCA 228 per Hodgson JA at [41].
21 Ibid.
22 Ibid at [45].
necessarily legally trained, would be allowed the power to determine their own jurisdiction. As Jacobs (2007: 40) points out, it took the English courts, possibly over 100 years, to allow arbitrators to determine their own jurisdiction in certain limited circumstances.

Further, it would appear that if an adjudicator wrongly determined that he or she had jurisdiction to determine such damages, and an amount for damages was included in their determination, such a determination would remain valid. As McDougall J concluded in *Hargreaves* at first instance, even if it was not open to an adjudicator to include an amount for delay damages in their determination as provided in the contract between the parties, the fact that such an amount was included would not render the determination void. Thus, it seems that even though a jurisdictional error, the wrongful inclusion of damages provided for in a contract would not qualify as a failure to meet one of the basic and essential requirements laid down in *Brodyn*. This is consistent with McDougall J’s view that:

> that the basic and essential requirements, or essential preconditions, are more limited in scope than those matters which, under the pre-*Brodyn* approach, were considered to be jurisdictional in nature.

The NSW Court of Appeal affirmed its views in *Hargreaves* in *Coordinated Construction Co Pty Ltd v. Climatech (Canberra) Pty Ltd & Ors.*

In *Minister for Commerce (formerly Public Works & Services) v. Contrax Plumbing (NSW) Pty Ltd & Ors.*, the adjudicator determined a progress payment in the amount of approximately $1.5 million, most of which was for delay damages. The respondent’s payment schedule proposed a payment of ‘nil’ in respect of the relevant payment claim which sought approximately $2.6 million. The construction contract provided for the award of any delay or disruption costs incurred due to extensions of time. In its payment schedule, the respondent contended that the entitlement to be paid an amount for delay damages was conditional upon either agreement of such amount by the parties or, if agreement could not be reached, by determination of an amount by an expert, as provided for in the contract terms. In its adjudication application, the claimant, for the first time, asserted that the contractual terms regarding the calculation of the delay damages were rendered void in accordance with s 34 of the Act. S 34(2)(a) of the Act provides that a provision of any agreement under which the operation of the Act is, or is purported to be, excluded, modified or restricted (or that has the effect of excluding, modifying or restricting the operation of this Act) is void. In its adjudication response, the respondent submitted that the claimant was not entitled to raise s 34 in its adjudication application because s 34 had not been raised in its payment claim. The Court of Appeal upheld the decision of the adjudicator, and the Supreme Court in the first instance, by finding that:

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23 *Coordinated Construction Co v. J M Hargreaves and Ors* [2005] NSWSC 77 at [53].
24 *Ibid* at [46].
26 [2005] NSWCA 142.
27 An argument based on s 20(2B) of the Act.
(i) The claimant was entitled to rely on s 34 as its inclusion in the adjudication application for the first time merely amounted to submissions to answer an argument raised by the respondent in its payment schedule.29

(ii) An error by the adjudicator in interpreting and applying s 34 of the Act does not render the determination invalid and, therefore, even if s 34 does not invalidate the relevant contract terms, the adjudicator’s determination would not be invalid.30

Hodgson JA also commented that even if the claimant was not allowed to rely on s 34 because it had not been raised in its payment claim, the adjudicator could have taken s 34 into account in accordance with s 22(2)(a) and (b)31 if he or she came to know of the claimant’s submission and thought it to be relevant to the question.32 Additionally, Hodgson JA viewed that it is strongly arguable that s 34 does render the relevant contract valuation terms void.33

In John Holland Pty Limited v. Roads & Traffic Authority of New South Wales & Ors,34 the adjudicator awarded the claimant an amount for delay damages, in relation to a disputed extension of time, in excess of the amount determined for the damages by the contract superintendent. The respondent submitted in its adjudication response, but not its earlier payment schedule, that the adjudicator did not have the jurisdiction to determine the difference between what is claimed in an extension of time claim and what has been determined by the superintendent in relation to a delay damages claim.35 The terms of the construction contract provided for the amount of a delay damages claim to be determined by the superintendent and, in the event of a dispute, to be referred to expert determination. As such, the respondent contended that the independent valuation by an adjudicator of such a delay damages claim was not in accordance with s 9(a) of the Act, which required calculation of the payment claim amount in accordance with the terms of the contract. Additionally, the respondent contended that the adjudicator is not supposed to be the arbiter of complex extension claims36 which were subject to determinations under dispute resolution clauses in the contract.37 The NSW Court of Appeal held that the submissions in the respondent’s adjudication response were not “duly made” in support of the payment schedule, in accordance with s 22(2)(d) of the Act, as they had not already been included in the payment schedule.38 The court considered that even though the submissions were expressed in the adjudication response as being submissions concerning the jurisdiction of the adjudicator, this did not make them other than reasons for withholding payment which should have been raised in the payment schedule.39 Furthermore, the Court of

29 Ibid at [29].
30 Minister for Commerce (formerly Public Works & Services) v. Contrax Plumbing (NSW) Pty Limited [2005] NSWCA 142 per Hodgson JA at [50].
31 Which provide that the adjudicator consider the provisions of the Act and the construction contract.
32 See ibid per Hodgson JA at [35].
33 Ibid at [51].
35 John Holland Pty Limited v. Roads & Traffic Authority of New South Wales & Ors at [13].
36 Ibid at [13].
37 Ibid at [13].
38 As required by s 20(2B) of the Act which engages with s 22(2)(d).
39 Ibid per Hodgson J at [42].
Appeal held that, notwithstanding that the adjudication response had not been duly made, the adjudicator was not required to consider the submissions pursuant to s 22(2)(a) or (b) as, although the adjudicator had been aware of the matters in the submissions, he did not believe them to be of any real relevance to provisions of the Act or the contract for the issues before him.

4 Criticisms of the NSW Act

Several criticisms have been made of the NSW legislative model. These are presented below together with a consideration as to their validity in light of both the original object of the legislation and the mission drift which has occurred.

4.1 Procedural ‘hoop-jumping’, not justice

This criticism particularly refers to the barring of the respondent from raising any reasons for withholding payment in its adjudication response if not raised previously in its payment schedule. Additionally, it has been suggested that the requirement for the respondent to prepare comprehensive payment schedules, in order to preserve their right to put forward the merits of their argument, is practicably too onerous. As Fenwick-Elliott (2007: 3) states, this feature of adjudication in NSW sets up tens of thousands of procedural traps (one for every payment claim that is received) and if head contractors or principals fail to divert sufficient resources to the massive task of preparing the appropriate payment schedules, a claiming contractor or subcontractor is entitled to obtain a more or less default adjudication decision.

This criticism, however, loses weight if payment claims are restricted to a valuation of actual physical construction work done, or goods and services supplied, during a payment period. The adjudicator then only needs to determine whether: the work claimed has been done, any of the claimed work defective, the work claimed is within the scope of the contract, and it has been valued appropriately in accordance with the contract. This being the case, the preparation of a payment schedule becomes a more straightforward process whereby the respondent only has to consider raising more limited, non-complex issues than would be the case for a damages claim.

Additionally, it may be argued that the requirement for a payment schedule, under a statutory payment regime which runs alongside a contractual payment regime, provides some benefit in ensuring a consistently rapid timetable for the processing and resolution of payment claims. However, there does seem to be some anecdotal evidence from the author’s discussions with Authorised Nominating Authorities (ANAs) in NSW to suggest that the failure to submit a payment schedule often bars unwitting respondents from bringing their arguments before the adjudicator. This is consistent with Uher and Brand’s (2008) survey finding that just over a half of the sampled contractor and subcontractor firms had a ‘low/none’ level of knowledge of the Act.

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40 See Minister for Commerce (formerly Public Works & Services) v. Contrax Plumbing (NSW) Pty Limited [2005] NSWCA 142 per Hodgson JA at [35].

41 John Holland Pty Limited v. Roads & Traffic Authority of New South Wales & Ors per Hodgson JA at [49].

42 The criticisms in sections 2.2 to 2.6 below have been succinctly presented by the Master Builders South Australia (2008) in their security of payment legislation submission to the South Australian Parliament.

43 Under s 20(B) of the Act.
4.2 No freedom to agree on adjudicators

The Act’s requirement for adjudicators to be appointed by ANAs, and the absence of an option for parties to agree upon a particular individual as adjudicator, has been criticised for:

- creating an adjudication industry which prioritises its own commercial interests rather than those of the adjudication process;
- leading to poor quality adjudicators, and discouraging good quality adjudicators who cannot benefit from repeat appointments; and,
- leading to determinations which the parties are less likely to be satisfied with.

If payment claims under the Act were to be restricted in accordance with the original legislative intent, the adjudicator’s role could be carried out competently by persons experienced in contract administration in the construction industry. As such, the ANAs then serve as an expedient ‘matchmaker’ between the contractual parties and adjudicators.

However, the adjudication of large and complex damages claims is a task more suited to adjudicators with legal training in addition to construction experience, akin to the skills of an arbitrator. The contractual parties, therefore, would be more likely to prefer to the appointment of a mutually chosen adjudicator for complex damages claims, who both feel is qualified for the task, than they would for a straightforward payment certification.

In this respect, it is interesting to note that the Building and Construction Industry Security of Payment Bill 2008 currently before the South Australian Parliament provides for the parties to agree upon the appointment of an adjudicator, and requires adjudicators to have undertaken the training prescribed by the regulations and to have been nominated as suitable for appointment as an adjudicator by a building and construction body prescribed under the regulations.

4.3 Restrictions on hearings

This criticism particularly relates to the restriction of the matters which the adjudicator may consider in making his or her determination under s 22(2) of the Act, and the restriction of any legal representation at any conferences called by the adjudicator. It is argued that extending the adjudicator’s investigative powers, so that more than a consideration of submissions may be made, would assist the adjudicator in ascertaining the facts and the law (Fenwick-Elliott 2006: 43). Additionally, it is argued that restricting legal representation at hearings detracts from the effectiveness with which each party’s case is put forward to the adjudicator. It is put that these restrictions have the effect of eroding the parties’ confidence in the determination and promoting poorer decision making by the adjudicator.

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44 A private member’s bill introduced by the Hon John Darley MLC.
45 See s 18(8).
46 See s 19(1).
47 See s 21(4A).
There is, however, no need for wider investigative powers or for permitting legal representation, which add time and cost to the adjudication process, if payment claims under the Act are restricted to exclude complex damages claims. Furthermore, the restrictions on matters which the adjudicator may consider under the Act result in most adjudications being determined on documents alone thereby reducing exposure to claims of bias or procedural error (Kennedy and Milligan, 2007: 13), which provides more certainty for straightforward payment claim determinations.

4.4 Timescales

The ten business days allowed under the Act for the adjudicator to determine the application is criticised as being too short for all but the simplest of cases. For this reason, McDougall J (2005) views the Act to be less efficacious in dealing with larger claims. However, this criticism loses much validity if payment claims are restricted to a straightforward valuation of physical construction work, and goods or services provided.

It is interesting to note that the Building and Construction Industry Security of Payment Bill 2008 currently before the South Australian Parliament allows 15 business days for the adjudicator’s determination.

4.5 Ambush claims

A claimant may take months to prepare a comprehensive payment claim for delay damages for inclusion in a payment claim leaving the unsuspecting respondent only ten business days to respond in its payment schedule. By way of example, Davenport (2006: 147) refers to Contrax Plumbing, where the claimant contractor made a progress claim including an ambit claim for approximately $2 million which took 12 months to prepare and was supported by two boxes of files detailing the claimant’s allegations.

This is clearly an unfair practice which would not exist but for the allowance of delay damages in payment claims under the Act.

4.6 One way street

Allowing payment on account for delay damages claims causes, as Davenport (2007: 14) puts it, “an imbalance because… only one party can refer a claim to adjudication and recover money”. If the adjudication process is to be used for the assessment of damages claims, it is only just that both parties be allowed to initiate claims.

Once again, if the scope of payment claims was restricted, this apparent inequity would not exist.

48 See s 21(3)(a).
49 At [40].
50 A private member’s bill introduced by the Hon John Darley MLC.
51 See s 22(3)(a).
52 See s 14(4)(b)(ii) of the Act.
5 Conclusion

Over the past five years, the NSW courts have emphatically supported the inclusion of items of delay damages in adjudicated payment amounts if they fall within the scope of the contract. In this respect, it would appear from the courts’ decisions that:

- An adjudicator has the power to determine his or her own jurisdiction as to whether delay damages fit within a broad definition of construction works or goods and services under the Act. Further, it seems unlikely that an adjudicator’s error as to their own jurisdiction in this matter will render their determination void.

- Despite the Act requiring calculation of progress payments in accordance with the terms of the contract, any contractual clauses making payment of disputed damages claims conditional upon expert determination are likely to be rendered void under s 34 of the Act.

- The claimant is allowed to raise issues in its adjudication application for the first time if such issues are in response to the respondent’s payment schedule.

- If the adjudicator errs in applying s 34 to contractual valuation terms with respect to damages, the adjudicator’s determination will remain valid.

- An adjudicator does not have to consider issues of jurisdiction in relation to damages claims, raised by the respondent for the first time in its adjudication response, as such issues are deemed to be reasons for withholding payment which should have been raised in the payment schedule.

- Issues raised for the first time by a respondent in its adjudication response, and by a claimant in its adjudication application, may still be considered by an adjudicator if such issues come to the adjudicator’s attention and he or she believes them to be relevant to the question in hand. However, so far in delay damages claims, the courts have used this reasoning to support the reliance on s 34 by a claimant, and to defeat an appeal by a respondent to challenge the jurisdiction of an adjudicator to determine delay damages claims.

Despite this support from the courts, there seems to be little doubt that the assessment of such complex damages claims in statutory adjudications was not intended by Parliament or contemplated by the object of the Act. This mission drift, which mirrors to some extent that which has taken place in the UK, has rendered the Act open to criticism in several respects. Ironically, the features of the Act which have been criticised are the very features which make the Act suitable for its originally intended object, the rapid and inexpensive resolution of progress payment disputes.

An analysis of the main criticisms levelled at the Act has shown that if the courts had interpreted the definition of “claimed amount” under the Act narrowly, such that the
progress payment must be for physical construction work carried out or for related goods and services supplied, the criticisms would have little validity.

Whilst the Act appears to have initially achieved its objective in getting the cash flowing to contractors for work carried out during interim payment periods, the effectiveness of the Act and respect for its statutory adjudication scheme are under threat if the courts continue to encourage complex damages claims to be the subject of adjudication. Consequently, the courts must correct the mission drift that has occurred, as they have done previously with respect to judicial review of adjudicators’ determinations in Brodyn, by restricting the scope of payment claims under the Act. An alternative may be for Parliament to consider reforming the legislation to provide for a dual process of adjudication, a certification process for progress payments and a traditional process54 for all other payment claims (such as damages), as proposed by Davenport (2007).

6 References


Master Builders South Australia (2008), Security of Payment Legislation Submission, Master Builders South Australia, Adelaide.


54 Such as that provided for in the UK and WA Acts, which provide, inter alia, for: payment claims to be made by either party, less restrictions on the adjudication hearings, and for the adjudicator to have longer to make his or her determination.


Prometheus unbound: Unraveling the underlying nature of disputes

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Abstract
Research has revealed that factors such as scope changes, poor contract documentation, restricted access, unforeseen ground conditions and contractual ambiguities are contributors of disputes. While this is widely known, disputes still prevail over such issues. Before disputes can be avoided an understanding of the pathogens that contribute to their occurrence needs to be determined so that mechanisms can be put in place to prevent them from arising. To determine the pathogens contributing to disputes, a total of 41 in-depth interviews were undertaken with industry practitioners who identified 58 examples of disputes in projects that they have been actively involved with. Analysis of the findings revealed that the pathogens of circumstance (arising from the environment), practice (arising from peoples’ deliberate practices) and task (arising from the nature of the task being performed) accounted for 87% of dispute occurrences. The environment associated with the use of traditional lump sum contracting was found to be associated with 72% of the disputes. The practice of deliberately not adhering to policies, and procedures, undertaking design reviews and distributing tentative design documents contributed to the problems arising. The task of failing to detect errors and misinterpreting contract terms and conditions contributed to disputation. It is suggested that organizations need to fundamentally re-examine their work processes, policies and procedures as well as behaviors if disputes are to be reduced in construction.

Keywords: Australia, causal path, disputes, learning, pathogens.
**Introduction**

The myth of *Prometheus*, the benefactor of the human race and the creator of science and crafts, has not lost its visual power despite the fact the story was recorded more than 2500 years ago. Modern scholars associate the story of Prometheus with revolutionary change (Wutrich, 1995:p.140). In 1820, Percy Shelley wrote his famous play: Prometheus Unbound. The title refers to the Aeschylus play ‘Prometheus Bound’ and reflects the second revolutionary change in human history: the liberation from the chains of feudalism and the emergence of the industrial revolution. Is there a lesson from the Prometheus legend that can enable researchers’ to better address the issues surrounding disputation in construction? Myths are visions of fundamental truth and so it is not possible to extract from them lessons for the management of human affairs. Myths imply ambiguity, fuzziness, but can enable a holistic viewpoint to be attained (Pels, 1973:p.240). They are, however, reminders of the legitimate forces that are present in the making of new technological eras. They can act as a signpost through the clouds of uncertainty and ambiguity associated with new scientific advances and technological breakthroughs. Far from providing recipes for managing technologies and change, they can be used to provide an orientation toward ‘understanding’ the problems that continually materialize in construction. The myth of Prometheus is a reminder of the cultural disenchantment and issues that are related with disputes. The myth is also a reminder of the differing goals and objectives of participants as well as the historical and professional boundaries that prevail. The construction industry is still struggling for the reconciliation of change and cultural cohesion. Despite a plethora of research and the countless legal precedents that have emerged, disputes have become an endemic feature of the construction industry. Unfortunately, they have become a norm!

The determination of the causes of disputes has reached saturation point; consistently the same causal variables are identified (e.g., Diekmann and Nelson, 1985; Semple *et al*., 1994; Kumaraswamy, 1997; Cheung and Yiu, 2006; Yiu and Cheung, 2007). Because most of the studies undertaken have been based upon questionnaires (e.g., Kumaraswamy, 1997) or derived from case law (e.g., Watts and Scrivener, 1992), the factors identified often lack contextual meaning. For example, poor communication has been identified as a cause of disputes (Bristow and Vassilopoulos, 1995; Kumaraswamy, 1997). Yet according to Busby (2001) problems do not arise because X does not communicate Z to Y, but the way Y interprets Z in light of some prior experience (or lack of), which X does not know about. Thus, X fails to make allowances for Z, and Y does not realize X does this because Y thinks both that their experiences are representative. Simply improving communication practices by improving information flow with technology or using Computer-Aided-Design will not reduce *per se* the incidence of disputes in construction. Fundamentally, work processes, policies, and procedures as well as behaviors need to change in concert if disputes are to be reduced in construction. Yet for change to have any significance a
better understanding of the underlying conditions associated with disputes is needed. Thus, in this paper the causes of dispute are re-examined through a different lens so that the process of situated cognition can be used as mechanism to avoid disputes.

**DISPUTE CAUSATION**

The literature has propagated studies that have sought to determine the causes of disputes (Table 1). Fenn et al. (1997) previously suggested that there had been limited empirical evidence that has been structured to justify the theories that had been presented. It would appear that Fenn et al.’s (1997) observation is still pertinent some ten years on. Much of the research that has been undertaken simply seeks to identify a list of factors or triggers which show some association with disputes. In fact, many of the factors identified are not dissimilar in nature as identified in Table 1. The identification of such factors, while useful, does not explain the underlying causal nature of disputes. In an attempt to examine the causality of disputes, Kumaraswamy (1997) sought to determine the root (the underlying reason of the problem and if eliminated, would prevent recurrence) and proximate (immediately precedes and produces the effect) causes. Root causes identified by Kumaraswamy (1997) include: unfair risk allocation, unrealistic time/cost/quality targets by the client, adversarial industry culture, inappropriate contract type, and unrealistic information expectations. Proximate causes identified included: inadequate brief, slow client responses, inaccurate design information, inaccurate design documentation, inappropriate contract form, inadequate contract administration, and inappropriate contractor selection.

A close examination of root and proximate causes of disputes proposed by authors such as Kumaraswamy (1997) makes it difficult to determine what originally gave rise to the other in many instances. Here parallels can be drawn with the ‘chicken or the egg causality dilemma’ and the circular cause of consequence (Garner, 2003). There are many real world examples of circular cause-and-effect, in which the chicken-or-egg dilemma helps identify the analytical problem. For example, fear of economic downturn causes people to spend less, therefore reducing demand, resulting in an economic downturn. A lack of professionalism by design professionals because of reduced design fees can result in inadequate contract documentation being produced, and therefore lead to rework that manifests as a lack of professionalism and may eventually emerge in a dispute. Many of the root causes of disputes identified in the literature can be managed and controlled using various project management strategies, tools and techniques. For example, errors in documentation can be reduced through the use of design audits and reviews. The exception being uncontrollable external events such as weather, unforeseen ground conditions and the behavior of parties (Kumaraswamy, 1997).
Mitropoulos and Howell (2001) suggest that a combination of environmental and behavioral problems can lead to disputes. The inherent degree of uncertainty that prevails within construction projects can result in planning being a problematic issue, especially when information is not available. When uncertainty is high, initial drawings and specifications will invariably change, and the project team will have to solve problems as they arise during construction. Once changes arise they may be deemed to be ambiguous and as a result disagreements between parties can arise. This is because under the concept of *bounded rationality* not all potential contingencies are identifiable and can be assessed until they materialize (Williamson, 1979). When parties enter into a contract and a specific clause fails to account for an unforeseen event or it is interpreted to suit the particular circumstances that have arisen, then there is a potential for opportunism. In this instance there is likelihood for a party to opportunistically exploit or delay another to maximize own gains (Mitropoulos and Howell, 2001). The dispute causation factors of uncertainty, contractual problems and opportunistic behavior identified by Mitropoulos and Howell (2001) are similar to those recognized by Diekman et al. (1994): (1) project uncertainty, which cause change beyond the expectation of the party, (2) process problems, which includes imperfect contracts and unrealistic performance expectations, and (3) people issues, problems due to poor interpersonal skills, opportunistic behavior and cognitive dissonance.

Table 1. Claims and disputes in construction (Adapted from Kumaraswamy, 1997)

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Factors contributing to claims/disputes</th>
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</table>
| Blake Dawson Waldron (2006) | *Nine* key causes in disputes:  
1. Variations to scope  
2. Contract interpretation  
3. EOT claims  
4. Site conditions  
5. Late, incomplete or substandard information  
6. Obtaining approvals  
7. Site access  
8. Quality of design  
9. Availability of resources |
| Cheung and Yui (2006)    | *Three* root causes of disputes:  
1. *Conflict* - Task interdependency, differentiations, communication obstacles, tensions, personality traits  
2. *Triggering events* - Non performance, payment, time  
3. *Contract Provision* |
| Yiu and Cheung (2004)    | *Significant* sources:  
• Construction related: variation and delay in work progress  
• Human behavior parties: expectations and inter parties’ problems |
<p>| Killian (2003)           | • <em>Project management procedure</em>: Change order, pre-award design review, pre-construction conference proceedings, and |</p>
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<th>Quality assurance.</th>
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<tbody>
<tr>
<td>• <em>Design errors</em>: errors in drawings and defective specifications.</td>
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<td>• <em>Contracting officer</em>: Knowledge of local statutes, faulty negotiation</td>
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<td>procedure, scheduling, bid review</td>
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<tr>
<td>• <em>Contracting practices</em>: Contract familiarity/client contracting procedures.</td>
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<td>• <em>Site management</em>: scheduling, project management procedures, quality control,</td>
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<td>and financial packages</td>
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<td>• <em>Bid development errors</em>: estimating error</td>
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<tr>
<th>Mitropoulos and Howell (2001)</th>
<th>Factors that drive the development of a dispute:</th>
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<tr>
<td></td>
<td>1. Project uncertainty</td>
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<td>2. Contractual problems</td>
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<td>3. Opportunistic behavior</td>
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<tr>
<th>Kumaraswamy (1997)</th>
<th>Five common category of claims:</th>
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<tr>
<td></td>
<td>1. Variations due to site conditions</td>
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<td>2. Variations due to client changes</td>
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<td></td>
<td>3. Variations due to design errors</td>
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<td>4. Unforeseen ground conditions</td>
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<td>5. Ambiguities in contract documents</td>
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<td>Five common causes of claims:</td>
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<tr>
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<td>1. Inaccurate design information</td>
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<td>2. Inadequate design information</td>
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<td>3. Slow client response to decision</td>
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<td>4. Poor communication</td>
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<td>5. Unrealistic time targets</td>
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<tr>
<th>Conlin et al. (1996)</th>
<th>Six key dispute areas:</th>
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<tr>
<td></td>
<td>1. Payment and budget</td>
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<td>2. Performance</td>
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<td>3. Delay and time</td>
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<td>4. Negligence</td>
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<td>5. Quality</td>
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<td>6. Administration</td>
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<th>Sykes (1996)</th>
<th>Two major groupings of claims and disputes:</th>
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<tr>
<td></td>
<td>1. Misunderstandings</td>
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<td>2. Unpredictability</td>
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<tr>
<th>Bristow and Vasilopoulos (1995)</th>
<th>Five primary causes of claims:</th>
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<tr>
<td></td>
<td>1. Unrealistic expectations by parties</td>
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<td>2. Ambiguous contract documents</td>
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<td></td>
<td>3. Poor communications between project participants;</td>
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<td></td>
<td>4. Lack of team spirit</td>
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<td>5. Failure of participants to deal promptly with changes and unexpected outcomes</td>
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<tr>
<th>Diekman et al. (1994)</th>
<th>Three main dispute areas:</th>
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<tr>
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<td>1. Project uncertainty</td>
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<td>2. Process problems</td>
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<td>3. People issues</td>
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<th>Heath et al. (1994)</th>
<th>Five main categories of claims:</th>
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<td></td>
<td>1. Extension of time</td>
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<td></td>
<td>2. Variations in quantities</td>
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<td>3. Variations in specifications</td>
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<td>4. Drawing changes</td>
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<td></td>
<td>5. Others</td>
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<td><strong>Seven main types of disputes:</strong></td>
<td><strong>Ten factors in the development of disputes:</strong></td>
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<td>1. Contract terms</td>
<td>1. Poor management</td>
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<td>2. Payments</td>
<td>2. Adversarial culture</td>
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<td>3. Variations</td>
<td>3. Poor communications</td>
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<td>4. Extensions of time</td>
<td>4. Inadequate design</td>
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<td>5. Nomination</td>
<td>5. Economic environment</td>
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<td>6. Re-nomination</td>
<td>6. Unrealistic tendering</td>
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<tr>
<td>7. Availability of information</td>
<td>7. Influence of lawyers</td>
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<td>Rhys Jones (1994)</td>
<td>8. Unrealistic client expectations</td>
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<td>9. Inadequate contract drafting</td>
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<td>10. Poor workmanship</td>
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<th><strong>Six commons categories of dispute claims:</strong></th>
<th><strong>Four common causes of claims:</strong></th>
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<tr>
<td>1. Premium time</td>
<td>1. Acceleration</td>
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<td>2. Equipment costs</td>
<td>2. Restricted access</td>
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<td>3. Financing costs</td>
<td>3. Weather/cold</td>
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<td>4. Loss of revenue</td>
<td>4. Increase in scope</td>
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<td>5. Loss of productivity</td>
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<td>6. Site overhead</td>
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<td>Semple et al. (1994)</td>
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<td>Watts and Scrivener (1992)</td>
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<td>Hewitt (1991)</td>
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<td><strong>Most frequent sources of claims:</strong></td>
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<td>1. Variations</td>
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<td>2. Negligence in tort</td>
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<td>3. Delays</td>
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<td><strong>Six areas:</strong></td>
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<td>1. Change of scope</td>
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<td>2. Change conditions</td>
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<td>3. Delay</td>
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<td>4. Disruption</td>
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<td>5. Acceleration</td>
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<td>6. Termination</td>
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**Pathogens: Latent Conditions**

Pathogens are latent conditions that lay dormant within the project system until a problem comes to light. Before the problem becomes apparent, project participants often remain unaware of the impact upon project performance that particular decisions, practices or procedures can have. Pathogens can arise because of strategic decisions taken by top management or key decision-makers within a project. Such decisions may be mistaken, but they need not be. Latent conditions can lay dormant within a system for a
considerable period of time and thus become an integral part of everyday work practices. However, once they combine with active failures then the problem that arises and the subsequent consequences may be significant. Active failures are essentially inappropriate acts committed by people who are in direct contact with a system. Such acts include: slips, lapses, mistakes and procedural violations (Reason, 2000). Active failures are often difficult to foresee and therefore cannot be eliminated by simply reacting to the event that has occurred. Latent conditions, however, can be identified and remedied before an adverse event such as a dispute between parties occurs. Pathogens have been defined by a number of qualities (Busby and Hughes, 2004):

- they are a relatively stable phenomena that have been in existence for a substantial time before the dispute occurs;
- before the dispute occurs, they would not have been seen as obvious stages in an identifiable sequence failure; and
- they are strongly connected to the dispute, and are identifiable as principal causes of the disputes once it occurred.

According to Busby and Hughes (2004) pathogens can be categorized as:

- Practice – arising from people’s deliberate practices;
- Task – arising from the nature of the task being performed;
- Circumstance – arising from the situation or environment the project was operating in;
- Organization – arising from organizational structure or operation;
- System – arising from an organizational system;
- Industry – arising from the structural property of the industry; and
- Tool – arising from the technical characteristic of the tool.

Love et al. (2008) have suggested that before causal inferences can be made it is necessary to initially determine the latent conditions that contribute to the problem that is being experienced.

**Research Approach**

To determine the pathogens that contribute to disputes in construction projects an exploratory research approach was adopted as there has been limited work that has sought to address these salient issues. Interviews were chosen as the primary data collection mechanism because they are an effective tool for
learning about matters that cannot be observed. Interviews were used as an attempt to understand the views of practitioners, to unfold the meaning of practitioners’ experiences of dispute causation. In other words, interviews were used to gain an understanding and the underlying change needed to prevent their occurrence (Kvale, 1996). According to Taylor and Bogdan (1984:p.79), no other method “can provide the detailed understanding that comes from directly observing people and listening to what they have to say at the scene”.

**Interviews**

Three basic types of qualitative interviewing have been identified (Patton, 1991): the informal conversational interview, the interview guide approach, and the standardized open-ended interview. Although these types vary in the format and structure of questioning, they have in common the fact that the participant's responses are open-ended and not restricted to choices provided by the interviewer. A plethora of definitions as to what constitutes a dispute can be found in the normative literature. The operational definition of a dispute used for the purposes of the study reported is:

“When parties cannot resolve an issue relevant to the performance of the project in a proactive, timely and mutually acceptable manner, and each party forms an entrenched and contrary opinion with respect to that issue that requires resolution”.

This definition focuses on dispute related to the performance of the contract, thus avoiding situations that are purely behavioral in nature.

The interview guide is the most widely used format for qualitative interviewing and was adopted for this research (Patton, 1991). In this approach, the interviewer has an outline of topics or issues to be covered, but is free to vary the wording and order of the questions to some extent. For example, the interviewees were asked to think of a recent completed project that they had been involved with where there had been a dispute. Background details of the project such as contract value, duration were obtained. Then the interviewer proceeded to ask the interviewee to select a dispute from the project and describe its antecedents from their perspective. This enabled the researcher to delve into the contextual backdrop so that inferences could be made. This type of interview requires relatively skilled and experienced interviewers who need to know when to probe for more in-depth responses or guide the conversation to make sure that all topics on the outline are covered. In this case, two interviewers with more than fifteen years research and industry experience were used to conduct the interviews.
Forty one in-depth interviews were conducted over a two month period with a variety of personnel such as project directors, quantity surveyors (QS), architects, arbitrators, project managers, contract administrators. Firms from the metropolitan area of Perth were selected from the Yellow Pages® using the technique of stratified random sampling and invited to participate in the research. The interviews were conducted at the offices of interviewees. Interviews were digitally recorded and transcribed verbatim to allow for the nuances in the interview to be apparent in the text.

The interviewees’ details were coded to allow for anonymity, although all interviewees were aware that it might be possible to identify them from the content of the text. The format of the interviews was kept as consistent as possible following the themes associated with disputes identified from the literature (e.g., antecedents, costs, effect etc). The nature of the questions allowed for avenues of interest to be pursued as they arose without introducing bias in the response. Notes were taken during the interview to support the digital recording to maintain validity. Each of the interviews varied in length from 30 minutes to two hours. Interviews were open to stimulate conversation and breakdown any barriers that may have existed between the interviewer and interviewee.

**Data Analysis**

Content analysis was used as the primary analysis technique on the collected data. In its simplest form this technique is the extraction and categorization of information from documents. Inferences from the data can only be drawn of the relationship with what the data means can be maintained between their institutional, societal and cultural contexts (Krippendorf, 1980). The text derived from the interviews was analyzed using QSR Nvivo (which is a version of NUD*IST and combines the efficient management of Non-numerical Unstructured Data with powerful processes of Indexing and Theorizing) and enabled the development of themes to be identified.

One advantage of such software is that it enables additional data sources and journal notes to be incorporated into the analysis. The development and re-assessment of themes as analysis progresses accords with the calls for avoiding confining data to pre-determined sets of categories (Silverman, 2001). Kvale (1996) suggests that *ad hoc* methods for generating meaning enable the researcher access to ‘a variety of common-sense approaches to interview text using an interplay of techniques such as noting patterns, seeing plausibility, making comparisons etc’ (p.204).

Using Nvivo enabled the researchers to develop an organic approach to coding as it enabled triggers or categories of interest in the text to be coded and used to keep track of emerging and developing ideas.
(Kvale, 1996). These codings can be modified, integrated or migrated as the analysis progresses and the generation of reports, using Boolean search, facilitates the recognition of conflicts and contradictions. This process enabled the pathogens and causal paths of disputes to be determined.

Research Findings and Discussion

Project Characteristics

The sample of 41 interviewed comprised of: 3(7%) public sector client, 6(15%) private sector client, 3(7%) consulting project managers, 11(27%) contractors, 4(10%) consulting engineers, 4(10%) architects, 3(7%) QS, 4(10%) arbitrators/mediators 3(7%) and subcontractor 1(2%). Each individual was initially asked to describe a recently completed project where they had been involved with a dispute. 11 respondents were not able to identify any particular project but were able to provide examples and their perceived causes of disputes. 30 respondents identified and described a specific dispute that they had been involved in, and in some cases were able to identify more than one example.

In total 58 projects and dispute examples were identified by interviewees (Table 2). The most common project types were: commercial – offices 6(10%), commercial – retail 6(10%), administration – authorities 9(16%), hospital/health 5(9%), administrative – civic 5(9%), and railway 4(7%). The procurement methods used to deliver the projects were traditional lump sum 42(72%), design and construct 10(17%), construction management 2(3%), alliance 2(3%) and traditional cost-plus 1(2%). The type of contracts used in the projects varied but the most popular form used was based on Australian Standard (AS) 2124 for 42(72%) projects. Other types of contract forms used were AS4902 2(3%), AS4000 4(7%), owner bespoke forms 3(5%), AS4300 (Amended) 2(3%), AS4916 (Amended) 1(2%), engineering and construction contract 1(2%), and NPWC3 1(2%). The total value of the projects sampled was approximately A$4.47 billion. The contract value for the projects ranged from A$250,000 to A$1.8 billion with a mean of A$77.23 million. The duration of the projects ranged from 3 to 60 months with a mean of 15.5 months.

Pathogens: Determination of Causal Paths

A number of themes emerged from the analysis of the interview data as to the underlying causes of disputes from the 58 examples provided by interviewees. The most common issues were client influences and expectations, scope and design changes, contract documentation, inadequate planning and management, risk allocation and non-adherence to practices and procedures. Each of the examples provided by interviewees was examined in detail and the latent conditions contributing to the dispute determined. In almost all cases there appeared to be several pathogens working together and so related
pathogens for the examples that were provided are also identified and denoted using a prefix as noted in Table 2. It can be seen that the pathogens of task, practice and circumstance contributed to 87% of disputes. Examples of the common pathogens and the dispute trajectories using a causal path diagram are presented hereinafter.

Example 1 - Task pathogen: Procedural violation

In the following example a dispute arose because of a series of omission errors. Omissions errors can be defined as failures to follow due procedure when undertaking a task(s). Architectural and mechanical shop drawings were not checked and verified and as a result a very costly rework incidence occurred, which eventuated into a dispute between parties who were not willing to take responsibility for the error that arose. The project was a prison that was refurbished using a traditional lump sum contract AS2124. The contract value was A$1.5 million and the schedule was 6 months. Because of the dispute that was raised the project was delayed by 8 months. The dispute was resolved through the process of negotiation at a cost of A$200,000, which equates to 13% of the project’s original contract value.

<table>
<thead>
<tr>
<th>Pathogen Category</th>
<th>Description</th>
<th>Cause Examples</th>
<th>N</th>
<th>Related pathogens</th>
</tr>
</thead>
</table>
| Practice          | Pathogens arising from people’s deliberate practices | • Failure to undertake design reviews
• Distribution of tentative design documents
• Failure to oblige by contractual obligations | 16  | (T),(C) |
| Task              | Pathogens arising from the nature of task being performed | • Failure to detect and correct an omission/error in design documentation
• Misinterpretation of contract terms and conditions | 15  | (P),(C),(CO) |
| Circumstance      | Pathogen arising from the situation or environment the project is operating in | • Low design fees meant tasks were deliberately left out
• Failure to provide access to site
• Unforeseen scope changes | 19  | (P),(T),(CO) |
| Convention        | Pathogens arising from standards and routines | • Re-use of existing specification and design solutions
• Failure to adhere to company polices
• The use of competitive tendering resulting in selection of lowest bid
• Contract forms and risk allocation (Limited incentives) | 5   | (C),(T) |
| Industry          | Pathogens arising from the structural property of the industry | • Ineffective use of CAD software (no checking for inconsistencies) | 1   | (T),(P) |
| Tool              | Pathogens arising from a characteristic of a technical tool | | |

Key: Practice (P), Task (T), Circumstance (C), Convention (CO) Organization (O), System (S), Industry (I), Tool (TO)
Interviewee extract:
“And we had drawings that were supposedly “as constructed” drawings that show where the fittings and conduits went. The contractor had to come through and cut holes in each of the ceilings to put the air conditioning ducting. It was a special sort of ducting and it had a grill cover on a certain side. And the grill cover was certain dimensions so you couldn’t tie things up and hang yourself from it. So that’s the description of the work. Now a comedy of errors comes to mind with all this series of errors. The first thing that happened was the contractor had difficulty getting access to the site. Now the contractor bore a certain amount of that risk but it had gotten beyond him, ridiculous things. When they first went in to cut the first cellblock they went to cut the first hole, they marked it all out and cut it, and consequently blew the switchboard. It caused some damage to the switchboard as they cut through a live power feed that wasn’t supposed to be there. The drawing said it wasn’t there. Well, that should be the contractor’s responsibility to check where the cables are, and we’re saying, ‘Well, that’s a bit unreasonable’, it was a bit unreasonable of the client. This particular client was a hard client, everything’s the bloody contractor’s fault, and that didn’t help. And there were some other issues it was just a nuisance for the prison to deal with, through no fault of the contractor. So that was one issue. And in the end there were questions about how it should be resolved. The contractor should have used an x-ray machine that could actually find out where the conduits were. Decisions as what to do held up the job which extenuated the delay. That’s one part of the dispute.

Dispute:
- Responsibility for conduit and power supply
- Difficulty to access site caused delays
- Unreasonable client

Dispute Effect:
- Increase in project costs
- Increased stress/anguish
- Inducement of conflict
- Negative influence on team morale

Pathogens:
- The task of tendering on incomplete work
- The task failing to undertake a review of the design
- The circumstance of limited site access

Figure 1. Causal path for a dispute: Task pathogen
Two major incidents were identified as contributing to the dispute in this project. The first related to access to the site and incomplete drawings, and the second related to erroneous drawings and unilateral decision-making on behalf of the lead consultant. Figure 1 identifies the causal path of for the initial dispute that happened because of incomplete information. Serendipitously, the previous as-built drawings for the prison did not correspond with what had been actually constructed. Penetrations were required for the installation of air conditioning (A/C) grills. The contractor was given limited access to prison cells and as result this affected the program of works. After ‘setting-out’ where the penetrations were required in the ceiling slab work commenced almost immediately. While undertaking the initial penetrations electrical conduits were severed, which caused a fault to occur and subsequently damaged the switchboard. A dispute arose as to who was responsible for fixing the conduit and replacing the switchboard. In addition, the issue as to how to overcome the problem associated with electrical conduit that had not been incorporated within the ‘as-built drawings’ took considerable time to resolve and delayed the project by two weeks with considerable costs being borne by the contractor. The costs of rectifying the damaged works were approximately A$30,000.

Example 2 - Practice pathogen: Failure to communicate an error

While the aforementioned dispute came to light and was in the process of being resolved another began to manifest (Figure 2). The architectural drawings that had been produced were examined by the mechanical engineer and it was revealed that the size of the A/C grills shown on the drawings was wrong and thus would not meet the specified airflow requirements. The A/C documentation produced by the mechanical engineer simply did not marry with the architectural documentation; the A/C grills were deemed to be too small in size. The mechanical engineer informed the architect in writing about this error. The architectural documentation was not amended and tenders were called from subcontractors with incorrect information present. The mechanical subcontractor who was awarded the contract was not notified of the error contained within the documents. Shop drawings were produced by the subcontractor and instead of providing them directly to the contractor to gain the necessary approvals as noted in their contract; they were bypassed and given directly to the mechanical consultant for approval. The subcontractor did this because they had a close working relationship with the mechanical consultant. In addition, they needed the shop drawings to be approved as soon as possible so as not to delay their program and the project. The project was experiencing considerable delays at this point. Despite the mechanical engineer informing the architect of the error, it was revealed that the architect had amended the grill sizes to match their drawings without informing any other project team member. The mechanical engineer had assumed the architectural drawings had been altered as requested, but unknowingly they had not. Instead the architect had unilaterally made the decision to opt for the smaller size A/C grills without consulting the necessary
parties. The mechanical consultant approved the shop drawings and failed to notice that the A/C grills were the size originally specified by the architect. In fact, the shop drawings were not distributed to the architect for checking. No detailed checking had been undertaken. The drawings were passed on to the project superintendent’s acting representative who approved the drawings without also checking them. The contractor on receiving the shop drawings also stated they had been checked by them, when in fact they had not been. Thus, on the basis of the approvals received the A/C grills were manufactured and delivered to site. During the installation of the A/C grills the subcontractor noticed they were too small as penetrations were larger than the grill size. For some unknown reason, penetrations were cut as required for the larger size A/C grills as originally specified by the mechanical consultant. The cost of manufacturing the smaller A/C grills was $50,000. They did not fit and were inadequate. The architect apparently abrogated their responsibility for the problem by explicitly stating the architectural documentation were correct and if the shop drawings had been distributed to them then the error would have been identified.

Example 3 - Circumstance pathogen: Appropriate procurement selection

In the next example, the pathogen of circumstance is described, as noted in Figure 3. A number of pathogens and conditions interacted that contributed to the dispute that is examined. The selected project was procured using an alliance contract and the client placed considerable pressure on the project team to deliver the project as quickly as possible. Such pressure placed considerable strain on the design and engineering team, especially with the skills shortage being experienced, particularly in Western Australia (WA). The design team was not able to meet the required schedule and as a result it was perceived that they adopted a work of practice of purposefully not checking what they had designed with one another so as to meet their deliverables. The contractor made the following comment:

“We’re subjected to liquidated damages in our contract but designers weren’t. There was no stick in place to whack them with, they don’t have penalties. They just send crappy documentation and expect us to cop it.”

This set the scene for a battleground on the project despite an alliance being in place. The contractor accepted the terms under the contract but did not expect to be subjected to documentation that was so indecorously put together. Because the documentation was incorrect, scope changes had to be made, which had an impact on the program and the contractor’s costs. Relations became strained and a great deal of tension was present at site meetings. It was perceived that personal agendas began to take a foothold and so it was agreed that the problems were to be resolved through negotiation.
Interviewee extract:
Well is it the mechanical subcontractor who had the wrong grill size initially? Or hang on, the architect when they just picked it up and amended the contract documents to say the right size. So you say to the consultant, ‘So this guy basically has abrogated to that person,’ but who’s responsible? Should the architect have told his mechanical subcontractor he’d made the change? Did the mechanical subcontractor do the wrong thing going to the mechanical sub-consultant to have the shop drawings checked? To expedite, to resolve – because they generally – they always talk to each other because there’s always discrepancies in design requirement etc, so that’s quite a common route. But in the end did he, by not going back through that way, cause the problem? Did the mechanical sub-consultants cause the problem by actually accepting that without say, ‘No, hang on, you’ve got it wrong’. Did the contractor do anything wrong? Well, actually no. The contractor took shop drawings from his mechanical subcontractor, said, ‘Okay, here are the shop drawings, it's not my job to check them, I don’t know what I’m looking at’, Mr Superintendent’s representative, here they are’. Didn’t do anything wrong. Possibly you could argue, and these have been approved by – led to the superintendent’s representative – so you could say he probably shares a little morally, if not literally, but he didn’t do anything wrong. Did the superintendent’s representative do anything wrong? Arguably not, because the contractor, without doing anything wrong, had said, ‘These have also been checked’. Bit lazy, probably should have actually rung up and said, ‘Hey, do you want your shop drawings’, but didn’t. If he’d had done the thing and handed it back on, it probably would have been picked up early. So it was a combination of people all doing the right thing for the project, thinking they were being helpful, but neglecting the contract flow, neglecting the document flow envisaged in the contract.

Dispute
- Responsibility for checking and verifying documentation was correct
- Abiding by contractual obligations and responsibilities
- Cost of rework

Dispute Effect
- Increase in project costs
- Increased stress/anguish
- Inducement of conflict
- Negative influence on team morale

Figure 2. Causal path for a dispute: Practice pathogen

**Pathogens:**
- The task of withholding information/not informing participants
- The practice of not undertaking design audits, verifications and reviews
- The circumstance of time pressures to complete the project
- The convention of not adhering to company policy
Interviewee extract:

“The procurement method has got to suit the market, and the market at the moment is booming. We agreed to take on an alliance project and it was our mistake. It was the wrong method I feel – should have been a standard form of contract as we know what we are up against. We took on too much risk and prices started to rise. There was urgency for the project to start as soon as possible because of the price increases being experienced and because the client wanted to reap the benefits of the returns the project would bring. It’s a tough market, and we took a punt to too speak. We had a rise and fall clause but it didn’t really account for the increases experienced. You can see that the price of steel has gone from $500 to over $1000 in 12 months. Our project had a huge amount of steel as there was considerable reinforcement required. Then we experienced scope changes and errors in the documentation! The engineers and architects drawings did not correspond. Yes, they were put under pressure to document but I don’t think they bothered doing detailed checking – this put us under considerable pressure and ended up delaying our works. We had to wait for the architect and engineer to supply the correct information. We can only take so much and if I were honest possibly took on too much risk. We didn’t know steel would increase so much, it was totally unexpected. Now we’re in dispute over scope costs, and delay costs”.

Dispute

- Additional scope of works not clear on drawings
- Cost escalation
- Errors in documentation
- Delay and disruption

Dispute Effect

- Loss of profit
- Increased stress/anguish
- Inducement of conflict
- Detrimental to future business relationship with consultants

Figure 3. Causal path for a dispute: Circumstance pathogen
Interrelationship of Pathogens

Figure 4 summarizes the relationship between the significant pathogens that have emerged from the analysis and interpretation of the data. These findings are similar in nature to the research reported in Love et al. (2008) where the underlying pathogens for errors were identified. However, the pathogenic influence of ‘circumstance’ was also found to be a prevalent feature. The circumstance within which a project is procured influences the work practices adopted and how tasks are performed. For example, a skills shortage had been experienced and there was considerable cost escalation being experienced because of the rising price of commodities. It was imperative, within WA for example, that projects were delivered as quickly as soon possible to meet the demands of clients. Unfortunately, there were instances where an inappropriate procurement strategy for projects was adopted.

A traditional lump sum method, for example, was used for a project that was more than two years in duration and was in excess of A$1 billion. The contract documentation contained many errors and omission because of the ‘schedule pressure’ placed on consultants and because resource constraints. Practices such as design reviews and distributing tentative information were adopted. Moreover, limited
time was spent on checking for errors. When the problem is identified then there is a potential for a
dispute as there are invariably financial implications for the party who is affected by the error.

The circumstance may influence an individual’s behavioral adaptation because of their personality and
how deal with the environmental pressures imposed upon them. This can be further be exacerbated by the
existent culture, strategy and policies that prevail within their organization and those that are subsequently
transferred to the project. The environment within which projects are procured is constantly changing and
it is important for organizations and project managers realize how it can influence the nature of tasks and
practices are that employed. From the evidence provided from this exploratory study disputes appear to
materialize because of an organization’s inability to react effectively to environmental pressures (e.g.,
political, economic, social and technological) that they are subjected too as well as those being directly
imposed upon the project. Consequently, this may impact project tasks and procedures and stimulate the
occurrence of active failures. Such failures invariably lay dormant within the project system until they are
identified. If issues associated with the active failure are not effectively remedied, then a dispute can
materialize and have a significant impact on the performance of the project. Considering the underlying
latent conditions associated with circumstance, task and practice it is suggested that strategies for avoiding
disputes should initially focus on these areas.

Strategies for avoiding disputes were solicited by interviewees so as to identify pragmatic practices that
could be readily adopted and possibly have a significant impact. Nevertheless, the reduction of issues
such as scope changes, rework, and an overall improvement in productivity and performance would
require the construction industry to make a dramatic ‘paradigm shift’ from being essentially adversarial;
where there are only ‘winners’ and ‘losers’ to one that is based upon solidarity and collaboration where
mutual gains can be attained and sustained for the benefit of all parties. This will require organizations to
transform their businesses in terms of relationships, behaviors, processes, communications and leadership.

Conclusion
While a considerable amount of knowledge has been accumulated about dispute causation, they continue
to prevail and disharmonize the process of construction with considerable cost. The reason as to why they
still continue to occur is that many firms have failed to learn from previous experiences and continue to
adopt work practices that are opportunistic as well as posses a ‘blame culture’ that is used to dominate and
control in an oppressive tyrannical manner instead of taking responsibility for their actions. This
invariably translates to individuals’ behavior and how they respectfully solve problems with other
individuals.
An underlying condition contributing to how individuals address problems that arise pertains to the circumstances within which the project is being procured. The adoption of adversarial practices such as competitive tendering often leads to the lowest price being adopted. In hindsight, however, many clients and consultants have often regretted this choice when expected performance levels (in terms of time, cost quality, safety and even information flows) are not achieved. A re-examination of original selection processes often reveals decisions are dominated solely by price competition. This is particularly the case for consultants who are also often forced to competitively bid for their services and as a result provide minimal services for the fees charged, which often results in documentation being substandard. To obtain ‘best value’ there needs to be shift toward negotiation rather than the use of competitive selection so as to ensure firms who have the capability and experience to undertake the project at hand. While negotiation is probably amenable to many private sector clients, those from the public sector will have to confront issues surrounding probity and the perception of public accountability.

There is a need for greater use of modern procurement methods, which by default promote the use of constructability. A significant proportion of the dispute examples provided pertained to traditional lump sum contracting. This procurement route by its very nature is adversarial and therefore it is not surprising that disputes occurred, though it should be acknowledged that many successful dispute free projects have been procured using this method.

Firms need to implement stringent policies and procedures that must be adhered too at all times (e.g., quality systems), but at the same being cognizant of not initiating blame. When an individual is deemed to be non-compliant and ‘procedural violations’ arise, then behavior modification should be undertaken using intervention. Behavior after error occurrence is influenced by the presentation of positive heuristics, for example, “I made a mistake; I can learn from this!” Such positive heuristics are presented to facilitate emotional coping after the events occurrence, thereby aiding people to consider that errors can also be interpreted as informative feedback. Learning from mistakes is pivotal to dispute avoidance. The use of communities of practices within organizations and projects can provide an opportunity to share knowledge, solve problems, and derive innovative solutions. The transformation from an adversarial to one of solidarity and collaboration can enable such discourse and learning to take place between individuals and organizations through situated cognition, which is necessary for dispute avoidance and resolution. While such actions are necessary, hope, remains locked away in Pandora’s Box.
References


A Review of Statutory Adjudication in the Australian Building and Construction Industry, and a Proposal for a National Approach

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Abstract:

Despite the recommendation of a 2003 Royal Commission that Australia should enact a Commonwealth Building and Construction Security of Payment Act, security of payment legislation has been enacted on a State-by-State basis in five jurisdictions. Two distinct legislative models can be identified from the five Acts. This paper reviews the key differences between the statutory adjudication schemes prescribed by the models and considers the reason for such differences. Additionally a review of statistical performance data for statutory adjudication, recorded by the government departments and agencies in the relevant jurisdictions, is presented. The paper finds that whilst statutory adjudication under both models is being well used by the building and construction industry, one of the models is more suited to the efficient determination of straightforward progress payment claims and the other model is more suited to the equitable resolution of more complex payment claims for debts or damages. A dual process of adjudication conceptualised by Davenport (2007), which essentially combines the strengths of the two existing legislative models, is proposed as a basis upon which a national approach may be taken.

Keywords: Security of Payment, Statutory Adjudication, Australia

1 Introduction

Of the eight Commonwealth jurisdictions which have enacted payments legislation for the building and construction industry, five¹ have been Australian States or Territories.² The first Australian jurisdiction, and second Commonwealth jurisdiction after the UK, to enact such legislation was New South Wales (NSW) in the form of the Building and Construction Industry Security of Payment Act 1999. The title of the NSW Act has led to the term ‘security of payment’ becoming widely used in the Australian construction industry.

¹ The titles of the five Australian Acts are presented in Table 1.
² The others being the UK, New Zealand and Singapore.
industry to refer to both the entitlement of contractors to receive payments due to them, and the associated raft of legislation that has developed in the various jurisdictions to address payment problems. Victoria, Queensland, Western Australia (WA), and Northern Territory (NT) have followed NSW in enacting security of payment legislation. South Australia (SA) has two alternative, yet similar, security of payment bills currently before parliament, and proposed security of payment legislation is also currently being carried forward through the Tasmanian Department of Justice. Both the proposed SA and Tasmanian legislation is largely modelled on the NSW Act.

The uptake of security of payment legislation by Australian States and Territories is consistent with the finding of the Cole Royal Commission Report into the Building and Construction Industry (2003: Vol 1, 6) that there is an “absence of adequate security of payment for subcontractors” in the Australian building and construction industry. Such an uptake, however, is not consistent with the Cole Report’s (2003: Vol 8, 115) recommendation that, due to reasons of equality and cost efficiency, the Commonwealth enact a Building and Construction Industry Security of Payments Act. The Cole Report (2003: Vol 8, Appendix 1) even went as far as drafting a proposed Building and Construction Industry Security of Payments Bill 2003.

The consequence of security of payment legislation emerging on a state-by-state basis is a lack of uniformity between the relevant Acts in the different Australian jurisdictions. Of the enacted Australian legislation, there are some notable differences between, on one hand, the NSW, Queensland and Victorian Acts and, on the other hand, the WA and NT Acts. The NSW, Queensland and Victorian Acts have collectively been referred to as the East Coast model legislation, and the WA and NT Acts as the West Coast model legislation. The differences between the two models are particularly marked with respect to the procedure prescribed in each model’s statutory adjudication scheme.

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Act</th>
<th>Government department or agency responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA</td>
<td>Construction Contracts Act 2004</td>
<td>Building Management &amp; Works Division, Department of Treasury and Finance</td>
</tr>
<tr>
<td>NT</td>
<td>Construction Contracts (Security of Payments) Act 2004</td>
<td>Department of Justice</td>
</tr>
</tbody>
</table>

The current situation with respect to security of payment legislation in Australia is not dissimilar to the situation that existed with respect to inconsistencies in commercial

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3 Hereafter, referred to as the Cole Report, after the Honourable Commissioner Terence Rhoderic Hudson Cole RFD QC who led the Royal Commission into the Building and Construction Industry.
5 Accordingly, this terminology has been adopted for this paper.
arbitration State legislation – another key Act for the Australian construction industry concerning dispute resolution – until the mid-1980s when the States agreed to introduce uniform amendments so as to maintain consistency of the law and processes (Bailey 1998: 40).

The existence of two distinct statutory models, as well as some variations between Acts of the same model, presents inconsistency on a national basis resulting in unfamiliarity with key legislation for parties in the Australian building and construction industry undertaking contracts located interstate. Such unfamiliarity, in turn, may result in parties incurring extra costs in familiarising themselves with differences in interstate legislation, or parties being unaware and/or confused as to their statutory rights with respect to payment for construction work, which, in turn, may affect compliance with the relevant legislation. As stated in the Cole Report (2003):

National consistency is desirable. It reduces the cost of businesses moving between jurisdictions and operating in different jurisdictions. It means that the costs of subcontractors and the cost of building are not inflated in those States and Territories where there is a higher risk that subcontractors will not get paid.

Furthermore, there is a risk that building and construction will become relatively more expensive in those Australian jurisdictions which have not enacted security of payment legislation, as the cost benefits to the industry from an efficient form of payment dispute resolution is not available. Such cost benefits arise primarily in the form of improved cash flow during contracts, and lesser financial risk in tendering, to contractors. Consequently, tender prices to clients fall in a business environment where certainty of fair payment is increased. Jurisdictions without security of payment legislation, therefore, are likely to become less competitive for businesses generally due relatively higher overheads associated with building and construction capital.

On the basis that the inconsistent application of security of payment legislation currently existing in Australia presents a problem to the building and construction industry as outlined above, this paper identifies the key differences between the statutory adjudication schemes operating under the East Coast and West Coast legislative models, and reviews the use of statutory adjudication under each model in the respective jurisdictions. Having appraised the East Coast and West Coast model statutory adjudication schemes, a dual process of adjudication, as conceptualised by Davenport (2007), is proposed as a basis for the implementation of a nationally consistent approach.

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6 Particularly within the East Coast model legislation between the Victorian Act and the NSW/Queensland Acts.

2 The Key Differences between the East Coast and West Coast Model Statutory Adjudication Schemes

Whilst the intent of both the East Coast and West Coast models is similar – to improve cash flow in the construction industry – there is a significant difference between the scope of payment disputes which may be adjudicated under the two legislative models. This difference is apparent in comparing the objects of the NSW and WA Acts which epitomise the East Coast and West Coast models respectively. The object of the NSW Act\(^8\) states:

> The object of this 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.

Whereas, the object of the WA Act\(^9\) is “to provide a means for adjudicating payment disputes arising under construction contracts”.

The West Coast model, therefore, allows all payment disputes under a construction contract to be submitted to statutory adjudication. Whereas, the East Coast model restricts statutory adjudication to progress payment disputes only.

The East Coast model provides for the adjudication of straightforward progress payment claims for construction work carried out, or for related goods and services supplied under the construction contract in a payment period.\(^10\) Accordingly, the legislation defines “construction work” to be physical forms of construction,\(^11\) and “related goods and services” to be goods and services necessary for physical construction to take place.\(^12\) As such, the East Coast model legislation does not anticipate the adjudication of more complex payment claims, such as those for damages for breach of contract – for example, delay or disruption damages claimed by the contractor for a compensable cause under the contract. The East Coast adjudication scheme has been likened to that of an independent certifier (Davenport 2007: 13). Conversely, in addition to straightforward progress payment claims, the West Coast model anticipates the adjudication of more complex payment disputes for debts or damages, such as delay and disruption costs, liquidated damages for late completion, or amounts owed by way of indemnity from the other party. Such disputes require the adjudicator to make a determination of a more judicial nature more akin to arbitration or litigation. Accordingly, the West Coast model requires the adjudicator to determine on the balance of probabilities whether any party to the payment dispute is liable to make a payment or return any security.\(^13\)

\(^8\) S 3(1).
\(^9\) Stated on page 1 of the Act.
\(^10\) See ss 4, 8 & 13(2)(a) of the NSW Act.
\(^11\) See s 5 of the NSW Act.
\(^12\) See s 6 of the NSW Act.
\(^13\) See s 31 (2)(b) of the WA Act.
Furthermore, if the adjudicator feels that the dispute is too complex to make a fair determination, he or she may dismiss the application without making a determination.\textsuperscript{14}

Many of the procedural differences between the East Coast and West Coast statutory adjudication schemes, considered below, can be attributed to the differing objects of the respective legislative models with respect to scope of payment disputes covered.

### 2.1 Limitations on matters raised in an adjudication response

The East Coast model operates a ‘dual payment system’ for progress payment claims. This means that if a payment claim is to be eligible for submission to adjudication under the Act, it must state that it is made under the Act\textsuperscript{15} and be served upon the principal.\textsuperscript{16} This, in effect, amounts to a separate claim from the contractual progress payment claim made by a contractor and served upon the contract administrator or superintendent. The serving of a separate statutory claim theoretically means that the adjudicator is starting from the point of assessing a fresh payment claim rather than a contractual payment claim which has already been assessed by the contract administrator. This is in keeping with an independent certification role. Such a dual payment system has been described as a “dual railroad track system”,\textsuperscript{17} which creates a statutory system alongside any contractual regime.\textsuperscript{18}

Under the East Coast model’s statutory payment regime, a respondent has up to 10 business days after the payment claim is served to serve a payment schedule indicating the amount of the payment it proposes to make. If the scheduled amount is less than the claimed amount, the schedule must indicate why the scheduled amount is less with reasons for withholding payment.\textsuperscript{19} If the respondent does not provide a payment schedule, it becomes liable to pay the claimed amount to the claimant on the due date for the progress payment.\textsuperscript{20} If the respondent either fails to provide a payment schedule, schedules an amount less than the payment claim or fails to pay the whole or part of the scheduled amount by the due date, the claimant may make an adjudication application under the Act.\textsuperscript{21} In the case where a lesser amount is scheduled and paid, the claimant must serve an adjudication application on an Authorised Nominating Authority (ANA) of their choice,\textsuperscript{22} with a copy served on the respondent,\textsuperscript{23} within 10 business days\textsuperscript{24} after receiving the payment schedule. The respondent then has either a period of 5 business days after receiving a copy of the application or 2 business days after receiving notice of an adjudicator’s acceptance of the application, whichever is the later, to lodge an adjudication response with the adjudicator.\textsuperscript{25}

\textsuperscript{14} See s 31(2)(a)(iv) of the WA Act.  
\textsuperscript{15} See s 13(2)(c) of the NSW Act.  
\textsuperscript{16} See s 13(1) of the NSW Act.  
\textsuperscript{17} *Transgrid v Siemens & Anor* [2004] NSWSC 87 at [56], per Macready AJ.  
\textsuperscript{18} *Beckhaus v Brewarrina Council* [2002] NSWSC 960 at [60].  
\textsuperscript{19} See s 14(3) of the NSW Act.  
\textsuperscript{20} See s 14(4)(b) of the NSW Act.  
\textsuperscript{21} See s 17(1) of the NSW Act.  
\textsuperscript{22} See s 17(3)(b) of the NSW Act.  
\textsuperscript{23} See s 17(5) of the NSW Act.  
\textsuperscript{24} See s 17(3)(c) of the NSW Act.  
\textsuperscript{25} See s 20(1) of the NSW Act.
Critically, the respondent may only lodge an adjudication response if it earlier served a payment schedule upon the respondent.26 Additionally, a respondent may only include in its adjudication response reasons for withholding payment which have been included in the earlier payment schedule.27 Thus, a respondent will not be able to present their full case to the adjudicator unless it has previously served a comprehensive payment schedule which covers all the issues it may wish to rely on subsequently. This feature of the East Coast model has been criticised by some as a ‘procedural trap’28 which prevents a fair hearing and requires the respondent to divert significant resources to the massive task of preparing appropriate payment schedules. The author is also aware of anecdotal evidence from discussions with ANAs that the failure to submit a payment schedule often bars unwitting respondents from bringing their arguments before the adjudicator. This is a problem most likely due to inadequate knowledge of the legislation by parties in the construction industry – accordingly a survey of contractors and subcontractors in the NSW construction industry carried out by Uher & Brand (2008) showed that 48% had either low or no knowledge of the NSW Act and 37% had only moderate knowledge of the NSW Act. This issue aside, there are benefits in the statutory payment regime in that it provides a consistent and rapid timetable for payment claims and the adjudication process.

Bearing in mind that statutory adjudication under the East Coast model is essentially supposed to be an independent certification process, the preparation of payment schedules should not, in theory, prove too onerous. Reasons for withholding payment in a payment schedule should be restricted to issues of claimed work being either defective, beyond the scope of the contract, or not appropriately valued in accordance with the contract. Furthermore, the requirement to identify issues to be later relied upon in the payment schedule allows the claimant to respond to such issues in their adjudication application, and means that no issues are brought up for the first time in the adjudication hearing. This means that the claimant is fully aware of all the respondent’s reasons for withholding payment before making the decision to progress to adjudication, and that both parties have an opportunity to address all the issues before the adjudication hearing commences.

The West Coast model does not have a dual payment system. Payment claims which become the subject of adjudication are claims made under the construction contract. Thus, respondents are not barred from raising issues in their adjudication responses. This is a fairer and more practicable approach for claims which may be more complex in nature, and require a more judicial approach from the adjudicator. It also means that an adjudicator is making an assessment of what has already occurred under the contract with respect to a payment claim, which is more in line with a judicial approach taken in arbitration or litigation.

2.2 Who can apply for adjudication?

Under the East Coast model, only a person who has undertaken to carry out construction work or supply related goods and services under the contract may apply to have the

26 See s 20(2A) of the NSW Act.
27 See s 20(2B) of the NSW Act.
28 For example, see Fenwick Elliot (2007: 3).
dispute adjudicated. This, therefore, restricts adjudication applications to contractors and suppliers, and precludes principals. This is consistent with the scope of adjudication being limited to straightforward progress payments for construction work carried out, or for related goods and services supplied.

Under the West Coast model, any party to the contract may apply to have the dispute adjudicated. This is because it would, as Davenport (2007: 14) puts it, create an “imbalance” if only one party was allowed to apply for adjudication of payment disputes regarding debts or damages. Debts or damages claims may be initiated by either contractual party and, therefore, it would be blatantly unfair to allow only one party the right to refer such claims to adjudication.

**2.3 When can a party apply for adjudication?**

Under the East Coast model, an adjudication application may be made only pursuant to a progress payment claim which has been disputed or not paid in part or in whole. Progress payment claims may be made on and from each reference date determined in accordance with the contract or, if the contract makes no express provision with respect to the matter, the last day of each month in which construction work was carried out. Such requirement is consistent with the East Coast model’s limited scope of adjudication to straightforward progress payments which, as Davenport (2007) points out, become due after the payment claim is made.

Under the West Coast model, either party may apply for adjudication of a payment dispute within 28 days after the dispute arises. A payment dispute arises if by the time when the amount claimed in a payment claim is due to be paid under the contract, the amount has not been paid in full, or the claim has been rejected or wholly or partly disputed. The making of a progress payment claim does not prevent the contractor from making any other claim for monies payable to the contractor under or in connection with this contract. Therefore, the parties are not restricted as to the timing or number of adjudication applications they may make by reference dates stated in either the construction contract or security of payments legislation. This accords with the West Coast model’s coverage of payment disputes regarding debts and damages which if valid, as Davenport (2007) points out, are due at the time the payment claim is made. Therefore, payment claims and subsequent respective adjudication applications may be made at any time under the West Coast model.

**2.4 The investigative powers of the adjudicator**

In making his or her determination under the East Coast model, the adjudicator is only to consider the submissions made by the parties (payment claim, payment schedule, adjudication application, and adjudication response) together with the provisions of the

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29 See ss 13(1) & 17(1) of the NSW Act.
30 See s 25 of the WA Act.
31 See s 17(1) of the NSW Act.
32 See s 26(1) of the WA Act.
33 See s 6(a) of the WA Act.
34 However, an adjudication application cannot be made in respect to a dispute which has already been subject of an adjudication application – see s 25(a) of the WA Act.
Act, provisions of the construction contract and the results of any inspection carried out by the adjudicator of any matter to which the claim relates. In practice this often means that the adjudicator makes a determination on documents only. This is appropriate to the adjudicator’s role as independent certifier of progress payments. Additionally, as Kennedy and Milligan (2007: 13) note, such limits reduce exposure to claims of bias or procedural error, providing more certainty for straightforward payment claim determinations.

The investigative powers of an adjudicator making a determination under the West Coast model are wider. The adjudicator is not bound by the rules of evidence and may inform himself or herself in any way he or she thinks fit. This is more apt to the quasi-judicial role that an adjudicator may be required to undertake in relation to more complex claims regarding debts or damages.

2.5 Legal Representation at Adjudication Hearings

Under the East Coast model, if an adjudicator calls a conference of the parties no legal representation is permitted. Legal representation is unnecessary, and would only add time and cost, to what is essentially a straightforward independent certification process.

The West Coast model allows the adjudicator to determine his or her own adjudication procedure, and does not specifically preclude legal representation at hearings. Thus, legal representation at conferences is at the adjudicator’s discretion. Allowing legal representation at conferences regarding more complex debts or damages claims may be prudent as the effectiveness with which each party’s case is put forward to the adjudicator is improved. This will allow the adjudicator to gain a better understanding of the issues in dispute. Additionally, the parties are more likely to have confidence in the adjudicator’s determination if they feel that their case has been clearly communicated and understood.

2.6 How is an adjudicator appointed?

Under the East Coast model, the adjudication application must be made to an ANA chosen by the claimant. It is then the duty of the chosen ANA to refer the application to an adjudicator. The parties, therefore, cannot agree upon the appointment of a particular individual as adjudicator. The ANAs, however, ensure that their listed adjudicators are suitably trained and qualified for their role. As such, the ANAs provide an expedient means of appointing an adjudicator suitable for independent certification.

Under the West Coast model, the parties to the contract may agree upon a registered adjudicator or prescribed appointor. The provision to agree upon a particular individual as adjudicator is more important for complex claims, as the parties are likely

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35 See s 22(2) of the NSW Act.
36 See s 32(1)(b) of the WA Act.
37 See s 21(4A) of the NSW Act.
38 See s 32(6) of the WA Act.
39 See s 17(3) of the NSW Act.
40 See s 17(6) of the NSW Act.
41 See s 26(1)(c) of the WA Act.
to prefer the appointment of somebody who they feel is suitably qualified and experienced, and in whom they have mutual confidence to determine complex disputes in a restricted timeframe.

2.7 How long does an adjudicator have to make their determination?

Practically, there is little difference in the time allowed for an adjudicator to make his or her determination between the East Coast and West Coast models. The East Coast model requires determination within 10 business days\(^{42}\) of the date on which the adjudicator notified his or her acceptance of the application.\(^{43}\) The WA Act requires determination within 14 days,\(^{44}\) and the NT Act within 10 working days,\(^{45}\) after the date of the service of the adjudication response. All of the Acts allow for the extension of the determination period with the agreement of both parties.

10 working days appears reasonable for a certification type adjudication. However, 10 working days or 14 days would seem, at first sight, a tight timeframe within which to determine a more complex claim for debt or damages under the West Coast model.

3 The Performance of Statutory Adjudication in Australia

In each Australian jurisdiction, a government department or agency facilitates, promotes and monitors the use of security of payments legislation in their building and construction industry. The names of these government departments and agencies is presented in Table 1 above. Each department or agency collects various statistical data regarding the use of statutory adjudication which is available to the public either on the internet or by request. A review of this statistical data has been carried out, and is presented below, in order to obtain a comparative overview of the use of statutory adjudication in the various Australian jurisdictions.

Figures 1, 2 and 3 indicate the level of use of statutory adjudication since 2003/04\(^ {46}\) in terms of number of adjudication applications, total value of amounts claimed in adjudication, and amount claimed in adjudication per head of population respectively. Figure 4 shows the mean value of payment amounts claimed in adjudication.

Figure 1 shows that the number of adjudication applications in NSW escalated rapidly for the first two years after it was amended in 2003.\(^ {47}\) However, the number of applications appears to have plateaued since 2005/06. Queensland has experienced the

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\(^{42}\) See s 21(3) of the NSW Act, and s 2222(4) of the Victorian Act.

\(^{43}\) The Queensland Act differs slightly in that it requires determination within 10 business days after the earlier of the date on which the adjudicator receives the adjudication response, or should have received the adjudication response.

\(^{44}\) The WA Act does not define ‘day’. However, s 61(1)(e) of the Interpretation Act (WA) 1984 states that where the time limited for the doing of a thing expires or falls upon a Saturday, Sunday or public holiday, the thing may be done on the next day that is not an excluded day.

\(^{45}\) See s 33(3).

\(^{46}\) All jurisdictions record data each financial year with the exception of NSW which records each calendar year.

\(^{47}\) Most significantly for the use of adjudication, the NSW Act was amended to remove the original option provided for a respondent to an adjudication to provide security by way of guarantee to the successful claimant in lieu of payment, pending final determination.
steepest increase in adjudication applications since the legislation took full effect in October 2004. Indeed, NSW had significantly more adjudication applications than any other jurisdiction until 2008/09 when Queensland applications increased by 89% from 2007/08 to overtake the number in NSW. The high take-up rate in Queensland most likely reflects the efforts of the State’s Building and Construction Industry Payments Agency, which is relatively well resourced compared to its counterparts in other jurisdictions, in promoting and facilitating statutory adjudication. The numbers of adjudication applications in Victoria, WA and NT are significantly lower than in Queensland and NSW, and have only experienced a relatively gentle rise since enactment of the legislation compared to Queensland and the initial take off in NSW.

Whilst lower numbers are expected in WA and NT due to significantly smaller populations, this is not the case with Victoria. The slow adoption of statutory adjudication in Victoria is likely due to the option provided for in the original 2002 Act which allowed a respondent to an adjudication to provide security by way of guarantee to the successful claimant in lieu of payment, and was not removed from the Act until amendments were made to the Act which took effect on 30 March 2007. Additionally the amended Victorian Act appears to be more complex than its counterparts in NSW and Queensland, for example with respect to ‘excluded amounts’ which an adjudicator must not take into account when determining the claim,\(^{48}\) which may possibly deter industry usage.

Figure 1 shows that although the number of adjudication applications in NSW have remained fairly constant since 2005, the total value of amounts claimed in adjudication has dropped dramatically (a 78% decline between 2005 and 2008). This equates to a decrease in the mean value of payment amounts claimed in adjudication from $945,504 in 2005 to $198,973 in 2008. In Queensland, the total value of amounts claimed in adjudication has steadily increased on an annual basis (a 31% increase between 2006/07 and 2007/08, and a 26% increase between 2007/08 and 2008/09). In Victoria the total value of amounts claimed in adjudication has also risen steadily (a 36% increase between 2006/07 and 2007/08, and a 43% increase between 2007/08 and 2008/09). The total value of amounts claimed in adjudication in WA increased by 553% between 2005 and 2008.

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\(^{48}\) See s 23(2A)(a) of the Victorian Act.
2007/08 and 2008/09 whilst number of adjudication applications for the same period only increased by 139%. This equated to an increase in mean value of payment amounts claimed in adjudication from $442,726 to $1,142,116. NT experienced an increase in total value of amounts claimed in adjudication between 2006/07 and 2007/08 from $3,113,998 to $15,196,688. This figure has dipped slightly in 2008/09.

![Figure 2: Total value of amounts claimed in adjudication](image)

In order to gain a perspective as to the use of adjudication relative to the size of each jurisdiction, the total value of amounts claimed in adjudication was divided by the population\(^{49}\) for each jurisdiction in order to derive an amount claimed in adjudication per head of population, as shown in Figure 3. On a per capita basis over the past two years, NT has experienced the most claims in terms of value followed by Queensland and WA.

![Figure 3: Amount claimed in adjudication per head of population](image)

\(^{49}\) Population data was sourced from Australian Bureau of Statistics (2003).
Figure 4 shows that over the past two years, there has been a marked downward trend in the mean value of amounts claimed in an adjudication in NSW and Queensland, and an upward trend in the mean value of amounts claimed in an adjudication in WA and NT. In 2007/08 the mean value of claims was $294,441 in NSW, $352,239 in Queensland, $568,686 in Victoria, $1,142,116 in WA, and $1,013,113 in NT. Therefore, the mean value of claims is significantly lower in the East Coast model as opposed to the West Coast model jurisdictions.

![Figure 4: Mean value of amounts claimed in an adjudication](image)

Figure 5 shows the number of claims falling within various ranges of claim values for WA, Queensland and NT. 78% of adjudication claims in Queensland were between $0 to $99,999 range. This compares to only 44% in WA and 25% in NT for the same range.

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50 This data was not available for NSW and Victoria.
Figure 5: Frequency of claims by value

Figure 6 shows the mean adjudication fees charged by the adjudicators and/or ANAs in WA and Queensland.\textsuperscript{51} It may be seen that mean adjudication fees in Queensland were significantly lower (43% lower) than in WA for adjudication claims up to $99,999, but significantly higher (64% higher) for adjudication claims over $100,000.

\textsuperscript{51} This data was not available for NSW, Victoria and NT.
4 A Proposal for a Dual Process of Adjudication

If used as intended by parliament, adjudication under the East Coast model legislation provides an extremely efficient way of assessing progress payment claims, in a manner akin to an independent certifier, for the vast majority of claims. Ten working days is a rapid and reasonable duration in which to determine a straightforward progress payment claim. Furthermore, the data presented above supports the assertion that adjudication fees are significantly lower for smaller claims (below $99,999), which form over three quarters of all claims, in Queensland as compared to WA. The adjudication scheme under the East Coast model legislation, however, is not designed to determine more complex payment claims for damages, which has occurred in NSW over the past five years.  

Such mission drift is a severe threat to the effectiveness of, and confidence in, the statutory adjudication scheme in the East Coast model jurisdictions.  

The adjudication scheme provided in the West Coast model legislation is designed to be able to fairly assess both progress payment claims of a certification nature and more complex claims for debts or damages of a more judicial nature. Due to its wider scope, however, the West Coast adjudication scheme is not as efficient at determining smaller progress payment claims. Furthermore, it is questionable whether the 14 days (WA), or 10 working days (NT), allowed for the adjudicator to make his or her determination is long enough to reasonably assess more complex payment claims.  

Davenport (2007) has proposed a dual process of adjudication which appears to combine the established strengths of the East Coast and West Coast model statutory adjudication processes. This dual process retains the East Coast ‘certification’ process for pure progress payment claims, and adopts the West Coast ‘traditional’ process for other payment disputes. Davenport (2007) explains how the dual process of adjudication would operate and describes its key features, which are summarised in Table 2.


53 See Coggins (2009) for further discussion.
Table 2: Key features of Davenport’s (2007) Dual Process of Adjudication

<table>
<thead>
<tr>
<th>Certification Process</th>
<th>Traditional Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determines pure progress claims, limited to claims for the actual value of work</td>
<td>Determines payment claims for debts due under or for damages for breach of the</td>
</tr>
<tr>
<td>actually carried out or goods or services actually provided</td>
<td>construction contract</td>
</tr>
<tr>
<td>The object of the East Coast model legislation applies</td>
<td>The object of the West Coast model legislation applies</td>
</tr>
<tr>
<td>Only a supplier (a person who contracts to supply work goods or services) can make</td>
<td>A supplier or a purchaser (the person who is liable to pay the supplier) can make</td>
</tr>
<tr>
<td>a progress claim</td>
<td>a payment claim</td>
</tr>
<tr>
<td>A progress claim would have the endorsement “This is a claim under the … Act”</td>
<td>A claim would have the endorsement “This is an ex-contractual claim under the … Act”</td>
</tr>
<tr>
<td>Adjudication applications can only be made in connection with progress payment claims</td>
<td>Payment claims may be made at any time</td>
</tr>
<tr>
<td>or from contractual/statutory reference dates</td>
<td></td>
</tr>
<tr>
<td>Adjudicator appointments made by ANAs</td>
<td>Adjudicator appointments made by ANAs</td>
</tr>
<tr>
<td>Respondent to provide payment schedule within a prescribed time in response to</td>
<td>Respondent to provide a defence within a prescribed time in response to payment claim.</td>
</tr>
<tr>
<td>payment claim. Failure to provide payment schedule precludes an adjudication</td>
<td>Failure to provide a defence precludes an adjudication response.</td>
</tr>
<tr>
<td>response.</td>
<td></td>
</tr>
<tr>
<td>Cross claims or set offs not permitted unless decided in final proceedings or in</td>
<td>Respondent permitted to make cross-claims in addition to defence against claimant.</td>
</tr>
<tr>
<td>adjudication of an ex-contractual claim under the traditional process</td>
<td>Claimant would be able to make a ‘rejoinder’ against the cross claim.</td>
</tr>
<tr>
<td>Progress claim is payable after the amount is certified by an adjudicator and on the</td>
<td>The adjudicator would not decide a due date for payment as either the amount is due at</td>
</tr>
<tr>
<td>due date decided by the adjudicator</td>
<td>the date of the ex-contractual claim or it is not properly the subject of an</td>
</tr>
<tr>
<td></td>
<td>ex-contractual claim</td>
</tr>
</tbody>
</table>

5 Conclusion and Further Research

There are several key differences between the adjudication schemes provided for in the East Coast and West Coast model building and construction industry security of payment legislation enacted in Australia. These differences may be explained by the object of the West Coast model being wider in scope than the East Coast model with respect to the types of payment claims which may be determined in adjudication.

Statistical usage data recorded by government agencies and departments shows that in all jurisdictions, statutory adjudication is being well used by the building and construction industry. Nevertheless, discussions with some of these government bodies suggests that there is still a significant proportion of the industry which has little or no knowledge of statutory adjudication. This anecdotal evidence is supported by a recent
industry survey in NSW (Uher & Brand, 2008). Therefore, there is still significant potential for increased usage of statutory adjudication in most jurisdictions.

Adjudication under the East Coast model is more suited to the efficient determination of smaller progress payment claims (below $100,000) for construction works actually carried out or goods and services actually supplied. Adjudication under the West Coast model is not as efficient at resolving smaller, straightforward progress payment claims. However, it is more suitable for the equitable determination of larger and/or more complex payment claims. Therefore, both models have their own unique strengths.

The inconsistencies which exist in security of payment legislation in Australia are detrimental to the competitiveness of the building and construction industry, particularly for those firms conducting business interstate. Thus, there is an extremely strong case for a national approach to security of payment legislation, as recommended by the Cole Report (2003). Such unification is perhaps inevitable, and should take place sooner rather than later.

A dual process of adjudication has been conceptualised by Davenport (2007) which combines the unique strengths of statutory adjudication schemes under the two existing legislative models in Australia. The dual process provides for the determination of straightforward progress payments under a ‘certification’ adjudication process (similar to the existing East Coast model), and the determination of more complex payment claims for debts or damages under a ‘traditional’ adjudication process (similar to the existing West Coast model). It is proposed that this dual process would form a sound basis for the research and development of a national approach to security of payment legislation in Australia. Furthermore, Davenport’s dual process would allow the existing statutory adjudication schemes which have been established in the various jurisdictions to remain in place for payment claims for which they are suited.

Further research into the feasibility of operating a dual process of adjudication as a national approach in Australia is recommended. Additionally, research into the key features and provisions of such a process is recommended in order to fine tune and establish agreement on an optimal dual process model which could be accepted by all jurisdictions. The author proposes to follow up these recommendations as part of his ongoing PhD studies.\(^\text{54}\)

6 References


\(^{54}\) The author is currently enrolled on a PhD in Law at the University of Adelaide.


What are the requirements for the South African construction industry to fully utilise adjudication?

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Abstract:
Adjudication as an alternative dispute resolution (ADR) mechanism has recently been introduced to the South African (SA) construction industry. This paper outlines what the requirements are for the industry to realise the full potential of adjudication. To this end the paper reviews the necessary contractual, institutional and legislative framework, discusses relevant skills and available training, and establishes what impact the situation has on the current practice of adjudication in SA.

An extensive literature review was conducted, covering the local and international practice of adjudication. A structured interview was conducted with adjudicators, and those who were out of geographic reach were sent a survey questionnaire. The results obtained were statistically analysed.

The research established that adjudication appears to have found acceptance in the SA construction industry, but it was considered that the industry is not yet able to realise the full potential of adjudication, and the main reason for this was considered to be lack of knowledge.

Keywords: adjudication, alternative dispute resolution, payment, construction industry, legislation.

Standard abbreviations used
JBCC Series 2000 Joint Building Contracts Committee (SA)
CIDB Construction Industry Development Board (SA)
GCC 2004 General Conditions of Contract (SAICE)
FIDIC Federation Internationale des Ingenieurs-Conseils
NEC New Engineering Contract (ICE)
1. Introduction

Adjudication has recently been introduced into the four CIDB-endorsed forms of contract (JBCC Series 2000, GCC 2004, FIDIC and NEC) as one of the standard methods of dispute resolution. As with others elsewhere, the SA construction industry is more familiar with other forms of dispute resolution, such as arbitration, mediation and litigation. Adjudication is a relatively new concept and is, therefore, not yet well-understood. It also faces challenges in application as most adjudicators are trained and/or experienced in these other forms of dispute resolution and not in adjudication per se. Those meant to be served by it, i.e. clients, consultants and contractors, also appear to have limited understanding of the process or how best to make use of it.

The purpose of this paper is to investigate what the requirements are for the SA construction industry to fully utilise and benefit from adjudication. To facilitate this, the research reviewed the necessary contractual, institutional and legislative framework and other enabling factors, discussed relevant skills and available training, assessed whether or not these are in place in the SA construction industry, and established what impact the whole situation has on the current practice of adjudication. Recommendations are then made based on the findings.

1.1 Problem Statement

1.1.1 Main Problem
What are the requirements for the SA construction industry to fully utilise adjudication?

1.1.2 Sub-problems
The main problem was elaborated through the following sub-problems:

- How does the SA construction industry understand adjudication, how is it distinguished from other forms of dispute resolution, and what makes it an attractive alternative ADR process?
- Is adjudication adequately provided for in the contractual, institutional and legislative framework?
- Are there enough adjudicators in SA? Is there an established set of skills for adjudicators, and is relevant training available on adjudication?
- What impact does the status established above have on the realisation of the full potential of adjudication in SA?

1.2 Hypothesis

Adjudication is neither sufficiently understood nor appropriately practiced for the SA construction industry to realise its potential in full.

This was also broken down further into corresponding sub-hypotheses as follows:
Adjudication is not yet well-understood, and in practice it is not sufficiently distinguishable from the other forms of dispute resolution. It is regarded as attractive because of the perception that it is quick and cheap.

Although all four CIDB-endorsed forms of contract now make provision for adjudication it does not enjoy sufficient institutional support, as there is neither legislation nor voluntary association for adjudication.

There are not enough adjudicators in SA who possess of the required skills for adjudicators, and there currently exist neither regulation nor organization and training for the practice of adjudication.

The status depicted above (as established through the findings of the research) negatively impacts on the realization of the full potential of adjudication.

2. Literature Review

1.3 Definition

The term “adjudicate” is found in general usage to mean “give a ruling” or “to judge”. In more recent times, a specialised use of the term “adjudication” appears as a form of ADR available to the construction industry. Its definition in this context is not universally agreed, it being more often defined by what it is not than by what it is, but the following characteristics are reflected by most definitions (after CIDB 2004):

- Object is to reach a fair, rapid and inexpensive decision.
- The adjudicator is to act impartially and in accordance with rules of natural justice.
- Adjudication is neither arbitration nor expert determination, but the adjudicator may rely on own expertise.
- The adjudicator’s decision is immediately binding.

1.4 Origins

Differing views have been expressed regarding the origins of adjudication in construction (Gould 2006), but it is a commonly held view that its primary aim was to secure timely payment, having recognised that one of the most notorious inefficiencies of the construction industry is non- or late payment of contractors/sub-contractors by employers/contractors respectively (see for example Maritz 2007). This is possibly why adjudication is so closely associated with legislation of the form “Security of Payment Act”, and why it has been characterised by the adage “pay now, argue later” (Uff 2005).

An earlier form of adjudication is recorded to have been in use in the United Kingdom (UK) in the 1970’s, focusing on the payment problem between contractor and sub-contractor. In the United States of America (USA), dissatisfaction with rising costs of arbitration and litigation in the construction industry led to the appearance of dispute boards in the 1960’s, and this started to take root in the 1970’s (Gaitskell-3 2005). Of perhaps greater significance is that the quasi-judicial role of the principal agent has also been brought into question in recent times. One of the principles of natural justice, that one
cannot be judge in his own cause, appears to have played a major role in this latter
development, and this also features prominently in adjudication.

In their 1999 white paper to the Minister, the CIDB also recommended the use of ADR, as
arbitration and litigation were observed to have become costly and time-consuming (CIDB
PGC3 2005). The Latham report (UK 1994) is also referred to as a point of departure, as
with many other jurisdictions in the world, which have come to rely on the report as an
authority. The CIDB went further and made it mandatory for the SA construction industry
to adopt adjudication (CIDB PGC3 2005).

1.5 Adjudication within ADR

The rise in the modern use of ADR procedures appears to be due to the following factors
(Uff 2005; Butler and Finsen 1993), which to a large degree used to be claimed for
arbitration as its strong points before (in comparison to litigation):

- Expertise (of facilitator).
- Lower cost and shorter duration.
- Convenience and flexibility.
- Privacy and informality.
- Voluntary or customised dispute resolution process (can be made mandatory by
  agreement/contract).

Having observed that arbitration had become more formal and legalistic, Butler and Finsen
(1993) expressed the hope that the advent of ADR would rekindle arbitration and provide it
with appropriate techniques to sustain its use. Indeed more than ten years later Uff (2005)
observed that positive developments like the “100-day arbitration procedure” had grown
out of the lessons learned from adjudication.

Many authors however view all dispute resolution methods as constituting a continuum or
spectrum, with each method having its rightful place (see for example M’khomazi and
Talukhaba 2004). Indeed for enforceability if nothing else, ADR has had to form an
alliance with the formal court system (Maritz 2007).

1.6 Adjudication in Practice

The practice of adjudication was reviewed through its three tiers of application, namely
standard forms of contract, institutional guidelines and legislation.

1.6.1 Standard Forms of Contract

Many believe that standard forms of contract are more important than statutes and case law,
as they reflect current professional practice and mindset. A comparison was drawn between
adjudication provisions of the four CIDB-endorsed forms of construction contract namely
following summarised findings emerged:
The adjudicator (or Dispute Adjudication Board) is appointed jointly by the parties, some at the beginning of the contract, others once a dispute has arisen. Otherwise a named authority appoints.

The adjudicator’s agreement is co-signed by both parties and the adjudicator/board member. The agreement generally requires the adjudicator to be impartial and independent, and to disclose any potential conflict of interest. The adjudicator’s expertise is required to differing degrees.

Adjudication is not to be conducted as an arbitration, but the adjudicator has procedural discretion “…to ascertain the facts and the law”. Thus generally an inquisitorial approach is encouraged, as is reliance on own expertise. Procedural powers and duties are listed to differing levels of detail.

The adjudicator is immune from liability unless his act or omission is in bad faith, and is not to be called as a witness in subsequent proceedings.

Disputes referred to adjudication can be in connection with anything under the contract.

A hearing is held at the adjudicator’s discretion, but is generally discouraged.

Emphasis is generally placed on rules of natural justice or procedural fairness.

The adjudicator can decide own jurisdiction under JBCC and FIDIC, but is restricted to decide matters in dispute under GCC and NEC.

The adjudicator’s decision is binding until revised by arbitration, litigation or agreement. Failure to comply can be referred to court or arbitration.

Administrative aspects are provided for to differing degrees, e.g. communications, termination, etc.

1.6.2 Institutional guidelines

A comparison was drawn between Adjudication Guidelines from selected institutions, namely JBCC, CIDB, Dispute Resolution Board Foundation (DRBF), American Arbitration Association (AAA), International Chamber of Commerce (ICC), World Bank, and Construction Umbrella Bodies (UK).

The following major findings emerged:

- The guidelines generally go into more detail, particularly on procedural matters like the hearing, unless the associated form of contract already provides procedural rules e.g. FIDIC.

- Some institutions are more involved in the administrative aspects of the adjudications, such as appointments and hearings (e.g. AAA).

- Some guidelines from financial institutions are prescribed for projects funded by them, thereby effectively acquiring the status of regulation, one step closer to legislation discussed below.
1.6.3 Legislation

A comparison was drawn between selected adjudication legislation, namely that from the UK, New Zealand, Queensland (Australia) and Singapore. The legislation was found to generally address the following:

- Conditional payment clauses in contracts e.g. pay-when-paid.
- Establishing minimum payment terms.
- Establishing statutory adjudication system for disputes.
- Remedies available in case of non-payment.

1.7 Level of Use and Knowledge

The work of the Adjudication Reporting Centre at the Glasgow Caledonian University (Kennedy 2005) appears to represent best practice for collecting statistics in the use of adjudication. The centre issues regular reports based on information obtained from Adjudicator Nominating Bodies in the UK. The data handled includes, inter alia:

- Number and discipline of adjudicators.
- Trends in adjudications (growth, decline, fluctuations).
- Performance of adjudication (dissatisfaction or otherwise).

From elsewhere, various levels of acceptance and use of adjudication have been claimed, in all its various forms. Dispute boards continue to grow in use in the form of Dispute Review Boards, Dispute Adjudication Boards or Combined Boards (DRBF 2007). The World Bank along with other development banks is perhaps leading the way in this aspect, more recently with the help of FIDIC’s harmonised conditions of contract. Povey’s research (2005), whilst focusing on mediation, also revealed that SA mediators tended to conduct themselves more like the modern adjudicator. Van Langelaar (2001) confirms the international trends discussed above for Southern Africa and further notes that although the adjudication system appeared to have been successful, the knowledge base needed to be expanded.

1.8 Skills and Techniques

A comparison was drawn between information on adjudication skills and training from selected institutions, namely the CIDB, Institution of Civil Engineers (ICE), Chartered Institute of Arbitrators (CIARB), DRBF, AAA and FIDIC. The following major findings emerged:

- Formal training is common, varying from workshops to formal tuition and assignments.
- Formal assessment and accreditation is also common, including examinations and peer reviews, used in different formats and to varying degrees of intensity.
- Continuing Professional Development (CPD) as an on-going requirement has become universal.

Thus the right mix has to be found which would be suitable for SA conditions. Whilst one does not necessarily want to “kill it with science”, there could be legitimate cause for
concern that sub-standard levels of skill may not do justice to adjudication, or be able to exploit its full potential for the benefit of the construction industry.

3. Research Methodology

1.9 Population Size and Sampling

Due to limited numbers of knowledgeable people on the subject, purposive or target sampling was adopted. Panels of dispute resolution practitioners were sourced from relevant organisations (Association of Arbitrators SA (AASA), South African Association of Consulting Engineers (SAACE or CESA of late), South African Institution of Civil Engineering (SAICE), NEC Users Group), within which adjudicators were targeted. Some 30 practitioners were identified as being theoretically accessible for interviews and were contacted, out of which 18 availed themselves. Survey questionnaires were sent to some 17 practitioners who were outside geographic reach, out of which 6 were received. Some 9 additional candidates were identified by snowball sampling and acquaintance (including 2 based in the UK), from who 5 completed questionnaires were received. See Table 1 below for summary.

<table>
<thead>
<tr>
<th>Sampling group</th>
<th>Total contacted</th>
<th>Successful</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview</td>
<td>30</td>
<td>18</td>
<td>60%</td>
</tr>
<tr>
<td>Completing questionnaire – adjudicators</td>
<td>17</td>
<td>6</td>
<td>35%</td>
</tr>
<tr>
<td>Completing questionnaire – general sample</td>
<td>9</td>
<td>5</td>
<td>56%</td>
</tr>
<tr>
<td>Totals</td>
<td>56</td>
<td>26</td>
<td>52%</td>
</tr>
</tbody>
</table>

To the extent that this study leans towards engineering construction, its conception was also structured as a collaborative effort with the Maritz (2007) study, which tended to focus on building construction, the two studies thus covering the entire construction industry. Also, certain findings of the Maritz (2007) study were unpacked as part of this study, for example the possible content of an “adjudication qualification”.

1.10 Research design

The research design adopted was generally quantitative, but made provision for qualitative data in the form of comment. A survey questionnaire was developed and administered to answer the sub-problems or test the hypotheses, with input from the University of Pretoria’s Department of Statistics on the final format for ease of data capture and interpretation. The questionnaire design and administration incorporated considerations of threats to validity and research ethics.
The data was analysed statistically, and content analysis was employed for qualitative results.

4. Results

The summarised results are presented in Table 2 below.

<table>
<thead>
<tr>
<th>Question</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Background</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>58% of the respondents practiced in engineering construction and 34% in building construction</td>
</tr>
<tr>
<td>1.2</td>
<td>65% of the respondents held a qualification in engineering, 13% in architecture, and 10% in each of quantity surveying and legal</td>
</tr>
<tr>
<td>2. Level of use and knowledge</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>46% rated their knowledge of adjudication very high, 39% high and 14% average</td>
</tr>
<tr>
<td>2.2</td>
<td>34% each use adjudication rarely, 56% often/regularly and less than 10% each for “never” and “always”</td>
</tr>
<tr>
<td>2.3</td>
<td>Total of 96% agreed that adjudication was quicker, 86% for cheaper, 80% for providing interim relief, 72% for immediately binding, 69% for expertise of adjudicator, 55% for enforceable, and 53% for consensual</td>
</tr>
<tr>
<td>2.4</td>
<td>Total of 80% of respondents had had satisfactory experience with adjudication.</td>
</tr>
<tr>
<td>3. Adjudication in practice</td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>Contractual provisions for adjudication were considered sufficient by total of 55% of respondents for JBCC, 48% for GCC, 68% for FIDIC, and 62% for NEC</td>
</tr>
<tr>
<td>3.2</td>
<td>Institutional guidelines for adjudication were considered adequate by 50% of respondents for JBCC, and between 60% and 90% of respondents were not familiar with other (international) guidelines</td>
</tr>
<tr>
<td>3.3</td>
<td>Legislation for adjudication was considered effective by 50% of respondents for UK, and over 75% of respondents were not familiar with legislation from other countries</td>
</tr>
<tr>
<td>3.4</td>
<td>Other enabling factors appeared in the order of (from most suggested) skills, party relations, court support and publicity.</td>
</tr>
</tbody>
</table>
4. Skills and techniques

| 4.1 | 65% of respondents considered that there were not enough adjudicators in the SA construction industry |
| 4.2 | Total of 90% of respondents agreed that both technical expertise and legal knowledge were relevant skills for adjudicators, and 70% agreed with project management skills |
| 4.3 | 96% of respondents agreed that the inquisitorial approach was useful in an adjudication, 60% disagreed with the adversarial approach, 80% agreed with the facilitative approach, and 90% agreed with the evaluative approach |
| 4.4 | Total of 70% agreed that age was a desirable personal attribute in an adjudicator, 96% agreed with experience, 60% agreed with professional registration, 40% did not agree with professional accomplishments, 45% agreed with corporate seniority, 93% agreed with fairness, 84% agreed with procedural approach, and 90% agreed with availability |
| 4.5 | Total of 80% agreed that participating in an adjudication was important to acquire knowledge and experience, 90% agreed with conducting an adjudication, 80% agreed with self-study, 72% agreed with attending seminars, and 84% agreed with taught courses and 72% agreed with assignments |
| 4.6 | 62% agreed that examination was important to assess competence, 80% agreed with interview/peer review, 65% agreed with mock adjudication, and 45% considered that a certificate of attendance was a nice-to-have |
| 4.7 | Respondents were roughly split equally on regulating the practice of adjudication, but majority believed it should be better organised (similar to AASA role in Arbitration). |

5. Impact

| 5.1 | Respondents were roughly equally split on whether or not SA is able to realise the full potential of adjudication |
| 5.2 | 75% believed the factors discussed had an impact on the practice of adjudication |
| 5.3 | 50% considered lack of knowledge as the single most important contributing factor |
| 5.4 | Suggestions for improvement appeared in the order of (from most suggested) skills and training, promoting adjudication, improving contracts, work-shopping lessons learned, introducing legislation and providing institutional support |

6. Legislation

| 6.1 | Total of 75% agreed that SA needs a “Payment and Adjudication Act” similar to that in the UK and other countries |
| 6.2 | Total of 60% agreed that such legislation should address minimum payment terms, 90% agreed with statutory adjudication, and 95% agreed with remedy in case of non-payment |
| 6.3 | 95% agreed that scope for such law should cover all disputes under the contract, and there was a split opinion on professional liability as well as on special provisions for emerging contractors |
| 6.4 | 80% agreed that such law should have an international component |

7. Interest

| 7.1 | 96% of research respondents wished to see the results of the study |
5. Findings

The results appear to reveal the following on the research problem:

- The first sub-hypothesis was disproven as far as adjudication practitioners are concerned: their understanding appears to be quite high, and is in keeping with generally accepted characteristics of adjudication. However, the same cannot necessarily be said of the rest of the construction industry.

- The second sub-hypothesis was disproven in the first part: contractual provisions were generally considered sufficient in all standard forms of contract except GCC. Lack of organisation and visibility was a recurring theme. Thus the other part of the second sub-hypothesis was confirmed in that it was generally agreed institutional support was lacking. Regularisation was suggested along the lines that the practice of arbitration is organised under AASA.

- The third sub-hypothesis was confirmed: there were not enough adjudicators, and although there was no established set of skills or minimum training requirements for adjudicators, there was general agreement on relevant skills, useful techniques and desirable personal attributes. There was also 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 fourth and over-arching sub-hypothesis was confirmed: the SA construction industry was generally considered not to be able to realise the full potential of adjudication in the current circumstances, and the main reason for this was considered to be lack of knowledge.

Note on Interpretation

The results appear inconclusive on whether or not SA is able to realise the full potential of adjudication, if based only on the results of Question 5.1 Ability to realise full potential above which shows a split response. But if a holistic view is taken, starting with the results of Question 5.2 Factors contributing to situation which show that the factors discussed are in fact considered to have an impact on the situation, combined with the findings pertaining to those factors themselves, which generally show adjudication facing more challenges than successes (e.g. usage remains low, institutional support lacking, skills and training remains a major concern), then it becomes evident that, overall, SA is not yet able to realise the full potential of adjudication. Furthermore, it is through such an interpretation that the rest of the research findings fit together: it is contended that it is due to the recognition of lack of knowledge as the most important contributing factor to this untenable situation, that skills and training has been identified as the most favoured means of addressing the situation.
6. Conclusion

Based on the findings above, it can be concluded that adjudication has found acceptance in the SA construction industry. However, it still has some way to go before its potential can be realised in full. Certain challenges need to be overcome to enable this to happen, which range from the contractual, institutional and legislative framework, to matters of skills and training. It is in this spirit that recommendations are made below.

7. Recommendations

In keeping with the conclusion and findings, the following recommendations can be made:

- Increase knowledge and understanding of adjudication by the construction industry.
- Improve the wording of standard forms of contract, strengthen provisions for adjudication, and standardise the process as far as possible.
- Organise the practice of adjudication, either through an existing organisation (e.g. AASA, CIDB, DRBF etc.) or by establishing a dedicated one.
- Introduce legislation to support the process of adjudication.

8. References


Conception of Disputes Amongst Malaysian Quantity Surveyors

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Abstract:
Disputes have been a common phenomenon in the Malaysian construction industry and with the surge in numbers of construction projects, the numbers of disputes are expected to increase. To overcome this, the Malaysian construction industry has introduced various initiatives is to encourage the application of more effective ways of preventing and resolving construction disputes but results have been variable.

While much has been done, critics are frequent in arguing that the initiatives have not been effective. In was conceived that a critical weakness lies in the holistic understanding of disputes and the contributing factors. The fundamental starting point should be to firstly understand the nature of the disputes itself within the context of the industry. This is necessary before appropriate means of dispute resolution can be effectively identified. A research to identify this was carried out and part of its findings found that the primary cause is misunderstanding of contracts and the inappropriate choice of resolution methods when disputes occur. The paper posits that the industry needs to re-learn disputes, its nature and the alternative dispute resolution methods.

Keywords:
Dispute, Conflict, Construction Industry Master Plan (CIMP), Alternative Dispute Resolution (ADR), Claims

1. Introduction

At its best, the Malaysian construction industry is able to match the industry of the developed countries in delivering complex and sophisticated construction projects with high class performance standards. However, in many areas it was found to be under-
achieving and performance in some areas of the industry had not been effective. Construction projects not completed within time, cost or quality. Many completed infrastructure projects are deteriorating rapidly because of poor management and maintenance. Disputes have also been frequent. In realising the need to overcome the weakness, the Malaysian Construction Industry Board (CIDB) has launched the Construction Industry Master Plan (CIMP) in 2006. The promotion of more effective alternatives of preventing and resolving construction disputes has been underlined as one of the CIMP initiatives. While much is expected from the CIMP to reform the industry, results have been poor. Reports from the CIDB reveal that performance improvements following the reforms have not been up to mark. The percentage of construction project overruns, projects were delivered not within the tender cost and tender programme continue remain high. Construction was well short of reaching safety targets with the low reduction in the number of fatalities and injuries. The number of construction dispute cases waiting to be heard in courts is very high and it might take years before they can be resolved. (The New Strait Times 2007) reported that in the Malaysia, the numbers of cases pending the court hearing has increased to more than 900,000 cases in July 2006.

A research project was carried out to conceive the failure of the industry to address the problems of disputes. This research is on-going and part of the research suggests that the industry needs to re-learn construction disputes. The fundamental starting point is to understand the nature of the disputes itself before appropriate means of dispute resolution can be identified. The focus of the research was to firstly identify the common causes of construction disputes and their impact. The theoretical framework is provided together with the research methodology. The findings are discussed and the conclusion is presented at the end of the paper.

2. The Theoretical Framework

2.1 Definition

Conflict and Dispute

A review of the literature on conflict and disputes in construction were found to be variably used. In many instances, they are used separately or in pairs and frequently without clear indication of the precise meaning of each use. Chan (2008) see conflicts as the prime driver of disputes. Conflict emanating from opposing interest due to scarce resources, goal divergence, frustration and mixed motive relationships; it exists wherever there is incompatibility of interests among the disputants. Fenn et al. (1997) suggest that conflict can be managed to the point before it leads to disputes. Kumaraswamy (1997) observe that disputes occur when when a claim is rejected and the rejection is not accepted.

Brown & Marriott (1993), Cheung and Yin (2006) and Cheung and Suen (2002) commonly agree that dispute is the manifestation of the underlying conflicts and is linked to difference in perspectives, interests and agenda of human beings. Zack (1995) stress that disputes are not something that magically appears during the project construction stage. The seeds of a dispute are usually planted during the design stage but emerge during construction. Fenn et al. (1997) add that when this occurs, it requires
resolution and usually involve third party intervention. Shin (2000) suggests that disputes can be analysed from lessons learned, experiences and precedence knowledge. Shin (2000) associates conflicts and disputes mostly in construction contract terms and propose that conflict cannot be avoided but can be managed. Singh (2009) suggests that claims are a sub-set of dispute, and occur when any party or third party rightly or wrongly request an adjustment to the original time and cost and relate to legal implications. Claim is wastage to the project resources and should be avoided by identifying the principle reasons for the claims.

2.2 Why Disputes Occur?

The view that nature of the construction and the complexity of the project as the primary contribute contributor to disputes were found to be consistent. McIntyre (1991) notes that as projects increase in size and complexity, so then does the risk of cost and time overruns, which invariably leads to disputes. Ball (1994) believes that the failure to act, or incorrect action, to cope with information systems, communications and knowledge are the primary causes of construction disputes. Mitropolous and Howell (2001) and Cheung and Yin, (2006) associate disputes to project uncertainty, contractual problems and opportunistic behaviour. Chan (2008) associate disputes with (i) a combination of issues including time, cost and defects; (ii) the contractor’s cash flow; and (iii) extra difficulty of the private sector to negotiate for commercial settlement whereas public organisations usually seek determination of a dispute by a competent tribunal. Vorster (1993) finds: (i) uncertainty causes change beyond the expectation of the parties (ii) process problems including imperfect contracts and unrealistic performance expectations and (iii) peoples issues, problems due to poor communication, poor interpersonal skills and opportunistic behaviour, as the common causes of disputes.

Cheung & Yin (2006), in their proposed ‘dispute triangle’ model, classify (i) contract provisions, (ii) triggering events, and (iii) conflict, as the key the components of disputes. In their study, Kumaraswamy & Yogeswaran (1998) maintain that construction disputes primarily emanate primarily from contractual matters, but Chan & Suen (2005) and Diekmann and Girard (1995) disagree.

Poh (2005), Mohd. Isa & Ishak (2005), Ismail et al. (2006) and Motsa (2006), and identify disputes in the Malaysian construction industry as contributed by every parties involved in the contract. Abdullah Habib & Abdul Rashid (2006), and Lian (2006) identify that clients and the main contractors, the main contractors and their subcontractors or suppliers or both are the common parties that in dispute. The findings from the studies on disputes by Poh (2005), Ismail (2006), Motsa (2006), Mohd. Isa & Ishak (2007), Abdullah Habib & Abdul Rashid (2006), and Lian (2006) are summarised in Table 1(a),(b) and (c). It was drawn that the main cause of construction disputes relates to payment (particularly on non-payment for certified sums) and misunderstanding in payment procedures among the main contractor and sub-contractor. This is followed by delay, termination and variation.
Table 1(a), (b) & (c): Nature of Disputes, Parties Involved and Stages of Dispute Occurrence in the Malaysian Construction Industry

<table>
<thead>
<tr>
<th>Causes of Disputes</th>
<th>No. of cases</th>
<th>Parties Involved (Defendant &amp; Plaintiff)</th>
<th>No. of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment</td>
<td>37</td>
<td>Developer and client</td>
<td>1</td>
</tr>
<tr>
<td>Variation</td>
<td>9</td>
<td>Employer and architect</td>
<td>2</td>
</tr>
<tr>
<td>Termination</td>
<td>13</td>
<td>Employer and engineer</td>
<td>2</td>
</tr>
<tr>
<td>Delay</td>
<td>14</td>
<td>Employer and main contractor</td>
<td>45</td>
</tr>
<tr>
<td>Defect</td>
<td>1</td>
<td>Employer and sub-contractor</td>
<td>3</td>
</tr>
<tr>
<td>Damages</td>
<td>8</td>
<td>Employer and purchaser</td>
<td>3</td>
</tr>
<tr>
<td>Performance bond</td>
<td>6</td>
<td>Main contractor and sub-contractor</td>
<td>12</td>
</tr>
<tr>
<td>Default</td>
<td>6</td>
<td>Sub-contractor and sub-contractor</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construction Stage</th>
<th>No. of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial stage</td>
<td>1</td>
</tr>
<tr>
<td>Design stage</td>
<td>0</td>
</tr>
<tr>
<td>Construction stage</td>
<td>55</td>
</tr>
<tr>
<td>Occupational stage</td>
<td>16</td>
</tr>
</tbody>
</table>

While most disputes are between the employer and the main contractor, the disputes mostly occurred during the construction phase. The five most causes of construction disputes in Malaysia are variations, extension of time, financial claims, payment, ambiguous contract, design errors and inadequacies.

2.3 Managing Construction Disputes

Lian (2006) stresses that the aim of managing disputes is to undertake damage control measures by recognising the disputes earlier. He maintains that although measures can be taken to avoid disputes, it frequently occurs, and there must be adequate mechanisms to resolve them before they become chaotic. Zack (1995) stressed that dispute management technique is important to avoid the litigation phase. Shin (2000), Chan and Suen (2004) and Mc Cormac (1994) sees dispute management process as developing from knowledge from past dispute cases, but to achieve this, the contracting parties have to be pro-active in managing disputes. Clients should provide a clear brief to the contractor in order to avoid disputes and getting a quality building because a happy contractor usually will do a better job.

Zack (1995), Chan and Suen (2006) and Fenn (2002) stressed that dispute prevention is better than cure. To enable this, Ismail (2008) and Dickmann & Girard (1995) suggest that the parties should be aggressive in predicting the disputes by equipping themselves with knowledge on contract and understand their rights and obligations. Otherwise, it will be a very complicated process. Lian (2006) suggest that the quantity surveyor (QS) should also play a pro-active role at the various stages of the development cycle of the project to ensure best management practices are adhered to. The QS is responsible in avoiding construction disputes and claims from blowing into full fledge to litigation or arbitration.
Figure 1: Dispute Prevention Measures Undertaken by the Quantity Surveyor
The dispute prevention measures that can be undertaken by the QS is summarised in Figure 1 and the dispute prevention measures drawn from the literatures researched is summarised in Table 2 below.

### Table 2: Dispute Prevention Measures

<table>
<thead>
<tr>
<th>Dispute Prevention Method</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constructability/bidability review, scheduling specification, payment for variations, estimating requests for information and plan clarification, pre purchasing owner delay time, bid mark-up rate and daily extended overhead rate, predicting the weather &amp; escrowing of bid documents</td>
<td></td>
</tr>
<tr>
<td>2. Construction phase</td>
<td></td>
</tr>
<tr>
<td>Partnering, Open communication, preconstruction audit, delegation of authority, project trending, document tracking, time-lapse video photography, submittal of contractor’s daily logs &amp; submittal of contractor’s short interval schedules</td>
<td></td>
</tr>
<tr>
<td>3. Dispute phase - Negotiation team, decision ladder and dispute review board</td>
<td></td>
</tr>
<tr>
<td>4. People issues</td>
<td>Jahren &amp; Dammeier (1990)</td>
</tr>
<tr>
<td>Being fair, reasonable, respectful, develop a team atmosphere, retaining an experienced staff &amp; avoid adversarial relationship</td>
<td></td>
</tr>
<tr>
<td>5. Policy issues</td>
<td></td>
</tr>
<tr>
<td>Working through disputes in a timely manner, creating good documentation, avoid competitively bid work, emphasising negotiated work</td>
<td></td>
</tr>
<tr>
<td>6. Communication issues</td>
<td></td>
</tr>
<tr>
<td>Good communication skills, having a good contract &amp; clear scope of work</td>
<td></td>
</tr>
<tr>
<td>Understand contract terms, make sure that the partner is not insolvent &amp; devise a realistic risk assessment</td>
<td></td>
</tr>
<tr>
<td>9. Prevention of cultural disputes</td>
<td></td>
</tr>
<tr>
<td>Parties must be transculturally competent, recognise the expectations &amp; behaviour of others</td>
<td></td>
</tr>
<tr>
<td>10. Prevention of legal disputes</td>
<td></td>
</tr>
<tr>
<td>Keep up to date with the current laws &amp; regulations</td>
<td></td>
</tr>
<tr>
<td>Assess the risk assessment involved &amp; reflect it in the contract, provide contingency plan, parties should specify exact terms for payment &amp; performance standards &amp; establish a realistic timetable, pay special attention to any changes to the standard form of contract &amp; spend time going through the entire document</td>
<td></td>
</tr>
<tr>
<td>12. Management of cultural &amp; legal disputes</td>
<td></td>
</tr>
<tr>
<td>Recognise the expectation &amp; behaviour of others, good effective communication &amp; integration among members, organise project charter workshop involving key participants to synchronise their thinking so that they can lay out problems &amp; resolve any conflicts, adopt international institution arbitration rules &amp; seek advise from local lawyers expert in construction law &amp; local policy</td>
<td></td>
</tr>
</tbody>
</table>
2.4 Impact of Construction Disputes and Dispute Resolution

While there is a general agreement that that resolving construction disputes during the course of the project is preferable (Brown & Marriott, 1999; Sew, 2004; Naseem, 2005), there were variable views as to the consequence of disputes. From his study, Abidin (2007) identifies time, cost, and quality as the consequence of disputes. Conversely, studies by Cheung (2002), Chan and Suen (2004), Harmon and Kathleen (2004) and Poh, 2005) identify time delays and cost overruns, diminution of respect between parties, deterioration of relationship and breakdown in cooperation and additional expenses in managerial and administration as the major impacts of disputes. Disputes can be detrimental to construction procurement if not being addressed and resolved properly and, therefore, dispute resolution cannot be over-emphasized (Cheung et al. 2002; Chan and Suen, 2002, 2004, 2005). The process to attain the most appropriate dispute resolution strategy is equally important.

Mohd. Isa & Ishak (2005) identified that traditionally parties go to court or arbitration for their disputes settlement but neither solution is really adequate. Over the last decade, it has become apparent that civil justice system around the world are in a state of crisis such as excessive costs, delays, uncertainties and causing distortions in business community (James, 2003). Even though, litigation is not growing rapidly, its volume was still beyond the capacity of the courts to cope with adequately (Brooker and Lavers, 1997). In attempting to address this backlog, the construction industry has initiatives to look for a new alternative dispute resolution (ADR) methods which include arbitration, negotiation, mediation and adjudication. Litigation remains as the traditional means of resolving disputes (Jannadia et al. 2000; Cheung et al. 2002; Mohd. Isa & Ishak, 2005, Hamidi, 2008).

Arbitration is perceived to be the most appropriate ADR method (Luen, 2006) and exist in all major construction standard forms of contract. Even so, it is yet to be applied vigorously by the construction parties (Isha and Ishak, 2007 and Ismail et al. 2008) due to the time and cost factors, tedious process and unsatisfactory results by the third party. Contradict with Diekmann and Girard, 1995; Meng, 2001; Cheung et al. 2002; Ismail et al. 2008) argued that as a project team, any dispute should be resolved through direct-negotiation among the disputants without third party involvement. Otherwise, other issues will emerge and further detriment the concept of ADR. Mohd. Isa and Ishak (2005) identify that the disputants are also unfamiliar with ADR. Therefore, it is recommended that ADR framework to be formulated to assist all parties in resolving the disputes. Ismail (2008) believed that in order for ADR to success in Malaysia, not only the government support and the political influent are crucial but the most important factor is the disputants themselves should change their adversarial mindset (Faruqi, 2000).
3. The Research Methodology

The research aim was to establish how construction disputes are conceived by drawing the views of practising quantity surveyors. To enable this, a quantitative research method was adopted for inquiry one which involves the administration of questionnaire surveys to selected random samples of quantity surveyors. The research questions were:

- what are the types and sources of construction disputes?
- what are the of common methods used to settle disputes?
- what are the views on litigation, arbitration and mediation? and,
- how can disputes be prevented

<table>
<thead>
<tr>
<th>Position</th>
<th>Number</th>
<th>Percent</th>
<th>Working experience (Years)</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Director</td>
<td>1</td>
<td>3.7</td>
<td>&lt; 5</td>
<td>4</td>
<td>14.8</td>
</tr>
<tr>
<td>Senior Assistant Director</td>
<td>1</td>
<td>3.7</td>
<td>6-10</td>
<td>6</td>
<td>22.2</td>
</tr>
<tr>
<td>Assistant Director</td>
<td>3</td>
<td>11.1</td>
<td>&gt;10</td>
<td>16</td>
<td>59.3</td>
</tr>
<tr>
<td>Project Executive</td>
<td>1</td>
<td>3.7</td>
<td>Not indicated</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td>Senior Manager</td>
<td>2</td>
<td>7.4</td>
<td>Total</td>
<td>27</td>
<td>100</td>
</tr>
<tr>
<td>Assistant Manager</td>
<td>1</td>
<td>3.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract Manager</td>
<td>1</td>
<td>3.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity Surveyor</td>
<td>14</td>
<td>51.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not indicated</td>
<td>3</td>
<td>11.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The summary of the respondents and their variables are as shown in Tables 3(a), (b) and (c) above. Seventy questionnaires were distributed and twenty seven (38.6%) were returned. Table 4 - Table 9 below recapitulates the findings of the preliminary survey. The SPSS Software was used to analyse the quantitative data and the qualitative data was analyzed manually.
4. Findings

4.1 The Respondents Experience on Construction Disputes

Eighty nine percent of the respondents have experience in managing construction disputes. Although design and build procurement is believed to be able to overcome problems of disputes, it recorded the highest number of disputes (70%). Unfamiliarity to operate the design and build procurement system among the building teams is suspected to primarily contribute to this. As Suleiman (2008) pointed out, a design and construction works are simultaneously ongoing, contractors tend to practice 'build first & design later'. Singh (2007) supports by underlining the lack of a systematic or formalised guideline for the preparation of the needs statement in Malaysian design and build projects. He added that poor needs statement given to the design and build contractors have led to contractors facing the problems in providing a good proposal.

Table 4(a), (b) & (c): Dispute Involvement, Types of Procurement & Dispute Contributors

<table>
<thead>
<tr>
<th>Dispute Involvement</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>24</td>
<td>88.9</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>7.4</td>
</tr>
<tr>
<td>Not indicated</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Types of procurement</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional</td>
<td>6</td>
<td>22.2</td>
</tr>
<tr>
<td>Design &amp; build</td>
<td>19</td>
<td>70.4</td>
</tr>
<tr>
<td>Not indicated</td>
<td>2</td>
<td>7.4</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dispute contributors</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client</td>
<td>5</td>
<td>18.5</td>
</tr>
<tr>
<td>Consultant</td>
<td>4</td>
<td>14.8</td>
</tr>
<tr>
<td>Contractor</td>
<td>17</td>
<td>63</td>
</tr>
<tr>
<td>Not indicated</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>100</td>
</tr>
</tbody>
</table>

Results from the analysis suggest that most of the disputes are contributed by the contractors, followed by the consultant and client. Notwithstanding, construction disputes are evolutionary and cannot be accused to just one party. Teamwork is very important in any project delivery system to fulfil each party goal and the project requirements.
Table 5: Experience on Types and Causes of Construction Disputes

<table>
<thead>
<tr>
<th>Causes of disputes</th>
<th>Types of disputes</th>
<th>Number</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiguous contract document</td>
<td>Contractual</td>
<td>17</td>
<td>63</td>
<td>4</td>
</tr>
<tr>
<td>Contract figures too low</td>
<td>Contractual</td>
<td>5</td>
<td>18.5</td>
<td>9</td>
</tr>
<tr>
<td>Poor communication</td>
<td>Organisational</td>
<td>10</td>
<td>37</td>
<td>6</td>
</tr>
<tr>
<td>Inadequate management</td>
<td>Organisational</td>
<td>18</td>
<td>66.7</td>
<td>3</td>
</tr>
<tr>
<td>Failure to deal with changes and unexpected conditions</td>
<td>Organisational</td>
<td>13</td>
<td>48.1</td>
<td>5</td>
</tr>
<tr>
<td>Lack of team spirit or collegiality among participants</td>
<td>Organisational</td>
<td>5</td>
<td>18.5</td>
<td>9</td>
</tr>
<tr>
<td>Set-off</td>
<td>Contractual</td>
<td>3</td>
<td>11.1</td>
<td>11</td>
</tr>
<tr>
<td>Design errors and inadequacies</td>
<td>Technical</td>
<td>21</td>
<td>77.8</td>
<td>1</td>
</tr>
<tr>
<td>Variations</td>
<td>Contractual</td>
<td>20</td>
<td>74.1</td>
<td>2</td>
</tr>
<tr>
<td>Misinterpretation of contract documents</td>
<td>Contractual</td>
<td>13</td>
<td>48.1</td>
<td>5</td>
</tr>
<tr>
<td>Financial claims</td>
<td>Contractual</td>
<td>9</td>
<td>33.3</td>
<td>7</td>
</tr>
<tr>
<td>Unrealistic contract provisions</td>
<td>Contractual</td>
<td>6</td>
<td>22.2</td>
<td>8</td>
</tr>
<tr>
<td>Unrealistic expectation of the parties</td>
<td>Organisational</td>
<td>4</td>
<td>14.8</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 5 presents the results of analysis of the causes and types of construction disputes. The findings show that the five common causes of disputes are design errors and inadequacies (77.8%), variations (74.1%), inadequate management (66.7%), ambiguous contract documents (63%) and failure to deal with changes and unexpected conditions and misinterpretation of contract documents (48.1%). In line with the views of Shin (2000) and Chan & Suen (2004), contractual disputes are most common.

Table 6: Impact of Construction Disputes to the Project

<table>
<thead>
<tr>
<th>Impact of construction disputes</th>
<th>Number</th>
<th>Percent</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost increased</td>
<td>25</td>
<td>92.6</td>
<td>1</td>
</tr>
<tr>
<td>Prolong completion period</td>
<td>18</td>
<td>66.7</td>
<td>2</td>
</tr>
<tr>
<td>Destroy business relationship</td>
<td>2</td>
<td>7.4</td>
<td>3</td>
</tr>
</tbody>
</table>

There is a general agreement that the most common impacts of disputes are increase in cost, prolongation of contract period and damage of the disputant relationship. This tends to support the view of (Cheung et al, 2002) who suggests the need for more consideration of dispute prevention during the initial project stage underpinned with better understanding and harmonisation of the building team (Cheung et al, 2002).

4.2 Means of Resolving Construction Disputes

Figure 2 below outlines the respondents’ views towards litigation and arbitration.
Views on litigation

- Long & tedious process
- Costly
- Time consuming
- Non-technical judges
- Unresolved cases
- Wasting money to pay the charge
- Parties know their respective rights and becoming more defensive
- Bias to the clients sides

Views on arbitration

- Faster than litigation
- Location for hearing is flexible
- Technical expertise available
- Tedious process
- Costly

Figure 2: Views on Litigation and Arbitration

There is a general dissatisfaction over the litigation and arbitration process. Although arbitration is preferred over litigation but neither seems to be really adequate. Drawing from (Walls, 2000), it is suspected that this is may be due to the clauses in the standard forms of contract stating that arbitration can only takes place in the end of the contract. Thereby, the following difficulties occur: (i) disputes fester, (ii) relationships deteriorate (iii) nobody can remember exactly what had happened and (iv) every one is on or wants to be on the next project.

Table 7 & 8: Dispute Resolution Method & Stages of Resolving the Disputes

<table>
<thead>
<tr>
<th>Method of dispute resolution</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Litigation</td>
<td>5</td>
<td>18.5</td>
</tr>
<tr>
<td>Arbitration</td>
<td>9</td>
<td>33.3</td>
</tr>
<tr>
<td>Negotiation</td>
<td>23</td>
<td>85.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stages</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad-hoc</td>
<td>3</td>
<td>11.1</td>
</tr>
<tr>
<td>Construction stage</td>
<td>13</td>
<td>48.1</td>
</tr>
<tr>
<td>Completion stage</td>
<td>2</td>
<td>7.4</td>
</tr>
</tbody>
</table>

Most of the respondents (85.2%) favoured negotiation compared to litigation and arbitration as the form of ADR. Most of the disputes were resolved during the construction stage (48.1%), at the early stage when the problem arise (11.1%) and completion stage (7.4%). Most ADRs are resolved only after the project completion period and these disputes goes to arbitration if they dissatisfied with the decision made earlier by the third party.
The majority of the respondents are satisfied (70%) with the current means of dispute resolution methods and more ADR should be considered.

Table 9: Dispute Resolution Experience

<table>
<thead>
<tr>
<th>Methods of dispute resolution</th>
<th>Dispute resolution experience (No)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Negotiation</td>
<td>5</td>
</tr>
<tr>
<td>Adjudication</td>
<td>11</td>
</tr>
<tr>
<td>Mediation</td>
<td>10</td>
</tr>
</tbody>
</table>

There is a high awareness of ADR and the application in dispute cases among the majority of respondents as shown in Table 9. Most of the respondents resolved their disputes through negotiation (23.1%) while 21.4% through adjudication.

A list of factors on why mediation is not widely used in Malaysia

1. Most problems can be resolved through direct-negotiation with the disputants without any involvement from others. The involvement of a third party can make disputes become more complicated or even worse
2. Not widely known in Malaysia since it is a new approach
3. Not exposed to any mediation procedure since no major disputes have yet arisen which need settlement through mediation
4. Differential in value of work if substantial will be added or omitted progressively and this must be agreed by both parties
5. The main contractor will offer alternative works or projects as replacement if the sub-contractor suffers losses
6. Not agreed or initiated by both parties
7. Unaware

Figure 4: Respondents’ view on why mediation is not widely used in the Malaysian construction industry
Figure 4 above shows a list of contributing factors identified by the respondents as responsible for ADR is not popularly used to resolved construction disputes in Malaysia.

4.3 Dispute Prevention

All of the respondents agreed that dispute prevention is better than cure. They commonly believe disputes are difficult to resolved and it is waste of construction resources, increased cost, affect the quality of work, prolong the construction period, involved unnecessary claims, very tiring and tedious process and to avoid stop work.

<table>
<thead>
<tr>
<th>A list of recommended ways to prevent dispute in conventional project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Adequate time to prepare a complete and good documentation</td>
</tr>
<tr>
<td>2. Best practice of project management. The project team should put on high effort to ensure that dispute will be minimised</td>
</tr>
<tr>
<td>3. Clarify any unclear issues before award the contractor</td>
</tr>
<tr>
<td>4. Select a knowledgeable and experienced consultants and contractor</td>
</tr>
<tr>
<td>5. Mutual trust among the participants</td>
</tr>
<tr>
<td>6. Understand the contract documents</td>
</tr>
<tr>
<td>7. Unambiguous drawings and bill of quantities</td>
</tr>
<tr>
<td>8. In the case of lump-sum tender, clear client needs is vital</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A list of recommended ways to prevent dispute in design and build project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The project brief must be precise and clear especially the needs statement</td>
</tr>
<tr>
<td>2. Best practice of project management. The project team should understand the pre-bid document and arise any area of disputes earlier</td>
</tr>
<tr>
<td>3. Appointment of a capable person to check on the document and a capable supervision team</td>
</tr>
<tr>
<td>4. Select a knowledgeable and experienced consultants and design and build contractor</td>
</tr>
<tr>
<td>5. Aware of the risks and process involved in design and build project</td>
</tr>
<tr>
<td>6. Understand the contract documents</td>
</tr>
<tr>
<td>7. Provide adequate time to prepare good documentation and the technical evaluation</td>
</tr>
<tr>
<td>8. Mutual trust and understanding</td>
</tr>
<tr>
<td>9. Technical evaluation is done by a competent officer</td>
</tr>
<tr>
<td>10. Practice value management</td>
</tr>
<tr>
<td>11. Teamwork</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A list of recommended ways to prevent dispute in joint venture project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clear distribution of tasks and defined roles of each party involved</td>
</tr>
<tr>
<td>2. Appoint a capable person to check on the document</td>
</tr>
<tr>
<td>3. Good documentation</td>
</tr>
<tr>
<td>4. Good supervision and monitoring system</td>
</tr>
<tr>
<td>5. Select a knowledgeable and experienced contractors</td>
</tr>
<tr>
<td>6. Mutual trust among the participants</td>
</tr>
<tr>
<td>7. Understand the contract documents</td>
</tr>
<tr>
<td>8. Best practice of project management</td>
</tr>
<tr>
<td>9. Teamwork and always be motivated</td>
</tr>
</tbody>
</table>

Figure 5, 6 & 7: Respondents’ View on Means of Dispute Prevention in the Conventional, Design and Build and Joint-Venture Procurement System
The respondents were then asked to identify the best ways to prevent disputes in three different procurement systems popularly used in Malaysia such as conventional method, design and build and joint venture. Figure 5 – Figure 7 summarizes the means of dispute prevention identified by the respondents.

5. Conclusion

This paper concludes that the construction industry is dispute prone one and its effects are detrimental. This issue an issue should be of great concern among the responsible parties. The study suggests that most of the disputes are due to the contractual issues particularly on the misunderstanding of the contract and incomprehensiveness of documents. However, disputes can be prevented if the relevant parties adopt good practices at various stages of the development cycle of the project, understand their respective tasks and roles in the project and be more proactive in identifying matters that will spark disputes at the earlier stage of the project. They should always exercise teamwork, good communication and build trust among each other.

Resolving construction disputes is a difficult task, especially when the available resources are limited and the dispute is of a complex nature. Notwithstanding, these disputes must be resolved as soon as possible and the solutions must be prompt. Therefore, a systematic selection of dispute resolution strategy is critical to dispute management. Many Malaysian practitioners agreed that the current dispute resolution methods adopted in many cases are ineffective. ADR should be the best option to resolve Malaysian construction disputes. However, it is not being fully utilised. Disputants are more preferred to negotiate or litigate their disputes. Therefore, it is recommended that ADR framework to be formulated to assist all parties in resolving the disputes. The government support and the political influent are also crucial but the most important factor is the disputants themselves should change their existing adversarial mindset.

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Measuring the evolution of online handling of building permits in Europe

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OTB Research Institute for Housing, Urban and Mobility Studies
The Netherlands

Email: f.m.meijer@tudelft.nl; h.j.visscher@tudelft.nl

Abstract:
Electronic customer related services of governments have expanded enormously. In many regulatory domains the use of ICT services has become common property. This applies also to the field of building regulations. Main theme of this paper is the possibility to apply online for a building permit. The developments in 18 European countries are being analyzed, with a focus on the Netherlands. The article addresses Dutch and European policies towards online public services in general and towards the electronic handling of building /permit applications in particular. We trace the main trends of eEurope policy with regard to the online availability of public services and analyze the progress European countries have made with the availability of online application facilities for building permission. The paper goes into the way progress is being measured and monitored in Europe. Although progress has certainly been made, we cast doubts on the accuracy of the results of the measurements.

Keywords:
Building Control, e government, building permit procedures, Europe

1 Introduction

There are many definitions of the concept of e-government. In this paper the official EU definition is used: “the use of information and communication technologies in public administrations – combined with organisational change and new skills – to improve public services and democratic processes and to strengthen support to public policies” (Empirica, 2006). During the last decade information technology has been the eye catching new ingredient in the relation between citizens and their governments. For several years, European governments have been seeking to provide full online access to government services. The European Union has developed community policy to further develop e-government. The exact reasons behind the policies differ slightly from country to country. In general the key reasons behind e-government have been the wish to increase the efficiency of government operations, to strengthen democracy, to enhance transparency, and to provide better and more versatile services to citizens and businesses (e.g. Flak, 2005).
The overall policy of countries and the European Union is to bring their services online. This paper focuses on the service ‘the application of a building permit’. Why are European countries bringing their building permit procedure online? What progress is being made in this field and how is this progress being measured? We initially started to research the online applications of building permits in 2003. This paper considers the 15 European countries that were EU-member at that time; Norway, Iceland and Switzerland are also included. The research results are based on information derived from our previous and ongoing European research projects on building regulatory systems (e.g. Meijer, F. & Visscher, H. 1998 and 2006; Meijer, F., Visscher H. & Sheridan, L., 2002; Sheridan, L., Visscher H. & Meijer, F. 2003).

This paper analyses the state of the art in Europe with regard to online facilities for applying for a building permit. It addresses in Section 2 Dutch and European policies towards online services in general and towards building permits in particular. In section 3 the question is answered how the evolution towards the online handling of building permit applications is being measured. Section 4 compares the availability of online application facilities for building permits in Europe, tracing developments and offering comments in the process. Section 5 places these evolution and measurements in their perspective by looking closer at the situation in specific countries. The paper ends with discussion and conclusions in section 6.

2 Public services online: e-government

Developments with regard to e-government policies are illustrated in this section by the policies of European Union and the Netherlands.

2.1 European Union

Initial key documents were the eEurope 2002 Action Plan, which was further strengthened by the eEurope 2005 Action Plan (Commission of the European Communities, 2002a and b). The overall objective of eEurope was to bring Europe online as soon as possible. According to the European Commission e-government could lead to improvements in customer satisfaction, improvements in the service level (e.g. a seamless and customized service, more flexibility of access in terms of time and channel options, and greater transparency both for customers and governments), greater efficiency, improved quality and supply of information and reductions in costs and process times. It may also reduce obstacles to the internal market and enhance mobility across Europe (European Commission 2003). By 2005, Europe should have modern online public services and a dynamic e-business environment. The Action Plan comprised several (interlinked) tools for attaining the targets: legislation, good practices and demonstration projects. Policy measures should be monitored and steered by eEurope benchmarking. A list of twenty basic public services was drawn up for the fifteen ‘original’ member states plus Norway, Iceland and Switzerland. The indicators covered different domains. The European Commission issued in 2006 the new i2010 e-Government Action Plan. One of the key elements is e-government: by bringing the governmental services online the gap should be closed between the administration and the citizens and businesses.
2.2 The Netherlands

For several years now the ICT policy of the Dutch government has been geared to promoting and incorporating information and communication technology in public services, the idea being to improve accessibility and speed. This, in turn, would cut down the paperwork and the administrative costs. Since the mid-1990s a lot of experience has been gained in ICT applications thanks to numerous pilot projects in many municipalities. The aim of the Electronic Government Action Plan (Boxtel van, 1999) was to target the deployment of ICT in such a way that it should give a momentous boost to the quality and service (customer focus), efficiency (cost savings) and effectiveness (reaching the target group) of public services. Three explicit themes were named: good electronic accessibility, improved public services, and better management of internal government operations. The introduction of digital services should ‘fill up’ the main pitfalls of public services: too supply-driven, too restricted opening times and too long processing times. The government identified many areas where ICT could be used to improve public services, not least permits and subsidies, and information (Boxtel van, 1999). With ICT it would no longer matter where or when people choose to ‘do businesses’. The Action Plan stated that the (one- and two-way) services offered by the government should be so interesting that they prod people into action at home or via public terminals. The Action Plan proposed that at least 25% of public services be administered electronically by the end of 2002. This target was later raised to 35% for 2003, 55% for 2006 (Remkes, 2003) and 65% for 2007 (Graaf de, 2003). While higher targets were being consistently set over the years, extra objectives were being formulated at the same time. For example, an extra objective in the ‘Contract for the Future’ policy paper (Boxtel van, 2000) was that all Dutch municipalities should have a website by the end of 2002. In 2003 the Alternative Government Action Plan (Graaf de, 2003) re-affirmed the existing policy and introduced the additional objective of a 25% reduction in administrative costs for private citizens and businesses by 2006, compared with levels in 2002. The nationwide ICT agenda (Brinkhorst, De Graaf & Van der Laan), which appeared in 2004, clearly pursues targets and objectives on a European as well as a national scale: twenty specific public services should be fully interactive by 2005. More recent policy documents do not set ‘firm’ targets anymore. The ICT agenda 2008-2011 (Heemskerk, 2008) gives an oversight of all governmental ICT-activities and states that the Netherlands is one of the ICT frontrunners. The aim is to further expand this position by a better use of the available facilities.

3 Measuring progress of e-government:

Although the policy goals are set on a national level, the effects can be best measured on a local level. In most countries municipalities offer the most direct services to businesses and citizens.

To measure how well governments are progressing up the e-government ladder usually a stage model framework is used. In the first stage there is a simple web presence where information can be obtained. In the final stage full online case handling is possible. In most cases e-government is assessed through an index or benchmark that results in a certain score. With these indexes the scores for a services can be compared with another
service, progress can be measured, various services in different countries can be compared, etc. A number of models have been developed and many studies have been carried out using this kind of framework to measure the progress in e-government (e.g. Flak et al, 2005; Baum & Dimaio, 2000; Ronaghan, 2002; Andersen & Henriksen, 2006; Layne & Lee, 2001; Reddick, 2004).

3.1 European Union

To benchmark the progress within the EU, the 20 public services mentioned in section 2.2 are being measured from 2001 on. Of these services 12 are directed at citizens (e.g. income taxes and car registration) and the other 8 are specific directed at businesses (e.g. VAT and public procurement). The survey initially covered the then 15 EU members plus Norway and Iceland. Switzerland joined the survey for the 2nd measurement and the new member states were taken into account from the 5th measurement in 2005 on. A five-stage framework – very similar to the Dutch system - has been defined to measure and compare the results (CGE&Y, 2003):

0: No – relevant – publicly accessible website (score: 0-24%).
1: The information for starting a procedure is available on-line (score 25-49%).
2: One-way interaction: paper forms can be downloaded (score 50-74%).
3: Two-way interaction: electronic intake is possible (score: 75%-99%).
4: The website enables full electronic case handling; no other formal procedure is necessary (score: 100%).

The online availability (or ‘sophistication’) is determined by the extent to which a service can be provided electronically. The policy indicator for measuring progress that was originally ‘percentage available online’ (eEurope 2002) has since been changed by the EU to the ‘number fully available on-line’ from the 2nd measurement on (eEurope 2005). In the case of the eEurope 2005 indicator, ‘not fully’ and ‘fully’ available online were added to this framework. In the seventh measurement the existing framework again was extended to include a fifth level of sophistication built around pro-activity and personalization. Thus in 2007 besides the indicators ‘fully available online’ an online sophistication indicator was measured (Capgemini, 2005, 2006, 2007).

The benchmarking scores show that the overall average of sophistication of the twenty public services has evolved from 45% in 2001 (17 countries) to 76% in 2007 (31 countries). Or in other words a growth from a ‘one way interaction’ level to a level that is between ‘two way interaction’ and ‘fully transactional’. The overall score of 76% is the average of all the surveyed countries. Austria is the leader of the ranking (with a score of almost 100%), with Slovenia and Malta on the second place with an equal score of 96%. Most of the ‘older’ Member states score a little above average, while a majority of the ‘new’ Member states have a score that is below average.

On the basis of the ‘fully available online’ indicator, the 2002 measurement resulted in an average score of 36% for the twenty public services. Since then, the ‘fully available online’ development of public services in the fifteen Member states has improved to a score of 68% in 2007. For the current 27 Member states the ‘fully available on line’ score is 59%. The country ranking is strongly correlated with the ranking of the sophistication scores. The range of scores however is bigger, which is most likely an illustration of the fact that it is more complex to achieve the full online status than to
reach a high sophistication score (Capgemini, 2007). A higher score on the sophistication scale can be accomplished by taking gradual steps. A service is considered to be fully available online if it reaches sophistication above stage 3.

There is a considerable gap in the performances for businesses and citizens. Almost three quarters of services for businesses are fully available online against half for citizen services (Capgemini, 2007). Although progress has been made the goal that all twenty services should be fully available online in 2005 was not reached.

3.2 The Netherlands

In the Netherlands progress is yearly being measured (from 2000 on) in the “government.nl.monitor”. A continuous and a yearly monitor are available. The continuous monitor gives monthly a ranking of the scores. The yearly monitor is publishes as a book volume. Every year services may be skipped and new ones may be introduced. In the 2007 monitor 26 municipal services where included (22 for citizens and 12 for enterprises. In total some 100 services are part of the monitor. A 5 stage model has been established to measure the service:

0: no information is available.
1: information is available on the website.
2: forms can be downloaded.
3: forms can be filled in and uploaded to the government agency.
4: full case handling is possible.

For every service a maximum reachable stage level is established. The monitoring results show progressive results. In mid-1996 only 5% of all municipalities (30 in absolute terms) had a website; in 1999 this figure had risen to 30%, and at the start of 2003 almost all municipalities were accessible online (Remkes, 2003). The government’s aim to manage 25% of public services electronically by the end of 2002 had already been achieved by the end of 2001. In 2003 almost one third of all public services were accessible online to private citizens and businesses alike (Remkes 2003). The most recent monitoring results show that in 2007 67% of all governmental services are available on websites and can be handled on line (http://advies.overheid.nl/monitor/). So the target that was set in 2003 on 65% has been reached.

4 Progress of online building permit applications in Europe

For the service ‘application for a building permission’ a five-stage framework has been defined to measure and compare the results (CGE&Y, 2003):

1. No – relevant – publicly accessible website (score: 0-24%).
2. The information for starting a procedure is available on-line (score 25-49%).
3. One-way interaction: paper forms can be downloaded (score 50-74%).
4. Two-way interaction: electronic intake is possible (score: 75%-99%).
5. The website enables full electronic case handling; no other formal procedure is necessary (score: 100%).

Table 1 shows the scores for building permit procedures in the period 2001-2007. Please note that the percentages have been copied from a bar chart and that we only have taken
the countries into account that were member of the EU in 2001, plus Switzerland, Norway and Iceland.

Table 1 Scores for the public service ‘building permit procedures’

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The countries in Table 1 are arranged in order of ‘sophistication’ in 2007. In general one should expect for every country a gradual development through the years in the direction of more sophistication. This is indeed the case for Austria, the United Kingdom (with both a 100% score) and Denmark, Portugal, Iceland and Spain. In France, Belgium, Germany and Luxembourg progress seems to stagnate in recent years. Which could be explained by the fact that progress is getting more difficult in the latter stages of sophistication. The scores for the other eight countries fluctuate yearly and indicate a decline of the online sophistication. Norway and Ireland are especially remarkable in this respect because they had a score of 100% in the past, but somehow managed to lose the lead. These fluctuations in the scores raise questions. What does a 100% score mean; How can the fluctuations be explained; does the score reflects the actual use by applicants of the online possibilities?

5 The meaning and accuracy of the sophistication scores

In order to get answers to these questions and to get a better grip on the meaning of the scores we take a closer look at a small number of countries:

- Netherlands: how realistic is the benchmark score of 52%?
- Austria and the United Kingdom: idem ditto and what does a 100% score mean in reality?
- Ireland: what is the explanation for the fluctuations in the scores?
5.1 The Netherlands

Building Regulations (technical requirements and building permit procedures) in the Netherlands are nationwide uniform. Municipalities are responsible for building control and the issuing of building permits. Since some years it is possible to access building control departments online. The websites provide or refer to information on all aspects of the application procedure. Through a question-and-answer procedure it can be determined which permit is required. Application and other forms can be downloaded and printed. It is also possible in most municipalities to track the progress of the application and to make an electronic appointment with building control inspectors. Full electronic case handling is still not possible, but the actual implementation is merely a question of time. How this actual situation relates to the Dutch score in the European benchmark studies is questionable (see table 1). The lion’s share of the Dutch municipalities did (in 2007) operate already on level 3. A score of 75% instead of 52% seems to be a better reflection of the actual situation at that time.

The Dutch government is going to introduce in 2010 the ‘environmental permit’. This permit combines and replaces some 25 regulations and permits concerning the physical surrounding that are currently in force (e.g. building permit, demolition permit, and environmental permit). In stead of a range of permits that sometimes are necessary, one permit suffices in the near future. In 2010 one ‘digital office window’ will be introduced where the environmental is permit can be handled online. Municipalities can make use of the central server organization.

5.2 Austria

Austria is a federal republic which consists of nine provinces. Until 2008 there where no uniform Building Regulations in Austria. The past decennia regularly attempts have been undertaken to establish one set of model Building Regulations for the whole country. In 2008 the efforts finally paid off. A news harmonized set of technical requirements was introduced. Since then four out of nine Austrian provinces have already taken over the new building regulations (Mikulits, 2008). Harmonization of the building control procedures however where were excluded. Online building permit application is in essence a procedural service. This means that there are still 9 different procedures in the nine provinces. Our current research project shows (based on the situation in Vienna and Styria) that information and paper forms can be downloaded. A recent visit to the websites of various Austrian cities confirms this. So the application of building permission in Austria at this moment operate on level 3 of the European measurement framework. The 100% score in the 2007-benchmark seems far too high.

5.3 United Kingdom

There is not one set of building regulations that covers the whole UK. England & Wales, Scotland, and Northern Ireland each have their own – albeit similar – systems of rules and regulations. Every constituent country has established its own procedure. So the first question that should be answered is what does the EU benchmark figure for ‘the’ UK relates too?

5.3.1 England and Wales (and Northern Ireland)

In England & Wales planning and building regulations are nationwide uniform. Applicants can choose between Local Authority Building Control or Approved
Inspectors to check their building plans. Within Northern Ireland building control is entirely administered and enforced by local authority district councils. Since the early 2000’s the effort was aimed to further digitize the planning permission and building permit process. Again, government policy is the driving force: all local authorities were expected to e-enable their services by 2005. The planning portal was ready first. The submit-a-plan-website, where applications for a building permit can be submitted, was launched in 2003. The English system seems very similar to the proposed digital server concept in the Netherlands. According the summit-a-plan website all local authorities in England, Wales and Northern Ireland are now listed for making electronic building control applications. A 100% score for England and Wales (and Northern Ireland) seems to be in order. That does not mean that all building permits in England and Wales are being processed electronically. Our current research project shows (information from the end of 2008) that at that time roughly half of the councils had signed up to take electronic applications. It was estimated that only a relatively small fraction of all building permits was issued online.

5.3.2 Scotland

In May 2005 a new building regulatory system has come into force in Scotland. In the new system ‘verifiers’ (= local authorities) are responsible to carry out building control. In the future it could be possible that private parties could also play a role as verifier. Suitably qualified design professionals can become approved ‘certifiers’ of structural design and approved ‘certifiers’ of construction. The verifier is not allowed to check work done by a certifier. Full electronic handling of permits is possible in Scotland. However our current research shows that the percentage of construction plans that are handled electronically is low.

All in all it is fair to say that the 100% score for the UK is justified. Electronic handling is in principle possible. However the actual number of permits that is actually process completely online is far from 100%.

5.4 Ireland

Although Ireland has nationwide building regulations based on a Building Control Act, the Irish system differs slightly from other European building control. Ireland applies a system of planning permission, commencement notices and fire safety certificates. Goals have been defined for online access to planning application and development control processes, including commencement notices. In 2004 online inquiry facilities were available for planning permission in 60% of the major local authorities (Hanafin, 2004). At this moment it is possible to apply for certain planning applications online in the major local authorities. Similar developments are taking place in commencement notices and fire safety certificates. It is possible to download forms and information on a large scale. In some municipalities it is also possible to track the (planning) procedure. A full-scale intake, case handling, decision and delivery of a standard procedure to obtain a fire safety certificate via the web is not possible. The 2007 score seems to reflect the actual situation. It is however unclear where the 100% scores for 2002 and 2003 are based upon (Table 1).
6 Discussion and conclusions

There are many potential advantages of the online handling of building permits. Positive cost and time effects and a further streamlining of procedures can be expected. The system eliminates sending layers of papers and it is available around the clock. The heaps of paper in municipalities’ archives can largely be replaced by one electronic archive. Progress of applications can be tracked online. Building inspectors will be able to take electronic plans and documents out on-site. Drawings can be viewed on screen and redline comments can be made. A nationwide uniform building control system (as is the case in the UK and Norway and the Netherlands) is an important additional factor to facilitate the introduction of online building permit procedure. The same rules apply everywhere (e.g. technical requirements) and the building control authorities work along the same procedures. This enables the development of a central web server where local building control offices can register.

A reliable measurement tool is indispensable to compare progress in Europe with regard to the online availability of building permits. It is however essential to be crystal-clear what exactly is measured and how it is measured. There are differences in the building control systems of European countries. In some countries the planning permit is an essential instrument and a ‘building permit’ is not being issued. In order to understand the possibilities and impossibilities of electronic handling of building permits one has to have an elementary notice of the building regulatory system in a country. The first step is to define exactly what service is being measured. Furthermore it should be defined precisely what a score for a country exactly means. As building permits are often granted at municipal level, the question arises how the scores should be interpreted. What score does a country get where half of the municipalities operate on level 3 en the other half on level 4? Besides that percentages suggest accuracy and exactness, but do they reflect the actual situation? A closer look at four countries has casts some doubts on the actual value of the European benchmark scores. Furthermore it has put a 100% score in its right perspective. A ‘staged benchmark framework’ is certainly useful to show online progress on a general certain level. Important questions remain unanswered.

The main problem is that this European measurement tool does not give information about the use by the target groups and can not be related to the other main goals of e-government. As in the Netherlands from the start of the European benchmark on hardly any information was gathered about functionality (is anyone using the services?) and content of the websites (is the quality adequate?). To asses progress in a ‘sensible’ way important questions should be addressed as are the services actually adopted by the people/businesses they are aimed at and are the goals (in terms of less time costs, etc.) actually realized. As stated the European benchmark was until recent years aimed at surveying if there is a website available for the relevant service and if yes what possibilities are offered for its use. In the 2007 EU measurement a pilot was executed to measure user centricity. Besides that information has been gathered on a yearly base (since 2005) about e-government usage by individuals and businesses. These data showed that around 30% of all individuals in the 27 Member States have used the internet in 2007 for interaction with public authorities. For businesses the comparable figure is 65% (Eurostat-a and Eurostat-b, 2008). Interaction is defined as “having used
the internet for obtaining information, or downloading forms, or filling in web-forms, or full electronic case handling”. It stays unknown what percentage of a service is actually handled via the internet and if the intended goals are realized.

Although all European countries work on the introduction of online permit handling, progress is slow. Drawback of the current monitoring system is that information is missing if the intended goals are being reached. Important subjects for future research will be the fine-tuning of the assessment method by which progress can be compared and a nearer analysis of the actual contents and practical effects of the online building permit services.

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Comparison of tasks and responsibilities in the building control systems of 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 better insight into the building control systems in the European Union. This paper presents a comparison of the tasks and responsibilities of public and private parties in the building control systems of the 27 European Union countries. To gather 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 that contain all the countries. The themes are as follows: regulatory framework, application, plan approval, site inspection, completion and supervision. The main conclusion is that the building control systems of EU countries have many similarities. Public parties set the regulatory framework, check planning demands, issue building permits, conduct final inspections, grant completion certificates and supervise the system. The main difference concerns the involvement of private parties in checking technical requirements and in site inspections. Three basic types of building control systems were identified: public building control, mixed building control and dual building control. The majority of the countries have mixed systems. Although several variations were found among the mixed systems, the most common situation is for public parties to check the technical requirements and private parties to be involved in site inspections. Additional uniformity among building control systems would help to support a single market for services in the construction industry, in which architects, developers and builders are no longer limited to working within national markets.

Keywords:
Building control system, 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 is issued.

There are many differences between countries regarding procedural aspects of building control, including the following: simplified procedures, categories of construction works included in each type, possibility of phasing, submission requirements, frequency and moment of site inspections, criteria for determining the value of fees and time limits of the procedure. However, the most prominent structural difference concerns the division of tasks and responsibilities between public and private parties. Differences can be explained by the presence of diverse legal and administrative frameworks, socio-economic conditions and cultural traditions. It is beyond the scope of this research to explore the reasons why these differences exist.

The purpose of this paper is to compare the tasks and responsibilities assigned to public and private parties that enforce the building control systems in the European Union countries. The three research questions addressed are as follows: What are the main differences and similarities between EU countries regarding the tasks and responsibilities of enforcement actors? What are the main types of building control systems? What lessons can be learned from the various building control systems?

The following section justifies the importance of carrying out comparative research on building control systems. Section 3 explains the research methodology and Section 4 presents the results of the comparative analysis. Section 5 describes the main types of building control systems.

2 Trends of change in building control systems

Studying the tasks and responsibilities in the building control systems of EU countries is important for several reasons (CEBC, 2006; DCLG, 2008):

1. The EU has developed a single market, thereby ensuring the freedom of movement of people, goods, services and capital. Developments towards the harmonisation of national regulations have enabled construction products to be traded freely across the European Economic Area. Nonetheless, differences among the building control systems of EU countries continue to represent a barrier to the freedom of movement of services.
2. The present trend towards a common market for construction products and services is likely to increase cross-border activities in the construction industry. Designers, applicants and builders will have to deal with the different building control systems of the EU countries.

3. The building control system is changing. Building control was originally performed by building authorities, but there is currently a trend towards the gradual privatization of building control. The tasks assigned to private parties vary by country.

4. The growing need for housing in some countries justifies continuing or increasing the construction of new buildings. The goal of improving the maintenance condition and the energy efficiency of the existing housing stock is intended to stimulate rehabilitation activity. To face these demands an adequate, efficient and effective building control system is required to operate today and to develop into the future.

Recent international comparative research on building control is quite scarce. Within this field, the OTB Research Institute for Housing, Urban and Mobility Studies conducted a comparative study of building regulations and systems of building control in eight European countries (Meijer et al., 2002). The study showed a broad variety of organizational models for building control systems, with private parties playing an important role. The Consortium of European Building Control (CEBC) conducted a study on the building control systems in Europe (Mikulits, 2006). Information about 21 European countries was collected and analysed. The main conclusion was that there were fewer differences among the building control systems in the responding countries than had been expected. In nearly all countries private control elements were found at least as a means of delegating tasks to independent private experts. More recently, OTB conducted an analysis of the consequences of private sector involvement in building regulatory enforcement (van der Heijden, 2009). To support the analysis, the regulatory enforcement regimes of eight case studies in Australia and Canada were compared. One of the results was the identification of five types of building regulatory enforcement regimes.

3 Methodology

The research presented in this paper was conducted as part of a European comparative research project currently underway at OTB (Meijer and Visscher, 2008). The project aims to describe and compare the building regulation system in 34 European countries. The main subjects addressed are as follows: the organization and formulation of technical building regulations, the tasks and responsibilities of actors involved in building control, the technical and administrative aspects of the building permit procedure and the quality demands imposed on building control bodies.

The development of the research project was divided into two phases. In the first phase, the aim was to describe the building regulation system. National experts in each country received questionnaires about their building regulatory systems. Based on information obtained from the questionnaire and the analysis of major legal documents, a
monograph was written for each country. In the second phase of the project, the aim was to compare the building regulation systems of the European countries in order to identify trends and developments.

This paper presents results from the second phase of the research project. The focus is on the tasks and responsibilities of actors involved in building control. The basis of the analysis is restricted to the 27 countries of the European Union. Due to the federal structures of Austria, Germany and Belgium, analyses of each of these countries focuses on a single province or region. With regard to the United Kingdom, information was collected for England and Wales.

The comparison of building control systems is divided into the following parts: regulatory framework, application, plan approval, site inspection, completion and supervision.

The actors who intervene in the building control systems are divided into public parties and private parties. Public parties are the central, regional and local authorities, including their departments and agencies that relate to construction. Private parties (individuals or corporate bodies) were classified as follows:

1. The applicant starts the project and manages its implementation.
2. The designer develops the design submitted with the application for a building permit.
3. The design auditor checks the compliance of the design with the building regulations.
4. The builder builds the construction work under a contract with the applicant.
5. The building surveyor is authorized to conduct site inspections.
6. The approved inspector is authorized to perform private building control, which includes checking the compliance of the design with the building regulations and site inspections.

The conclusions presented in this paper are not definitive, as the necessary information has not yet been gathered and validated for all countries. This paper focuses only on the construction works that follow a regular building-permit procedure. The categories of construction works that require building permits varies by country. Specific aspects of simplified procedures (e.g. building notice and simple procedure) are not included in the analysis.

4 Comparative analysis

4.1 Regulatory framework

In all EU countries, building regulations and the rules for their enforcement are set by the public parties at a central level (Table 1). In some countries, this legislation can be
complemented at the regional and local levels. Due to their particular administrative divisions, some countries do not follow the general rule. These exceptions are as follows:

1. In Austria and Germany, central (federal) authorities set a model of building regulations and enforcement rules that is adapted by regional authorities.

2. In the United Kingdom, different regulatory systems exist in England and Wales, Northern Ireland and Scotland.

3. In Belgium, the different levels of authority legislate over different requirements.

In some countries (e.g. England and Wales), responsibility for the enforcement of building regulations concerning quality demands for private parties is delegated to private parties. In these countries, public parties outline the criteria, and private parties are responsible for determining the details.

Table 1 – Which public parties set the building regulations and the rules for their enforcement?

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<tr>
<th>Country</th>
<th>Austria</th>
<th>Belgium</th>
<th>Bulgaria</th>
<th>Cyprus</th>
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Although public parties take a leading role in setting the regulatory framework of building control, most countries have schemes to ensure the participation of private parties. For example:

1. In Denmark, there is an ongoing dialogue with the parties of the building industry. Collaboration takes place through a building policy forum and user panels on specific areas.

2. In the Netherlands, an advisory board discusses future developments in the building regulatory regime and may give advice to public authorities. All parties within the building sector are represented in these boards.

3. In England and Wales, public authorities promote the public debate concerning proposed reforms to the building regulatory regime.

4.2 Application

An application for a building permit may be submitted by the owner of the property, a person who holds the right of construction on someone else’s property, or a person who manages the building permit procedure on behalf of the owner.
The application includes a design of the proposed project. In the majority of the EU countries, the design must be developed and signed by a qualified designer (Table 2). In most cases, the design team is coordinated by the architect, and specialists may be appointed to prepare particular designs.

The qualifications of designers must be documented by registration in the appropriate professional association. In some countries, the qualifications (education and experience) required to carry responsibility for a design vary according to the complexity of the construction work (e.g. more than four floors), type of building (e.g. listed building) and location of the building (e.g. inside the protection area of a listed building). The design of small construction works may be exempt from the requirement to be signed by a qualified designer (as in France).

In some countries (e.g. Denmark, Estonia, Netherlands, Sweden, England and Wales), there are no demands regarding the qualification of individuals who are responsible for the design. In these countries, it might be usual or advisable to hire a qualified designer, although doing so is not mandatory. In Estonia, designs that are not signed by a qualified designer must be checked by a design auditor. In the Netherlands, building authorities pay special attention during the process of plan approval for designs that are not signed by a qualified designer.

In all countries, the designer is responsible for ensuring that the design complies with planning demands and building regulations.

### Table 2 – Who is responsible for the design?

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#### 4.3 Plan approval

In the plan approval process, the applicant submits the building permit application with the information necessary to demonstrate compliance with planning demands and technical requirements. The competent building authority scrutinises the application and consults 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 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 all the EU countries, public parties check design compliance with the planning demands (Table 3). In most of the countries, planning demands are checked by a department of the local authority in charge of enforcing building and planning
regulations. In some countries, there are separate departments for planning and building issues. The following are exceptions to this rule:

1. The central planning authority is responsible for enforcing building and planning regulations (e.g. Malta).

2. A regional building authority provides advice to local authorities that do not have complete permitting autonomy (e.g. Belgium).

3. The local or regional office of the central planning authority enforces the planning instruments (e.g. Cyprus, smaller municipalities of France, Poland, Slovenia).

Table 3 – Which public parties check planning demands of building permit applications?

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Public parties, particularly local authorities, are also responsible for checking the technical requirements of designs in most of the EU countries (Table 4). Private parties may be involved in or responsible for checking the technical requirements in one fourth of the EU countries. In addition to the countries in which the building authority checks the technical requirements, the following distributions of tasks and responsibilities between public and private parties were found:

1. The building authority and the professional association of designers check the technical requirements (e.g. Spain).

2. The building authority may appoint a design auditor to check the design on their behalf (e.g. Germany) or may require the applicant to have the design checked by a design auditor (e.g. Finland, Latvia).

3. The applicant must appoint a design auditor for certain categories of construction works, with the remaining categories checked only by the building authority (e.g. Bulgaria).

4. The applicant may voluntarily have the design checked by a design auditor, and the building authority can choose either to re-check the design or to accept the declaration of the auditor (e.g. Latvia).
5. The applicant may choose between having the design checked by the building authority or by an approved inspector, excluding re-checks by the building authority (e.g. England and Wales).

6. The applicant must appoint a design auditor (e.g. Romania).

7. The applicant must appoint a design auditor for certain categories of construction works, and the remaining works are not checked (e.g. France, Slovenia).

8. The building authority checks only the preliminary design (e.g. Portugal).

9. Plan approval does not include checking the technical requirements (e.g. Sweden).

For some requirements (e.g. energy and indoor air quality), there may be specific control systems that are separate from those used during the general procedure for approving plans. Auditors may be appointed to check either the complete design or some part of it (e.g. gas installations, energy and indoor air quality).

When the technical requirements are not checked in their entirety (as in Portugal and in the case of some categories of construction works in France, Slovenia and Sweden), the designer’s declaration of compliance constitutes sufficient guarantee for the building authorities. In France, an audit of the design may be necessary for insurance purposes.

Table 4 – Who checks the technical requirements of a building permit application?

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<th>Building authority</th>
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Depending on the type of building and its location, approvals from authorities other than the one issuing the building permit may be required. The authorities that are consulted fall into four main groups, according to their tasks: authorities that manage the listed buildings, collective facilities or environmental heritage and their protection areas; authorities that supervise the use of certain types of buildings; authorities that provide urban services; and authorities that guarantee health and safety.

In some countries, the necessary approvals are requested by the building authorities (Table 5). In other countries, the applicant must request the approvals directly and submit them either along with the building permit application or before the start of construction. Building authorities usually offer some support to the applicant by...
providing a service through which most approvals can be requested at the same time. In some countries (e.g. Italy, Portugal), the applicant may choose to collect the approvals in advance and submit them along with the application.

Table 5 – Who requests approvals from other authorities?

<table>
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In all EU countries, the building permit, or an equivalent document, is granted by public parties, usually the local authorities (Table 6). Only in England and Wales, where the procedure is operated by approved inspectors, may construction begin without a building permit issued by the public parties. However in England and Wales planning permits granted by the planning authority are mandatory and the local building authority can reject a plan certificate that has been issued by the approved inspector.

Table 6 – Who grants the building permit or equivalent document?

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<td>Approved inspector</td>
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</tbody>
</table>

Other parties can object to a proposed construction work in all EU countries. The objections must be presented before the building permit has been granted. Only in France are objections presented within 2 months after the day on which the notice that the building permit has been granted is displayed on the property in question. To make the application for a building permit public, the building authority, applicant (or both) must usually take one or more of the following actions:

1. Display a site notice on or near the property to which the application relates.
2. Post an advertisement in the press or on an Internet site.
3. Send notification in writing to neighbours and other affected parties.

4.4 Site inspections

The applicant, the builder or both are responsible for ensuring that the construction work complies with the approved design and the building regulations. To control the construction work, site inspections are conducted by public or private parties (or a
combination). If there are indications that no building permit has been issued for a part of the construction work or that construction is in violation of the building permit, construction work is stopped.

In approximately half of the EU countries, public parties are involved in some way in site inspections. Private parties may be involved in site inspections in almost all EU countries (Table 7). The degree to which public and private parties are involved in site inspections varies significantly. The following distributions of tasks and responsibilities between public and private parties were identified:

1. The building authority conducts site inspections (e.g. Hungary, Ireland, the Netherlands, Slovakia).

2. The building authority is responsible for site inspections but may appoint a building surveyor to conduct them on their behalf (e.g. Germany).

3. The building authority may conduct site inspections or delegate them to a private party, such as the applicant, the builder, the designer or a building surveyor (e.g. Finland, Sweden).

4. The building authority and a building surveyor (appointed by the applicant) conduct site inspections (e.g. Bulgaria, Czech Republic, Italia, Lithuania, Malta, Poland, Spain).

5. A building surveyor appointed by the applicant conducts site inspections, with the building authority participating as well for some categories of construction works as well (e.g. Lithuania).

6. A building surveyor appointed by the applicant conducts site inspections (e.g. Belgium, Cyprus, Romania, Slovenia).

7. A building surveyor appointed by the applicant carries out site inspections of some categories of construction works, and the remaining categories are exempt from control (e.g. Estonia, France).

8. The applicant may choose between having site inspections carried out by the building authority or by an approved inspector (e.g. England and Wales).

9. Site inspections are not mandatory, but no final site inspection by the building authority is required if the construction work has been checked by a building surveyor and the designer (e.g. Portugal).

Like Germany, other countries allow building authorities to appoint building surveyors to conduct site inspections on their behalf. Unlike the situation in Germany, however, this arrangement has no statutory status. For some requirements (e.g. energy and indoor air quality), there may be specific control systems other than those used during general site inspections.

Almost all countries require the designation of a public or a private party to be responsible for site inspections. Estonia, France and Portugal are the only exceptions. In
France, however, most applicants voluntarily submit their construction works to comprehensive schemes of private building control that include site inspections, as building control involves lower premiums for the mandatory decennial insurance.

In some countries (e.g. Italy, Romania), the designer may also be the building surveyor, while other countries require site inspections by the designer for all construction works (e.g. Slovenia) or for particular categories (e.g. Bulgaria, Latvia).

<table>
<thead>
<tr>
<th>Table 7 – Who conducts site inspections (if required)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
</tr>
<tr>
<td>Building authority</td>
</tr>
<tr>
<td>Building surveyor</td>
</tr>
<tr>
<td>Approved inspector</td>
</tr>
<tr>
<td>Designer</td>
</tr>
<tr>
<td>Builder</td>
</tr>
<tr>
<td>Applicant</td>
</tr>
<tr>
<td>No mandatory inspection</td>
</tr>
<tr>
<td>No information</td>
</tr>
</tbody>
</table>

Although private parties assume an important role in site inspections, public parties have the legal power to stop a construction work in all EU countries (Table 8). In a few countries (e.g. Bulgaria, Italy, Latvia), the building surveyor or designer also has the same power.

<table>
<thead>
<tr>
<th>Table 8 – Who has the power to stop a construction work?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
</tr>
<tr>
<td>Building authority</td>
</tr>
<tr>
<td>Building surveyor</td>
</tr>
<tr>
<td>Designer</td>
</tr>
<tr>
<td>No information</td>
</tr>
</tbody>
</table>

4.5 Completion

Once the construction work is finished, the building authorities are notified. A final site inspection is usually conducted by the building authorities and other authorities. If problems are found, the building authorities specify the corrective measures to be undertaken. If satisfied with the final site inspection, the building authorities issue or approve a document that certifies that the construction was completed successfully (i.e. a completion certificate) or can be used for the intended purpose (i.e. a use permit). In some countries, the building authorities rely on declarations by the private parties that
conducted the building work or the site inspections, and they do not perform a final site inspection.

According to the information that has been gathered to date, public parties conduct final site inspections for all types of buildings in the majority of the EU countries (Table 9). In almost all the remaining countries, the final site inspection is required only for certain types of buildings, usually those that are open to the public. In Poland, Portugal and Sweden, public parties do not conduct a final site inspection if they are satisfied with the documentation that attests to the fulfilment of the obligations of construction control and if they find no cause to intervene. Even if final site inspections are not mandatory, public parties can always choose to do so.

Table 9 – Who conducts the final inspection (if required)?

<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>
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<th>Greece</th>
<th>Hungary</th>
<th>Ireland</th>
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<th>Slovakia</th>
<th>Slovenia</th>
<th>Spain</th>
<th>Sweden</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building authority</td>
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</tbody>
</table>
When required, the completion certificate or use permit is usually issued by public parties. Exceptions occur in England and Wales, for situations in which applicants have opted for private building control; in such cases, the approved inspector issues the completion certificate and informs the local authority, who has a specified period within which to reject it. In Poland, some buildings require a use permit, while the rest require the submission of a completion notification and other documentation to the building authority, which has a specified period within which to raise objections.

4.6 Supervision

Supervision involves overseeing and auditing entities that carry out plan approval and site inspection. In all EU countries, public parties perform the supervision of the building control system. These public parties are central or regional governmental bodies. When local authorities are not involved in the control of construction works, they usually supervise the performance of private parties as well.

<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>
<th>Greece</th>
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<th>Portugal</th>
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<th>Slovakia</th>
<th>Slovenia</th>
<th>Spain</th>
<th>Sweden</th>
<th>United Kingdom</th>
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<tbody>
<tr>
<td>Central authority</td>
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<tr>
<td>Regional authority</td>
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<tr>
<td>Local authority</td>
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<tr>
<td>No information</td>
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</tbody>
</table>

5 Conclusion and discussion

What are the main differences and similarities between EU countries regarding the tasks and responsibilities of enforcement actors?

In EU countries, public parties set the regulatory framework, check planning demands, issue building permits, conduct final inspections, grant completion certificates and supervise the system. The main difference between countries concerns the parties responsible for verifying the technical requirements of the design during plan approval and for conducting site inspections during construction.

The involvement of public and private parties in checking the extent to which building designs comply with technical requirements can be classified into four main patterns (Table 12): the designs are checked by public parties, public parties may delegate responsibility for checking to private parties, applicants may choose between having their designs checked by public or by private parties, designs are checked by private parties. In some situations, the technical requirements of the design are not checked. Public parties play a dominant role in checking the technical requirements of the design.
Table 12 – Who checks the requirements of the design during plan approval?

<table>
<thead>
<tr>
<th>Public</th>
<th>Austria, Belgium, Bulgaria (some types), Cyprus, Czech Republic, Denmark, Estonia, France (some types), Greece, Hungary, Ireland, Italy, Lithuania, Luxembourg, Malta, Poland, Portugal (preliminary design), the Netherlands, Slovakia, Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public may delegate to private</td>
<td>Finland, Germany, Latvia</td>
</tr>
<tr>
<td>Applicant may choose between public and private</td>
<td>Latvia, England and Wales</td>
</tr>
<tr>
<td>Private</td>
<td>Bulgaria (some type), France (some types), Romania, Slovenia (some types)</td>
</tr>
<tr>
<td>Not checked</td>
<td>France (some types), Portugal (detailed design), Slovenia (some types), Sweden</td>
</tr>
</tbody>
</table>

With regard to site inspections, the involvement of public and private parties can be classified into five main types (Table 13): Site inspections are conducted by public parties, public parties may delegate responsibility for site inspections to private parties, applicants may choose between having their sites inspected by public or by private parties, site inspections are conducted by public and private parties, site inspections are conducted by private parties. In some situations, there are no mandatory site inspections. Private parties play a dominant role in site inspections.

Table 13 – Who conducts site inspections?

<table>
<thead>
<tr>
<th>Public</th>
<th>Bulgaria (some types), Hungary, Ireland, the Netherlands, Slovakia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public may delegate to private</td>
<td>Germany, Luxembourg</td>
</tr>
<tr>
<td>Applicant may choose between public and private</td>
<td>Finland, Sweden, England and Wales</td>
</tr>
<tr>
<td>Public and private</td>
<td>Austria, Bulgaria (some types), Czech Republic, Italy, Latvia (some types), Lithuania (some types), Malta, Poland, Spain</td>
</tr>
<tr>
<td>Private</td>
<td>Belgium, Cyprus, Denmark, Estonia (some types), France (some types), Latvia (some types), Lithuania (some types), Romania, Slovenia</td>
</tr>
<tr>
<td>Not checked</td>
<td>Estonia (some types), France (some types), Portugal</td>
</tr>
</tbody>
</table>

What are the main types of building control systems in the EU countries?

With regard to private and public responsibilities in plan approval and site inspections, three basic types of building control were identified (Table 14):

1. Public building control: Public authorities are responsible for plan approval and site inspection (e.g. Hungary, Ireland, the Netherlands, Slovakia).
2. Mixed building control: Public authorities and private parties share responsibilities for plan approval and site inspection.
3. Dual building control: The applicant can choose to have plan approval and site inspection conducted by public or by private parties (e.g. England and Wales).
A number of variations were found within the category of mixed systems:

1. Public parties check the technical requirements, but private parties may be involved in site inspections (e.g. Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Italy, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Spain).

2. Private parties may be involved in checking the technical requirements and site inspections (e.g. Bulgaria, France, Germany, Latvia).

3. Private parties are responsible for both the technical requirements and site inspections (e.g. Slovenia).

4. Technical requirements are not checked during plan approval, and private parties may be involved in site inspections (e.g. Sweden).

The first situation is the most common in EU countries. Public parties are still responsible for plan approval, although they encourage the participation of private parties in site inspections. In very few countries, it is possible for applicants to choose between private or public parties. Only in England and Wales is there a complete system of private building control.

Table 14 – Analysis of the main features of building control
(Pr - private sector, Pu - public sector, Mi – public and private, Du - public or private, blank - not applicable or information unavailable)

<table>
<thead>
<tr>
<th>Regulatory framework</th>
<th>Austria</th>
<th>Belgium</th>
<th>Bulgaria</th>
<th>Cyprus</th>
<th>Czech Republic</th>
<th>Denmark</th>
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<th>Slovenia</th>
<th>Spain</th>
<th>Sweden</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning demands</td>
<td>Pu</td>
<td>Pu</td>
<td>Pu</td>
<td>Pu</td>
<td>Pu</td>
<td>Pu</td>
<td>Pu</td>
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<tr>
<td>Technical requirements</td>
<td>Pu</td>
<td>Pu</td>
<td>Mi</td>
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<td>Pu</td>
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<tr>
<td>Building permit</td>
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<tr>
<td>Site inspections</td>
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<tr>
<td>Completion certificate</td>
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<tr>
<td>Supervision</td>
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<td>Mixed</td>
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<td>Mixed</td>
<td>Mixed</td>
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</tr>
</tbody>
</table>

In general, public parties maintain a dominant role in the building control systems of EU countries. The role of private parties is generally to support the enforcement of the system, primarily in tasks that demand technical expertise or intensive survey of construction works.

What lessons can be learned from the building control systems of the EU countries?
In an overall analysis, similarities were identified among the building control systems of EU countries regarding the tasks and responsibilities of enforcement actors. Public parties maintain a dominant role, and private parties are involved in building control systems of 23 of the 27 EU countries. The tasks of private parties include checking technical requirements and conducting site inspections. These results are consistent with the conclusions of previous studies about the subject, particularly the 2006 CEBC report (Mikulits).

A closer analysis of plan approval and site inspection shows that the degree of private-party involvement varies significantly. Further differences are likely to exist in the quality demands of public and private building-control bodies.

Building upon previous studies (Meijer et al., 2002; van der Heijden, 2009), an analytical framework was established. The analysis provided a global picture of the building control systems of the European countries. The results can be useful for situating the systems of each country within the European panorama, assessing the main trends and developments and guiding strategic choices on possible improvements in each country.

A complete analysis of the regulatory systems of the European countries requires further comparative studies, focusing on the organization and formulation of technical building regulations, the procedural aspects of building control and the quality demands of public and private building-control bodies. 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.

Although many similarities were found among the building control systems of the EU countries, the differences in the involvement of private parties in building control still constitute a barrier to the freedom of movement of people and services. Additional uniformity among building control systems would be beneficial in supporting a single market for services in the construction industry, in which architects, applicants and builder are no longer limited to work in national markets.

6 Acknowledgments

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The impact of energy performance regulations on systems of building control

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Abstract:
The awareness of climate change influenced by CO2 emissions, but also the dependency of fossil fuel and the risks of increasing prices all lead to the need of better energy performances of houses. Therefore the energy performance regulations for houses will be put on increasing levels during the next decade. Several European countries are formulating policies aiming at net zero energy or carbon neutral houses in the years 2015 - 2020. Technical solutions do exist and are already brought into practise; this concept is called the passive house. In some European countries more and more examples of passive house projects are realised. However there is quite some evidence that it will be a big challenge to achieve these performances at a large scale in the construction practice. Research under recently build houses in the Netherlands demonstrates that in many cases even the current levels of required performances are not met, due to mistakes in the design and in the construction processes. In this paper we argue for the need of innovation in the systems of building control and quality assurance to support the energy. In stead of a system of control that basically aims for avoiding large safety failures, a system is needed that guarantees a high level of certainty of performances. In this paper we describe the possible changes of building processes due to the introduction of the passive house concept, and the urgency of reliable quality assurance to adequately reaching the energy ambitions and to assure other quality issues at the same time. We illustrate this with passive house certification schemes from some European countries

Keywords:

1 Introduction

Promoting energy efficiency is essential to achieve the Kyoto Protocol. 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 (2002/91/EC). This framework has lead to energy performance certificates for buildings, in many countries to be introduced in 2007-2009. The EC has also highlighted that future adaptations of the EPBD may be
extended to include ‘low energy or Passive Houses’ as a requirement, setting a target date of 2015. For newly built houses the national building regulations prescribe increasing levels of energy performances. More and more countries, but also regions or municipalities, formulate ambitions for net zero energy or carbon neutral houses.

For many countries the passive house level is seen as a long term political ambition level to reduce energy consumption in the building sector (Dyrbol et al., 2008). Many countries also have industry initiated target settings, supported by the government. E.g. in France the ‘Grenelle de l’environnement’ specified targets for sustainable construction. The ‘Code for sustainable Homes’ in the United Kingdom states that by 2016 new dwellings will need to be zero carbon and will have to achieve a similar level of fabric performance as passive houses. In the Netherlands, a strengthening of the energy performance level of buildings is proposed to nearly passive by 2015. In the Flanders Region specific passive house targets have been proposed by the transition arena ‘sustainable living and building’. (Mlecnik et al., 2008)

Passive houses have to reach a target energy demand for heating less than 15 kilowatt hour per square meter net heated surface and per year (kWh/m²a) and a total primary energy demand less than 120 kWh/m²a (PEP, 2008). Some European countries and regions have introduced long term visions for the year 2015-2020 that include voluntary passive house certification or in certain circumstance a mandatory passive house standard. Often a verification of reaching the passive house standard is a condition for financial benefits.

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 crucially important to study these examples.

This paper continues in section 2 with an elaboration on the trends in regulations and building control that stress the importance of certification. Section 3 will explain of the impact of the passive house concept on the building process. In section 4 examples of passive house certification in some European regions are presented. In section 5 finally we draw conclusions.
2 The need for quality assurance

Besides the conditions described in the previous section, the poor performances of the building industry in the mainstream building projects in combination with a withdrawing government from building regulations and actual building control is perhaps the most important reason to develop reliable certification schemes, especially for passive houses.

2.1 Failures in the Dutch building industry

The cost of failures in the Dutch building industry amounts to more than 10% of turnover (USP marketing consult, 2007). Total investment costs (including maintenance) in homes were € 46 billion in 2005, which means annual wastage of € 4.6 billion in this part of the building industry. Vereniging Eigen Huis, a consumer organization for homeowners, carries out final inspections on many new homes. In 2005 it was reported that construction companies are gradually improving their standards. The average number of deficiencies in more than 1,400 homes examined at new build housing areas was 17.5 per home. However, some homes had as many as 71 deficiencies. There are also many problems with aspects of building physics, as revealed in a study of 78 housing projects by the VROM Inspectorate (Kuindersma et al., 2007). The researchers observed acute health risks, reduced living comfort and, above all, poor energy performance. New homes must comply with the EPC (Energy Performance Coefficient), an important policy instrument for achieving CO2 reduction targets. The study showed that 25% of the EPC calculations that were part of the building permit were not correct. The performance of the built homes was studied too, and it was unsatisfactory in 47% of homes! In order to comply with EPC regulations, a system whereby heat is recovered from the ventilation system (balanced ventilation) is often installed. In the past few years, this system has been installed in approximately 400,000 Dutch homes. Problems with the system in the Vathorst area of Amersfoort have featured regularly in the news (Duijm et al., 2007). An analysis of the problems has shown that they are not necessarily due to the ventilation system itself, but that poor quality management throughout the construction chain can lead to an accumulation of faults.

We suspect that the Dutch situation is not unique. At a meeting of the European Consortium of Building Control in Riga in 2008, representatives from many countries reported on problems in the individual countries. Although the problems are very diverse, it is apparent that in many countries there is a discussion about the organization of building control in the context of quality problems.

There are major challenges in terms of realizing and maintaining the physical performance of homes. Requirements will become much more stringent than is currently the case, particularly with regard to energy conservation, the indoor environment and integral environmental quality. Quality management and, above all, quality assurance are becoming more and more important. In the future, responsibility for these aspects will be increasingly transferred to parties in the building sector.
2.2 Developments in building regulations and building control

Building regulations are the subject of an ongoing debate between, on the one hand, those in favor of deregulation and reducing the administrative burden and, on the other hand, new quality demands that require government intervention. Currently in the Netherlands, both sides of this debate appear to be gaining in importance. Deregulation, as well as high targets for energy conservation, structural safety and reliable government, are high on the politicians’ agenda. 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 CO2 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.

The current cabinet is aiming to reduce the administrative burden by 25%. Again, the field of building regulation is seen to have a great deal of potential in this regard. The Ministry of Economic Affairs and the Ministry of VROM appointed the Construction Sector Fundamental Review Committee (Commissie Fundamentele Verkenning Bouw) chaired by Sybilla Dekker, the former Minister for VROM, 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 operationalised?
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 the next section we illustrate how the building process can be impacted when the client requires a passive house.

3 Innovative building process for passive houses

Building passive houses is still no daily practice for many designers, building contractors and installers. Due to the lack of experience of designers and contractors to build to the much more demanding requirements of the passive house, there is potentially a high risk of the house claiming to be a passive house having higher energy demand than predicted by the passive house standard. Therefore it is advisable that, when a consumer wants to purchase a passive house, some form of quality assurance is provided. This can start with a contractual agreement of a building team to deliver a passive house according to the previously described specific measurable criteria. Certification of the project or product will offer more certainty for the consumer. Alternatively, or in addition, requiring experience guarantees of the architect, the building contractor and the installer may help to make sure that the consumer involves self-educated parties and finally gets the energy efficient and comfortable house which he/she had in mind. Performance based contracting is being initiated for passive houses and low energy buildings and these experimental processes provide first insights in shifts from means contracting to performance contracting. For the commissioning of passive house buildings the preferred award procedures are the performance-based bidding procedures; open or restricted calls for tenders, the design contest, the negotiated procedure with or without publication and the competitive dialogue.

An essential element in the performance assurance is the calculation of energy performance, usually already in a first design phase, either using EPBD related software or specific passive house software. The so called PHPP software, developed by the German Passivhaus Institut Darmstadt (2008) was specifically designed to design and certify passive houses and has the advantage that its consistency has been verified on hundreds of passive houses. For passive houses, verification, minimum at the final design stage, is required according to PHPP, and later, a practical performance test on site to check the air tightness of the building envelope. This has implications on the whole building process, as illustrated in Figure 1.

In most cases the building designer does not have the knowledge of the PHPP tools. A passive house energy consultant is usually assigned to the project. The energy consultant will provide passive house design advice, PHPP calculations and recommendation for products and technologies specification. The PHPP calculation is
based on a large number of building and installation characteristics. Key elements for information gathering are thermal and solar characteristics of building components and factors influencing heating and primary energy demand and indoor climate requirements. PHPP also checks minimum ventilation requirements, dimensioning of heat production and the risk of overheating.

In the building permit stage, EPBD requirements in most countries require to report a specific official energy performance, i.e. a building energy rating (sometimes combined with an indoor climate rating). E.g. in Belgium, a specific EPB software has to be used to produce E levels and advisory reports for buildings requiring a building permit. These are produced by an accredited EPB reporter who is registered in a regional database of assessors. Many of these reporters are not very familiar with the details of the passive house concept.

When a passive house is built, the building owner or the certificate provider (architect, contractor) usually commissions an air tightness test (undertaken by an independent testing company). The building should achieve required air-tightness level as for the passive house standard. This test is usually performed when the building is wind and
weather proof, and repeated on delivery of the building. Thermographic imaging is recommended in combination with the air tightness test, for indicating areas where thermal bridging or air leakage is occurring.

When building a passive house the required on-site practices and know-how to achieve high air-tightness, proper installation of insulation, windows, heat-recovery ventilation system, etc. are much more rigorous than typical on-site EPB related construction practices. Lack of equipment and know-how is sometimes perceived as a bottleneck. Therefore some countries are involved in developing specialized training for passive house contractors and project managers. Some education initiatives are associated with specific master degrees.

One can note that one the level of product and system energy performance additional certificates can be introduced. E.g. for passive house building systems and specific passive house technologies like triple glazing, high efficiency windows and doors, high efficiency heat recovery systems, and so on, specific certificates are provided in Germany by a list of experts. These certificates specify comfort (e.g. also acoustical quality) and energy related parameters of the product or system and thus complement information from more standard types of certificates.

When tests and final calculations are completed, the building owner can apply to an independent party, for a passive house project certificate. Many countries and regions have a range of financial stimuli for energy efficient investments in buildings, e.g. subsidies, tax reductions, attractive loans, etc. Typically for passive houses, a number of conditions have to be met to receive the benefits. In some cases a ‘passive house certificate’ by an independent expert is required to obtain the benefits. Certification usually means that these conditions have to be verified by a non-involved independent expert. The expert issues a verification based on standardized quality assurance procedures to a demanding party, usually the architect or the contractor, in some cases the owner. The receiving party perceives this ‘certificate’ as a guarantee of conformity. Note that, if the client or inhabitant receives the certificate indirectly from the architect or contractor, the client’s perception could include that a certain energy or environmental performance is guaranteed.

It should be noted that the use of the passive house concept usually also has implications after delivery of the building. E.g. many home owners are not familiar with the types of technologies and controls commonly used in passive houses. Special care needs to be taken by the contractor to ensure that the services provided are correctly specified, installed and commissioned and that the occupier is provided sufficient information to ensure correct operation and occupant satisfaction.

4 Passive house certification in some European regions

There are examples of Passive House certification in several European regions. Here we present the situation in Germany, Flanders in Belgium and Austria.
4.1 Germany

In Germany the passive house standard has seen a broad introduction in the mid nineties. Nowadays more than 6000 passive houses exist in Germany, also non residential buildings and renovations. In some cities like Frankfurt, Leipzig, Kreis Lippe, the passive house standard is required for the construction of buildings that belong to the municipality. Main economic driver for the construction of passive houses in Germany is the provision of a beneficial loan for the construction of low energy and passive houses by the German state bank KfW.

A certification system for passive houses and passive house suitable components was introduced in Germany in 1997 by the Passive House Institute Darmstadt. The certificate ‘quality proofed passive house’ confirms the ‘as built’ design of a building in accordance with the Passive House Planning Package. This so called PHPP software, issued by Passivhaus Institut Darmstadt (2008) is basically an excel software tool used for verification of the passive house standard. The limit values for passive houses according to PHPP are validated. It is assessed if the values for total energy demand, total primary energy and air tightness fulfil the passive house requirements (Elswijk et al. 2008, Beedel et al., 2007). PHPP was developed independently from German building legislation. The advantage is that calculation procedures and boundary conditions are not influenced by political considerations and special interests of stakeholders and fast integration of new research results is possible. These qualities are the reason that PHPP is a highly-estimated tool in Germany. Furthermore the official German building energy performance calculation procedure is included within PHPP to avoid extra work for planners. However, existing German norms (e.g. DIN EN 12831 for heat load calculations) are currently perceived as a barrier for certification. The Passive House Institute Darmstadt and selected partners now also provide certificates to companies for passive house technologies (glazing, frames, heat recovery systems, building systems, etc.). Certification of products facilitates finding and comparison regarding energetic qualities. In future the Passive House Institute also plans to certify building actors. A certificate for, and a listing of, passive house planners will make it easy to find a planner with substantiated knowledge regarding passive houses.

4.2 Belgium, Flanders Region

In Belgium the passive house standard was introduced in 2002 by the non profit organization Passiefhuis-Platform. First project certificates were delivered in 2005, based on verification of calculations, using translation and climate adaptation of the German PHPP software as a basis. Special grants for passive house are given on a regional level and these are different in the Flemish, Walloon and Brussels Region. The cities of Turnhout, Bilzen and Mechelen also provide extra grants for passive houses. A federal tax reduction is offered for passive houses and a lowering of real estate tax is foreseen (Mlecnik, 2008). For most buildings requiring a building permit, official EPBD requirements are set for the energy performance and indoor climate at the same time. These requirements are different in the Flemish, Walloon and Brussels Region. In the Flemish Region the standard is called EPB and the reporting of is undertaken by trained reporters using required EPB software. In the Brussels and Walloon Region similar energy performance laws are under construction. The EPB software will serve as a basis for the production of building energy certificates. Problems arising with the use of this software for the evaluation of passive houses have been reported to the Flemish
Energy Agency. A good coupling of the passive house concept with the EPB is still to be obtained and requires a substantial research effort. PHPP is used by passive house specialists and currently not accepted as an EPB calculation. Both calculations have to be performed. Certification based on PHPP calculation is currently performed by Passiefhuis-Platform vzw in the Flanders Region (alternatively by Plate-forme Maison Passive asbl) on a voluntary basis. The PHPP software serves as a basis. Federal tax reduction for passive houses refers to the necessity of demonstrating a passive house quality assurance form, provided by independent experts. The quality assurance form is currently granted based on verification of PHPP calculations and results of a building pressurization test to determine air tightness. In future, the quality assurance procedure will be extended to include summer comfort and air quality.

4.3 Austria

In Austria the passive house standard is highly popular. In connection to the national policy the Programme of the Austrian Government for the period between 2007-2010 is to be cited, where the Austrian government mentions and defines the passive house standard for the first time. The Austrian pioneer federal state is Vorarlberg, where the federal government constituted at the beginning of 2007, that for new buildings of public housing associations passive house standard is obligatory. In 2008 the city of Wels signed a declaration to build all future municipal buildings in the passive house standard. In Austria nine different housing grant schemes exist, so verification can be different in different regions. The certification of passive houses in Austria basically happens by means of the Passive House Planning Package and/or the Austrian methodology according the guideline no. 6 of the Austrian Institute of Construction (OIB), when it comes to housing grants. Since 2005 the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management supports the dissemination and implementation of minimum criteria concerning the energy performance and the ecological quality of new built residential buildings within its klima:aktiv haus program. Within the klima:aktiv haus programme criteria for so-called klima:aktiv passive houses were defined. They must be heat –bridges-free and airtight, their heat energy demand and their total primary energy demand must be verified by the PHPP, they must be equipped with energy efficient ventilation systems with heat recovery and water saving fittings. Further they must not be built of HFCH or PVC containing building materials and they must fulfill requirements concerning summer suitability. Some differences occur between the Austrian OIB methodology and PHPP, especially concerning surface definition. Very optimistic default values for internal heat gains and shading of the OIB methodology have been criticized, while PHPP shows good validation.

5 Conclusions

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 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 modeling 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 is 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.

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Energy efficiency in buildings and building regulations and control in local authorities in South Africa

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Abstract:

South African local authorities are mandated to enforce building regulations established by the National Government. In addition, new building plans must be approved by building control departments of local authorities before implementation. This provides an important opportunity for these local authorities to intervene and either encourage or prescribe regulations and standards for an energy efficiency policy in the built environment. This paper investigates the possible role of the local authorities in building regulations and control as an effective strategy for energy efficiency and greenhouse gas emissions reduction in the built environment. The paper draws from existing literature and presents the options in building controls and regulation frameworks practiced in South Africa. It further compares it with existing practices in other countries, using existing knowledge to make deductive conclusions. It has been found that local Authorities have a significant role to play in enforcing of energy efficiency regulations through their bylaws in areas under their jurisdiction.

In conclusion, a well enforced energy efficiency policy, which is built into the Building control and approvals regulations framework in the local authorities will make a definite and effective starting point in achieving the twin goals of reduction in greenhouse gas emissions and ensuring energy security. Additionally local authorities centered approach is idealized as the key towards increasing levels of awareness and knowledge in energy efficiency and green building principles among developers, professionals and practitioners in the built environment.

Keywords

Regulations, policy, energy efficiency, local authorities, buildings

1 Introduction

In the quest for stability in electricity supply and eventual energy security, South Africa needs to emphasise energy/electricity demand reduction via energy efficiency and real-
time energy scheduling apart from increasing the supply sources. The case for energy efficiency appears to be the cheapest and this is well espoused by the following comments:

“These ‘negawatts’ (contributed by energy efficiency) have been every bit as valuable in economic terms as the ‘produced watts’ of energy they replaced. With today’s energy prices, a negawatt of energy savings costs about half of what it costs to produce the same amount of energy. The cheapest, most competitive, cleanest and most secure form of energy thus remains saved energy.” (Piebalgs, 2008)¹

Bennet (2001), du Toit (2006) and Reinink (2007) demonstrated that developing national regulations and standards for building’s energy efficiency and/or sustainable buildings is critical in achieving greater energy efficiency and provides a great potential towards reduction in greenhouse gas (GHG) emissions, apart from being a sound investment. South Africa’s national building regulations and building standards act (act no 103 of 1977)² is administered by local authorities and is the enabling legislation for the national building regulations (Holden 2004, du Toit 2006). This act details the process of enforcing the national building regulations by local authorities. As a result, all new building plans must be approved by the ‘building control and approval’ departments in the local authorities before implementation. This provides an important opportunity for the local authorities to intervene by insisting on mandatory or voluntary regulations for energy efficiency in their building control and approval process. This concept is further aided by the fact that the local authorities are permitted to make by-laws within their areas of jurisdiction. As such the introduction of energy efficiency by-laws by the local authorities could be used to effect regulations for retrofits and new developments in these areas.

It is encouraging to note that these regulations are affordable as shown by UNEP (2008) and WGBC (2009), and that ‘available commercial technologies’ make it possible to halve energy consumption in both new and old buildings without significant investments. These could be done at least cost by incorporating measures like improved ventilation and insulation, increased use of natural lighting, the use of energy efficiency appliances and lighting alongside the use of renewable energy sources in the building control and approvals regulations. It is on this basis that it is argued that a well enforced ‘energy efficiency policy’ for buildings, which is anchored in the building control and approvals regulations of the various local authorities in South Africa would make a definite and an effective starting point in achieving the goals of reduction in GHG emissions, improved health of people who currently experience poor indoor quality through the use of biomass and increased energy security as well as achieving economic and financial benefits for developers.

2 Methodology

The paper focused on literature review on the use of regulatory and control mechanisms as a policy strategy towards achieving greater energy efficiency in buildings with the local authorities’ department of building control and approvals process as the enforcing agent. A general scenario on the regulatory framework in the world was presented followed by specific situation studies/cases in South Africa. Discussions were then presented on this and appropriate conclusions and recommendations made. It must be acknowledged that this area is relatively new in South Africa and much is yet to be published. As a result much of comparative literature was mostly ex-post evaluations where available, and summaries of assessments of cases in other countries were presented. This paper was therefore limited by scope because of its over-reliance on literature review. It should be pointed out that this forms a preliminary stage of an ongoing research and a field based study is scheduled later this year.

3 Building regulations, local authorities and energy efficiency regulations in buildings

Several instruments or options are available for the promotion of energy efficiency in buildings. Van Egmond (2001), OECD (2003), Kuijsters (2004) and Reinink (2007) separately affirm these options as regulatory, fiscal, economic, or communications instruments. These instruments may take the form of direct regulatory instruments, indirect regulation or information instruments (refer Figure 3-1). It is worth noting that the choice of these instruments by governments is determined by the level of success that is achievable when applied. This is however variant on the socio-economic and political context of the locality. It is noted as an example that implementation of the building codes have reduced energy consumption of new dwellings in the USA by about 30% whereas the Chinese government have established an energy consumption target in buildings which is 65% less than the current practice in existing buildings, this is via an ‘energy consumption standard’ for the construction sector whose compliance is encouraged by tax and fees rebate system for low energy buildings to encourage their construction (UNEP, 2007). On the other hand energy regulations in buildings in Netherlands have reduced the consumption rates by 15% on its introduction in 1995 and later by 27% on tightening of requirements (Ecofys, 2004). Other countries where the introduction of energy regulations have been successful are Denmark where the act to promote energy and water savings in buildings (DEA, 1996) is in use and India where the energy conservation act was enacted in 2001.

In South Africa, regulations governing energy efficiency in buildings is still at an infancy stage. It is mainly covered under the electricity regulation act that stipulates that the regulator shall take into account the energy efficiency measures undertaken by

3 Danish Energy Authority (DEA) 1996, Act to promote energy and water savings in buildings, no. 485 of 12 June 1996, legislative document
the client while deciding on tariff structure and the Electricity regulations for compulsory norms and standards for reticulation services\(^6\).

![Figure 3.1 Instruments for energy efficiency implementation in buildings; Adapted from OECD, 2003)](image)

It is expected that these regulations would stimulate increased drive towards energy efficiency. In addition, it should be noted that the draft standard for energy efficiency in buildings was unveiled in 2008 and if adopted as the national standards would contribute greatly to energy efficiency in buildings. These are SANS 204\(^7\) Parts 1, 2 and 3, Edition 1.

The newly published building standard is expected to eventually legislate on insulation levels, solar water heaters and energy-efficient lighting and will be prescriptive. At the initial phase, it will apply only to new buildings (Standards South, 2008). At the same time in 2007, the SABS 0400 (the Building Code) is in the process of being rewritten to be SANS 10400 to take into account the energy efficiency standards of existing buildings (Reynolds, 2007 and du Toit, 2007).

SANS 204 focuses on new buildings, it specifies the general requirements for design and operation of energy efficient buildings with both natural and artificial

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environmental control and subsystems. The key issues in SANS204 are as follows (Standards South Africa, 2008):

i. Maximum energy demand and maximum annual consumption are mentioned in accordance to the 31 number of classifications of occupancies of buildings and prevailing climatic conditions in the standard.

ii. The standard state for building envelope design is outlined.

iii. Energy rating for equipments and appliances fitted in new buildings is required to comply with requirements of SANS 10400-O

iv. Purpose driven planned maintenance of the mechanical/electrical components, is advised to be in line with broader economic and energy efficiency agenda.

Enforcement by Central or Local government department/agency charged with reviewing designs and performing post construction inspections is the most common situation in the world (Building Research Establishment, 2008). In South Africa, it is envisaged that the implementation of SANS 204 will fall under the docket of local authorities. It is however noted that it will take considerable time for South Africa to effectively start applying energy efficiency requirements in building regulations. Holden (2004) approximates this to take a minimum of five years.

At the moment, it is clear that local authorities are ill equipped in implementing and enacting local building regulations due to legal and technical incapacity (du Toit 2007). As a result it is envisaged that the problem be sorted out by rewriting their bylaws with energy efficient regulations such as limiting the quantity of energy consumption in buildings through setting maximum energy/m² caps and making the same to be part of the building applications and approval regulations. In the absence of local regulatory powers, cities can consider developing local guidelines or standards. For uniformity and acceptability, these should ideally be based on existing standards and norms and best practices from similar jurisdictions.

The approval process for new buildings or alterations as prescribed by the National Building Regulations and Building Standards Act 103 of 1977 and effected by the local authorities revolves around Administrative matters, protection of property and public health, safety and convenience for the users and occupiers of the buildings. During submission for approvals, key items required are as follows (City of Johannesburg, undated):

i. Completed application form, signed by the owner of the property or his/her authorised representative (proof of authorisation is required)

ii. A copy of the registered title deed

iii. A copy of the approved Site Development Plan is also needed, if this is required in terms of the zoning regulations that apply to the stand.

iv. A separate form also needs to be completed by a professional engineer or technologist registered with the Engineering Council of South Africa when structural work such as reinforced concrete floor and roof slabs, special reinforced foundations, and so forth are part of the proposed building.

v. Different certificates or designs need to be submitted depending on the technical aspects of the plan. You should consult an architect or engineer in this regard.
vi. In the case of non-residential developments (for example, offices, factories, shops, institutional buildings and so on), a zoning certificate with a copy of the most recent Amendment Scheme is to be furnished.

There is no requirement for energy efficiency codes certification to deal with envelop energy issues, HVAC systems and lighting & hot water systems in the building.

3.1 Compliance to Energy Codes

In a departure from the established norm, the Building Research Establishment (2008) proposes that compliance with mandatory minimum energy performance requirements for buildings should be confirmed by formally certified private assessors and paid for by the building owners. It is further suggested that the process be audited by the authority under which the code is issued (Building Research Establishment, 2008). Thus the following enforcement model is idealized by RICS (refer Figure 3-2). In South Africa however, the local authorities have a well established buildings control and regulations framework and structure and there is a deliberate intention by government to retain and create employment at local levels. Therefore it is proposed that the enforcement and the certification be done by these local authorities (refer Figure 3-3)

Figure 3-2: RICS compliance enforcement model, Source: Building Research Establishment, 2008
Figure 3-3: Proposed compliance enforcement for the Local Authorities in South Africa, Author’s construction

As indicated earlier in this paper, local authorities are mandated to enforce building regulations within their areas of jurisdiction, as per the Act (103 of 1977). Some cities have explored this possibility by developing local energy efficiency building regulations, but have since abandoned this process given that building regulations are established nationally in order to promote uniformity within a vast sector. However, the City of Potchefstroom has shown interesting local initiative whereby they have made the SAEDES\(^8\) (South African Energy and Demand Efficiency Standard) standards guidelines mandatory for all new municipal buildings, and where commercial building applications must go through an environmental impact assessment process; the local authority has had to introduce the SAEDES standards as a condition for the development.

4 Worldwide Scenarios

Around the world, building controls and regulations with regards to energy efficiency are evolving and are being implemented via both voluntary and mandatory standards or may entail a mixed approach (refer Figure 4-1).

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In the Scandinavia, there is a general norm of using national building codes and standards, which regulate physical, thermal and electrical requirements of building components, service systems, indoor conditions, health and safety standards, operation and maintenance procedures and energy calculation methods (UNEP 2007b). A number of building codes currently include energy performance standards, limiting the amount of energy that buildings can consume. The building codes in Scandinavia are enforced by the various building development control agencies in the respective countries.

It is reported that currently there is the renewable energy & energy efficiency partnership (REEP) project aimed at promoting the concepts of low-energy buildings in China, the results will be incorporated in proposed new legislation regarding low-energy buildings by Chinese government in order to ensure that appropriate policies and building codes are implemented to encourage and deliver the required reduction in energy consumption (UNEP, 2007). Indeed, implementation of elements of these codes are to be piloted by the four major municipality cities of Beijing, Shanghai, Tianjin and Chongqing and other economically developed big cities such as Shenzhen (Ling et al, 2007).

The European Union often uses directives for regulating various environmental themes whose implementing agents are various government departments in the respective member states. In most cases this falls in the ambit of local authorities in the respective countries. The directive on the energy performance of buildings was enacted in January 2003 and its main elements are specified as follows (UNEP 2007b):

i. Minimum energy performance requirements, for new buildings and for major renovation of existing buildings larger than 1000m²;

ii. Energy performance certificates to be made available when buildings are constructed sold or rented out;
iii. The year 2010 is the reference year after which the rules will be extended to apply to all buildings and renovations (at the moment buildings below 1000 m² are not covered)

5 Conclusions and Recommendations

From the foregoing literature, it is evident that several developing countries have already enacted legislation on energy efficiency in buildings. However, only a few evaluations or studies are available to show the best way to apply this legislation to achieve energy efficiency goals in buildings. Due to late entry into energy efficiency practice, most developing countries lack quantitative data and are mainly reliant on data from the developed nations; this poses a contextual problem taken that their programmes may not be applicable to the prevailing local condition. This can be seen in the case for South Africa which has had to borrow quite heavily from the Nordic countries and Australia in formulating its energy efficiency codes in buildings (Reynolds, 2007).

Developed countries find solace in the fact that increasing energy prices will continue to be the catalytic driver for improved energy efficiency policies in developing countries. In South Africa, the main electricity utility company ‘Eskom’ successfully lobbied to raise tariffs by nearly 32% and intends to seek further increment in the near future (Engineering News, 2008). As a result it is expected that the South African government will in response empower the local authorities as the electricity distributing agencies to incorporate energy efficiency measures in their building control processes and bylaws, besides engaging in training of the built environment practitioners and advocacy to the general citizenry. It should be emphasized that the success of the Building Regulations is highly dependent on compliance by the construction industry hence the need for Local Authorities to invest in continuous training and advocacy of Building Control Officers and Built Environment Professionals on the energy efficiency regulations and their application.

It is also expected that energy security considerations and rapidly rising energy demand like the one which contributed to unstable electricity supply in South Africa during the years 2006 to 2008 will whip the local government and energy utilities companies into action for energy efficiency efforts. This is already evidenced in the enactment and amendments to the two electricity acts in South Africa viz-a-viz the electricity regulation act and the Electricity regulations for compulsory norms and standards for reticulation services which were mentioned earlier.

In terms of the mode of policy implementation, south Africa can borrow a leaf from developing countries such as Malaysia, Brazil, Morocco and partly Thailand which first introduced voluntary energy efficiency standards for buildings then progressively made them mandatory (UNEP, 2007). It should also be noted that although best practices and experiences can be shared and regional cooperation is useful, building code specifications cannot be uniform for all parts of a country due to climatic and other peculiar differences. This further fosters the idea of local authorities as the ideal enactor and enforcer for energy efficiency codes in buildings.
This paper has demonstrated the effectiveness and success of regulatory and control mechanisms like energy efficiency building codes when enforced by the local authorities. It is therefore not only natural, but a matter of necessity for South Africa to use the local authorities as the enforcing agents for energy efficiency codes in buildings. This is made easier by the fact that in South Africa, the local authorities are considered the most important party in service delivery (Republic of South Africa, 1995). It is noted that in South Africa, energy efficiency policies are in various government agencies and departments (these are Department of Energy, Department of Minerals, ESKOM, NERCSA, Department of Public Works, Roads and Transport), the policy implementation details is therefore a challenge. For the building sector, it is recommended that the local authorities should take the initiative and follow the lead provided by the city of Potchefstroom and effect energy efficiency regulations through their building control and approvals regulations processes and systems.

While implementing the energy efficiency building regulations through their building regulations and control mechanism, local authorities should make appropriate education and outreach programmes to raise awareness of the developers on the economic/financial benefits of energy efficient buildings, and demonstrating options for retrofitting of existing buildings as well as the design and construction of new ones.

It is acknowledged that research gaps exist in several areas of energy efficiency in buildings in South Africa, an example is the lack of costs estimation data for energy-efficient buildings. Similarly, there is no efficient market guidance for energy-efficient buildings. This causes low sensitivity to energy-efficient buildings issues in the design, construction and maintenance of buildings. Research and studies in these areas will enhance learning and help make improvements in program designs for energy-efficiency in buildings in future.

6 Acknowledgement

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The Indonesian Construction Law: Challenges toward Globalization

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Abstract:

Construction industry has for long been the backbone of Indonesian economic and social development. Since the early days of modern era of 1900s, during the colonization, the Dutch engineers has brought in and introduced the technology as well as professional practices of the industry to the area. Until 35 years after proclaiming its independence in the 1945, Indonesia has virtually yet to have its own national regulation concerning the construction industry, during which the only known construction legal reference was the colonial inheritance of the Dutch’s AV41. In that period the construction industry was dominated by the government role in both providing the infrastructure and regulating the industry.

The political reform of 1998 put Indonesia into a new governance paradigm, which in turn also affected practices of the construction Industry. The first Indonesian Construction Law was put into effect in 1999, which was then followed by three government decrees. The three government decrees address issues relating to the business and role of construction society, the practices of construction industry, and construction industry development. This new set of legal construction standard of practices was established in response to increasing demand of local autonomy and global competition challenges. Under this regulation the role of centralized government in infrastructure and construction industry has shifted to allow more participation of private sector and the community. Among important issues addressed in this regulation includes governance, professionalism, and the role of society.

This paper discuss the rationale behind the development of the Indonesian Construction Law, the threats and challenges that follow during the last decade of implementation, as well efforts that have been carried by the government and the industry. In particular this paper will discuss three government decrees and their impact to the national construction industry

Keywords:

Construction law, Indonesia, governance, globalization
1. Introduction

Construction industry has for long been considered as the backbone of Indonesian economic and social development. In 2008, the construction industry’s direct contribution to the gross national product was around 6%, and employing more than 4.5 million people, which is around 7-8% of the country’s overall labor force. Currently the industry consists of more than 134,000 registered construction companies spread out in the country’s 33 provinces, where more than 120,000 among them are classified as small-scale business enterprises. In contrast, the largest 900 construction companies have been entrusted with the 80%-90% of the country’s US$ 17 billion national construction market. In order to widen the market, in recent years the government has encouraged the construction companies to go global to include the international market. Consequently, in the last ten to fifteen years, more international construction companies have also joined the market. Such condition has created additional threats and challenges to the growth of the industry. One of many challenges faced by the Indonesia construction industry is availability of sound and effective legal framework.

This year marked the 10th anniversary of the Indonesian Construction Law. Yet, many problems still arise and what was envisioned in that law is yet to be realized. Complains such as lack of fairness and professionalism, and even the often conflicting regulations, are among the problems faced by the industry. In addition, globalization also requires the national construction industry to respond to the world progress in international contract and regulations. In response, the government and other stakeholder are currently working together to improve the construction regulations. This research is part of that work that aims at measuring the effectiveness of current legal framework of the Indonesian construction industry, as well as identifying the potential solution on how the regulation can be improved. In particular, the work emphasis on the role and function of Construction Service Development Board – CSDB Indonesia, as the main body responsible for development of the national construction industry. This work is mainly based on the analysis of the Indonesia Construction Service Law and the three Government Decrees against critical issues that have been raised by many stakeholders of the industry. This research will also include group discussion involving academia, government officials, and practitioner of the industry.

2. Method of Study

This study aims at determining the effectiveness of the current construction regulatory framework in catering and advancing the national construction industry. In general this work will consist of three steps. This study started with the review of historical development of Indonesian construction law and regulation, and in particular identifying the significant progress made and its relevant condition during certain period of time. This part of study will be used to gain better understanding the contextual setting of the regulation. Next step will be to identify problems often encountered or cited by various players and stakeholders of the construction industry. This process will be done in two ways. The first one is by reviewing publications in public media, notes of group discussion and meetings, whereas the other method is by conducting survey to construction practitioners, government officials, as well as academia, and officials from central and local Construction Service Development Board offices.
A series of focus group discussions will be held to refine and elaborate finding from the previous steps. This group will consist of representatives from construction practitioners, professional associations, government officials, academia, and NGOs. The focus group will also review similar regulations such as Building and Construction Industry Improvement Act no 113 from Australia (BCII, 2005) or Act 520 - Lembaga Pembangunan Industri Pembinaan Malaysia ACT (CIDB Malaysia, 1994) as references for improvement of the current law. The objective of the discussions is to accurately identify the problems and threats faced by the industry, as well as weakness of current legal framework, and ultimately making recommendation for future revision of the construction laws and regulation.

3. Historical Progress on the Indonesian Construction Law

The Indonesian construction law cannot be separated from its historical progress of the industry. With regard to construction law and regulations, the industry’s historical development can be divided into three periods; before independence or colonial period, development period, and reform period.

3.1 Colonial Period

Until 35 years after proclaiming its independence in 1945, Indonesia has virtually yet to have its own national regulation concerning the construction industry, during which the only known construction legal reference was the colonial inheritance of the Dutch’s AV41 (Algemene Voorwaarden Voor De Uitvoering Bij Aaneming Van Openbare – 1941). During that period the construction industry was dominated by the government role in both providing the infrastructure and regulating the industry. Construction contracts were also drawn from colonial civil law of Dutch’s Burgelijk Wetboek 1848.

After the independence into the late 1960s, Dutch’s own construction companies were nationalized. During that period virtually no private company were involved, and those state-owned companies became the sole engine of the construction industry. There were no bidding involved, and the construction projects were appointed directly to the state-owned contractors using cost plus fee contract. Most of these state-owned construction companies are still exist today and become the top construction companies in Indonesia. Their long experience has proven to be effective in adapting themselves in changing construction regulations.

3.2 Development Period

This period span from 1967 to late 1990s, where the new order government regime was in power. The Indonesian construction industry started experiencing growth, providing significant contribution to the nation’s gross domestic product. Despite still inexistence of standard construction regulation, the construction industry manage to grow and expand; involving private sectors and successfully adopting various modern construction practices and standards, such as open bidding procurement process and FIDIC or JCT standard of contracts.

In 1980 the government has started to regulate its state-funded projects, including those in construction sector. Presidential decree no 14 – 1980 has set standard process and requirement for procurement of all projects under government budget (including those
funded by overseas agencies). Through that decree, in order to maintain fairness and accountability, the government also regulated the requirements for all construction and consultant companies to be licensed, and grouped the companies according to their classification and qualification. This decree was then revised and perfected several times to accommodate changing practices and needs in procurement methods. At present Presidential Decree no 29 – 2003 is used as guideline for procurement of all government funded projects.

3.3 Reform Period

The political reform of 1998 put Indonesia into a new governance paradigm, which in turn also affected practices of the construction Industry. The first Indonesian construction law was put into effect in 1999 (Construction Services Law), which was then followed by three government decrees. The three government decrees address issues relating to the business and role of construction society, the practices of construction industry, and construction industry development. This new set of legal construction standard of practices was established in response to increasing demand of local autonomy and global competition challenges. Under this regulation the role of centralized government in infrastructure and construction industry has shifted to allow more participation of private sector and the community. Among important issues addressed in this regulation includes governance, professionalism, and the role of society at large.

The Construction Service Law no 18 (Indonesia, 1999) was established in 1999 to response concerns over the fact that high construction growth was not accompanied by effective governance, which was reflected in, among others: a) low quality of product, on time construction, and inefficient use of resources, b) lack of enforcement and compliance to laws and regulations, and c) lack of fairness and synergetic partnership amongst providers and users of construction services in terms on rights and responsibilities. Among many significant aspects, the law in particular has set the foundation for establishment of an independent body that would shift most roles of the government in leading and guarding the development and growth of the Indonesian construction industry.

Following the establishment of Construction Service Law no 18, in 2000 the government issued three Government decrees: 1) Government Decree no 28 on Business and Society Role in Construction Services, 2) Government Decree no 29 on Execution of Construction Services, and 3) Government Decree no 30 on Development of Construction Services. In principle, the first Government Decree regulates the professional requirements for entities to operate and the role of society in construction industry. The Government Decree 29 essentially regulates how the construction industry works in terms of contract, covering from selection of provider to execution of work, to construction failure and dispute. The Government Decree no 30 emphasis on the regulation concerning the role of government (both central and local) and construction society in regulating, empowering, and monitoring the construction operation.
Table 1. Summary of Indonesian Legal Framework for Construction Services

<table>
<thead>
<tr>
<th>Legal Document</th>
<th>Year Effective</th>
<th>Purpose</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presidential Decree no 80</td>
<td>2003</td>
<td>Guideline for Procurement of Goods and Services within government jurisdiction</td>
<td>Developed based on Presidential Decree no 14, 1980</td>
</tr>
<tr>
<td>Law no 18: Construction Services</td>
<td>1999</td>
<td>Guideline for promotion and development of construction services To maintain order of construction practices that would provide assurance of fairness and adherent to law and order To realize and promote the role of society in construction services</td>
<td>Foundation for Government Decree no 28, 29, and 30 - 2000</td>
</tr>
<tr>
<td>Government Decree no 29: Execution of Construction Services</td>
<td>2000</td>
<td>Guideline for Procurement and Contract of Construction Services</td>
<td>The scope includes regulation concerning procurement of construction services, construction contract, and construction failure and disputes</td>
</tr>
<tr>
<td>Government Decree no 30: Implementation of Construction Service Development Guidance</td>
<td>2000</td>
<td>To provide guideline for regulation, empowerment, and control of construction services.</td>
<td>The scope of this regulation includes guidelines for central and local government</td>
</tr>
</tbody>
</table>

4. Finding and Discussion

The successful implementation of Construction Service Law no 18 and its three accompanying government decrees depends on how effective they are to address various issues. Certainly there are other aspects to be considered. However the following discussion describes only some issues that are considered as the most influential ones.

4.1 Balancing the Demand for Local Needs and Challenge for Globalization

Liberalization of international trades in goods and services such as in WTO and AFTA in 2000 has forced the construction industry to open its market for foreign competition. Although these agreements have been taken into effect for some years, the industry is still not fully prepared to cope with the challenges. In this industry only a very limited
number of construction companies are ready for international market opportunities. In addition to lack of international professional practices, many of them are also not familiar with international contract standards such as FIDIC and alike. On the other hand, supported with their advancement in technology, superior experience and strong capital, the competition threat from foreign companies to local construction market is growing significantly.

Although it is commonly acknowledged that such threat is mostly true only for large projects, local competition is also faced with tough challenges. Statistic shows that almost 90% of 134,000 registered construction companies are of small scale companies, each with average annual market less than US$ 25,000. Of more than those 120,000 companies, it is estimated that only less than one-third are actively involved in construction works, whereas the rest are listed as inactive or fictitious with inadequate or no business and technical resources. The majority of these small-scale companies are located in small cities across Indonesia’s 33 provinces. Within such limited local market, these conditions eventually may lead to risk of illegal and unlawful practices such as corruption and collusion.

4.2 Local Autonomy

The main spirit of Construction Service Law no 18 is to lessen the role and control of government over the construction industry. In 1999 the government also established Law no 22 in Local Autonomy and Law no 23 on Financing Balance between Central and Local Government; which was then replaced by Local Government Law no 32, 2004. These two laws have string influence on the development of local construction industry. Under these laws, local governments have more control over planning, budgeting and execution of construction works, which in turn will help strengthening the local construction industry. However, the capacity of local government and construction industry is still limited. Thus, the needs to exercise more autonomic rights are not balanced with adequate capacity to execute. Lack of adequate managerial and technical skills, coupled with low professionalism attitude are among the factors often cited as the low quality of construction practitioner and officials in local government. It seems that what was envisioned in Government Decree no 30 has yet to be realized.

On the authority of local autonomy, in order to protect the interest of local construction industry, many local governments established regulation that created a set of new additional bureaucratic mechanism. Yet, this new set of regulation is often proven to be ineffective and even contradict with other law and regulations.

4.3 Increasing Role of Private Sector and Public Private Partnership

In Jakarta and other major cities, where most commercial building construction works took place, the capacity of the construction companies are among the best in the nation. While state-owned construction companies can benefit from its long experience in construction industry, some newer private companies are also able to compete due to their more professional skills, and more flexible and less bureaucracy in adopting technology and business practices. Unfortunately the largest part of the construction industry does not possess those kinds of capacity. The majority of the Indonesian construction industry consists of medium and small-scale private-owned construction
companies, which mostly work in small scale building and commercial estate constructions. Amongst these small-scale contractors it is not considered uncommon practice where the winning bidders are not the ones who will execute the work but rather act as construction broker. Due to lack of access to project information, this group of companies often works without direct contract with the owner but rather as second or third tier contractor at lower cost than what the winning bidder has initially offered. Pre-arranged tendering process and puppet bidder are frequently cited as the sample of bad practices involving construction companies. This condition certainly causes inefficiency in construction industry.

Decreasing capacity of the government in providing adequate funding for construction has improved the changes for the private sector to play larger role in the construction industry. Like in many other countries, private sector is starting to take larger part in infrastructure constructions, such as toll roads and ports, through public-private partnership initiatives. Although this trend of partnership is expected to grow in the future, where more and more infrastructure investment will be offer to private sector, there are still some legal issues which are not yet specifically accommodated in the current construction laws and regulations. This includes major issues such as standard form of agreement and the responsibility and accountability of private sector to the public.

4.4 Institution and Governance

One of the important initiatives in Construction Service Law no 18 deals with the concept of good governance. Under this law, the central role of government was limited and shifted to a more independent entity representing the interest of all stakeholders of the construction industry. The introduction of the notion of construction society put the construction society and the society in general in the central role of the construction industry.

Perhaps the most debated issue regarding the implementation of Construction Service Law no 18 is section VII that regulates the role and responsibility of the construction society. According to this regulation, construction society is defined as part of overall society who has interest to and/or performs activities that are related to construction business or construction works. Further in Government Decree no 28, the role of construction society is to be formulized in the forms of Construction Service Forum and an independent board. Based on those regulations, the government established Construction Service Development Board – CSDB as the independent board that bear the responsibility for development and enhancement of the Indonesian construction services. This body consists of representative of professional associations, as well as representatives or government and academia.

The Construction Service Forum is an informal body consisting of representatives from construction business associations, professional associations, intellectual society, NGOs, the government, and other necessary element. The objective of this forum was to absorb society aspiration, formulize the direction for construction development, providing advice the government, and encouraging society control over the construction. On the other hand, the independent board is the manifestation of the forum which has executive power to exercise its duty: a) to inspire and performed
research and development of construction services, b) performed education and training in construction services, c) conduct registration for all construction workers, d) conduct registration for construction business entities, and e) encourage and improve the role of arbitration, mediation, and expert judgment in construction service. The board is a body similar to CIDB of Malaysia (CIDB Malaysia, 1994) or BCA Singapore (BCA, 2009). The structure of Construction Service Development Board – CSDB consists of one national CSDB at central level and one local CSDB in each of 33 provinces in Indonesia.

In reality, the Construction Service Forum, which is supposed to be the highest body of the board has only insignificant role in the society, whereas the board on the other hand plays very dominating role in the construction industry. Since the law requires any entity (individual or organization) working in the construction industry to be registered and certified, then the certification becomes very crucial issues. So far, most of the debate and complaints concerning the registration evolve around the role and function of the CSDB.

Under the Government Decree no 28, certification is given as acknowledgement to the classification and qualification of competence and capability possessed by individual or construction business entity (Indonesia, 2000a). This certification can only be given by CSDB. Alternatively, certification can also be given by construction associations that have been accredited by the DCDB. Due to limited of capacity of CSDB to certify such a huge number of individuals and construction business entities, the certification process become an enormous burden to the industry. On the other hand, lack of control by CSBD causes the certification by construction associations to face other problems. In practice there is no enforced standard certification employed by association, as each construction association may employ its own standard and mechanism. This condition may lead to improper application of certification process, where certification becomes a trade commodity. Individual person or company which failed the certification can form its own association and, thus conduct its own certification for those who are willing to pay.

4.5 Human Resources

Construction workers are the main player in the construction industry. The quality of construction workers not only depends on the skill and competency of individual workers but also on other factor such as regulation and system. In general, the quality of human resource in Indonesian construction industry is considered low and inadequate for modern construction. Low productivity and high rate of accident is often mentioned to reflect lack of competency and professionalism.

Although has stated showing encouraging trend, the rate of construction accident in Indonesia remains the highest amongst neighboring countries. This condition indicates that the current system and regulation concerning construction safety and health has proven to be ineffective to cope with this alarming condition. In particular, in a highly competitive job market, the attitude of workers toward construction safety is generally disappointing, as they are willing to take risk in return for simply being able to work. Similarly, the current business practice of construction service has not been able to convince the construction companies to start using productivity as factor to improve
competitiveness in the industry. Lack of understanding on the importance of productivity and construction safety by both the workers and the management often considered as the major influencing factor. The majority of the industry still considers safety and productivity improvement program as additional burden to construction cost with no apparent benefit. (Soemardi et al, 2009)

5. Conclusion and Recommendation

Preliminary assessment to the effectiveness of legal framework for Indonesian Construction Service has identified some issues that may be taken into consideration for improving the current law and regulations.

Expanding the Scope of “Construction” and Restructuring the Construction Industry

According to Construction Service Law no 18 – 1999, the term construction service includes planning, execution, and monitoring and supervision of construction works. This scope is considered to narrow and should be expanded to accommodate more comprehensive scope of construction works. The term construction should not be limited to that scope but should also be able to accommodate wider applications of construction arrangement, such as those found in BOT contract. A full life-cycle construction process must also include the operation, maintenance and refurbishment and demolition. In addition, the new law should be able to accommodate other players in the overall construction service supply chain, and should not limit itself into contractors and consultants.

To assure the fairness and equal opportunity in the industry, the construction service needs to be restructured. Classification and qualification of construction business entity should be redefined as to accommodate and compatible with international standard, such as CPC (central product classification).

Restructuring the Construction Human Resources System

Under the current law and regulations Construction Service Development Board holds strategic position in relation to construction human resource development. To improve the capacity and competence of the construction workers, CSDB must be more active to promote and conduct training for construction workers of all levels. CSDB is also expected to learn from success of similar organization in other countries, and to develop programs which are more appropriate for national construction condition, as well as capable to meet with global challenges.

According to Construction Service Law no 18, construction workers are categorized into expert and skill workers. Meanwhile the Ministry of Labor and Transmigration has already developed Framework for Indonesian National Qualification, a system of qualification and career path which consists of nine levels of qualification. For that reason, to ensure compatibility and equality amongst the workers in the construction the classification and qualification of construction workers needs to be synchronized. Further, CSDB must play larger role in enhancing the national construction industry by actively promoting and enforcing the professional role and good governance of the construction associations as the center for professional development at all levels.
Reposition and Revitalization of Construction Institution

The capacity and governance of the Construction Service Development Board must continuously be improved. While in the past this organization was often found itself trapped within conflict of political interest of various parties, in the future this organization should be able to play greater role in guiding the development of the construction industry. In order to do so, the organization needs to be able to distance itself from politic and transform its character from a bureaucratic licensing board into a professional organization serving and guiding the advancement of the construction industry through advocating, education, and research.

It is apparent that under the current legal structure the responsibility for developing and improving the national construction industry lies heavily on CSDB. However, due to the lack of professional maturity of the industry, it is widely acknowledged by the industry that the government should not distance itself from the current structure. While the current CSDB structure has liberated the construction industry from government dominated control, the need for strong government leadership and responsibility remains imperative. As opposed to being a totally independent body, many in the industry is considering to restructure CSDB to be more of a government controlled agency, like those in Malaysia and Singapore.

Globalization and internationalization is something that the industry cannot avoid. The ever growing participation of international construction companies must be responded effectively. CSDB should play leading role in enhancing the capacity of local companies to compete with their foreign counterparts. On the other hand, the construction law and regulations should accommodate the demand for international contracts as well as regulation concerning international partnerships.

6. Acknowledgement

This work is part of an ongoing effort to review the effectiveness and proposed improvement for the Indonesia Construction Law which is initiated and jointly sponsored by the Construction Service Development Board and Ministry of Public Work. This paper would not be possible without the help and guidance from members of the review team, including those from Community Action for Indonesian Construction (KAKI). Their contribution is highly appreciated.

7. References

Contractor Design and standard form contracts: A problem solved?

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Abstract:
The ‘fuzzy edge’ between design and construction has always caused problems in the traditional contract. This is especially so when liability for faults in workmanship or design have to be resolved later. This interaction has been resolved by the growth of D&B contracts. This has been followed by the express inclusion in traditional contracts of a design element. The JCT 05 SFQ provides a design portion and the NEC 3 a design option. Including design in the contract poses the question of what that design liability should be? The common law imposes a fitness for purpose obligation onto contractors who carry out design. By contrast, the standard forms of contract limit this liability to the exercise of the reasonable care and skill. By doing so, it raises a number of potentially difficult questions. These are examined through the analyses of the case law on the requirement of reasonable care and skill in the context of professional design. Early cases involving contractors where there was no express allocation of design liability are examined in the light of the current contractual provisions. These express clauses in the standard forms and their requirements are dissected together with the way they deal with the consequences of design failure. This involves limitation of liability and the difficult issue of consequential losses. The allocation of the consequences of design failure in professional contracts is not an easy matter. Allocating it in contracts with contractors and subcontractors creates the illusion that this aim has been satisfactorily achieved. In reality it leaves all the parties exposed to litigation in order to allocate responsibility for design failure later. What is clear is that despite comprehensive drafting of the SFC contracts, the position is no clearer now than it was in the early cases where a solution was required of the common law.

Keywords:
Common law, design liability, limitation of liability reasonable care and skill, standard forms of contract

1 Introduction

The growth of Design and Build contracts (D&B) has been taken one step further by the introduction in the traditional standard forms of contract of a contractor’s design portion.
This provides the employer with much needed flexibility in the design and construction process. To make this possible the standard forms have become more complex in their drafting, in order to make this change in emphasis and practice work.

This paper examines the effect of these provisions and analyses the resulting changes required in the standard forms. Provisions have to be made for the contractor’s design liability, for consequential losses, and for limitation of liability. At the same time it has to be emphasised that the modern contractor neither designs nor builds. In fact it manages the process by subcontracting the actual carrying out of the design and the construction work. This is so whether the contract is a traditional one or a design and build contract (Adriaanse: 2007).

In order to demonstrate the nature of the problem, a number of cases on earlier attempts to impose design liability at common law will first be examined. The nature of professional liability will be analysed in order to demonstrate the problem with contractor design liability in the standard forms. The drafting requirements of the traditional contract with contractor design will then be evaluated.

2 The position at common law

In the cases that follow, the employer had to prove that the contractor’s design had been carried out negligently. In Independent Broadcasting Authority v Bicc Construction Ltd (IBA) 1 a television mast constructed at the frontiers of knowledge collapsed. This was due to ice forming on the stays where the design assumed that it would fall way in the high winds. The contractor played no part in the design. However, its tender it stated that the offer was ‘for the design, supply and delivery of a 1,250 ft. high stayed cylindrical mast in accordance with our line diagram drawing No. 3SP5134/4’. The use of the word ‘design’ allowed the House of Lords to conclude that the contractor had expressly accepted liability for the design. It justified this on the grounds that it could recover the costs from the subcontractor. In doing so the House considered Norta Wallpaper Ltd v John Sisk2 which on the facts were similar but came to a different conclusion.

Tenders were invited for the construction of a factory. The employer negotiated and approved the design of the factory superstructure. By a process of nomination the contractor was instructed to enter into a subcontract for the design and erection of the superstructure. This design itself was approved by the employer’s engineers. The roof leaked due to faults with the design. As a consequence, the building contractors were sued for damages for breach of contract but in the event, were held not liable. In the course of his judgment Kenny J. said at p 130

It seems to me that if the design has been prepared by the sub-contractor and approved by the employer, and if the contractor has had nothing to do with the preparation of it and has not been consulted in relation to it, and indeed is bound

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1 [1955-95] P.N.L.R. 179
2 (1978) 14 BLR 49
to accept the sub-contractor and his design, then no reason exists why the sub-contractor should be liable for defects in it [but not the contractor].

This case was decided on the basis of nomination. Prior to the use of D&B contracts, nomination of specialist subcontractors was dealt with by the employer’s advisers. These specialists provided design services and carried out the resulting work required. In such an arrangement the contractor facilitates the work but has no involvement or liability for the design. Although the subcontractor in *IBA* was also nominated, the court decided that the contractor was in a position to check the design.

A failure in the design was also the issue in *Cable (1956) v Hutcherson Bros Ltd*[^3]. Though the documents described it as a ‘turn-key’ project, the high court of Australia decided that at the time such a phrase had no legal content. They decided that it was in fact a traditional contract in which the contract had no design input or responsibility. The fault lay in the drawings which required the approval of the engineer.

What this selection of cases demonstrates is that there are circumstances where the contractor can be held to be liable for design, in the traditional contract. This is however a costly exercise and subject to the lottery of litigation. Each case was decided on its facts and could as easily have had the opposite result. Why else were there appeals against the judgments made at first instance (including in *Cable (1956)* the award of the arbitrator)? A further question that arises is whether the parties could have arranged matters differently and whether the outcome would have been different as well? Do the provisions described below improve the situation?

### 3 The provisions in the standard forms

The JCT 05 Standard form of Building Contract with Quantities (JCT O5 SFQ) has a complex clause that limits the design liability of the contractor to the exercise of reasonable care and skill. The wording of the clauses does not make it *that* clear. Instead Clause 2.19.1 states the contractor shall have in ‘respect of any inadequacy in such design’ the same or similar liability of an architect or that of any other appropriate professional designer holding himself/herself out to be competent to take on work of such design. The clause also limits the duty to that created by statute or otherwise. Statute would be for example s 13 of the Supply of Goods and Services Act 1982. It implies a duty of reasonable care and skill into a contract for services: see: *QV Limited v. Frederick F Smith & others*[^4]. The designer under the JCT contract would have fallen into the category of ‘other appropriate’ professional as the designer was a chartered builder. The phrase ‘otherwise’ refers to the duty at common law of reasonable care and skill in a professional designer’s contract: see *Lanphier v. Phipos*[^5]. This liability is also described the same as that of a professional who enters into a separate contract with an employer.

[^3]: (1969) 43 ALJR 321
[^4]: [1998] CILL 1403
[^5]: (1838) 8 C&P 475
The wording of the clause is the same as in *Co-operative Insurance Society Ltd v Henry Boot Scotland Ltd and ors* In a contract demolish, design and reconstruct a building in Glasgow was let under the JCT 80 condition’s of contract with contractor’s design supplement 1981 edn., (revised July 1994). Clause 2.2.1.4 contained the same wording as Clause 2.19.1. The court held that the wording included checking the suitability for the pre-contract design. JCT 05 through in Clause 2.13.1 specifically excludes this duty. Instead it makes the contractor not be responsible for the contents of the Employer’s Requirements or for verifying the inadequacy of any design contained therein.

By contrast the NEC 3 deals with design liability in a much clearer manner. Where Option X15.1 The Contractor’s design is adopted - Clause X15.1 merely states that the contractor is not liable for defects in the work due to his design so far as he proves that he used reasonable care and skill to ensure that his design complied with the works information. What if he does not? The requirement that the contractor proves that he used reasonable care and skill is that the employer’s runs into the difficulty created by civil litigation of having to prove its case in the first place. Eggleston too considers that the wording is open to different interpretations (2007).

The JCT avoids this uncertainty by making addition provisions should the design prove to be defective. In Clause 2.19.2 liability under 2.19.1 includes liability under the Defective Premises Act 1972 (DPA). This duty according to Section 1(1) applies to: A person taking on work for or in connection with the provision of a dwelling (whether the dwelling is provided by the erection or the conversion or enlargement of a building) owes a duty…to see that the work which he takes on is done in a workman-like or ... professional manner, with proper materials and so that, the dwelling will be fit for habitation when completed.

In *Bole & Anor v Huntsbuild Ltd & Anor* 7 both the contractor and the structural engineers were held liable under the DPA for foundation failures in a newly constructed house. HHJ Toulmin CMG QC at 179 decided the house as built was unfit for habitations it was unsuitable for its purpose. The unstable foundations resulted in movement and cracking and other defects caused by heave fell under s1 of the DPA. The contractor had failed to do the work in workman-like manner and engineer had failed to do it in a professional manner. Such a duty is excluded where commercial development is carried out.

### 4 Consequential loss

In addition to the costs of repair, claims resulting from a defect in design can cause consequential losses that can far exceed the cost of the work. In *British Sugar plc v NEI Power Projects Ltd*8 the contract between the parties for the design, supply, delivery, testing and commissioning of electrical equipment was for price of £106,585. The buyer claimed damages of over £5 million due to increased production cost and the losses of

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6 [2002] EWHC 1270 (TCC)
7 [2009] EWHC 483 (TCC)
8 (1997) 87 BLR 87
profits caused by breakdowns to the supply of power. This was due to a poor design and faulty installation of equipment. The clause excluding consequential loss had been agreed after lengthy negotiations.

Clauses limiting consequential loss are quite common in such contracts. They are essentially about risk allocation. Chadwick LJ in *Watford Electronics Ltd v Sanderson* 9 (with whom LJ Gibson and Mr Justice Buckley agreed) at 55 as observed that:

> Where experienced businessmen [and women] representing substantial companies of equal bargaining power negotiate an agreement, they may be taken to have regard to matters known by them…They should be taken to be the best judge on the question whether the terms of the agreement are reasonable.

Gibson LJ too went on to say that a court should not assume that where they have agreed the risk allocation, that either party was likely to commit their company to unfair or unreasonable terms. If the price agreed reflected the risk taken, then there was little scope for a court to unmake the bargain of commercial people.

Clause 2.19.3 limits the Contractor’s liability for ‘loss of use, loss of profit or any other consequential loss arising in respect of liability of the Contractor referred to in clause 2.19.1. Clearly a claim for loss of use and loss of profit might not be considered as consequential loss as these are direct losses: see *Hotel Services Ltd v. Hilton International Hotels (UK) Ltd*10. This leaves the generic phrase consequential loss whose meaning is unclear. It is therefore preferable to state the limit of such losses in the contract particulars. This is not compulsory under the contract and does not apply where the contractor is not involved in work to which the DPA applies.

5 Proving design liability of a professional

A professional has a duty of reasonable care and skill in carrying out the work. This duty exists at common law but may also be expressly provided for in the express terms of the contract. On the surface, this obligation is reasonably straightforward. The duty is to exercise the reasonable care and skill of the ordinary competent professional and this duty arises both in contract and in tort. The standard of care required was explained it particularly well *Eckersley v Binnie and parts* 11 by Bingham LJ. His judgment sums up the degree of care needed not to be judged to be negligent. Ward LJ adopted it without qualification in *Michael Hyde and Associates Ltd v JD Williams and Co Ltd* 12.

The law requires a professional to live up in practice to the standard of the ordinary skilled person exercising their special professional skills. He or she does not need to possess the highest possible skills.

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9 [2001] EWCA Civ 317
10 [2003] EWCA Civ 74
11 (1988) 18 Con LR 1
12 [2000] EWCA Civ 211
• The law does not impose liability for damage resulting from errors of judgment unless the error was such that no reasonably well informed or competent member of that profession could have made it.

• He or she should possess the body of knowledge which forms part of the professional equipment of the ordinary member of their profession.

• He or she does not lag behind other hardworking and intelligent members of their profession in knowledge of new advances, discoveries and developments in their field.

• He or she should have awareness as an ordinary competent practitioner of the deficiencies in their knowledge and the limitations in their skills.

• To their professional tasks he or she need not bring more that the ordinary competent skills of their profession; the law does not require him or her to be a paragon, combining the qualities of polymath and prophet.

Relatively speaking therefore, this standard of care is not particularly high. It applies to the standard of care which is that of the ordinary competent practitioner and then only to obligations of reasonable skill and care. For the difficulty of proving negligence, the case of Wimpey Construction UK v Poole\(^\text{13}\) showed the difficulty of tying to prove that your own designer had been negligent. Although the design failed the designer used the current British standard. Thus under Bolam v Friern Hospital Management Committee\(^\text{14}\) it was entitled to the state of the art defence and thus not negligent in doing so.

Only in exceptional cases has a professional been found liable to produce a result. In Greaves (Contractors) Ltd v Baynham Meikle & Partners\(^\text{15}\), the court found an implied term in the contract with a D&B contractor that the engineer had to produce a result by designing a floor to carry specified dynamic loadings without distress. The application of this principle which was based on the agreement of the parties is quite rare. Recently in CFW Architects (A Firm) v Cowlin Construction Ltd\(^\text{16}\) the architect was found to be under a duty to produce the information in a timely manner to fit the D&B contractor's programme. There are 30 years between these cases and illustrate the rareness of judicial decisions making a professional obligated to produce a result.

Where designers have been sued at common law for not producing a result, the court has had no difficulty in deciding the legal liability of a professional. Lord Denning in Greaves stated that no general assumptions could be drawn from this case about implying any term of fitness for purpose. He went on consider the position where an architect or engineer is employed to design a house or a bridge. Was he under an implied warranty that if the work was carried out to his design, it would be reasonably fit for its purpose or is he only under a duty to use reasonable care and skill? He declined to answer

\(^\text{13}\) (1984) 2 Lloyd’s Rep 499
\(^\text{14}\) [1957] 1 WLR 582
\(^\text{15}\) [1975] 3 All ER 99
\(^\text{16}\) [2006] EWHC 6 (TCC)
this question as a matter of law but observed in a future case it might need to be considered. Brown LJ too emphasised the the decision laid down no general principle as to the obligation and liability of professional men.

These questions raised in Greaves were considered in George Hawkins v Chrysler (UK) Ltd and Burne Associates\(^\text{17}\). This was whether the engineer was liable for the injuries caused by a defectively designed floor. An employee was injured when he slipped on the newly laid floors of a shower room. The employer argued for an implied term that (a) the engineer would use reasonable care and skill in selecting the material to be used for the floor of the showers; and (b) there was an implied warranty that the material used for the floor would be fit for use in a wet shower room. The court declined to imply terms into the contract either as a matter of fact or of law. It decided that there was nothing in this case that gave rise to any inference that a higher duty than reasonable care and skill was required to be exercised by the designers. It stated that while there may be anomalies between the position of contractor and sub-contractor in this respect (i.e., obligations of fitness for purpose), as opposed to professional people: however it was not open to the court to extend that duty except in special circumstances. It is this anomaly though that creates the problem when the contractor carries out design. At common law a contractor who carries out design has a fitness for purpose obligation\(^\text{18}\).

6 Application

What would the position be if in the three cases mentioned earlier in this paper, the contract had included a design component? Would the results at common law be different where the parties had made express provision for the allocation of design liability?

In IBA the arguments against the contractor was based on the common law. The contractor's defence was that it was at the frontiers of known knowledge and no tower that high had been constructed before. It was held liable at common law for failing to produce a product fit for its purpose. Had it been under the JCT contract its design liability would have been reasonable care and skill. This question was never argued before the House of Lords although it was before the court of Appeal. It is arguable that the contractor might have had a defence that it did use reasonably care and skill had it had that responsible for the design in the first place.

Norta raises quite different issues. Nomination has been deleted the from the JCT contract. The sub-contractor could either have been named in which case the contractor would be expressly liable for the design. If the JCT standard subcontract had been used instead, both parties would have had their design liability limited to reasonable care and skill.

As for Cable the result might have been that the contractor accepted liability for the design. In such a case the engineer would have no input. The contractor might well have been liable if it fell below the standard of reasonable care and skill of the average

\(^{17}\) (1986) 38 BLR 36 CA

\(^{18}\) Viking Grain Storage Ltd v. T H White Installations Ltd (1985) 33 BLR 103
competent professional. However would it have designed the works without a site investigation?

7 Suing contractors

In *Associated British Ports v Hydro Soil Services NV & Ors* 19 the contractor undertook to a fitness for purpose obligation in its contract. The contractor in its defence argued that unforeseen conditions had been the cause of the failure of the quay wall. HHJ Havery QC rejected that claim. This was because the contractual term requiring the works to be fit for its purpose was perfectly clear. He observed that what clause 12 (which offers protection from unforeseen conditions) enable a contractor 'to claim extra payment in certain circumstances but does not relieve him from the obligation, or modify the obligation, as to the fitness for purpose of the works. The burden remains on the contractor to prove his clause 12 claim. There was however the burden also on the claimant to prove the ensuing works was not fit for their intended purpose. This it did in a trial lasting 35 days and requiring the services of 10 very eminent expert witness (para 10).

The contractor in *Shepherd Homes Ltd v Enica Remediation Ltd and Green Piling Ltd* 20 conceded that it had failed to use reasonable care and skill. Instead it concentrated its arguments on showing that the developer had not mitigated its losses in reasonably. This boiled down to what means it should have used to repair the houses that had settled and cracked because of the ground conditions. The developer chose to buy the worst damaged properties and to use an internal pilling system to stabilise the properties. The contractor argued that it would have been cheaper to demolish and rebuild those houses.

Giving judgment Mr Justice Jackson held that the developer was entitled to substantial damages and indemnities in respect of 54 properties. In respect of the other 40 properties it was entitled to nominal damages of £2 per house. Ironically this was in the words of the judge a result of the pattern of water flow at the end of the last ice age, not the design skill of the contractor. These houses were in areas where the contours of the glacial till were high. It was only due to this fact that the foundations of these houses were adequate. It could be argued that in fighting a 5 week trial the contractor did at least mitigate its loss on 40% of the damaged properties.

8 Conclusion

The inclusion of a design element in the standard form contract does provide an employer with flexibility. It is easier to make changes with which the contractor is involved. Once this is done, provisions have to be made for the allocation of design liability, responsibility for errors in the employers’ proposal and consequential losses which may result. The result is that the employer will need to prove that the contractor was negligent in carrying out the design. Now the standard form such as NEC 3 requires the contractor to prove it was not negligent but it is difficult to see how this will work in

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19 [2006] EWHC 1187 (TCC)
20 [2007] EWHC 70 (TCC)
practice. The claimant in civil litigation has to prove negligence to win its case, so requiring the contractor to prove it was not negligent will be a matter for litigation in the future. It seems strange to have express clauses in a contract that may need litigation be sorted out what the parties intended by the words they used in their contract.

In applying the contract terms to old cases decided at common law, it seems that the results are not very clear if those provisions had been available at the time. The general advantage of clear express terms is that it enables the parties to resolve issues between them if the words used are clear. In attempting to limit the design liability of the contractor, the outcome has been left unclear, a rather unsatisfactory outcome. In order to decide who is responsible the parties may well have to litigate in the future to decide what was agreed.

The anomaly between the common law’s treatment of contractors and subcontractors, who carry out design, has not been resolved by the drafting. Even where the contractor has accepted a fitness for purpose obligation, the contractor can make the employer prove its case. The result is that the very problem identified earlier lack a clear solution in the standard forms examined. Risk allocation is ultimately a matter of price and provided all parties are aware of that risk, and can price for it, the compromises in the standard forms may well provide a satisfactory solution to the parties. Whether this is indeed true may well need to be decided by the courts at a future date.

9 References


The Engineering and Construction Contract NEC3 Thomas Telford Ltd and the ICE

The Standard Building Contract with Quantities SBC/Q (JCT 05) Sweet and Maxwell Ltd
Corruption of the commercial process revisited

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Abstract:
This paper is based on a report written over twenty years ago by John Huxtable, the then Chairman of the Confederation of Construction Specialists. The report is a passionate call to arms exposing the injustices felt by specialist contractors.

The emphasis for this paper moves slightly away from the original and centres on two new objectives: firstly an academic enquiry into the validity of the findings of the original report and secondly an update on John Huxtable’s material from the viewpoint of a 21st century specialist contractor.

A good deal has changed in the construction industry since the report was written in 1983, much of it for the better. The radical provisions of the Housing Grants, Construction and Regeneration Act 1996 have improved the specialist contractors’ position and would no doubt have been welcomed by John Huxtable. Advances by progressive thinking main contractors in risk management/allocation and collaborative working have also been made. However, several areas of deep concern remain for specialist contractors, foremost amongst them the continued imposition of non-standard onerous terms of subcontract. The continued use of these terms undermine the advances made elsewhere and John Huxtable’s central theme – that this amounts to a corruption of the commercial process – remains relevant to today’s industry.

Keywords:
Specialist contractors, subcontracts, onerous contractual terms, risk apportionment.

1. Introduction

The original 49 page report (“the Report”) written by John Huxtable (“Huxtable”) was the rallying cry for the Confederation of Construction Specialists (“the Confederation”) timed as it was with that body’s inception in 1983. The Confederation was set up to provide an effective national focus for the interests of specialist construction companies. The Report (Huxtable, 1983) includes a Declaration of the Rights of Construction Specialists and a ten point challenge to the wider construction industry to improve the position of the specialists. The main section of the Report promotes Huxtable’s contention that the imposition of one sided terms and conditions by main contractors on
specialist contractors amounts to a corruption of the commercial process – the latter forming the title of the Report.

The Report also contains a review of the non-standard terms and conditions from the early 1980’s and a comparison chart for standard and non-standard subcontract provisions. No distinction is drawn between the terms “specialist contractor” and “subcontractor” either in this paper or the original Report. Both terms describe the organisation/firms hired by main contractors to perform construction and engineering operations on their behalf for the benefit of a construction client referred to here as the “Client”. A key feature of this arrangement is the lack of any contractual link between the specialist contractors and the Client. This remoteness is identified by Huxtable as being the root cause for many of the problems experienced.

The narrative style adopted in this paper is to quote the Report in quotation marks and italics in order to distinguish the original from this work.

2. The Argument

In the Report Huxtable wastes no time in setting out his main contention:

“This report represents the starting point of the campaign aimed at exposing and rooting out contractual abuse which so damages the efficiency and harmony of the UK construction industry.”

“This report exposes a major scandal of truly shocking proportions. The scandal stems from the persistent and continuing imposition as a matter of deliberate policy by building and civil engineering main contractors and major trade contractors of onerous and unfair subcontract conditions onto the specialist companies who nowadays provide the majority of the value input into most construction projects.”

“In construction a grossly disproportionate share of the risk is transferred down the chain of responsibility to the specialist contractor. The Confederation considers that many of what have become common practices in the construction industry amount to a distortion or corruption of the commercial process and to a misuse of commercial power by main contractor companies.”

Huxtable explains in his introduction that the Report is based on the broad experiences of many specialist companies, covering the complete spectrum of construction work.

 “[The report] is based on long experience of analysing and investigating individual non-standard conditions and procedures and the consequent problems, uncertainties, disputes and disruption (and all too frequent insolvencies amongst Specialist companies) which inevitably follow.”

Huxtable goes on to identify the victims, which he draws more widely than one might necessarily have expected.
“The initial victims of onerous subcontracts and other forms of contractual abuse are, of course, specialist subcontractor companies who are most directly in the firing line – but the damage spreads much further. The distrust, every-man-for-himself attitude, defensiveness, claims-consciousness and general lack of co-operation which inevitably results when the main contractor abuses his commercial power also – inevitably - has a damaging effect on the efficiency, cost, quality and safety of the construction project. Thus the ultimate victim will be the client.”

The tone and content of Huxtable’s introductory comments will be familiar to some of the other stakeholders in the construction industry, particularly main contractors for whom vociferous sub-contractors airing their grievances are a common occurrence. At this stage of the Report a considerable proportion of the readership might be tempted to dismiss it. Such a reaction would be unjustified; the Report deserves and rewards further scrutiny.

3. The Case for Subcontracting

Following his introduction Huxtable moves on to safer ground as he sets out the benefits of subcontracting. The advantages of subcontracting and the relevance of his comments can only have increased in the intervening years since the report was written.

As long back as the Simon Report in 1944 it was observed that it has become impossible for any single Architect or Builder to have specialised knowledge and experience to deal effectively with all the new processes... as a result specialist firms are operating on a substantial scale.

At that time two thirds of work was carried out by specialist firms, according to the Simon Report’s estimates. In the post war period the growth and extent of Specialist work has been accelerated further by the development of new materials and technology and increasing complexity of construction works. The figure of subcontracted works now at 90% according to a CIOB/University of Reading Report.

The role of the Main Contractor is now predominantly that of organiser, coordinator or manager of the project, relying on a team of specialist companies to provide virtually all of the value input for the building or structure.”

The Report moves on to present the advantages of using specialist contractors as set out below. Again, few would argue that the comments are accurate and that their accuracy has only increased through the intervening years.

“I. Specialists can keep abreast and promote technological advancements in their field and bring the benefit to the project
2. The use of specialist leads to a highly efficient and economical use of resources provided they are co-ordinated properly by main contractors
3. Specialists are able to offer stability of employment to their workers by operating on a steady stream of projects rather than the one-off nature of employment on behalf of some main contractors.”
The underlying theme to the first sections of the Report is that specialist contractors are and will continue to be of vital importance to the construction industry. They therefore deserve to be treated fairly.

4. The Ideal Subcontract

Huxtable identified that the key feature of most construction projects is the remoteness in contractual and legal terms of the specialist contractor from the Client and that the only link was indirect through a third party middleman –the main contractor. Huxtable emphasised that the terms and conditions of the subcontract agreement thus assumed a very great significance and importance in the smooth running of the project. Ideally, the subcontract should:

“1. closely reflect the terms and conditions of the main contract
2. establish the rights and obligations of the subcontractor as clearly as possible
3. provide a fair balance between the interests of the main contractor and the subcontractor
4. enable the client to get the best out of the specialist firm
5. ensure the specialist is fairly rewarded for its work.”

As for the standard forms of subcontract available, Huxtable lamented the situation at the time that there was no representative of the specialist contractors on such pan-industry bodies as the Joint Contracts Tribunal (JCT). The inclusion of the National Specialist Contractor Council would presumably have addressed this grievance. The other notable criticism in this section of the Report was that there was no JCT compatible form of subcontract with the closest being DOM/1 and DOM/2. This has also now changed with a subcontract in the JCT 05 suite of contracts. Similarly the New Engineering Contract has made great efforts to ensure the terms of the main contract are reflected in the associated forms of subcontract available.

It is probably fair to say therefore that the standard forms of contract available today go much further than was previously the case towards fulfilling Huxtable’s wish-list shown above. A specialist contractor using a modern and unamended form of standard contract including such features as collaborative procedures, risk registers and gain/pain share arrangements would be in an enviable position to their 1980’s counterpart. Research into exactly how many of today’s specialist contractors are in this position would be a worthwhile follow up to this work.

5. Non-Standard Terms

In Huxtable’s experience the use of unamended standard forms of contract was minimal within the industry. The Report pointed out that whilst the RICS surveys of contracts in use at the time showed 80% of construction work (84% on 2004 figures) is let on standard forms the same is not true of sub-contracts where there is a far higher incidence of using non-standard forms upon the main contractors’ insistence that they are used. The Report therefore surmised that the use of an unamended form of subcontract was the exception rather than the rule.
Non-standard terms dominated the industry at the time the Report was written. Huxtable makes some strident remarks in the Report about these non-standard terms.

“Non–standard terms are produced unilaterally with the aim of serving solely the interests of the originator. Amid the infinite variety three broad types:

1. Fully produced subcontract document – more often than not plagiarised from one of the standard forms but with significant amendments additions and omissions which inevitably favour strongly the interests of the main contractor.

2. “Small print” sets of conditions which will typically appear on the back of the order or of the tender documents. It seems like an irresponsible practice to “shrink” the terms and conditions in this way and hide them away obscurely as micro print on the back of the document.

3. Incorporation of a standard form of subcontract but subject to a schedule of amendments and additions. This can be the most hazardous for an unwary specialist what seems minor may very significantly alter the balance and meaning and expose specialist to extra risk.

All have the feature of one-sided drafting contrasting sharply with the relative balance of interests which genuine standard forms aim to achieve. Faced with the unenviable task of disentanglement a specialist will often be under great pressure to sign in the dark and hope for the best. If he is prudent he will seek every opportunity to protect himself. The main contractor cannot complain about the defensiveness or claims consciousness of the specialist because the contractor has set the tone of the project from the outset.”

Huxtable supported his views with extracts from the Banwell report from 1964 which condemned the practice of alteration or amendment to standard forms. Similar messages can be taken from the Latham Report in 1994 where this tendency was again specifically criticised. Huxtable met with Michael Latham in the build up to the latter’s report and made the case to him from the subcontractors’ point of view. The latest holder of the baton of change in the industry, Sir John Egan in his report in 1998 also wanted to see an end to the use of one sided forms on construction contracts. The frustration of Sir John Egan and the inability of government reports to make any significant impact on the industry can be detected from the following quote from a Building Magazine article:

“I am disappointed that the levels of improvement we asked for have not been achieved but pleased we are at least making progress. Right from the start I said most government reports end up in the waste bin so the fact Rethinking Construction had any impact at all is an achievement.”

Specialist contractors need to look to themselves to protect their interests when faced with this admission of relative impotence from the policymakers. The only effective way to achieve this is for specialists to improve their awareness of the dangers inherent
in non-standard terms and to position themselves to be able to negotiate properly their commercial impact.

6. Common Features of Non-Standard Terms

The next section of the Report went on to examine the non-standard terms themselves. Exactly what terms were causing the commotion? The Confederation has over the years compiled an extensive range of Analysis Notes, a “rogues’ gallery” of non-standard terms that the Report claims are used by almost all of the “top 100” national main contractors.

Huxtable singled out six non-standard subcontract terms for particular comment. His choice reflected the most common inequitable terms of the day. This snapshot of the situation facing specialist contractors from 1983 is followed by a distillation of the most common “unfair” terms as taken from the Confederation’s Analysis Notes for the period 2007-2009. Twenty-two analysis notes were examined for the purposes of this exercise. Huxtable commented on his terms as follows:

1. “Pay-when-paid”

“Many main contractors seek to weaken their own obligation (to pay for work performed/materials supplied) and thus their own side of the contractual bargain by introducing a pay-when-paid provision into the subcontract…. The main contractor is only obliged to make payment when (or if) he in turn receives relevant payment from the Client.

2. Set-Off

“If a main contractor considers that he has – or might potentially have – a claim against a sub-contractor he will in many cases wish to use the commercial leverage and set-off his claim against the next interim payment due to the subcontractor.

There are instances where in the event of even a minor breach causing little or no financial loss the main contractor would be entitled to withhold all money due to the subcontractor thus exacting a penalty out of all proportion to the breach.”

3. Time for Completion

“Standard forms of subcontract entitle the subcontractor to be awarded a fair and reasonable extension if the progress has been delayed or disrupted by factors outside his control. Non-standard forms typically restrict the entitlement to extensions to the subjective and self-interested opinion of the Main Contractor.”

4. Protection of Works

“Subcontractor responsibility for unfixed material on site is common in standard forms of subcontract. Non-standard forms often seek to impose more onerous terms to “protect” the work for an extended period often following incorporation into the main
works and long after the specialist contractor has left site. This often leaves the specialist with an uninsurable risk and amounts to an abdication of responsibility by the main contractor."

5. Determination

“In standard forms of subcontract the main contractor’s right is strictly limited to cases of fundamental default by the subcontractor, requiring a warning type notice to be given. However, non standard subcontracts widen considerably the grounds for determination to include “any default or breach of this subcontract” this includes minor or trivial breaches and without a notice requirement. In practice these powers are used mainly as a means of intimidating subcontractors and of enforcing other onerous provisions or practices e.g. delayed payment.”

6. Omissions

“Non-standard forms of subcontract almost invariably omit many of the key features providing rights or safeguards for the subcontractor. Frequent omissions include:

- any contractual right to suspend work if payment is not received
- any contractual right for the subcontractor to determine the subcontract
- The word “unreasonable” this qualifying word is almost always omitted e.g. reasonable satisfaction rather than main contractor’s satisfaction.”

The above are the terms to which Huxtable drew specific attention. His choices are characterised by terms transferring risk onto subcontractors and removing safeguards from them. This study applied this approach to modern day terms and conditions as reported in the sample subcontracts examined as part of the Confederation’s Analysis Notes from 2007-2009. The point of this exercise is to ascertain how much things have changed and how many of the same type of arrangements are still being encountered in today’s industry. This study identified ten commonly occurring clauses from the data examined.

1. Variation of Subcontract Terms

This type of clause provides the contractor with the ability to unilaterally vary the terms of the contract in some way. Some clauses are quite general. Other clauses allow the contractor to take away work from the subcontractor or to vary the timings of the subcontract work and to instruct acceleration without compensation. Varying the terms of the contract is a very different proposition from varying the works under a contract where a mechanism is present for valuation of the variation and the granting of an extension of time.

2. Determination

Huxtable’s commentary on these types of terms is entirely relevant to today’s clauses.

3. Design Responsibility
Not something originally dealt with by Huxtable, the inclusion of this type of clause reflects the further growth in importance of the design input of specialist contractors into the construction process. Typically, this type of clause seeks to place the responsibility for co-ordination of the subcontractor’s design into the rest of the works onto the subcontractor. The duty of a subcontractor is more sensibly to co-operate with other designers and the contractor to assist in co-ordinating the design.

4. Limitations on claims for additional time and money

This type of clause is commonly worded that the subcontractor can claim an extension of time for any event for which the contractor has himself received an extension of time. This will obviously exclude causes of delay stemming from the contractor or other subcontractors. Other clauses seek to limit what constitutes a relevant event for the purpose of claiming extensions of time and loss and expense.

5. Protection

Huxtable’s commentary on these types of terms is entirely relevant to today’s clauses.

6. Future Set-off

Huxtable’s commentary on these types of terms is entirely relevant to today’s clauses.

The remaining common inequitable clauses examined have come about as a consequence of the Housing Grants, Construction and Regeneration Act 1996 (“The Act”). As from 1 May 1998, the position of subcontractors was materially improved in the Act’s introduction of mandatory provisions which all qualifying construction contracts must comply with or have their terms replaced by statutory provisions, in particular:

- Introducing payment and withholding notices so that the subcontractors could see why they were not getting paid and the amounts set against each figure that was being withheld.

- Bolstering the adjudication provisions for construction contracts so that the subcontractors could do something about it if they were not happy with the reasons given for non-payment

- Banning conditional payment of “pay when paid” clauses except in the event of client insolvency

7. The Costs of Adjudication

Huxtable was writing before statutory adjudication was introduced and therefore at the time of writing the Report no attempts were being made to limit its potentially harmful effects to main contractors. The clause makes the referring party responsible for the costs of the adjudicator, and/or inter-party costs irrespective of whom the adjudicator
has determined has won. As the referring party will usually be the subcontractor this means the subcontractor will usually pay the costs of adjudication and frustrates the purpose of adjudication.

8. “Pay when Paid” Clauses

Conditional payment agreements are invalid under Section 113 of the Act except on the grounds of the insolvency of the Client. However, some subcontracts still contain measures that link payment under the subcontract in a variety of ways with payment under the main contract. This is a conditional payment provision by another name.

9. Elongation of Time for Payment Period

Huxtable would no doubt have welcomed the provisions of the Act dealing with the mandatory inclusion of mechanisms for determining when payment will fall due, providing information on how much is to be paid, providing for withholding notices and a final date for payment. However the Act allows for flexibility in the time periods allowed and main contractors in the clauses studied have extended these periods far beyond the four week period that would otherwise appear reasonable. Typical extended periods run from 40-65 days and beyond.

10. Suspension

Another subcontractor friendly initiative under the Act (section 113) provided for the ability on seven days written notice for the suspension of performance for non-payment. It is not uncommon for subcontracts to contain provisions extending the notice that must be given prior to suspension being legitimately allowed to fourteen days or twenty one days.

The incidence of these terms in the twenty-two Analysis Notes studied is shown in Table A below. The full description of the entries corresponds to the items listed 1-10 above.
7. The Dangers of Non-Standard Subcontracts

Huxtable had strong views on the damaging effects of non-standard contracts.

“The contractual link is rendered un-necessarily vague and uncertain.... A busy specialist firm may face literally hundreds of different sets of non-standard subcontract terms and conditions and cannot reasonably be expected to assimilate all of the varying procedures and requirements, or figure out all the legal intricacies of each set. These terms are equally difficult to tender from effectively. It is almost impossible to price or quantify accurately the obligations and liabilities of such widely drawn main contractor powers.

Inevitably specialists are forced either to add a prudent margin to their pricing in the hope it will cover all unquantifiable risks, uncertainties and liabilities or they succumb to commercial pressures and price the job as competitively as possible while grimly hoping that none of the risks will unduly affect them during or after the project. Either way the client suffers.
What happens to the specialist subcontractors who are subject to these onerous terms and conditions? The resulting strangle on their cashflow causes some of them to starve (at least commercially) and some of them are pushed under and drown in a sea of insolvency, breaking up specialist teams and depriving the industry of solid chunks of specialist expertise and experience.... There are very many cases where a competent well-managed specialist company is simply cheated into oblivion by the onerous conditions and procedures and behaviour of the Main Contractors under which it has been obliged to work”.

Huxtable’s words in this section are stirring and such phrases as “cheated into oblivion” linger in the mind. Is it though a balanced view?

As a matter of law there is nothing to prevent the parties from entering into any terms and conditions they agree upon as long as they are not themselves illegal. According to a leading academic (Uff, 2005) the written document is interpreted as the sole declaration of the parties’ intention and it is from the words used that the intention must be discovered. Why should attention be drawn to the terms and conditions of a subcontract when the subcontractor should voice their concern before the contract is entered into – if they do not like certain terms then why enter into the contracts in the first place?

Huxtable is aware of this conundrum and addresses it in his Report.

“There is commercial risk in all business....It is argued by apologists for the Main Contractors that this just “reflects commercial reality”. Perhaps it does, but it is an ugly and unacceptable reality involving a corruption of the commercial process which no civilised society should - or in the long run can afford to – tolerate.”

Another problem in the argument being advanced by Huxtable is that quite often subcontractors do not help themselves in terms of acting consistently and/or collectively in how they respond to the imposition of non-standard terms. This point picks up on the main purpose of the Report – to provide a focal point for collective action in forming a concerted response to the situation. The need for this co-ordinated response would appear undiminished in the current prevailing economic conditions.

The underlying rationale to the Report appears sound although Huxtable’s language in this section is emotive. Subcontractors being coerced into signing one-sided terms and conditions have a direct correlation with business failure, additional costs and mistrust in the industry. These consequences are unattractive enough in themselves to be a motivation for avoiding them.

In the writer’s view there is an element in Huxtable’s argument which rings true regardless of one’s starting point. There is a category of term in some forms of non-standard subcontract which goes beyond reflecting the “commercial reality” of the situation – i.e. the main contractor has bigger and better bargaining power – and strays into the category of being unconscionable. This category of term makes a nonsense of the commercial bargain struck and the roles being undertaken. Into this category falls
such terms where risks are given to the subcontractor for matters over which they have no control.

Table B returns to the ten most common inequitable terms identified above. For this exercise, the terms have been coloured amber or red to denote the potential damage the term could cause to the specialist contractor. The amber terms are those which a specialist contractor could, in certain circumstances, be expected to manage in their pricing structures as a quantifiable risk. The red terms appear so manifestly one sided and unquantifiable from the specialist contractor's viewpoint as to be hazardous.

Table B Grading of non-standard subcontract terms

![Graph showing the grading of non-standard subcontract terms]
Taken as a percentage, approximately 50% of the terms examined are in the hazardous red category. These are the clauses saddling the subcontractor with the costs of adjudication, allowing main contractor future set-offs, limiting the recoverability of loss and expense, placing design co-ordination on subcontractors and allowing for unilateral variation of subcontract terms. The remaining 50% are in the second category of amber terms. These terms are barely any more manageable for the subcontractor requiring further guess work and predictions as to the behaviour of the main contractors involved.

One clear message to come out of this study of the Confederation’s Analysis Notes is that legislation alone is not sufficient to improve the position of specialist contractors. The benefits introduced by the Act have been blunted by non-standard terms and conditions. The underlying question is how subcontractors find themselves in a position where they feel they have no choice but to sign up to these types of provisions.

8. Huxtable’s Solution

Huxtable’s answer to the last question was clear and a theme he returned to in several places in his Report.

“All clients of the construction industry, whether private concerns or individuals or public sector bodies would be well advised to take a much greater interest in what goes on at the specialist subcontractor level on their projects and also insist on their professional advisers doing the same. …Despite the remoteness of the subcontracts from him, the client and his professional advisers should realise he has a clear vested interest in ensuring that the above are met.

Undue commercial pressures and the “every man for himself” attitudes which are an inescapable by-product of onerous subcontracts have an adverse effect both on standards of workmanship and efficiency to the lasting detriment of the client.”

Whether or not this solution is achievable - expecting the Client to look beyond their arrangements with the main contractors – is debatable. Certainly considerable strides were made towards this during the rise in collaborative and partnering arrangements in the last ten years. The anecdotal evidence available today is that these collaborative/inclusive arrangements are being overlooked in favour of a return to competitive/adversarial type procedures. If this is right then it represents a retrogressive step.

Perhaps a more realistic course of action for the Confederation to pursue would be to continue along its course in exposing the types of contractual abuse identified in the Tables set out above and promote self-help and education amongst its membership. This goal of securing fairer future treatment for subcontractors from the other stakeholders in the industry is entirely consistent with Huxtable’s mission. The importance of this mission and of continuing the campaign for fairer contracts and earlier involvement of specialists in the design process remains critical in today’s industry.
9. Conclusions

In section two of this paper I gave a warning that a large part of the industry would dismiss Huxtable’s findings as a standard subcontractor rant against the other stakeholders in the industry. The same individuals would no doubt point out that the practices of the subcontractors themselves are to a large extent responsible for bringing about the status quo and resulting lack of mutual trust and respect that exists in certain parts of the industry. There may or may not be some truth in this.

This is the “chicken and egg” conundrum which goes something like this— we mistreat you because you will mistreat us. Furthermore you expect us to mistreat you so we cannot start being nice to you. The main thrust of the argument put forward by this paper is that, whether or not you agree that this conundrum exists, and regardless of and whether you would label these habits (as they have been) subbie-bashing, commercial leverage or mere sound commercial sense, there is a category of risk transferring contractual term shown red on Table B above which ought not to be allocated to the subcontractor. The subcontractor has no power to control or even manage the outcome of the risk assigned. To transfer this category of risk to subcontractor appears to be without any logical justification and downright hazardous for the subcontractor to accept. The work of the Confederation of Construction Specialists and other organisations in disseminating this message is clearly of great importance.

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Role, definition and dimensions of incomplete construction contract documents

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Abstract:
The extent to which documentation incompleteness affects construction is well-recorded in a plethora of anecdotes and data detailing inefficiencies generated by letting contracts based on minimum information (Hughes and Barber, 1992). The inability to list entire contingency ranges, reduced design fee levels, and limited time for document development, all produce documents lacking exhaustive descriptions of parties’ rights and obligations for every contingency (Murray and Langford, 2003; Andi and Minato, 2003; Murdoch and Hughes, 2008). Nevertheless, many parties intentionally produce documents wherein production information, contingencies, obligations, and future duties are intentionally left unspecified, to achieve efficient organization of exchange and minimize transaction governance costs (Crocker and Reynolds, 1993; Al-Najjar, 1995; Saussier, 2000). Researchers call attention to theory focusing on the feasibility of completely describing contingencies and sensitivities to all contract-period events, with limited emphasis on the role of documentation incompleteness (Al-Najjar, 1995).

This study, informed by Al-Najjar’s (1995) approach to investigating this incompleteness function, addresses this shortcoming. The approach requires that contractual relations governance be conceptualized as: combining instruments to minimize costs by evaluating transaction attributes. This conceptualization guides the questions to be asked about incomplete documentation. It is suggested that researchers should be concerned with reasons for incompleteness. Of particular interest here is: defining degrees of document incompleteness and understanding influencing factors. Also, are there situations when parties might choose incomplete documents over more easily produced detailed documentation?

The TCE framework is considered best for systematically exploring issues surrounding construction contract incompleteness and answering these questions. Accessing a contract database, to review relationships between a regular building promoter and its builders, should allow greater understanding of variability in documentation incompleteness for the chosen project type. These results should supplement limited theoretical guidance on the role of incompleteness and contribute to developing consistent measures for construction documentation incompleteness and its impacts.

Keywords: contractual governance, documentation incompleteness, transaction costs
1 Introduction

Many have observed that even when produced by the same design/construction teams, working under seemingly similar circumstances, documentation incompleteness levels vary from project to project. Similarly and concomittantly, there are varying results for efficient project execution. In fact, the Tavistock (1996) and Yates and Hardcastle (2003) research agendas provide support for the notion that an optimal level of documentation completeness for every project is an enduring construction industry concern.

The authors are of the view that if construction project contributors, and in particular, clients, develop sound understanding of factors influencing contractual incompleteness, they can be better guided in contractual choices. Theorists (Al-Najjar, 1995; Crocker and Reynolds, 1993; Saussier, 2000) and practitioners have sought to understand contractual choices and explain variability. Unfortunately, however, only few studies empirically analyze contractual documents generated in inter-firm relationships. Even fewer address contract completeness levels chosen by contracting parties. Saussier (2000) identifies main contributions as being made by Crocker and Masten (1991) and Crocker and Reynolds (1993). Although they illustrate the methodological shift from the incomplete contracts theory (ICT) framework to the transaction cost economics (TCE) framework for analysis of contractual incompleteness, they do not elaborate on practical processes for defining contractual completeness and its dimensions. Revealed from reviewing the construction literature is the confounding lack of consensus on the importance of documentation-related construction process inefficiencies. Some (Kumaraswamy, 1997b; Yates and Hardcastle, 2003; Yogeswaran, Kumaraswamy, and Miller, 1997) cite incomplete documentation as a root cause for construction process inefficiencies, while others (Diekmann and Girard, 1995) view documentation impacts as symptomatic of other behavioural, process, and environmental root factors. Moreover, although Yates and Hardcastle (2003) advise proactive reduction of contractual incompleteness to improve efficiencies, they stop short of outlining procedures to achieve it.

Here, the assumption is: documentation incompleteness is a significant factor in achieving construction project efficiency and understanding the rationale for incomplete documentation should shed light on contractual choice questions. Current research seems to be inhibited by the absence of a comprehensive research model or framework to enable holistic exploration of contractual incompleteness. With this paper, we would like to contribute by proposing a practical approach to explore contractual incompleteness. The theoretical framework for this study is informed by the construction, law and economics, sociological and business literature and illustrated in construction terms.

This paper proceeds by outlining developments in ICT and TCE. We then describe the construction contract data acquisition, methodology for development of the incompleteness measure, and explain potential results. We conclude by discussing the implications of expected results and providing suggestions for future research.
2 Why Are Contracts Incomplete?

Construction contracts are generally assumed to be incomplete. They are vague or silent on a number of key features – notably, all contingencies that determine desirable choices and how decisions are made in response to contingencies. A case in point is: structuring economic institutions within the construction industry. Firms can be defined as nexuses of contracts (Reeve, 1990). Applying Williamson’s (1986) logic, the construction industry can be viewed as a network of contracts (Pugh and Hickson, 2007). Institutions are set up with loose objectives such as: ‘to deliver improved industry performance resulting in a demonstrably better built environment’ (Constructing Excellence (CE)); or ‘to make a measurable difference to the value, cost and time of clients’ projects and to provide services that combine to produce the best project and cost management in the industry’ (Davis Langdon)).

Before proceeding with contractual choice explorations, it would be helpful to introduce some ICT terminology, as ICT seems to be the most commonly invoked framework for analysis of problems in law and social sciences - probably because ICT is perceived to underlie some of the most important issues in these fields (Tirole, 1999). Also, reviewing the ICT genealogy would be instructive.

Now, Krugman and Wells (2009) describe economics as: involving creation of models that draw on basic principles, with added assumptions, that allow modellers to apply those principles to particular situations. Models are simplified representations of real-life situations, designed to illustrate more complex processes. Positive economic analysis uses models to answer questions about how the world works; while normative analysis uses models to explain how the world should work. In contracting theory, models are used to describe bargaining processes between agents in well-defined economic institutional settings (e.g. uncertainty, information asymmetry, commitment and renegotiation), using the Principal-Agent model (P-Am), which is an information asymmetry problem (an informed party meets an uninformed party (Salanié, 2005)). The P-Am, generates two other problems – adverse selection and moral hazard. Winch (2002) outlines these two problems in construction terms:

Adverse Selection - How can clients be sure that the most enthusiastic offer of required resources is not the most desperate; that the lowest price is offered because nobody else will contract with suppliers based on knowledge of their real capabilities?

Moral Hazard - How can clients be sure that firms, once hired, will fully mobilize their capabilities on the clients’ behalf, rather than on their own behalf or for other clients?

In ICT, the complete contract is the benchmark for developing models to illustrate and aid thinking on reasons for incomplete contracts (ICs) (Saussier, 2000). Usually two types of complete contracts are distinguished - contingent-claims contracts (CCCs) and complete/comprehensive contracts (CCs). CCCs are contingent on all variables relevant to contract fulfilment. All states of nature are observable and verifiable (able to be observed by transaction outsiders (e.g. contract enforcement authorities and courts)), leaving no possibility for adverse selection or moral hazard. CCCs were originally conceived to model general equilibrium – not as contracting models. This drastic simplification of contracting problems is a highly unrealistic depiction of real-world contracts. In reality, there are contract-drafting costs, limits on contract enforcement, and parties cannot instantly determine complex optimal long-term contracts (Bolton and Dewatripont, 2005). It is useless to condition contracts on variable values that cannot be settled in dispute. Even without negotiating and contract-writing costs, and without legal system constraints, bounded rationality (BR) (parties not
knowing precise conditions under which contracts will be executed (Winch, 2002)) forces parties to neglect some variables whose effect on relationships is difficult to evaluate. Thus far, economics research has made little progress in modelling BR (Salanié, 2005).

Therefore, ICT models were developed and used to account for certain standard economic institutions that CCCs could not. CCCs are not feasible with private information, but CCs are. For reasons outlined previously, CCs typically account for limited numbers of variables that are believed to be most relevant; or those verifiable by courts. CCs take into account all relevant information and are contingent on verifiable variables, enabling each party’s obligations to be specified in all conceivable eventualities. Using CCCs as the benchmark, therefore, ICs are contracts that do not even take all relevant variables into account.

Primarily, organizational issues motivated ICT modelling, e.g. what determines the size of the firm; or how authority is distributed within firms? Due to conceptualization and modelling difficulties in normative analysis of organizational issues, however, most organizations are not set up as contracts specifying how decisions follow from eliciting information about economies and societies. They do not deal explicitly with all possible contingencies and, instead, leave many decisions and transactions to be determined later (Tirole, 1999). ICT became a vehicle for analysing economic institutions and organizations, using models that consider economic situations (Bolton and Dewatripont, 2005). At this stage of ICT development, ICs are assumed to be prespecified, and control variables (range of instruments for governing transactions) include: ownership titles, control rights, decision-making rules, discretion, tasks, authority, and social conventions defining acceptable behaviour, to be allocated among parties.

Under ICT, parties sign incomplete contracts because they would like to add contingent clauses, but are unable to because states cannot be verified or because they are too expensive to describe \textit{ex ante} (Hart, 1995). Because of BR, contracting parties must determine some transactions and decisions later.

### 3 Transaction Cost Economics and Role of Incomplete Contracts

#### 3.1 Methodological Shift for Incomplete Contractual Analysis

Theorists seem generally satisfied with the ability of ICT to explain motivations for and impacts of ICs. However, they specifically question the validity of ICT framework models to formalize problems of: differences between contractual completeness levels and the extent to which those levels result from parties’ goodwill. For an explanation of the rationale behind contractual choice, we review Saussier’s (2000) criticisms of theorists’ efforts to model problems within the ICT framework. Usually, ICT explanations for parties’ motivations to sign ICs related to BR and verifiability of contract fulfilment variables. In this paradigm, models generally make the following simplifying assumptions:

- information symmetry exists between contracting parties;
- contractual incompleteness is due to external constraints;
- incompleteness is assumed as a basis for reasoning, rather than actually explained.
The concern is that these assumptions are not entirely satisfied in practice and, the difficult to formalize, BR concept is excluded from ICT analysis. Some theorists, therefore, turned to TCE for analysis of contractual choice. In TCE, contractual incompleteness is represented as an endogenous tradeoff between parties aiming to save transaction governance costs.

According to Crocker and Reynolds (1993), were contracting costless, in principle, it would be possible to design arrangements complete enough to circumscribe all surplus-eroding, redistributive tactics and intricate enough to mitigate investment distortions. In practice, however, costs of identifying contingencies and devising responses increases rapidly in complex or uncertain environments (usually the situation with construction contracts), placing economic limits on agents’ abilities to draft and implement elaborate contractual agreements.

When designing contracts, parties may mitigate \textit{ex post} opportunism and investment distortions by using more complete agreements, but at the cost of increased resources dedicated to crafting documents \textit{a priori}. Consequently, \textbf{environmental characteristics that generate increased contracting costs should result in less complete contracts, whereas conditions that exacerbate the potential for \textit{ex post} efficiencies should lead to more exhaustive arrangements.}

In reality, negotiating construction projects is costly, engaging managers and lawyers. Therefore, at some point during negotiations, costs of contemplating specific arrangements to cover unlikely contingencies outweigh benefits. Also inability/unwillingness of courts and third parties to verify \textit{ex post} values of certain observed variables is costly. Therefore, parties decide on a level of incompleteness. This TCE view of the role of ICs is represented diagrammatically in Figure 1.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{The Relationship between Degree of Contractual Completeness and Marginal Costs and Benefits of Contractual Completeness (adapted from Crocker and Reynolds (1993))}
\end{figure}

\begin{equation}
\text{Costs} \quad \text{MB}(L) \quad \text{MC}(\omega) \quad \text{(1-}p^*\text{)}
\end{equation}

where

\begin{align*}
\text{p} & = \text{probability that a contingency not expressly covered by the agreement may arise} \\
\omega & = \text{degree of environmental complexity} \\
L & = \text{likelihood of opportunistic (redistributive) behaviour/activities} \\
\text{MC} & = \text{marginal costs of contracting} \\
\text{MB} & = \text{marginal benefit of increased completeness}
\end{align*}
3.2 TCE Theory and The Role of Incompleteness in Contract Design

The limited empirical research on contract design has been heavily influenced by TCE. TCE contract design theory is premised on ideas about contractual functions that were first emphasized in legal literature. In particular, contracts are designed to facilitate transactions between parties, and this purpose is achieved to the extent that contracts:

- align parties’ expectations with regard to the other’s obligations under agreement
- provide incentives for parties to fulfill these obligations,
- prevent costly disputes from arising
- provide a basis for resolving disputes that arise despite best efforts, whether the disputes arise from opportunism or from honest misunderstandings.

Under TCE, where contractual incompleteness reflects attempts to achieve more efficient organization of exchange by minimizing transaction governance costs, the upper bound CCCs benchmark, is unattainable and parties do not always know optimal responses to foreseeable contingencies (Saussier, 2000). Opportunistic and boundedly rational agents make contracts incomplete. Also, since many investments in relationship-specific assets (having little value outside of the relationship at hand) are nonverifiable, parties execute ICs to avoid being expropriated of surpluses created by these specific investments.

Understanding ICs’ role can be built on the principle of combining governance instruments to minimize transaction costs by considering primitive transaction attributes. Governing complex transactions requires contracting parties to adapt performance to contingencies that actually arise. Availability of other instruments, (other than explicit ICs), suggests that some aspects of contractual performance will be governed by explicit contracts, while other instruments (e.g. implicit social conventions contracts) govern remaining aspects. To develop a picture of governance boundaries generated in contractual relationships, Al-Najjar (1995) suggests imagining them coinciding with the boundaries of each governance method, over the range of possible contingencies. These boundaries will vary across transactions to reflect differences in primitive attributes. Boundaries will also change over time in response to changing environments (e.g. market conditions, technological innovations).

ICT makes completeness levels difficult to evaluate, but TCE transforms the vital question from ‘Why do parties sign incomplete contracts?’ to ‘Why are contracts incomplete in the particular way observed?’ (Al-Najjar, 1995). For example, are gaps in performance specifications symmetrically distributed across contracting parties in given transactions; or are incomplete contracts lopsided - being more complete regarding obligations of one party relative to another? Of particular interest here, is whether there are conditions under which contracting parties might choose incomplete contracts even though more detailed contracts could have been easily drafted. This motivates the search for definition of the degree of contractual incompleteness of contracts and its influencing factors.

4 Definition of Incomplete Contracts

ICs have been defined as contracts that tend to specify every transaction dimension, but not necessarily all relevant information. Furlotti (2007) defines completeness as leaving ‘no possibility to improve efficiency by ex post adjustment of actions’. CCs can be achieved by
determining contingencies and prescribing corresponding joint surplus-maximizing actions. Applying this definition and relaxing CCCs assumptions enables a feasible upper bound to be determined through a measure that considers all incompleteness dimensions. Under this definition, CCs are contracts that utilize complex contractual governance apparatus, contingency planning and specify transaction performance in every conceivable case. Using this definition, a methodology can be devised to evaluate documentation completeness. This definition assumes there are alternative governance mechanisms and behaviour prescription.

5 Construction Contracts and Incompleteness Dimensional Analysis

Through endogenizing completeness under TCE, theorists realized the impossibility of achieving CCs through a single dimension. Before this realization, studies used differing operationalizations to represent endogenized completeness. The focus was on measuring degree of completeness through the various constructs. In order to truly evaluate degree of completeness, the dimensions must be explored in greater detail.

We consider prior research evidence that supports minimizing transaction costs through strategically incorporating contractual information based on exchange attributes. After a comprehensive literature review, Furlotti (2007) regrouped the range of operationalizations for endogenizing completeness under three conceptually-derived labels – specificity, complexity, and contingency planning. These dimensions were not clearly distinguished from each other, nor were they reconciled with the full range of contractual mechanisms observed. Also, Furlotti (2007) opined that a single completeness dimension cannot satisfactorily capture the extensive heterogeneity observed in contractual processes and mechanisms for various functions (e.g. enforcement, adaptation, etc.). Furthermore, researchers examined antecedents’ influences on contractual choice along different dimensions, without real consensus. Thus, the recommendation is to perform systematic, empirical investigations into all contractual completeness dimensions, to generate taxonomies based on those dimensions. As most empirical research on contract structure treats observed contract designs as equilibrium outcomes of competition (Argyres et al., 2007) without investigating completeness dimensions, scarce evidence exists, prompting calls for empirical work on contract documents (Brickley, 1999). Though much theoretical evidence exists in the economics and construction literature, outside economics, contractual studies are rare (Smith and King, 2007) with most empirical work ignoring completeness dimensions, in favour of its antecedents. Few studies advise on a comprehensive practical approach.

Studies reviewed by Furlotti (2007) uncover a variety of operationalizations, fields and contract forms. Results provide insight into corresponding construction contractual provisions. This study proposes a more comprehensive methodology for construction that contemplates entire documentation packages (i.e all production information (PI) and contract forms). The completeness attribute is important for construction because parties usually sign incomplete contracts in absence of objective criteria for determining degree of incompleteness. The completeness determination can be a difficult choice that parties struggle to make.

Now, as completeness determinations are expected to vary in accordance with metrics deployed (Malatesta, 2009), our aim is to develop a single comprehensive completeness
measure. Our approach combines a number of best practice recommendations for PI generation and contract formulation into one unique methodology for assessing construction contractual completeness. Also, this methodology is to be developed by analyzing an appropriate sample set of contract documents of a particular building type and therefore, should add content to the chosen construction industry subsector.

The construction industry is a fertile environment for observation of contract workings, because, at 10%, it is sixth-largest GDP contributor to the UK economy (Adamson and Pollington, 2006). So, with a broad range of subsectors and projects to choose from, evidence can be based on large samples. Also, predominantly project-based work makes sophisticated contracts an important feature of the business landscape. The contract will be the natural choice for unit of analysis. Clients determine need for projects and then engage a number of contractors to procure each project separately. This affords a rich data set to illustrate various dimensions, while maintaining necessary sample homogeneity. From contract documentation, completeness dimensions will be reviewed. The focus is on contract heterogeneity resulting from contractual incompleteness. Other heterogeneity sources will be controlled by limiting scope to similar projects e.g. in terms of size, value, a single owner, procurement route (traditional) and relationship type (owner-main contractor). Recommended for this study are the most widely used forms for major UK building work (JCT with Specifications and Drawings or with Quantities to SMM7) (Cox and Clamp, 2003; Sullivan, 2004).

Empirical information is limited since detailed contractual information is not usually released. Therefore, in addition to desk study of contract documents, those knowledgeable of contract formulation processes, such as lawyers, client and contractor executives and personnel will be consulted, through interviews, to obtain more detailed knowledge of project conditions; provide greater insight into contract formulation; and confirm and/or supplement literature findings. These individuals can also assist with dimension coding.

Dimensions can be classified as ex ante and ex post. From the Yates and Hardcastle (2003) completeness definitions, ex ante dimensions (ambiguity/specificity, complexity, and contingency planning) will be constructed from contract forms while ex post dimensions will largely be derived from the PI (drawings, specifications, and bills of quantities). Ex post dimensions, usually observable after contract execution, are manifested in phenomena such as: ambiguities, errors and omissions in ex ante documentation. Generally, ex post dimensions necessitate clarification of client/design team requirements and lead to variations.

6  Methodology for Evaluating Incompleteness Dimensions

6.1  Ex Ante Dimensions and Contract Forms

6.1.1  Contractual Ambiguity/Specificity

Parties use ambiguity to increase contractual adaptability and flexibility, and thus, incompleteness. Ambiguous contracts broadly state requirements without restricting parties to specific actions (Al-Najjar, 1995). e.g. In fixed price construction contracts, specification ambiguity increases in order of: fixed design, scope design, cardinal points (Turner, 2004).
To investigate the ambiguity/specificity dimension (ASD), we look to economics and business research for guidance. As studies do not generally address ambiguity directly (Furlotti, 2007), we turn to those designed to investigate contractual specificity/detail, and thus conversely, completeness. We draw inspiration from the inductive Ryall and Sampson (2009) approach, which satisfies our comprehensively objective requirements.

To operationalize ASD, first, Ryall and Sampson (2009) conduct in-depth analyses of their sample contracts to determine forms taken by contractual terms. Next, they develop a descriptive overview that details the structure of sample contracts. Once a general understanding of all contract terms has been established, then the broad categories that account for the largest portion of variance across contracts can be determined. For JCT 98, the conditions (Cox and Clamp, 2003) cover multi-dimensional broad categories that can be summarized as follows:

1) Intentions
2) Time Frames for Task Completion
3) Control and Contract Administration
4) Money
5) Statutory Obligations
6) Insurance
7) Termination
8) Miscellaneous
9) Disputes
10) Bonding Information
11) EDI Provisions
12) Supplemental VAT Agreement

After becoming fully conversant with the format, language, and terminology of the contract set, some degree of consistency in types of terms used across contracts will be observable. The aim is to identify those broad categories that would account for the greatest proportion of variance across contracts. Next, from the most detailed form that a contract may take, the clauses within these categories will be enumerated. e.g. JCT 98 categories 2), 4), 8), and 11) may be deemed to account for the greatest proportion of variance. For the most detailed contract in the set, the clauses within 2), 4), 8), and 11) will be enumerated.

Frequency and cross-frequency tables presenting incidences of occurrence and co-occurrence of terms across contracts in the set will be developed. This structural presentation will provide the benchmark, and thus, upper bound for ASD. Then we can check each contract against this descriptive structure to determine how ‘fully specified’ are contracts in the set. Contractual content can be measured by examining the number of terms within each broad category of variance. Contract ASD can be constructed as an ordered variable, (0 to 6) based on the number of possible clauses in the contract, across all broad variance categories.

Considering evidence from sociology and economics (Argyres et al., 2007; Brickley, 1999; Crocker and Reynolds, 1993; Furlotti, 2007; Ryall and Sampson, 2009), the expectation is for less detailed contracts to be formulated in environments characterized by much uncertainty. Those contracts formulated by more experienced parties, or in the presence of heightened perceptions opportunistic behaviour would probably receive a higher ASD designation.
6.1.2 Complexity

Complexity dimension (CD) refers to the complexity of the contractual governance apparatus employed to inflict penalties for uncooperative or violative behaviours. Because of BR, parties implement contractual safeguards (stipulations in formal agreements), in conjunction with other relationship governance alternatives, to prevent information problems, motivation problems, and incomplete commitment problems. Usually, opportunism is inhibited by prospective punishment (Parkhe, 1993). Heightened perceptions of behavioural hazards would mobilize governance structures involving greater transaction costs (i.e. coordination efforts, compliance costs, including high outlays for drafting, negotiating, monitoring, and enforcement). According to Yates and Hardcastle (2003), construction contractual safeguards normally take one or more of three forms, namely:

- Appropriate incentives/disincentives, which usually involve some type of severance payment or penalty for premature termination;
- Procedures and mechanisms for efficient dispute resolution.
- Trading regularities to support and signal intentions for ongoing and future business relations.

Typical elements of construction contractual enforcement apparatuses are safeguards such as: rights to examine and audit all relevant loss-and-expense claims records through a CPA firm, arbitration and litigation, and premature termination provisions.

To compile a list of provisions making up the contractual enforcement apparatus for the contract set under study, relevant literature and JCT construction contract forms can be consulted and findings confirmed and/or supplemented by interviews with practitioners. Consensus will also be sought from practitioner-provided information. Parkhe (1993), Helm and Kloyer (2004), and Furlotti (2007) expect the intensity of these contractual safeguards to decrease with intended relationship duration, transaction size and strategic importance, behavioural and environmental uncertainty and generally, with the ease of observability of counterparties’ actions.

From the foregoing, one would expect that with the perception of increased contractual hazards, efficient/complete contracts would be more complex. Thus, more complex (complete) contracts are expected to utilize more stringent language, be longer, include more provisions, and provide for larger arrays of enforcement mechanisms. This reasoning inspires research on contract complexity (Furlotti, 2007).

For the contract set under study, number and stringency for the CD can be evaluated, using 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 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 $\sum \text{(number of safeguard used/sum of number value of all safeguards used)}$. 
One would expect to see higher IOD values for large, important contracts with heightened perceptions of opportunistic proclivities.

6.1.3 Contingency Planning

For construction contracts, there are likely to be numerous important contingencies that parties may wish to anticipate and provide for in their contracts. The contingency planning (CP) dimension measures use of a particular strategy to achieve efficient adaptation (Furlotti, 2007). Including contingency plans in contracts is a key way of reducing contractual incompleteness (Argyres et al., 2007). According to Mayer and Bercovitz (2008), CP clauses specify actions to be taken by contracting parties in response to materialization of certain world states. These clauses facilitate adjustment within a well-defined range by providing a roadmap to follow if conditions change during contract execution. Clear codification of key events, to enable both parties to agree on occurrence, enables one or both parties to be required to take specific actions in response to certain events, to keep projects on track and feasible for all parties. Usually extent of CP is based on prior interaction between parties and characteristics of the current transaction. CP is favoured when there are greater ex ante conflicts of interest and lower contingency specification costs.

Mayer and Bercovitz (2008) outline benefits of CP to include: preservation of flexibility and reduction of opportunism risks. Flexibility facilitates adjustment when conditions change. Detailing contingency plans in contracts ensures that all parties have common assumptions and expectations, which should help facilitate adaptation. (e.g. If industry standards unexpectedly change, CP clauses can specify responsibility for bearing new standard compatibility costs). Also, CP lowers opportunism risks through clear specification, and thus, can constrain parties’ responses. Difficulty and cost of writing applicable clauses, however, complicates CP because additional resources (managerial time and firm capital) must be expended. Clearly, parties face a trade-off in deciding how much to invest in CP.

In construction contracts, parties often plan for changes in technology, input prices, government regulations, and product requirements. Though specific focus and wording of these clauses may vary, generally, they are either relatively generic, specifying processes or procedures to follow ‘in case something occurs’; or they can deal with possible occurrence of specific events. Examples of contingency clauses are: instructions for variations (general), change orders (general) and JCT 98 ‘relevant events’ (specific) clauses.

Probably, CP will be positively related to level of task interdependence, appropriability of proprietary technology, and prior relationships between parties, as repeat interactions allow partners to develop relationship-specific routines, so lowering costs and effort of explicit CP (Furlotti, 2007). CP will probably be negatively related to contingency specification costs.

The study contract set will contain detailed descriptions of projects, including type of service required, and parties’ responsibilities. Contracts can be graded 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
CP is expected to increase with the level of task interdependence, appropriability of proprietary technology, and with working histories. Contracts executed in expensive contingency specification cost environments will probably receive lower CP ratings.

6.2 **Ex Post Dimensions and Production Information**

6.2.1 *Production Information and Ambiguities, Errors, or Omissions*

The Construction Project Information Committee (CPIC) (2009) defines PI as ‘information prepared by designers, which is passed on to construction teams to enable project to be constructed’. PI describes the nature and quality of work to be constructed, must be based on substantially complete design and is conveyed by drawings, specifications, bills of quantities (BQs), or schedules of work (for smaller projects). PI must be of good quality to be effective and for design to be satisfactorily realized. Poor PI causes delays, extra costs, and poor quality, which, in turn, give rise to disputes over responsibility for problems. Effective communication of complete, accurate, and coordinated PI is, therefore, of vital importance to construction project success (CPIC, 2009).

Construction project evidence (Andi and Minato, 2003; Tilley, McFallan, and Tucker, 1999) supports the notion that poor or missing PI causes many problems on site. NEDC (1987) also claims that improved PI quality reduces the incidence of site quality problems and leads to significant cost savings in construction work. Therefore, one would expect greater efficiencies to be realized on projects managed with more complete PI.

The recommended approach to measuring PI completeness is largely similar to that recommended for measuring ASD. The starting point would be to become fully conversant with formats, language, and terminology of the contract set PI. After accounting for the greatest proportion of variance, the expectation is for the greatest variability to be observed in the PC Sums, Provisional Sums and Quantities; and in documentation Ambiguities, Errors, or Omissions (AEO). These two categories will be dealt with separately. For the AEO category, the practical guidance offered by CPIC (2009) for overcoming PI deficiencies can be utilized to create checklists for review of PI documentation practice.

6.2.2 *Bills of Quantities*

Bills of Quantities (BQs) is a product-based cost model that measures finished work in place. BQs provide an agreed basis for categorizing and analyzing finished work – according to an industry-agreed convention: e.g. SMM7 (Kirkham, Greenhalgh and Waterman, 2007).

As many SMMs are in common use, we expect that all the BQs in the contract set will be prepared using rules in a specified SMM. Thus, minimal variability in application of SMM is expected and to arrive at a completeness rating, focus will be on actual BQs sums and quantities. The most complete BQs (i.e. the contract with BQs containing fewest PC Sums and Provisional Quantities and Sums) will serve as the upper bound for BQs for this type of project. The lower bound contract will be that containing the most PC Sums and Provisional Quantities and Sums. The BQs rating scale can then be calibrated to create a 5-point scale.
The completeness level for all other BQs from the other contracts within the set are expected to fall within these bounds and will be rated on a scale of 1-5, accordingly.

6.2.3 Drawings

A Drawings checklist will be prepared. The following are completeness considerations:
- Spatial and Technical Coordination
- Drawing Annotations – logical pattern of links between drawings
- Drawing Arrangement – inclusion of a Drawing Register
- Drawing Numbers and Titles – containing appropriate identification information
- Revised Drawings – revision descriptions and dates

6.2.4 Specifications

Production specification defines construction mainly in prescriptive terms, describing products to be used and important aspects of workmanship (CPIC, 2009).

The following are considerations for a checklist to evaluate Specifications completeness:
- Specific to the project, with no irrelevant material
- Comprehensive, covering every significant aspect of quality to a degree of detail appropriate to importance and nature of work
- Practicable, requirements being specified having regard to nature of the project and available knowledge and resources
- Constructive - helpfully specific so that all parties know what is expected.
- Technically correct and up-to-date, reflecting current good building practice and current statutory requirements
- Enforceable, requirements being specified only if compliance can be demonstrated economically and within an acceptable timescale.
- Well-coordinated, with no conflicts or ambiguities, either within itself, or with drawings and measured information.
- Developed throughout the project lifecycle to become an essential part of as-built information.

To determine AEO completeness, the checklists will be used to generate ratings for each contract document package in the set. If the contract document package under review specifies all listed items, then it will be given the maximum score. If documents do not specify any items, then the PI information in question will scored 0. For intermediate levels of AEO completeness, the number of checklisted items present in the package will be determined. Then, this number will be divided by the total number of items specified on all the AEO checklists in order to arrive at a completeness rating for the package under review.

6.3 Overall Completeness Rating

At this stage, all completeness ratings for all the contractual dimensions can be determined. Summing all the completeness dimension values:

\[(ASD+CD+CP+BQs+AEO)\]
will provide an overall score for contract documentation completeness that contemplates form of contract and PI. This methodology provides an objectively quantitative analytical procedure for determining contractual completeness.

7 Conclusion

The ICs theoretical framework development in the economics literature is summarized as follows. Original ICT approaches to conceptualizing contractual relations governance led to focus on why contracts are incomplete and incompleteness in and of itself. Typically, contractual incompleteness is explained by inability to describe certain events \textit{ex ante}, even if those events and their implications are easily recognized \textit{ex post}. The main issue for economic analysis is: how to structure contractual incompleteness. (i.e. incentives, organizations’ decision-making procedures, discretion versus rules, and accountability (Bolton and Dewatripont, 2005)). Contract formulations are rarely explained as optimization (choice of a level of incompleteness) problems. Under TCE, the substantive change is to shift focus away from procedural and institutional design to determining most efficient contracts for project governance. The change of assumptions inspired research that focused on measuring ‘degree of completeness’ and related concepts.

Awareness of economists’ use of models as satisfactory descriptive tools should guide economics literature navigation. Each model has its own logic and should be interpreted accordingly. Because economists base conclusions on models, variation in appropriate simplifications, and therefore, different conclusions are always possible. Usually, consensus develops with evidence accumulation, showing which models better fit facts. However, in economics, as in any science, it may be a long time before research settles important disputes. Since the world always changes, (making older models invalid or raising new questions and problems), there are always new issues on which economists disagree. Researchers must therefore, decide which framework to subscribe to.

Although the TCE theoretical framework does not yet allow complete problem formalization, it allows derivation of testable propositions (Crocker and Reynolds, 1993; Saussier, 2000). (e.g. Contractual incompleteness level is an endogenous choice for minimizing transaction costs.) By removing the assumption that parties have complete, unconstrained rationality, TCE imparted considerable thrust toward analyzing actual contracts (Williamson, 1975). Some (Parke, 1993; Smith and King, 2009) believe that empirical analysis will quicken consensus. Here, the authors believe that TCE offers the better vehicle to systematically explore issues surrounding construction contract incompleteness and answer the fundamentally important question of ‘How complete should contracts be?’

There are several other scientific benefits to a TCE analytical approach to construction contractual incompleteness. Most importantly, a standardized methodology for operationalizing documentation incompleteness, which can then be used as a documentation metric, is provided. The method reviews the entire documentation package, rather than just the contract form - the usual approach. Also, this methodology illustrates achievement of sample homogeneity to enable true comparison between contracts for the full breadth of the incompleteness variable.
Additionally, access to a rich dataset would provide greater understanding of a chosen industrial organization. There can be observation of details of how this organization manages contractual development activities to devise responses to challenging development issues, such as: dealing with opportunistic partners, contracting in complex and uncertain environments, and how complete to make the contract documents. Not only will there be better insight into antecedents of documentation design, but this research will enable observation of contractual role beyond the legal function of providing third party resolution. Contractual influences on project performance can be observed.

Given the sparse research base on building contracts formulation, we recommend that a model linking incompleteness and contract documentation be developed. New empirical findings on contract variation across incompleteness dimensions will add to a growing body of literature on detailed contractual analysis. Such a study should make several other contributions to construction contracting literature. It can be considered a response to the Ryall and Sampson (2009) call for more holistic approaches to be taken to examine contracts and contexts with a view to providing some empirical regularities for advancing theory development. Using this methodology should make a contribution to empirical contract research, where studies dealing with large sets of contractual provisions are still rare. For construction project management, empirical proof of an efficient level of contractual completeness should be compelling.

Finally, this type of investigation should add to the construction contract documentation literature by extending prior research on incompleteness and construction process inefficiencies (Yates and Hardcastle, 2003). Empirical support for associated hypotheses would have positive and normative implications, since it would suggest that later problems could be mitigated by ‘front end’ procedures. Access to actual contracts to permit detailed analysis is expected to be difficult and therefore, some form of sampling will have to be employed. This could distort results if sampling is not properly performed. Notwithstanding this limitation, we expect the results to provide provocative insight into considerations for the process of designing an instrument to measure documentation incompleteness. Literature reviews and subjective analysis is a good starting point, but with more formal empirical analysis, this kind of study will complement existing theory and suggest some promising directions for extension. Our analysis should provide a useful guideline for future studies to better understand parties’ abilities for effective coordination; and ultimately, quantify contractual incompleteness impacts for construction project management.
8 References


CIVIL LIABILITY FOR BUILDING DAMAGE CAUSED BY CONSTRUCTION OPERATIONS: THE COMMON LAW EVOLVES

Philip Britton

‘Perhaps only lawyers can understand how such a simple issue such as this [liability for property damage caused by construction], through the process of law, comes to be governed by a mass of convoluted and irreconcilable rules; surely only the bravest amongst them would attempt to explain it to the average citizen.’ YONG PUNG HOW, CHIEF JUSTICE OF SINGAPORE

‘The development of the common law should be rational and coherent. It should not distort its principles and create anomalies merely as an expedient to fill a gap …’ LORD HOFFMANN

1 Introduction

There are many ways in which construction operations on Plot A may impact negatively on Plot B alongside. Some of these may be inevitable, temporary and cause little or no damage or loss, like noise and dust while the work is ongoing; but some are more serious and potentially permanent. What if excavation or demolition on Plot A causes buildings or other structures on Plot B to need repair, or even to collapse entirely? This significant – and expensive – scenario is the focus of this paper; as a result we are in the realm of the law of tort, the functional equivalent of ‘the law of delict’ in legal systems of the civil law tradition, like Scotland or South Africa. This is for the simple reason that there is unlikely to be a contract between the party whose buildings or structures have been damaged and any other party potentially responsible; if there is, it is more unlikely still that it contains any provisions relevant to liability for that damage.

Anyone who has only slight familiarity with the English version of the law of tort will know Donoghue v Stevenson. This is the case – arising in Scotland – which in May 1932 led a majority of the judges in the House of Lords, our then highest court of appeal in civil cases, to transform and generalise the law of negligence, in English as

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1 Xpress Print n 64 [37]. Yong was Chief Justice from 1990 to 2006; a law student in Cambridge at the same time as Lee Kuan Yew and wife, he had a distinguished career in banking and the public service before becoming a judge in 1989.


3 Donoghue v Stevenson [1932] AC 562 (HL Sc). The case came to London on appeal from the Court of Session (Second Division) in Edinburgh on a preliminary point: even if the claimant (‘pursuer’ in Scots terminology) could prove all the facts she was alleging, would she still be bound to lose the action?

4 In October 2009 the judicial functions of the House of Lords (with some of the UK-oriented judicial functions carried out by the Judicial Committee of the Privy Council) moved both legally and geographically to the new Supreme Court of the UK, when part 3 of the Constitutional Reform Act 2005 came into force.
well as Scots law. In the context of a claim by the ultimate consumer of a carbonated soft drink against its manufacturer for damages for personal injury, the judges took a fresh look at legal principle.

Starting from the list of factual categories accepted by caselaw, where one party already owed a duty to another not to cause harm, the judges argued that these specific categories must, in logic, be examples of a more general idea. This they then articulated as a broad (though not universal) principle of civil liability for fault within the tort of negligence. Inspired by Lord Atkin’s language in Donoghue, the threshold conditions for this liability became famous as ‘the neighbour principle’. As we would now put it, a duty of care can arise when A ought reasonably to foresee – according to the court – that if he or she failed to take reasonable care, harm of a reasonably foreseeable type could be caused to the claimant B, classed in law as A’s neighbour (alternatively expressed as satisfying a test of ‘proximity’). Liability would follow if A’s negligent actions (or, sometimes, failure to act) led to B suffering the form(s) of harm against which it was A’s duty to guard.

Applying these simple but powerful ideas, it may seem obvious that construction operations on Plot A which cause damage to buildings or structures on Plot B should give rise to liability in the party responsible, at least if negligently undertaken. What better possible example of the reasonable foreseeability of harm – in this case, property damage – to B, a neighbour in fact, as well as surely in law too?

But the law, like life, is seldom as straightforward as we might hope or expect; and negligence, in 2009 as in 1932, is not the whole of the law of tort. This paper therefore explores – and aims to explain, though not necessarily to justify – how liability at common law for property damage caused by construction operations obeys principles which have only a tangential relationship with the ‘big ideas’ of negligence above. As will become clear, courts across the common law world have in the last two decades been feeling their way towards new approaches on these issues: it is an area of (judicial) ‘work in progress’.

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5 The key passage from Lord Atkin’s speech n 3 580: ‘You must take reasonable care to avoid acts or omissions which you can reasonably foresee would be likely to injure your neighbour. Who, then, in law is my neighbour? The answer seems to be – persons who are so closely and directly affected by my act that I ought reasonably to have them in contemplation as being so affected when I am directing my mind to the acts or omissions which are called in question’.

6 In relation to English law, the paper uses ‘claimant’, the current term for the party initiating a civil action, even for the past when ‘plaintiff’ would have been used. ‘Plaintiff’ is used where appropriate in relation to other jurisdictions. A, B, M and other abbreviations for possible parties refer equally to individuals and legal entities.

7 For a useful discussion about when an omission may give rise to liability in negligence, why omissions lead to liability less often than positive acts and how to operate the distinction between a positive act and an omission, see Stovin v Wise [1996] AC 923 (HL).
2 Damage to land, buildings and structures: English law

2.1 Remedies: damages

The most common function of the law of tort is compensatory, looking to the past: to remedy harm by awarding a successful claimant damages against a legally responsible defendant for a wrong that has occurred. In our scenario, a building may already have collapsed; or demolition and rebuilding may be needed, where a building has become structurally unsound. The main possible heads of claim will be for:

1. The drop in capital value caused by the damage; or
2. The cost of repair or rebuilding (‘reinstatement’, as the law calls it) of the buildings, structures and land, back to the condition they were in before the tort occurred; and
3. The cost of damage to or destruction of the building’s contents; and
4. Possible consequential economic losses (business interruption, loss of rental income etc).

In such an after-the-event context, our claimant B must show that the defendant A has infringed his or her rights; and that the decrease in value or need for repair, plus any other losses claimed, falls on B but derives causally and legally from A’s conduct. When excavation starts on Plot A close to its boundary and the walls of B’s building alongside immediately start to show cracks, this cause-and-effect relationship may not be hard to demonstrate, at least to the required civil standard of proof of ‘the balance of probabilities’. B must, however, be ready to document this relationship to the court’s satisfaction and to evaluate it in money terms: this normally means instructing a building surveyor as a potential expert witness. The surveyor will, as well as giving a view about the causes and implications of the damage, usually propose a costed scheme for reinstatement, ready to form the main part of the claim; but may also (or instead) be asked to put a figure on the difference between the building’s pre-damage and post-damage market value.

The next-door occupier A (whether owner or tenant) is usually the primary defendant. However, if B has any concerns about A’s financial stability he may choose also to sue those working on A’s behalf on the project, for whom A may be legally responsible but who may be liable in their own right. This usually means M, A’s main contractor, but possibly also consultants C₁ etc and specialist sub-contractors S₁ etc. If B fails to name these further parties as second, third etc defendants, and if they are worth suing, A may bring some or all of them into the litigation under Part 20 of the Civil Procedure Rules (CPR) (‘Counterclaims and Other Additional Claims’). A will be hoping to assert three possible rights against these extra parties, if the case gets to court:

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8 For the current text of the CPR (SI 1998/3132, as heavily amended), see <www.hmcourts-service.gov.uk>, also Rt Hon Lord Justice Waller (Editor-in-Chief), Civil Procedure (‘The White Book’), London, Sweet & Maxwell (2009 edition).
1 To be indemnified by one or more of them, if B succeeds in a claim against A – depending on the terms of A’s contractual relationship, if any, with each and on the contract’s possible allocation of this specific risk;9 and/or

2 To have one or more of them make a contribution towards A’s liability, if also liable to B in tort for the same damage;10 and

3 To have one or more of them, if judged liable, pay an appropriate share of those costs payable to B at the end of the case which A would otherwise have to shoulder alone.

As for the issues which will need to be resolved between claimant and defendant (whether singular or plural), the first is about liability: has (any of) the defendant(s) infringed the rights of the claimant B? As part of this, there may be significant disagreement between the parties about causation (did construction operations on A’s land actually cause all, or at least some, of the damage now asserted by B?) and about remoteness of damage (are all the heads of damages claimed within the scope of A’s or some other party’s legal duty?).11 Even once liability is established – or admitted – the parties may still disagree:

• whether repair or rebuilding is the right measure of damages, rather than loss of capital value (or vice versa)12

• (if repair) what is the appropriate scale of the work proposed and its cost

• at what point in time the damages should be assessed13

• (if multiple defendants) how the damages should be allocated between the losing parties.

Any of these issues – well illustrated by the Singapore Afro-Asia case below14 – will usually be enough to bring experts into the frame on both sides. In theory the court can appoint a single joint expert; however, this would be unusual, even under the court’s

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10 Under s 2 of the Civil Liability (Contribution) Act 1978, the contribution owed by another party towards A’s liability – ‘such as may be found by the court to be just and equitable having regard to the extent of that person’s responsibility for the damage in question’ – could range between zero and a complete indemnity.

11 The burden lies on the defendant/s A and others to show that any category of harm for which damages are claimed is too remote – seldom a live issue for property damage caused by construction nearby. For a claim based on an ‘escape’ under Rylands v Fletcher where remoteness (and hence, as it proved, reasonable foreseeability) was key, see Cambridge Water Co v Eastern Counties Leather plc [1994] 2 AC 264 (HL).

12 On the choice between loss of value and reinstatement as a measure of damages, see Dodd Properties Ltd v Canterbury City Council [1980] 1 WLR 433 (CA), relied on by Judith Prakash J in Afro-Asia n 76. Donaldson LJ said 456H: ‘If he [B] reasonably intends to sell the property in its damaged state, clearly the diminution in capital value is the true measure of damage. If he reasonably intends to continue to occupy it and to repair the damage, clearly the cost of repairs is the true measure. And there may be in-between situations’.

13 In Dodd v Canterbury n 12 the Court of Appeal held that the relevant date for assessing the cost of repairs is the date when the repairs might first reasonably have been undertaken – often much later than the date the cause of action arose; so increases in construction costs are at the loser’s risk. In the case, it was reasonable for the claimant to wait for a clear outcome on liability – part of which hinged on the outcome of a trial. It appears that the assessment will not take into account the probability of future additional damage, since this will give rise to a fresh claim if it occurs: West Leigh Colliery Co v Tunnicliffe [1908] AC 27 (HL).

14 Afro-Asia: n 76.
active case management powers under the CPR.\textsuperscript{15} As a result, this sort of case often has an exaggeratedly high front-loading in cost terms.

\subsection*{2.2 Remedies: injunctions}

The law of tort, in our scenario, is not limited in its remedies to after-the-event compensation; the courts may offer more immediate help to B via an \textit{injunction}: a court order to one or more of the defendants, backed with the impressive sanctions of contempt of court (a potentially unlimited fine and, ultimately, imprisonment). However, B appears unable to go to court at all until at least some damage has actually occurred, since ‘damage is the gist of the action’\textsuperscript{16} – as it is in private nuisance more generally, though here the damage may be no more than loss of amenity. So if excavations on A’s land create (so far) only the probability – however high – of future damage to B’s land or buildings, B will have no right of action \textit{now} against A and/or M; this is so, even where what B wants is reimbursement for costs he has already prudently incurred for precautionary measures on his/her own land.\textsuperscript{17} This oddly narrow view of what is ‘damage’ has one side-benefit for B: the statutory period (normally six years) within which B has to begin legal action starts to run only once actual damage has been suffered, and each new subsidence or other damage occurring on Plot B is a fresh cause of action, even if no more excavation has occurred on Plot A.

Once actual damage occurs of a sort the law recognises, B could request a prohibitory (negative) injunction against A and any other relevant parties, to stop work which could cause further damage. A mandatory (positive) injunction could be requested as well, requiring A within a fixed period to restore that support for B’s land and buildings which has already been removed, assuming of course that B shows that his/her rights have already been infringed.

In practice an injunction is far rarer than a claim for damages, often because B may have no warning at all: the damage itself may be the first B knows of the risk. There are legal reasons too. The injunction is a discretionary remedy, coming into its own only where the court thinks that damages are inadequate. Further, for B to ask the court to grant an injunction provisionally and immediately (in other words, as an interim ‘holding’ measure, before any issues of substance between B and A can be definitively determined) will usually require B to commit to compensating A for stopping A’s project unjustifiably, if B does not win the case in the end (in technical terms, ‘a cross-undertaking in damages’). Additionally, the court is traditionally reluctant to put itself in a position where it could be called on to supervise construction work. A mandatory

\textsuperscript{15} Part 35 of the CPR n 8 attempts to facilitate appointment of a single joint expert in civil litigation: see the commentary in \textit{Civil Procedure} n 8. In the specialist Technology and Construction Court, where cases involving liability arising out of construction are often heard, the \textit{TCC Guide} (2nd ed, 2005, revised 2007) accepts at [13.4.1] that a single joint expert is not usually appropriate for the principal liability issues in a large case, nor where considerable sums have already been spent on one or more experts at the pre-action stage. For the \textit{TCC Guide}, see <www.hmcourts-service.gov.uk>, also \textit{Civil Procedure} n 8.

\textsuperscript{16} Lord Upjohn in \textit{Redland Bricks Ltd v Morris} [1969] 2 WLR 1437 (HL) 1443B, summarising the effect of \textit{Darley Main Colliery Co v Mitchell} (1886) 11 App Cas 127 (HL).

\textsuperscript{17} \textit{Midland Bank plc v Bardgrove Property Services Ltd} 60 BLR 1 (CA).
injunction, requiring affirmative action by A, or A’s construction team, is therefore specially unusual; to succeed, B will have to convince the court what A needs to do to remedy the problem, otherwise the order sought from the court will be too imprecise to be fair to A. The two types of remedy are not necessarily clear-cut alternatives, since a claim for damages could be combined with an injunction to prohibit further work, if the court were convinced that further invasions of B’s rights were likely, or if the present infringement is seen as a continuing one.

2.3 Legal categories

To our twenty-first century eyes, it may seem obvious that an owner or occupier of land should be protected by law against activities on neighbouring plots which cause damage to his/her land, or to the buildings and structures on it: but English law at present goes only part-way down this road. Historically, damage to buildings and structures is treated in English law as damage to the land itself (more accurately, as an infringement of B’s enjoyment of his or her rights in the land). The remedies the courts developed belong in a pigeonhole very close to that marked private nuisance – one of the branches of the law of tort, along with trespass to land, whose role is to support and protect private rights deriving from the law of real property.

So there is a ‘property test’ B must pass, in order to claim the protection of the law for his/her land and buildings. Happily, this is relatively easy to satisfy: all s/he has to enjoy (or claim) is exclusive possession of Plot B. In English law, freehold ownership or a tenancy clearly meets this requirement, but B can also qualify if s/he has an informal ‘family’ interest in the land (eg by contributing towards the purchase or

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18 For an example of a mandatory injunction affecting construction work, but in the context of trespass to land rather than private nuisance and simple to supervise (‘remove your scaffolding and materials from my land’), see John Trenberth v National Westminster Bank Ltd (1980) 253 EG 152 (Ch). The plaintiff B in Afro-Asia n 76 requested an injunction to force M to remove temporary support from B’s building, but this too was technically a remedy for trespass; it was linked to the wider claim for damages, in which B claimed the cost of a less unsightly and more permanent form of structural support. Examples of negative injunctions to restrain a continued trespass caused by construction operations are common: Trenberth again. In Anchor Brewhouse Developments Ltd v Berkley House (Docklands Developments) Ltd 38 BLR 82 (Ch) Scott J granted an injunction to stop the defendant’s crane jib oversailing the claimants’ land (trespass, he held), but would have preferred to be able to broker a compromise, under which the defendant made a reasonable payment in return for a short-term licence from the claimants.

19 Redland Bricks n 16.

20 The paper does not discuss the violation of public rights (eg public rights of way, registered commons etc) by construction, nor the law of public nuisance – but on public nuisance as a vehicle for claiming compensation for economic loss, see Westminster City Council v Ocean Leisure Ltd [2004] EWCA Civ 970, [2004] BLR 393 and Colour Quest Ltd v Total Downstream UK Ltd [2009] EWHC 540 (Comm), [2009] 2 Lloyd’s Rep 1. Nor does the paper consider forms of protection of neighbours against construction operations via public law, eg against excessive noise via the intervention of local authorities.

21 In Xpress Print n 64 [52], Yong Pung How CJ describes actions based on withdrawal of support as ‘equivalent or akin to an action under the tort of nuisance’, which leaves some questions of classification unanswered.

22 According to the majority in Hunter n 2, as a result (a) a mere licensee (eg a lodger, or family member with no beneficial interest) does not have a right to claim in private nuisance; (b) any damages awarded are divided equally between all qualifying occupiers of a single property unit; and (c) if B is a tenant, his landlord L may have a separate claim against A etc for any loss in value of his reversion, though the terms of the lease may allow L to claim this directly from B, leaving B to get reimbursed from A etc if he can.
rental of a home), and may even do so if s/he has no more than de facto occupation as a trespasser (squatter). \(^{23}\)

Using land law ideas, and almost a century ahead of the twentieth-century generalisation of the law of negligence, English law was already willing to impose liability for property damage caused by construction. There are two different categories of land-related rights to bear in mind; both are protected by actions for damages and, at the limit, by injunctions too:

1. A basic bundle of rights which every affected owner or occupier of land enjoys: protection for the physical integrity and enjoyment of his/her land, including limited protection against damage caused by activities on neighbouring land;
2. A’s neighbour in Plot B may enjoy additional rights, deriving from a specific, ongoing land law relationship between his/her land and Plot A, the construction site. \(^{24}\)

Unlike the post-Donoghue law of negligence, with its ‘duty of care’ threshold test and fault as central, protection for land and buildings in English law under 1 or 2 above leads to what lawyers and judges call strict liability. \(^{25}\) This means that all B has to prove is the fact of damage to his/her buildings or structures caused by A’s operations, as long as this infringes a legally protected right. B does not need affirmatively to prove fault, nor does A escape liability by showing that s/he took all reasonable care in commissioning, planning or executing the construction operations which have now infringed B’s rights by causing damage to his or her land. \(^{26}\)

The quotation from Lord Hoffmann at the head of this paper reflects the majority view in Hunter v Canary Wharf\(^ {27}\) that these distinctions between property torts and negligence are meaningful functional ones, which ought not to be blurred. In practice, however, claimants complaining of damage from construction, as in Hunter itself and Afro-Asia below,\(^ {28}\) often go for a ‘belt-and-braces’ approach: they frame their legal actions at the same time in nuisance, negligence and (for good measure) undifferentiated ‘breach of duty’. Doing so risks at worst adverse consequences in costs: these may materialise if A or another defendant successfully applies to the court

\(^{23}\) The principle that land law, hence the relevant parts of tort law too, can protect even a squatter – a trespasser with exclusive possession of the land – except against someone who can show a better title, derives from Asher v Whitlock (1865) LR 1 QB 1 (QB), now interestingly discussed in Ezekiel v Fraser [2002] EWHC 2066 (Ch).

\(^{24}\) Party walls, though outside the scope of this paper, are a special example of this category, familiar to building surveyors. See Louis v Sadiq 59 ConLR 127 (CA): a nuisance was committed by works which failed to comply with the statutory procedures, and the right to damages was unaffected by the statutory party wall scheme.

\(^{25}\) But not in Scots law: n 30.

\(^{26}\) Lord Simonds in Read v J Lyons & Co Ltd [1947] AC 156 (HL) 183: ‘… if a man commits a legal nuisance it is no answer to his injured neighbour that he took the utmost care not to commit it.’ However, in Afro-Asia n 76 Judith Prakash J regarded the separate liability of all defendants other than A as fault-based.

\(^{27}\) Hence the view of the Lords in Hunter n 2 that to claim damages for personal injury, even when caused by construction operations on nearby land, requires an action framed in negligence, rather than nuisance, as this is not an infringement of land rights; and (for the same reason) that harassment by repetitive phone calls does not properly fit within the tort of private nuisance.

\(^{28}\) Afro-Asia: n 76.
to have part/s or all of the claim ‘struck out’ as bound to fail, or if the trial judge does not accept every head of B’s claim.

2.4 Rights enjoyed by every owner or occupier

By the middle of the nineteenth century, long before our present statutory systems regulating land use and the process of building were introduced, two distinct versions of potential liability relevant to construction were already established in English caselaw:

1. Where materials or substances ‘escape’ from A’s construction site and cause damage to B’s land, buildings or structures (the principle in Rylands v Fletcher, with special rules for the escape of fire) [for space reasons alone, beyond the scope of the present paper]; and

2. Where activity on A’s land (usually excavation) itself causes damage by diminishing the support for B’s land, structures or buildings alongside.

Point 2 is best illustrated by Dalton v Angus, where the owners of a factory (B) claimed damages against their next-door neighbour (A) and his main contractor (M); B’s building had collapsed after M demolished A’s own house and started to excavate. After a jury trial in Newcastle in 1876 and three hearings before intermediate courts, the case reached the House of Lords in 1879. The case was thought to raise such difficult questions of principle that the procedure adopted in the Lords was unusual, if not unique: the five Law Lords asked for a second sequence of hearings of the final appeal, seven extra judges of lower rank being present to give their views, before giving judgment themselves in 1881.

The starting-point, agreed by all the Law Lords, was that every piece of land has a ‘natural right of support’ from its neighbours, protected by the law of tort. As Lord Blackburn put it:

‘… the owner of land has a right to support from the adjoining soil; not a right to have the adjoining soil remain in its natural state (which right, if it existed, would be infringed as soon as any excavation was made in it); but a right to have the benefit of support, which is infringed as soon as, and not till, damage is sustained in consequence of the withdrawal of that support.’

29 As happened in Hunter n 2.
30 Rylands v Fletcher (1868) LR 3 HL 330 (HL), approving Blackburn J speaking for the Exchequer Chamber (1866) LR 1 Ex 265, 279: ‘… the person who for his own purposes brings on to his own lands and collects and keeps there anything likely to do mischief if it escapes, must keep it in at his peril, and, if he does not do so, is prima facie answerable for all the damage which is the natural consequence of its escape’. In Transco plc v Stockport MBC [2003] UKHL 61, [2004] 2 AC 1, the House of Lords refused to follow the majority of the High Court of Australia in Burnie Port Authority v General Jones Pty Ltd (1994) 179 CLR 520, who held the rule ‘absorbed’ into the law of negligence; in RHM Bakeries v Strathclyde Regional Council 1985 SLT 214 (HL Sc), on appeal from the Court of Session, the Lords agreed that fault must be asserted in claiming damages in nuisance in Scots law, though see also n 88.
31 The paper does not therefore discuss withdrawal of support for land caused by natural forces, on which see Holbeck Hall Hotel Ltd v Scarborough Borough Council [2000] QB 836 (CA).
32 Charles Dalton v Henry Angus & Co (1880-81) LR 6 App Cas 740 (HL).
33 Dalton v Angus n 32 808.
'Natural' in this context is a significant part of the right: the protection attaches to every piece of land, universally and permanently, without needing to be proved or to be related back to some past land transaction, real or fictitious. So when a piece of land is sub-divided, the new owner of Part B will acquire this right immediately against the owner of Part A (and vice versa): such natural rights ‘require no age to ripen them’.34

However, the scope of the right is limited to damage to B’s land itself (‘earth to earth’, so to speak): buildings or structures are not as such protected, even though for almost all other purposes the law treats them as an integral part of the land.35 This was a setback for the claimant in *Dalton v Angus* itself; though not in the end fatal, as the next section explains.

### 2.5 Plot-specific additional land law rights?

Having defined narrowly the scope of the ‘natural right of support’ in *Dalton v Angus*,36 the Law Lords went on to accept that the presence of the factory on the boundary of B’s land could be protected by an *easement of support* owed by A alongside. An easement is one example of a land law ‘incumbrance’,37 in this case benefitting the land with the factory on it (Plot B) and burdening the land alongside (Plot A).38 The basic idea is of a *reciprocal right and obligation*, linking two pieces of land together, the equivalent of one category of the civil law ‘servitude’.39 The best-known example of an easement in English law is a right of way, which Plot B may enjoy across Plot A.40 This is called a *positive* easement, since it gives B the right to do something actually on A’s land (walk or drive across it); an easement is termed *negative* where it prevents A doing something on his/her own land, in order not to interfere with a right enjoyed by B. An easement protecting B against damage caused by construction operations on A’s land is therefore negative in this sense; A can comply with it by doing nothing to disturb the status quo.

If between freeholders, such an incumbrance survives changes in the identity of the owner of either plot: it is ‘the owner for the time being of Plot A’ who is bound and ‘the owner for the time being of Plot B’ who can enforce the easement. This is an idea of immense economic and practical significance – but startling to anyone more familiar with the limited scope for such arrangements via contract. Under English caselaw, contractual provisions can neither impose obligations nor confer enforceable benefits

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34 Field J – one of the additional judges – in *Dalton v Angus* n 32 752.
35 The authorities suggest that B may succeed in a claim for damage to buildings, in breach of the ‘natural right of support’ and without showing additional acquired rights, if s/he can show that any subsidence triggered by A’s excavations has not been caused by the extra weight of the buildings on his/her land: *Brown v Robins* (1859) 4 H&N 186 and *Stroyan v Knowles* (1861) 6 H&N 454. To succeed in such a claim must be very rare.
36 *Dalton v Angus*: n 32.
37 Under the definition in s 205(1)(ix) Law of Property Act 1925, easements are also ‘incorporeal hereditaments’, like profits.
38 This gives further terminology (avoided in the main text): the land benefitting (Plot B) is the *dominant tenement* and the land burdened (Plot A) the *servient tenement*.
39 South African law defines a servitude as ‘a limited real right in terms of which a burden is imposed on a movable object or on an immovable tenement restricting the rights powers or liberties of its owner to a greater or lesser extent in favour of either another person or the owner of another tenement’, WA Joubert (Founding Editor), *The Law of South Africa*, Durban, Butterworths (First reissue 2000), vol 27 §387.
40 For an illustration of the closeness of the Scots law of servitudes to the English law of easements, see *Moncrieff v Jamieson* [2007] UKHL 42, [2007] 1 WLR 2620 (HL Sc): right to park implied from ownership of other land.
on as yet unidentified future parties. By contrast, easements may last through changes of land ownership and endure forever. As a result, the courts are anxious lest easements over-inhibit future development: the caselaw shows extreme judicial reluctance to recognise new types of easement and to add them to the list of those already accepted.

In *Dalton v Angus*, though, the courts took this step, recognising for the first time at House of Lords level that a duty of support owed by one landowner to a neighbour can properly qualify as an easement, just as in South African law it is one of the accepted classes of servitude. But how could such an easement be created?

An incumbrance may start life deriving from an arms-length contract; but this is not necessary, and even one beginning in this way will be more properly viewed through land law spectacles, once the original parties are no longer on the scene. In *Dalton v Angus* there had been no formal transaction, let alone a contract, between A and B, nor (so far as known) between any of their predecessors in title. B therefore argued – his only option on the facts – that an easement of support for the factory had come into existence by prescription (the passage of time). Under the pragmatic doctrine of ‘lost modern grant’, resting on a pure fiction, if the owner of Plot B acts as if he already has the benefit of an easement as against Plot A for at least twenty years, and if all the other conditions for the creation of an easement are satisfied, the court will hold that

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41 An easement can be modified, or discharged entirely, by agreement between A and B, owners for the time being of the two plots; under current English law, there are no grounds on which an existing easement can be challenged before a court or tribunal, though the Law Commission n 85 is considering introducing such a possibility, along lines familiar from restrictive covenants under the Law of Property Act 1925 s 84 (as amended) and – less well known – the Housing Act 1985 s 610: see Lawtownt Ltd v Camenzuli [2007] EWCA Civ 949.

42 See Lord Denning MR in *Phipps v Pears* [1965] 1 QB 76 (CA) for a classic statement of this reluctance, in this case to invent a new ‘easement of protection from the weather’ – but the case also illustrates the courts’ willingness to enforce identical restrictions on the burdened land, as long as the parties (or their predecessors in title) have created them expressly by covenant. *Phipps v Pears* has been distinguished in ‘right to support’ situations by *Rees v Skerrett* n 90.

43 *The Law of South Africa* n 39 §416: the right derives from the Roman law ‘servitus oneris ferendi’; is defined as ‘the right to require one’s neighbour to support the weight of one’s house or wall’; and is regarded as the only exception to the general principle that complying with a servitude requires only passivity on the part of the burdened land or person.

44 One of the conditions for acquiring an easement by prescription is that it could have been acquired by grant: ie there must be a party who had the power in law to grant it expressly and a party who could lawfully acquire its benefit. On this see *Housden v Conservators of Wimbledon & Putney Commons* [2008] EWCA Civ 200, [2008] 1 WLR 1172 (interpretation of statutory powers of alleged ‘grantor’).

45 *Dalton v Angus*: n 32.

46 If Plots A and B have been in common ownership and Plot B already has buildings on it, the landowner retaining Plot A and selling Plot B would be obliged – unless the parties agree lesser or greater obligations – to respect the scope of the right of support in fact enjoyed by Plot B at the moment of its separation from Plot A. The subdivision of the land and transfer to a new owner of one plot could transform a *de facto* ‘quasi-easement’ into the *implied grant* of a ‘real’ easement by the seller of Plot A in favour of Plot B, under the principle in *Wheeldon v Burrows* (1879) 12 Ch D 31 (CA), or under s 62(1) Law of Property Act 1925: see Kevin Gray and Susan Francis Gray, *Elements of Land Law*, Oxford, OUP (4th ed 2005) §§8.128-8.167. For an unsuccessful attempt to rely on *Wheeldon v Burrows*, in order to avoid *Dalton v Angus* n 32 and to gain a right of support for buildings yet to be constructed, see *Kebewar Pty Ltd v Harkin* 9 NSWLR 738 (NSW CA). The scope for an *implied reservation* of an easement in favour of land retained by a seller is much narrower, since this in effect ‘derogates from the grant’ of the plot sold.

47 The common law rules for the creation of easements remain strongly influenced by successive editions of *Gale on Easements*. In Gale’s first edition (1839), the author admitted: ‘Upon some points indeed there is no authority at all in English law’ – hence his reliance on Roman law ideas, shared with Scots and South African law. The key conditions are usually summarised in the Latin ‘nec vi, nec clam, nec precario’ (neither by force, nor secretly, nor by permission). *Dalton v Angus* n 32 discusses the original Roman law, as well as applying the tests to the construction of a new building on a neighbour’s land, where there will normally be no question
(a) the owner of Plot A must at some point in the past actually have granted the owner of Plot B the easement in question; but (b) documentary proof of this grant must have been lost.48

These tests the court accepted B had met, simply because his factory had in fact been built twenty-seven years before work on the neighbouring land caused its collapse and the litigation. However, it looked as though B would have enjoyed no legal protection for his factory until the end of the last day of the prescription period, seven years or so before. Here is how Lord Penzance, who alone among the Law Lords would have preferred B to have acquired a right of support the day the new factory was built, spelt this out:

‘… at any time within twenty years after [a new house] is built the owner of the adjacent soil may with perfect legality dig that soil away, and allow his neighbour’s house, if supported by it, to fall in ruins to the ground.’49

That any judges should find such an outcome acceptable, on technical land law grounds, may strike us as bizarre and even shocking; the more so since the Law Lords quoted approvingly a Latin maxim already in wide use: ‘sic utere tuo ut alienum non laedas’ (‘use your own property in such a way as not to injure another [or his/her property]’).50 If applied literally, as a tort law basis for the legal relations between neighbours, this could have short-circuited all talk about easements and prescription – as it has more recently in other common law jurisdictions;51 and would have added a clear moral dimension to the legal rules. In the case itself, the Law Lords did not have to confront B’s vulnerability while the prescription period ran, since he fulfilled the tests for already having acquired an easement; its breach had also been shown. B therefore got his award of damages, jointly against both A and M.

A argued that any liability should rest only on M, who after all actually did the work which caused the damage. Lord Blackburn firmly rebuffed this idea:

‘… a person employing a contractor to do work is not liable for the negligence of that contractor or his servants. On the other hand, a person causing something to be done, the doing of which casts on him a duty, cannot escape from the responsibility attaching on him of seeing that duty performed by delegating it to a contractor. He may bargain with the contractor that he shall

of either force or permission; but with a right of way, the issue of permission may be crucial, as in Odey v Barber [2006] EWHC 3109 (Ch), [2008] Ch 175. As to secrecy, Lord Coleridge in Dalton v Angus said 801:

‘Where, as in the present case, a private dwelling-house is pulled down and a building of an entirely different character, such as a coach or carriage factory, with a large and massive brick pillar and chimney stack, is erected instead of it, the adjoining proprietor must have imputed to him knowledge that a new and enlarged easement of support (whatever may be its extent) is going to be acquired against him, unless he interrupts or prevents it’. In practice, A will usually have no means of interrupting or preventing it except via negotiation with B, backed by the threat that A may otherwise remove the support his own land represents during the prescription period.

48 This fiction is so strong evidentially that ‘a court is even obliged to disregard clear evidence that no interest was ever granted in favour of the dominant land’: Law Commission n 85 [4.171].

49 Lord Penzance in Dalton v Angus n 32 804. Yong Pung How CJ points out in Xpress Print n 64 [22] that, since all judges agreed that an easement had been acquired, this statement is technically obiter.

50 The maxim derives from the Roman jurist Ulpian (c160-228AD), whose writings in turn constitute almost a third of Justinian’s Digest.

51 See n 55 and 56.
perform the duty and stipulate for an indemnity from him if it is not performed, but he cannot thereby relieve himself from liability to those injured by the failure to perform it ...\(^52\)

So this is an example of that exceptional situation where a party may be liable for the acts of an ‘independent contractor’, commissioned to carry out a project or provide a service. It could be seen as a specially extended version of ‘vicarious liability’ (where an employer may be liable for torts committed by an employee); more accurately, we could say that A here owes a duty to B which the law prevents him from discharging by delegating it to anyone else. If A’s operations in fact constitute an invasion of B’s rights next door, A will therefore not diminish or avoid his/her own liability if s/he shows (as A did in *Dalton v Angus*) that he engaged a competent building contractor, M, on whom he imposed obligations not to endanger B’s buildings.\(^53\)

As a result, B’s rights against A are unaffected by A’s contractual arrangements with members of A’s project team, whatever the legal relationships with them may be; nor does B have to show that A has himself been negligent in selecting, briefing or managing M or others.\(^54\) For primary liability to remain on A is good news for B, if M is not worth suing (though M may be separately liable to B); but less good for A, who will shoulder liability alone (unless insured) if M is insolvent, when any indemnity M owes him in contract may also be worthless.

### 3 Rights of support: Singapore finds a new path

#### 3.1 Background

As we have seen, English law developed a pathway leading to liability for damage to buildings and structures, doing it via the law of real property. However, fear of subverting this area of the law has made English law hesitant to impose liability except where an easement of support can be spelt out; so what in Victorian times started as an special category of liability had by the twentieth century come to seem an odd legal dead-end. This narrow approach makes less sense in a world in which significant construction always needs planning permission, so the risk that B can ‘freeze’ A’s use of Plot A by unilaterally and without warning putting a new building on Plot B is slight.

Less attached than English courts to the nineteenth century world-view underlying *Dalton v Angus*, judges in Singapore have followed the lead of other common law

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\(^52\) *Dalton v Angus* n 32 829.

\(^53\) Neill LJ in *Alcock v Wraith* 59 BLR 16 (CA) discusses the rule that a party – in our case, a construction employer – is not usually liable for the acts of an independent contractor, though may be so where the defendant’s builder withdraws support from a neighbour’s land and where construction can be labelled an ‘extra-hazardous’ activity. At least in Singapore, it seems from *Xpress Print* (main text to n 72) as if the duty of support for a neighbour’s land is always non-delegable.

\(^54\) Beyond our own scenario, A may even be responsible for the activities of trespassers or the impact of the forces of nature on his/her land, if these cause damage to Plot B alongside; see *Sedleigh-Denfield v O’Callaghan* [1940] AC 880 (HL) and *Leakey v National Trust for Places of Historic Interest or Natural Beauty* [1980] QB 485 (CA), applied in a right of support context by *Rees v Skerrett* n 90. Here liability is not ‘strict’, since here it is for an omission, where the reasonableness of A’s conduct in the light of the resources available to him/her is one of the factors relevant to determining his liability.
courts in North America\textsuperscript{55} and New Zealand\textsuperscript{56} in diverging from English law – in the process pulling this aspect of the law of tort away from its land law roots and replanting it slightly closer to the law of negligence.\textsuperscript{57} Encouragement for these post-colonial initiatives has also come from differences in the law of prescription, which (as we have seen) can recognise as easements enduring factual situations which have no accompanying formal transaction or record at all. However, the scope for this is significantly narrower in many jurisdictions than in England & Wales, whose law even now tolerates an exceptionally wide range of ‘off-register’ interests in land.\textsuperscript{58} In Professor Tan’s pioneering textbook on Singapore land law,\textsuperscript{59} she reported that two of the three routes which in English law allow an easement to be created by prescription are unavailable in Singapore.\textsuperscript{60} As for the third – the ‘lost modern grant’ doctrine relied on in \textit{Dalton v Angus}\textsuperscript{61} – she argued that it certainly did not apply in relation to registered land in Singapore under the Torrens-based Land Titles Act, nor to the 999-year State leases common in that jurisdiction; and perhaps not at all.\textsuperscript{62} In such a context, to depend exclusively on thinking derived from the law of easements would offer neighbours even less protection for their buildings and structures than English law does.

Well aware of this danger, the Singapore Court of Appeal felt able to break free of the narrow English perspective of \textit{Dalton v Angus}\textsuperscript{63} in the \textit{Xpress Print} case, below. The judgment acknowledges the impact of the socio-economic realities of Singapore: extreme population density, immense pressure on all available land, regular and desirable redevelopment of commercial property, a high value placed on orderly co-existence. As a result of this judicial rethink, liability there for damage to buildings or structures caused by construction operations next door now falls within a wider duty of support owed by A, the owner of the neighbouring land.

\textbf{3.2 Escaping land law thinking: Xpress Print}\textsuperscript{64}

In 1997 Xpress Print (B), owners of an eight-storey building in Kallang completed in 1996,\textsuperscript{65} found that the driveway to their building had cracked; the ground between it and their boundary was subsiding; and their water supply had been severed by earth movements. The reason seemed obvious: the owners of the neighbouring plot of land

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\textsuperscript{55} Eg \textit{Wilton v Hansen} [1969] 4 DLR (3d) 167 (Manitoba CA) – alternative basis in negligence for B’s claim, based on ‘\textit{sic utere \ldots}’, in parallel with one for interference with right of support gained by prescription; \textit{Walker v Strosnider} 67 W Va 39 (W Virginia CA) – B could claim in negligence even where there was no easement.

\textsuperscript{56} Eg \textit{Bognuda v Upton & Shearer Ltd} [1972] NZLR 741 (NZCA) – B had no possibility of acquiring easement of support by prescription, but A could still be liable (in negligence) for construction work causing damage.

\textsuperscript{57} For a further example of this process of divergence, see n 30.

\textsuperscript{58} ‘Overriding interest’ is the key category, as defined by eg Schedule 3, Land Registration Act 2002, updating s 70(1) Land Registration Act 1925.


\textsuperscript{60} Including under the heavily criticised Prescription Act 1832, 2 & 3 Will 4 c 71.

\textsuperscript{61} \textit{Dalton v Angus}: n 32.

\textsuperscript{62} \textit{Principles of Singapore Land Law} n 59 416-418; see now \textit{Lim Hong Seng} n 67, discussed in \textit{Xpress Print} n 64.

\textsuperscript{63} \textit{Dalton v Angus}: n 32.

\textsuperscript{64} \textit{Xpress Print Pte Ltd v Monocrafts Pte Ltd} [2000] 3 SLR 545 (CA Singapore).

\textsuperscript{65} As a result, B’s building and roadway were too new to have gained an easement by prescription, even if this were legally possible.
Monocrafts (A) had engaged contractors (M) to develop their own site and M had started excavation work.\(^{66}\) B started legal action against both A and M for damages for negligence, nuisance and interference with a right of support.

By the time the case got to court, M had been wound up, so A was the only defendant, at first instance in the High Court and then on appeal. The court was impatient with the idea of relying on easements as the main legal technique for protecting buildings and structures on land from damage by construction; but had to bear in mind the complexity of two local land law systems (registered and unregistered), it being clear by then that the ‘lost modern grant’ doctrine was still alive and well in Singapore, though only in relation to unregistered land.\(^{67}\) The court did not want to deprive landowners of this form of protection and therefore did not wish to reclassify all claims for damage to buildings and structures as in the law of negligence.\(^{68}\)

So it opted for a middle way: newly completed buildings and structures on land immediately enjoy the ‘natural’ right of support from neighbours which land as such already does. As Yong Pung How CJ said, giving the Court of Appeal’s judgment:

> ‘Once the primacy of the principle [‘sic utere tuo …’] forbidding landowners to use their property to the injury of others is accepted, we think there is scant justification for the 20-year gestation period for a right of support in respect of a building.’\(^{69}\)

This was already the established position in South Africa,\(^{70}\) relying on the same Latin maxim newly prominent in Singapore. In South African law this is rightly seen as outside the main body of the law of servitudes, since protection for buildings and structures does not need to be gained by express grant or reservation, or by prescription.\(^{71}\)

In Xpress Print, this approach gave our claimant B the protection it was seeking, requiring it only to prove – as it had already done – that A’s use of the adjacent land had in fact diminished support for B’s own land, structures or buildings, causing damage (and possible consequential losses – quantum remained to be assessed). The Singapore court went on to confirm, just as Lord Blackburn said in Dalton v Angus itself,\(^{72}\) that this duty remains personally on A, who cannot evade liability merely by employing an independent contractor.

When B now constructs a new building in Singapore, this may still start the prescription period running, after twenty years conferring an easement protecting B’s

\(^{66}\) The excavation was halted twice when B asked the building control authorities to intervene: they imposed ‘stop work orders’, but further excavation and damage still occurred.

\(^{67}\) Lim Hong Seng v East Coast Medicare Centre Pte Ltd [1995] 2 SLR 685 (High Ct Singapore).

\(^{68}\) The judgment in Xpress Print n 64 concludes at [53]: ‘… there is a strong case for liability [of A] in negligence, independent of any interference with the right of support’; this is arguably obiter.

\(^{69}\) Xpress Print: n 64 [49].

\(^{70}\) CG Hall, Servitudes, Cape Town-Wynberg-Johannesburg, Juta (3rd ed 1973). But where B does not assert or prove a right to support from A, showing withdrawal of that support does not lead automatically to A’s liability in negligence: United Building Society v Lemmon Ltd 1934 AD 149 (Supreme Ct, Appellate Div).

\(^{71}\) Hall n 70 105, citing Johannesburg Board of Executors Ltd v Victoria Building Co Ltd 1 OR 43.

\(^{72}\) Quoted as main text to n 49.
building against A next door withdrawing support. But the scope and importance of this doctrine have diminished almost to zero, applying as it does only to land not yet within the land title regime.\footnote{Lim Hong Seng: n 67.} Even in this exceptional situation, the Court of Appeal’s approach means that, while the prescription period is running, B cannot find himself in the precarious position outlined by Lord Penzance above,\footnote{Quoted as main text to n 49.} which the Chief Justice’s judgment robustly rejected:

‘… the proposition that a landowner may excavate his land with impunity, sending his neighbour’s building and everything in it crashing to the ground, is a proposition inimical to a society which respects each citizen’s property rights, and we cannot assent to it.’\footnote{Xpress Print n 64 [37].}

3.3 Applying the new rules: Afro-Asia\footnote{Afro-Asia Shipping Co (Pte) Ltd v Da Zhong Investment Pte Ltd [2003] SGHC 286, [2004] 2 SLR 117.}

Not long after Xpress Print, Judith Prakash J in the Singapore High Court had to decide an action for damages brought by Afro-Asia (B), the owner of a commercial building in the Singapore CBD (seven storeys, with a four-storey annex).\footnote{B’s building was completed in the 1950s, so could potentially have gained an easement of protection by prescription against withdrawal of support by A’s land alongside; in the light of Xpress Print n 64 and A’s admissions this was not a live issue.} It is a classic of the genre, illustrating the full range of parties and issues, as well as the new Singapore law on liability for building damage in action.

The owners of the six-storey building next to B’s block, Da Zhong (A), decided to demolish and replace it with twenty storeys, occupying both the existing plot and the one beyond. Providentially for B, preparation for the redevelopment included a three-day photographic ‘before’ survey of B’s building, commissioned by a member of A’s group of companies – important evidence in court later on. The new building required deeper foundations than the existing; during its construction, cracks appeared in parts of B’s own building and there was water seepage, evidence of subsidence and concern about the whole building’s stability; some units could no longer be let at all and some tenants who stayed negotiated a rent reduction. At B’s insistence, members of A’s project team did some emergency repairs, including temporary external structural support.

Once construction was complete, B was unconvinced that these repairs were adequate for the long term, so started legal action against five defendants: A, M\textsubscript{1} (demolition contractor for the old building), M\textsubscript{2} (main contractor for the new building) and specialist piling sub-contractors S\textsubscript{1} and S\textsubscript{2} (two different piling companies, at different stages in the redevelopment) – no surprise, then, that the hearing took more than 30 days in court, with three expert witnesses and a judgment running to more than 50 pages.
The action was based on breach of duty, negligence and nuisance; both liability and quantum were in issue. A accepted that it owed a duty of support in relation to B’s building, in line with Xpress Print; the judge held from the survey and the expert evidence that B’s building was sound and stable before construction started and that A’s project had withdrawn that support, including by failing to ensure that damage already caused was not aggravated by further work. Reviewing the repairs already undertaken, the judge agreed that more needed to be done to get the building back into its state before the construction started: A would have been inescapably responsible in law for all these costs of reinstatement, if B was not already committed to selling the building. The planned sale made it unreasonable to award reinstatement costs; instead, the loss in market value caused by the damage, measured at the date of the court’s judgment, was the right approach. A’s liability covered even some damage occurring after it had leased the site of the new building to another entity, and applied although other defendants, which were members of its project team, might be liable in their own right – though B of course could recover its loss only once over. A was however not liable for any damage caused by M2, since A had not employed M2 (the building having been transferred onwards by then).

As for those other defendants – the final set of issues – the judge held that each would be liable to B only if shown to have negligently caused some or all of the damage B’s building suffered: their liability was fault-based, not strict like A’s. [There is no discussion at all in Dalton v Angus about the basis on which M was liable alongside A.] Accordingly, S2 was absolved from all liability, since it came on the scene late in the game and had not been shown to have contributed to the damage. By contrast, M1, M2 and S1 each bore individual responsibility for different parts of the damage which had led to the building’s loss in value; the share owed by M1 and S1 to that extent reduced A’s global primary liability, but placed the risk of their insolvency on A (and not B, who could collect the totality of the damages from A, except for those owed by M2). B’s consequential losses (diminution of rental income), to the extent accepted by the judge, were apportioned between the different defendants according to the particular damage which affected each individual unit in B’s building, its source and date. It was a demanding and detailed forensic exercise.

4 Conclusions

Readers who have persisted this far will be inclined to agree with Chief Justice Yong at the head of the paper: English law is over-complex and seems to have lost sight of rational justifications for imposing (or refusing) liability for damage to land, structures
or buildings caused by construction operations on a neighbour’s land. By contrast, the Singapore gloss on *Dalton v Angus* has principle and simplicity on its side, as well as being underpinned by clearly articulated moral and social value-judgments. Note that, though this new approach significantly widens the protection for B’s buildings and structures on land by abandoning the search for an easement, it does so by retaining – and extending – a principle of strict liability on A for such damage; and it reaffirms the nineteenth century doctrine that A does not discharge the duty to provide continuing support to B’s land etc by engaging a competent independent contractor as main contractor and other project team members, if their work results in damage to B’s land, buildings or structures.

This discussion leads to several further questions:

- From a classificatory point of view, is it still necessary and desirable to treat disputes between neighbours about damage to land, structures and buildings as deserving specific solutions of their own, outside the ambit of ‘the neighbour principle’, and imposing a strict liability which A cannot delegate? As we have seen, members of A’s project team may have their own separate liability to B, which in the Singapore view of things depends on their being shown to be negligent in the ordinary way.

- How do codified legal systems of the civil law tradition deal with the issues raised in the paper?

- What impact does – or should – insurance (construction-related or other) have on the loss-shifting and -spreading function of the law of tort in our area?

- What is (or should be) the impact of statutory regimes deriving from public law – eg building control, environmental protection or compensation for ‘public works’ – on questions of civil liability for construction?

- More fundamentally, what does justice (in the wider European context, respect for the fundamental rights of respect for one’s home and of peaceful enjoyment of one’s possessions)* require in relation to the liability of developer and construction parties to neighbours?

Answers must be for a further paper. Meanwhile, in March 2008 the permanent statutory law reform body for England & Wales, the Law Commission, launched a Consultation Paper which reviews – among other topics – the rules on the creation of

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83 *Dalton v Angus*: n 32.

84 ‘Home’: the Convention for the Protection of Human Rights and Fundamental Freedoms (the European Human Rights Convention), article 8; and ‘peaceful enjoyment of possessions’: the Protocol to the Convention agreed at Paris on 20th March 1952 (the First Protocol to the European Human Rights Convention), article 1. The Convention has been ratified by all 47 member-states of the Council of Europe, from the Azores to Vladivostok; the First Protocol has been signed by all but not yet (2009) ratified by Monaco or Switzerland <www.coe.int>.
easements by prescription. Agreeing that we have ‘a disorderly and uncertain body of laws’, the Law Commission already favours simplifying the law on prescription in relation to easements. More radically, it asks whether it should still be possible to acquire an easement by prescription at all (or some categories of easement, specifically negative ones like a right of support).

Thus England & Wales could join New Zealand and (in most situations) Singapore and the other Torrens-title jurisdictions in dispensing with the doctrine of lost modern grant which saved the claim in *Dalton v Angus*. This would dismantle – though only for the future – the main platform which provides legal protection for neighbours’ buildings and structures in English law. In return, would the ‘natural rights’ of landowners be widened, Singapore-style, to include immediate protection for new buildings and structures on the land, via an extended law of tort? This is not on the Law Commission’s initial shopping-list for new legislation, but might make it into its final report (perhaps including a draft Bill), due in late summer or autumn 2010. The judges might step in meanwhile, building on those isolated English cases which talk of duties of care in negligence and have applied these ideas to impose fault liability on one neighbour for property damage to another, beyond the crude individualism which still underlies aspects of land law. But would Lord Hoffmann think this ‘merely … an expedient to fill a gap’? The story is clearly not yet over.

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87 If prescription is retained, even if only for a limited class of easements, the tests would be simplified and restated, no longer relating back to a fictional grant by the owner of the servient tenement.
88 Once the Title Conditions (Scotland) Act 2003 came into force, no new negative servitudes could be created in Scots law; existing negative servitudes were transformed into negative real burdens: Coultsfield & McQueen (General Editors), *Gloag & Henderson: The Law of Scotland*, Edinburgh, Thomson/W Green (12th ed 2007) [35.34]. Like South Africa, Scots law appears to have a general principle that A is liable in delict for deliberate activities on his land which cause damage to buildings or structures on B’s neighbouring land, at least if *culpa* can be shown: *Kennedy v Glenbelle Ltd* 1996 SLT 1186 (Ct Sess, 1st Div), following *RHM* n 30.
89 *Dalton v Angus*: n 32.
90 Eg *Bradburn v Lindsay* [1983] 2 All ER 408 (Ch) and *Rees v Skerrett* [2001] EWCA Civ 1760, [2001] 1 WLR 1541.
91 n 2.
European Directive for tendering architectural services; a too strict interpretation by Dutch Local Authorities?

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Abstract:
When the value of services exceeds €206.000, local governmental bodies in European Union (EU) countries have to call for tenders in accordance with the EU directive 2004/18/EC, which specifies procedures for such contracts.

Recently, well known Dutch architecture firms expressed their dissatisfaction with the way local authorities in The Netherlands manage such European tenders. The firms claim that local authorities are too strict in their interpretation of the directive. According to them, the requirements regarding economic and financial standing and technical and professional ability (articles 47 and 48 of the directive) are set too high. The emphasis lays more on a high financial turnover than on quality. The architects also claim that the procedures to prove eligibility are too extensive.

The result is that start-up and smaller firms are excluded because they cannot meet the requirements. The Chief Government Architect of The Netherlands recently commissioned independent research on this matter.

This paper presents the results from the first stage of the research, which was based on data from the website ted.europa.eu, where tenders are officially published. Tenders which were submitted from 2006 to 2008 were analyzed with respect to requirements on annual financial turnover and design portfolios. The manner in which several other EU countries manage the process also formed part of the research.

Results from the first stage suggest that the arguments of the architects are generally valid. Requirements are generally high compared to the scope of the projects. In addition other EU countries appear less strict in their interpretation of the directive. The main recommendation from the first stage of research is that the office of the Chief Government Architect acts as an advisory board to local authorities.

Keywords:
Architecture, tenders, architectural services, European Union, European Directive
1 Introduction

When the value of works, supplies and services exceeds €206.000, local governmental bodies in European Union (EU) countries have to call for tenders in accordance with Directive 2004/18/EC. This directive specifies procedures for such contracts. An important purpose of the directive is to open up the European market for works, supplies and services and to give suitable businesses throughout the European Union equal opportunity to submit tenders.

Recently, a number of well known Dutch architectural firms and architects expressed their dissatisfaction with these procedures in various national newspapers and specialist journals. During the European procedure for the selection of an architect for the new town hall of the municipality of Westland, 7 out of 12 selected architects decided to withdraw from the selection process. The client demanded 3D sketches, models and an elaborated calculation of building costs. The firms stated that the expenses needed to provide these demands were too high. There were other reports of problems with European tenders for the design of public buildings. In these reports architects claim that the requirements regarding economic and financial standing and technical and professional ability are set too high. The emphasis lays more on a high financial turnover than on quality. The architects also claim that the procedures to prove eligibility are too expensive. Young and starting architects are not able to participate in these tenders, because they cannot meet the requirements. The strict interpretation in the Netherlands does not meet the before stated basic purpose of the European directive.

As a result, architects fear that only big and experienced architectural firms will be awarded with contracts for public buildings. This goes against the purpose of the directive and will ultimately lead to a declining architectural climate, they claim.

The reports caught the attention of the office of Chief Government Architect¹. In order to get an objective point of view the CGA asked the OTB Research Institute for Housing, Urban and Mobility Studies to do research on this subject.

2 Research Framework

The research was divided in four different subjects: The most applicable parts of the European directive were examined, four discussion meetings with interested professionals were attended, and the handling of the directive in three other EU countries was studied, with the help of attending meetings with experts from those countries and desktop research.

¹ The Chief Government Architect (CGA) advises the Dutch government on architectural policy and government housing, is a member of the Board of Government Advisors and holds a central coordinating position with respect to the preparation and implementation of the national government architecture policy. The appointment of the CGA is subject to nomination by the Director-General of the Rijksgewenendienst (Rgd), with a specified term of office (up to 5 years). He or she is appointed and dismissed by Royal Decree. The current CGA is mrs. Liesbeth van der Pol and she was appointed August 15th, 2008.
Finally, we looked at the facts and figures of European tenders for architectural services in 2006, 2007 and 2008, emphasizing on the demands on annual turnover and building references. We also looked at the type of architecture firms that were awarded with contracts. As a database for the facts and figures we used the internet archive of the Supplement of the Official Journal of the European Union.

3 The Directive and restricted procedure

3.1 The Directive

As stated before, when the value of services exceeds € 206,000, local governmental bodies in European Union (EU) countries have to call for tenders in accordance with the EU directive. ‘Directive 2004/18/EC Of The European Parliament And Of The Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts’ specifies the procedures and regulations which local government bodies who want to select an architect have to respect. The articles of the directive which we regard as the most important for our research on awarding architectural services are discussed below. We did not approach the study of the directive from a judicial point of view.

Article 2 on the principles of awarding contracts states that ‘Contracting authorities shall treat economic operators equally and non-discriminatorily and shall act in a transparent way’. Particularly, the directive requires that the announcement of new assignments and the awarding of contracts are made public. Furthermore, it appoints the exact periods in which the stages of the procedure have to be rounded off.

To make sure only suited companies express interest the directive gives examples on how to proof eligibility. Suggestions on how to proof eligibility on the economic and financial standing and the technical and/or professional ability are to be found in Articles 47 and 48 of the directive.

Article 47, paragraph 1 states that ‘Proof of the economic operator's economic and financial standing may, as a general rule, be furnished by one or more of the following references:

(a) appropriate statements from banks or, where appropriate, evidence of relevant professional risk indemnity insurance;

(b) the presentation of balance-sheets or extracts from the balance-sheets, where publication of the balance-sheet is required under the law of the country in which the economic operator is established;

(c) a statement of the undertaking's overall turnover and, where appropriate, of turnover in the area covered by the contract for a maximum of the last three financial years available, depending on the date on which the undertaking was set up or the economic operator started trading, as far as the information on these turnovers is available’.

One (or more) reference could be sufficient, but in The Netherlands, clients tend to interpret this article by demanding a high minimum annual turnover, but sometimes also a bank guarantee, risk insurance and/or proof of solvency.

Article 48, paragraph 2, states that ‘Evidence of the economic operators' technical abilities may be furnished by one or more of the following means according to the nature, quantity or importance, and use of the works, supplies or services: a list of the works carried out over the past five years, accompanied by certificates of satisfactory execution for the most important works’ or ‘a list of the principal deliveries effected or the main services provided in the past three years, with the sums, dates and recipients, whether public or private, involved.’ Other suggestions to proof technical abilities are e.g. providing a list of technicians, a list of technical facilities of the company, the educational and professional qualifications of the service provider or contractor, annual manpower and number of staff.

It is important to note that article 48, paragraph 2, does not prescribe the nature of the references or whether these references need to be similar to the new commission. But architects in The Netherlands claim clients often ask to present proof of similar buildings from their portfolio. This is limiting their access to new projects and expanding their portfolio.

3.2 Restricted Procedure

In The Netherlands, the most used procedure for awarding architectural services contracts is the so called Restricted Procedure. The Restricted Procedure is a two-stage process which allows contracting authorities to draw up a short-list of interested parties by undertaking a selection/pre-qualification stage, prior to the issue of invitation to tender documents.

Selection of suppliers to be invited to tender should be based on a statement of good economic and financial standing and technical or professional ability. The selection criteria must be published in the original contract notice and must be relevant and proportionate to the procurement in question. Selection criteria should be as published in the EU advertisement or set out in the tender – demonstrable fairness in selection is paramount. Offers send in by at least five participants must be evaluated according to the criteria set out in advertisement or tender documents. The offer which is economically most advantageous (this includes costs and design quality) is awarded with the contract.

4 Discussion meetings

In order to get a view on the experiences and views on the subject from architects, former CGA’s, city architects and consultants, the office of the Chief Government Architect arranged separate meetings with these professionals. The most important observations are described below.

3 http://www.buy4wales.co.uk/PRP/phase2/procurementaboveojeuthreshold/restrictedprocedure.html, viewed 22/06/2009
In the meeting with architects, the specific problems with the procedures were discussed. First of all, it is often not worthwhile to show interest, because architectural firms cannot meet the minimal required annual turnover. Also, the portfolio of realized works does not contain a building similar to the new commission, which is often one of the requirements. The role of consultants was also discussed. Consultancy firms are suited to guide clients through the process, based on their knowledge and experience with the procedures. But architects think they lack specific knowledge of architecture and the architectural practice. According to them, consultants tend to make the procedures more complicated than they need to be.

The members of the committee which, based on objective point scoring criteria, has to decide to which architect firm the contract should be awarded to, often lack professional expertise on architecture to make a good assessment of the contenders and their proposals. Furthermore, the architects attending the meeting argued that architecture is not really suited to be judged with the use of ‘semi’ objective point scoring systems. A case study on the selection of an architect for the new town hall of the city of Deventer seems to support this argument (Volker, 2008).

In several occasions, architects were not sure if clients have a clear definition of the assignment for the new building. Moreover, sometimes the architects at the meeting were not sure if the client was selecting an architect or a design.

Signing up for the first stage of the selection process is time consuming, because documents to proof eligibility are not standardized and need to be send to the client. In the next stage, submitting a tender can be expensive and time consuming too, because sometimes clients ask for elaborated sketches and models. In many occasions the financial compensation for these expenses is not sufficient or even lacking and there is off course no guarantee of an awarded contract. But one architect stated that this is part of the game and should not be complained about.

Based on their own research (Atelier Kempe Thill, 2008) on European tenders in The Netherlands and other European countries, an attending architectural firm suggested the founding of an independent Procurement Authority, which would combine business services and cultural knowledge. This national Procurement Authority would be given the task of organising and supervising all European tenders.

The basic foundation for the problems, the architects claim, lays in risk avoiding behaviour. Other studies confirm this (Volker, 2008) Projects are funded with public financing, and local authorities want to make sure the architectural firm they select is qualified for the job. Local authorities, assisted by consultancy firms assume a big architecture firm which has already designed three schools for instance will be most suited to design another school. Architects on the other hand claim that their specific expertise enables them to design a wide range of building types, which makes them qualified for any new design contract.

Meetings with former CGA’s and city architects provided similar views. Especially the role of consultancy firms was emphasized and disapproved. The idea of establishing a Procurement Authority was not recommended by them. They recommend instead altering the role of the office of the Chief Government Architect to act more as an
advisory board on European tenders for local governments and public law bodies. The established authority of the office of the CGA makes it very suited for this task.

In the meeting with consultants, they stated not to recognise the claims made by architects. Consultants are aware of the lack of knowledge local authorities have with European tenders. Local authorities have small budgets and sometimes big ambitions. Therefore, they seek to work with a big and experienced architectural firm. One of the most important things in putting out a contract notice, the consultants agreed on, is to formulate a clear and compact assignment. They admitted this is one of the tasks for consultants at the start of the process.

It is the experience of consultants that a lack of knowledge in selection committees does not necessarily lead to buildings of lower quality. The task of an expert in a committee should be to make sure the rest of the committee ask themselves the right questions to be able to make a good assessment of the proposals. To make the procedures smoother, the consultants recommend developing a leaner procedure, but also to collect ‘best practises’, and learn from them.

5 Other EU countries

All member state of the European Union have to respect the same European directive, so it is interesting to give a broad outline of the handling of the directive and the involvement of government and other institutions. For this research, we looked at Belgium (Flanders), France and Germany.

5.1 Flanders

Since 1998, Flanders, the Dutch speaking region of Belgium, has installed a national Flemish Government Architect (FGA), similar to the Dutch Chief Government Architect. The office of the FGA can provide assistance to commissioners and has knowledge on a wide range of subjects regarding architecture, infrastructure and spatial planning. For projects on a national scale or of great importance, consulting the FGA is obligatory.

The FGA has tools to promote architectural quality and help young architects become acquainted with (local) government as clients. There is also a bi-annual award (‘Prijs Bouwheer’) for an ‘excellent client’. One of the most important tools the office of the FGA is the so-called Open Tender. This procedure can be described as following: The Open Tender is one of the tools the FGA uses when he is looking for architectural quality for projects for the Flemish Government and local authorities. Besides having an exemplary principal, the correct choice of a developer for every project is of critical importance. The Open Tender is a selection procedure based on the principal of an architectural competition and the procedure is in accordance with the regulations covering governmental commissions and European competition rules. The Open Tender comprises a selection (made by the FGA) and shortlist of architects and architectural

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teams for different tasks in the areas of architecture, town planning and landscape architecture.

5.2 France

The MIQCP is a governmental body which was founded in 1977. On their website, they describe their aim as follows: ‘Created in 1977 to give expression to a strongly held government policy, MIQCP has continued to promote quality in the public construction sector. Whether it is new works, rehabilitations or edifices requiring maintenance, this sector encompasses buildings, infrastructures and public spaces under the responsibility of the State or local authorities. Architectural quality covers a wide range of town planning, aesthetic, functional, technical and economic requirements. It is essential that a public amenity meets the expectations of all those who will be using it and expresses a certain sense of continuity. In this respect, the amenity is symbolic of the values held by the society for which it is created.

To meet its assigned objectives, MIQCP has adopted a policy that associates reflective thinking, advice, assistance, direct actions and recommendations. The Mission also participates in discussions on how to harmonize practices to ensure that they comply with European directives concerning project consultant operations. It carries out comparative studies on the institutional context and the methods used to attribute public architecture contracts in the different European countries’.

A delegation from the office of the CGA went to France for a meeting with members of MIQCP. The MIQCP told the delegation they recognise the problems with European tenders as stated by the architects in The Netherlands. In France, there has been legislation on procurement since the 1970’s. By law, at least one third of the members of the committee, which has to advise the client on a suited architectural firm, must be architects. In 2006, legislation on procurement was altered to assure access to procedures for young architects and smaller architectural firms.

5.3 Germany

For this research, the office of the CGA arranged a meeting with an architect and expert on European tenders from Germany. This expert is also president of the board of an ‘Architektenkammer’. These are regional architects associations which look after the interests of architects. Because of the federal structure of Germany, each ‘Bundesland’ has an Architektenkammer, a total of 16. The ‘Länderkammern’ are united in the national ‘Bundes Architektenkammer’. German legislation makes a distinction between general service providers and free occupations. In Germany, an architect is a free occupation. This makes it possible to create specific regulations for the procurement of services, including architectural services. In the procedures there is emphasis on the quality of participants. The regulations make sure that smaller firms and starting architects need to be seriously considered for a contract.

http://www.bak.de/site/498/default.aspx, viewed 03/07/2009
However, in contest procedures within European regulations, more and more emphasis is placed on objective criteria such as annual turnover, number of employees and realized works. Therefore, the opportunities for young architects and smaller firms are declining. The Minister who is responsible for tender legislation acknowledged this in 2008 and said that requirements to enter a contest must be set to a minimum and related to the framework of new assignments.

5.4 Conclusion

Although the existence of governmental bodies and organisations of professionals does not guarantee perfect tender procedures, it is apparent that these three countries have a more institutional approach then The Netherlands when it comes to supporting the quality of architecture, assist local governmental bodies with the procedures and look after the interests of architects.

6 Facts & Figures

6.1 Research method

To find out if the facts and figures support the claims architects have made, we looked at European tenders for architectural services in The Netherlands which were published in 2006, 2007 and 2008. The emphasis was put on the demands on annual turnover and building references. We also looked at the type of architecture firms that were awarded with contracts. As a database we used the internet archive of the Supplement of the Official Journal of the European Union, to be found on the website http://ted.europa.eu. In order to find the right tenders we used the following search criteria:

- country: NL
- contract: service contract
- ‘contract notice’, or;
- ‘contract award’
- CPV code 71*: Architectural, construction, engineering and inspection services (CPV stands for Common Procurement Vocabulary and is obligatory to specify)
- Publication date: between 1-01-2006 and 6-10-2008 (our report was due 01-12-2008)

We only searched for contract notices and awarded contracts on (public) buildings; we did not look into contract notices and awarded contracts for services architectural firms also can provide. It is possible that not all notices and awards were found. Sometimes, local authorities forget to send in a notice of a new contract, or the wrong CPV code was used. Notices and awards are then beyond the search. But based on the broad range of contract types, building types and sizes and consultancy firms we found, the data is representative of all contracts in 2006-2008. We have no indication there is a bias in the contract notices and awarded contracts we registered.
6.2 General outcome

In total we found 204 contract notices, which we specified into clients, building type and size and if the procedure was done with the assistance of consultants. The totals are presented in the tables below.

Table 1. European tenders in The Netherlands, 2006-2008
(Source: http://ted.europa.eu)

<table>
<thead>
<tr>
<th>year</th>
<th>Number of published notices</th>
<th>Number of published competitions</th>
<th>Number of published awarded contracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>65</td>
<td>1</td>
<td>31</td>
</tr>
<tr>
<td>2007</td>
<td>73</td>
<td>2</td>
<td>54</td>
</tr>
<tr>
<td>2008*</td>
<td>66</td>
<td>4</td>
<td>26</td>
</tr>
<tr>
<td>total</td>
<td>204</td>
<td>7</td>
<td>111</td>
</tr>
</tbody>
</table>

*until 08/10/2008

Data on the types of clients and building types is combined in the next table.

Table 2. Contract notices specific to clients and building type
(Source: http://ted.europa.eu)

<table>
<thead>
<tr>
<th>client</th>
<th>Total 2006-2008</th>
<th>building type</th>
<th>Total 2006-2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>municipalities</td>
<td>105</td>
<td>educational</td>
<td>82</td>
</tr>
<tr>
<td>education</td>
<td>39</td>
<td>governmental</td>
<td>45</td>
</tr>
<tr>
<td>foundation</td>
<td>13</td>
<td>multifunctional*</td>
<td>27</td>
</tr>
<tr>
<td>Government Building Service</td>
<td>10</td>
<td>cultural</td>
<td>13</td>
</tr>
<tr>
<td>Housing association</td>
<td>9</td>
<td>sports</td>
<td>12</td>
</tr>
<tr>
<td>other</td>
<td>9</td>
<td>other</td>
<td>10</td>
</tr>
<tr>
<td>province</td>
<td>6</td>
<td>health care</td>
<td>9</td>
</tr>
<tr>
<td>Health care</td>
<td>6</td>
<td>research</td>
<td>4</td>
</tr>
<tr>
<td>developer</td>
<td>5</td>
<td>infrastructure</td>
<td>2</td>
</tr>
<tr>
<td>ministry</td>
<td>2</td>
<td>total</td>
<td>204</td>
</tr>
</tbody>
</table>

*these are buildings that could be a combination of dwellings, a healthcare centre, a school etc.

The numbers show a variety of clients, but it is clear that local governments commission the most contract notices. We also found a variety of building types. Educational buildings are most prominent, followed by governmental and multifunctional buildings. We found that 68% of the procedures were done with the help of consultants.
6.3 Requirements on economic and financial standing

One important aspect of European tenders we looked into is the ways clients requested interested parties to prove their economic and financial standing. Usually clients ask for a certain annual turnover, sometimes more specifically the annual turnover in design services for the building type that is the new assignment. As a case we examined the turnover demands for contracts for educational buildings. These are more or less similar in nature and therefore easier to compare. If we set the annual turnover demand next to the surface area of the building, we did not find a distinct pattern, annual turnover requirements vary quite a bit. For instance, we found two nearly identical contracts for school buildings, both having a surface area of 5000 m2. One client required an annual turnover of € 1.200.000, the other € 500.000. Some other examples are shown in table 3.

Table 3. Some examples on annual turnover demands, educational buildings, 2006-2008
(Source: http://ted.europa.eu)

<table>
<thead>
<tr>
<th>client</th>
<th>consultant</th>
<th>building type</th>
<th>surface area (m²)</th>
<th>turnover demand (€)</th>
<th>turnover demand €/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality of Amsterdam</td>
<td>BBN</td>
<td>Multipurpose school*</td>
<td>2600</td>
<td>1.000.000</td>
<td>385</td>
</tr>
<tr>
<td>Municipality of Tubbergen</td>
<td>ICS Adviseurs</td>
<td>School</td>
<td>2600</td>
<td>300.000</td>
<td>115</td>
</tr>
<tr>
<td>Willibrord foundation</td>
<td>W.Wissink Advies</td>
<td>School</td>
<td>3510</td>
<td>350.000</td>
<td>100</td>
</tr>
<tr>
<td>Municipality of Bolsward</td>
<td>ICS Adviseurs</td>
<td>School</td>
<td>4300</td>
<td>800.000</td>
<td>186</td>
</tr>
<tr>
<td>Christian school community of Groningen</td>
<td>ICS Adviseurs</td>
<td>School</td>
<td>4500</td>
<td>750.000</td>
<td>167</td>
</tr>
<tr>
<td>Municipality of Scheemda</td>
<td>Not applicable</td>
<td>Multipurpose school</td>
<td>4565</td>
<td>1.200.000</td>
<td>263</td>
</tr>
</tbody>
</table>

* Type of school building that can also accommodate a healthcare centre, a community centre or day-care centre or a combination of these types

6.4 Requirements on technical abilities

Another important aspect of the European tenders we looked into is the ways clients asked interested parties to proof their technical abilities. Usually this must be proven by sending a list of completed buildings of the last three or five years, which need to be more or less similar to the new assignment. Not all the projects listed on the EU database had information on required references. But the information we found on required building references suggest that many times architectural firms can only enter if they have designed buildings similar to the new assignment. Table 4 shows the numbers we found on demands on references. Of the 32 notices we found with information on reference demands, 21 of them demanded similar buildings in the portfolio of interested firms. Sometimes it is also required that references have a minimum surface area or minimum building cost.
Table 4. Reference demands, all building types, 2006-2008
(Source: http://ted.europa.eu)

<table>
<thead>
<tr>
<th>year</th>
<th>Total number of contract notices</th>
<th>Number of notices with information on reference demands</th>
<th>Number of notices with information on demands for similar references</th>
<th>Number of notices with information on minimum required surface area</th>
<th>Number of notices with information on minimum required building costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>65</td>
<td>32</td>
<td>21</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>2007</td>
<td>73</td>
<td>19</td>
<td>13</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>2008*</td>
<td>30</td>
<td>30</td>
<td>15</td>
<td>11</td>
<td>7</td>
</tr>
</tbody>
</table>

*until 08/10/2008

6.5 Awarded contracts

The database also gave some insight in which architectural firms were awarded with contracts in 2006-2008. Although it is obligatory to send a notice to the EU of an awarded contract, this was not always send. This means the numbers on awarded contracts are not complete. However, the numbers we did find indicate that mostly larger and better known Dutch architectural firms were awarded with contracts in 2006-2008. We also found only three foreign architectural firms.

Table 5. Characteristics of architectural firms awarded with contracts
(Source: http://ted.europa.eu)

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of published awarded contracts</th>
<th>Number of different architectural firms awarded with contracts</th>
<th>Unknown which firm was awarded</th>
<th>Average number of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>31</td>
<td>25</td>
<td>6</td>
<td>40</td>
</tr>
<tr>
<td>2007</td>
<td>54</td>
<td>45</td>
<td>9</td>
<td>40</td>
</tr>
<tr>
<td>2008*</td>
<td>26</td>
<td>23</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>111</td>
<td>74</td>
<td>18</td>
<td>39</td>
</tr>
</tbody>
</table>

*until 08/10/2008

Summary of outcomes:

- 61 of the 74 different firms we found have more than 10 employees, these firms are regarded in The Netherlands as medium sized or larger firms
- Average number of employees is 39
- In general larger and noted firms are awarded with contracts
- Assumption: starting firms are small firms; contracts were in 2006-2008 not awarded to smaller firms (< 1-10 employees)
- Based on the numbers we found, we cannot conclude that the same firms always win
- Three firms specialize in designing schools and sports facilities and were awarded with four or more contracts for these types of buildings.
7 Conclusions and recommendations

The content and principles of the European Directive are clear. When the value of services exceeds € 206,000, local governmental bodies in European Union (EU) countries have to call for tenders in accordance with the EU directive. Interested parties should be treated equally and the procedures must be proportional and transparent. It also gives suggestions on how interested parties can prove eligibility by sending information on financial standing and technical ability. But the directive leaves room to emphasize the selection process on quality instead of objective requirements.

Architects and other professionals do not regard the directive as the main reason for the problems in The Netherlands; the problem is the strict interpretation by clients and consultants, because of risk avoiding behaviour. Demands on portfolio and annual turnover are mostly set high, in that way excluding smaller firms and starting architects. This goes against the principal of the European directive. The procedures are made more complicated than needed and as a consequence are time and money consuming. Entering a European procedure has become problematic.

Three surrounding countries have institutions and governmental bodies which support architects and architectural quality and give advice on European tenders. However, this does not guarantee perfect European procedures. The facts and figures we found support the claims architects made. Demands on annual turnover vary quite a bit, but are set high. The data we were able to retrieve suggest that it is indeed necessary to have one or more buildings in the portfolio similar to the new assignment to successfully enter a new procedure.

OTB Research Institute for Housing, Urban and Mobility Studies concludes and recommends the following:

- The problems architects report are real; they are visible in the facts and figures of European tenders in The Netherlands in 2006-2008;

- Because of the strict interpretation of the European directive in The Netherlands, the purpose of the directive for an equal market for all suitable architectural firms is not met;

- It is possible to emphasize more on qualitative criteria in European tender procedures instead of semi-objective criteria; the European directive is interpretable towards this goal. But Dutch clients seem reluctant to do so;

- Local government has a lack of knowledge and therefore focuses on legal issues and semi-objective criteria, making procedures more complex than needed;

- The Dutch government could be more supportive of the interests of special service providers such as architects (similar to Germany, Flanders and France), through developing new policies or legislation on European procurement;
• A new active role for the office of the Chief Government Architect could be researched further on; In the future, the office of the CGA could act as a central advisory board where local authorities can turn to;

• In the end, we think young and starting architects will still have a smaller chance of getting contracts for public buildings, because local authorities will continue to seek experience and routine.

8 References


Kroese, R., Meijer, F. and Visscher, H. (2008), De toepassing van Europese aanbestedingsregels bij architectenselecties, OTB Research Institute for Housing, Urban and Mobility Studies, Delft
Pure economic loss relating to construction defects - a comparative analysis of four common law jurisdictions

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Abstract

The problem of whether pure economic loss should or should not be compensated has been a legal conundrum for many common law jurisdictions. The aim of this paper is to provide a comparative analysis of the state of law on pure economic loss resulting from construction defects in four common law jurisdictions, namely, England, USA (State of California), Australia and Singapore. The paper will show that whilst the English and American courts have regularly found pure economic loss problematic and have had the tendency to reject claims based on the belief that such losses are more difficult to foresee than ordinary losses, or that they would open the flood gates for a series of derivative claims, the courts in Australia and Singapore have taken a different path, showing their willingness to test each case on the merits so as to allow themselves to do justice in individual cases. This paper argues in favour of the liberal approach taken by the Australian and Singapore courts, primarily on the basis that, in claims for pure economic loss, although there is no physical injury to person or property of the victim, the very fact that an economic loss is caused to the victim as a result of the tortfeasor's action should be actionable in law.

Keywords: Pure Economic Loss, Construction Defects, Common Law, Negligence, Tort

I. Introduction

Most construction projects are complex and involve a multitude of parties with diverse interests. Not all relationships and interests of these parties are connected through and protected by way of contracts. For example, in a traditional contract procurement model, there is no contractual relationship between an architect or an engineer appointed by the client and the contractor who constructs the project. However, the actions of such an architect and/or the engineer in connection with the project will definitely have an impact on the performance of the contractor. Likewise, a contractor who builds a project or an architect who designs a project may not have any contractual relationship with a subsequent owner or user of a project, except in the case of express and implied undertakings or warranties. Irrespective of the fact that there may not be any relevant contractual relationships between the parties who are directly or indirectly involved in a
construction project, the possibility that physical injury (to person or property) or economic harm may be caused to one or more of them as a result of negligent action of another cannot be ruled out. Construction defects are a particularly pronounced example of this possibility. As a result, construction projects usually provide a healthy breeding ground for disputes.

A popular and an easily acceptable theory of law is that, for every wrong done there should be a remedy. The very development of equity in common law supports this theory. As Lord Chancellor Cottenham observed in *Wallworth v. Holt*:

“*It is the duty of this court to adopt its practice and course of proceedings to the existing state of society and not, by a strict adherence to form and rule, under different circumstances, to decline to administer justice and enforce rights for which there is no other remedy... If it were necessary to go much further than it is, in opposition to some sanctioned opinions, in order to open the doors of this court to those who could not obtain it (justice) elsewhere, I should not shrink from the responsibility of doing so.*"

However, in reality, it has not been possible for the legal systems to find remedies for each and every wrong. One specific area particularly relevant to construction projects is “pure economic loss”. On grounds such as public policy and the “floodgates” argument, which are briefly discussed later, courts in common law jurisdictions have consistently struggled to find a satisfactory and common response to tort claims for pure economic loss. As a result, there has been a division of opinion with courts in some jurisdictions taking a restrictive approach and the others a liberal approach.

The paper will briefly trace the manner in which claims for pure economic loss have been considered by the English Courts and courts in three other common law jurisdictions, USA (State of California), Australia and Singapore, presenting a comparative analysis of the current state of the law. Further, this paper will support the argument that courts should adopt a liberal approach in treating tort claims for pure economic loss, with the ultimate aim being to provide remedies to those who have suffered losses, including economic losses, due to the negligent acts of others, subject to the established tests applied in common law jurisdictions to determine liability.

### 2. What is Pure Economic Loss?

Those who are not legally trained may find the term “economic loss” misleading, as usually, the remedy for all successful tort claims is damages, which results in a monetary award when the physical harm suffered is translated into monetary terms, the universally acceptable measure of loss. Such a loss should not be mistaken as a purely economic loss.

A pure economic loss is one that is not consequent upon personal injury or physical damage to property belonging to the victim. In the case of *RSP Architects & Engineers v.*

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Ocean Front Pte Ltd, the term “economic loss” was defined by LP Thean JA of the Court of Appeal of Singapore as, “by the term ‘economic loss’ we mean only mere economic loss not consequent on any injury to persons or damage to property.” In other words, losses that are not accompanied by physical damages to property or personal injury fall under the category of pure economic loss.

However, it should be pointed out that sometimes, the division of losses into two categories, pure economic and others (physical damages to property or personal injury), is not always clear cut. Trying to justify why one category would be compensated and the other not is even more complex. For example, in Spartan Steel and Alloys Ltd v. Martin & Co. Ltd, the claim was based on a power failure which disrupted the work in plaintiff’s stainless steel factory, which caused physical damage to the factory’s furnaces and metal. The plaintiffs also lost profit on the damaged metal and the metal that was not melted during the time the electricity was off. The Court of Appeal delivered a majority judgment (Edmund-Davies LJ dissenting), that the plaintiffs could only recover the damages to their furnaces, the metal they had to discard and the profit lost on the discarded metal. It was held that plaintiffs could not recover the profits lost due to the factory not being operational for 15 hours. The main reasoning for this was that while the damage to the metal was considered a "physical damage" and the lost profits on the metal was "directly consequential" upon it, the profits lost due to the blackout was considered as constituting a "pure economic loss". In his dissent, Edmund-Davies J. found that the loss was both direct and foreseeable consequence of the defendant's negligence and should therefore be recovered. Thus, in his dissenting opinion, Edmund-Davies J. did not see any logical basis for the division of the losses into two categories in Spartan Steel.

3. Pure Economic Loss in England

3.1. The applicable tests

Since the English courts considered the liability of a manufacturer towards an end-user with whom the former did not have a contractual relationship in the case of Donoghue v. Stevenson way back in 1932, the English law of negligence has seen many developments. The other common law jurisdictions have keenly followed these developments, sometimes differing, but mostly, faithfully following and adopting them. One area in which the courts in common law jurisdictions such as Australia and Singapore have decided to take a more liberal approach compared to the English courts is pure economic loss.

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5 The effect of the above judgment was that it outlined that there are two types of economic loss, namely, (1) economic loss consequential on physical damage and (2) "pure" economic loss. Only the first is in principle recoverable.
6 1932 SC (HL) 31.
7 The courts in other common law jurisdictions such as Canada and New Zealand have also not followed the English Courts on pure economic loss.
One of the key aspects of the tort of negligence is the scope it offers for the recovery of pure economic loss. However, traditionally, all common law jurisdictions adopted a restrictive approach towards claims for recovery of pure economic loss because of two main reasons. Firstly, because courts were afraid that allowing claims of such nature would open up floodgates for such claims. Secondly, the belief that economic loss fall within scope of contracts and, therefore, allowing claims of such losses may undermine contract law. In England, the courts only permitted the recovery of pure economic loss in tort, in very limited situations. For example, the decision of *Hedley Byrne v. Heller*\(^8\) recognised the possibility of recovery of pure economic loss where a negligent misrepresentation had been made by bankers regarding the financial standing of a company, which was later found out to be inaccurate, notwithstanding the fact that there was no contractual obligation on the part of the bank to give the reference\(^9\).

The cases that followed established that, where a "special relationship" or proximity between the parties is established where one party is holding itself out as an expert in that particular field and that the other party relies upon that expertise to its detriment, the former would be liable for losses caused, even though they may be categorized as purely economic, thus establishing an exception to the restrictive approach. For example, in *Junior Brooks v. The Veitchi Co. Ltd*\(^10\), a case involving a nominated sub-contractor, who was sued by the plaintiffs for the cost of replacing a defective floor, the issue was whether the defendants who had negligently laid a defective floor but had not caused any injury to person or other property belonging to the plaintiff were liable for the costs of replacing the defective floor. The House of Lords, by a majority, held that they were liable even in the absence of any contractual relationship, as there was a requisite degree of proximity between the defendants and the plaintiffs by virtue of a number of factors including the defendant’s knowledge of the plaintiff’s requirements, the plaintiff’s reliance on the defendants’ expertise, the defendant’s knowledge that the plaintiffs relied on their skills and expertise. The court concluded that the relationship between the parties were as close as it could be short of actual privity of contract.

In the case of *Anns v. London Merton Borough Council*\(^11\), the House of Lords unanimously held that a local authority might be liable in negligence for pure economic losses suffered by long lessees of maisonettes after the authority negligently failed to discover that the foundations were inadequate. It established a broad test for determining the existence of a duty of care in the tort of negligence, popularly known as the *Anns test* or sometimes retronymically, the two-stage test. Lord Wilberforce who delivered the judgment with whom the fellow judges concurred laid down the Anns test in following words:

> “Through the trilogy of cases in this House, Donoghue v Stevenson, Hedley Byrne...and Home Office v Dorset Yacht Co Ltd, the position has now been reached that in order to establish that a duty of care arises in a particular

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\(^9\) The plaintiff in this case was unsuccessful in its action as the bank had issued its statement subject to a disclaimer of liability.

\(^10\) 1982 Sc (HL) 244; 1982 SLT 492.

situation, it is not necessary to bring the facts of that situation within those of previous situations in which a duty of care has been held to exist. Rather the question has to be approached in two stages. First one has to ask whether, as between the alleged wrongdoer and the person who has suffered damage there is a sufficient relationship of proximity or neighbourhood such that, in the reasonable contemplation of the former, carelessness on his part may be likely to cause damage to the latter, in which case a prima facie duty of care arises. Secondly, if the first question is answered affirmatively, it is necessary to consider whether there are any considerations which ought to negative, or to reduce or limit the scope of the duty or the class of person to whom it is owed or the damages to which a breach of it may give rise.”

Thus, Anns reduced the circumstances under which Hedley Byrne recognised the availability of pure economic loss in torts to a mere example of a situation in which a plaintiff may be successful, and established a two stage test that could be applied in cases of tort in determining whether a duty of care existed. The test requires first a “sufficient relationship of proximity based upon foreseeability”, and secondly, considerations of reasons why there should not be a duty of care. In other words, where there was foreseeability and proximity there should be a duty of care unless there was a policy reason for holding that no duty existed.

In the years that followed, the English courts backed away from Anns. In 1990, in Caparo Industries plc v Dickman12, the House of Lords regarded the Anns test as too wide and held that even where there is foreseeability and proximity the court may decide that there should not be a duty of care, because it would not be fair, just or reasonable to impose one. In Caparo, the loss claimed was economic and was based on a negligent statement made by the company accountants in published accounts. The House of Lords held that while it is foreseeable that investors may use published accounts to make investment decisions, the accountants who produced them would not be liable for losses as a result of the accounts being wrong, as there is not sufficient proximity between the accountants and, effectively, anyone at all who may rely upon them. The House of Lords developed the following three limbed formula to be applied to determine whether a duty of care existed:

- Was the loss to the claimant foreseeable?
- Was there sufficient proximity between the parties?
- Is it fair, just and reasonable to impose a duty of care?

The last limb above brought in the concept of policy in which the courts have to balance the needs of an injured claimant against that of opening the “floodgates” and creating an indeterminate liability. Disagreeing with the approach taken in Anns, Lord Bridge in Caparo quoted with approval Brennan J in the Australian case of Sutherland Shire Council v Heyman13:

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13 [1985] 60 ALR 1, at 43-44.
“it is preferable in my view that the law should develop novel categories of negligence incrementally and by analogy with established categories, rather than by a massive extension of a prima facie duty of care restrained only by ‘considerations which ought negative, or reduce or limit the scope of the duty or the class of persons to whom it is owed.’”

In the case of Henderson v. Merrett Syndicates Ltd, the court widened the approach in Hedley Byrne on proximity. The "special relationship" or proximity between the parties which was held to exist where one party holds itself out as an expert in that particular field and the other party relies upon that expertise to its detriment was thus stretched to include situations in which the defendant voluntarily assumes responsibility for the economic interests of a plaintiff and where the defendant knows or ought to know that his skills or expertise will be relied upon by the plaintiff.

In White v. Jones, the issue was whether a solicitor who had carelessly failed to amend the will of his client, with the effect that the client died before the intended beneficiaries were indicated on it, was liable in an action in negligence brought by the beneficiaries. Here the House of Lords decided, by a bare majority, that they could recover, in spite of the fact that generally a solicitor owes no duty of care to anyone except his client. Thus, White v. Jones clearly departed from the previous practice of insisting on a "special relationship" or proximity between the parties which exist where one party holds itself out as an expert in that particular field and the other party relies upon that expertise. Further, it cannot also be said that the basis of the decision in White v. Jones was the voluntary assumption of responsibility which formed the basis in Henderson v. Merrett. Apart from the rather trite principle that courts will find ways to do the right thing in a particular case, it is difficult to point out what specific principle has been applied in White v. Jones by the court in arriving at its conclusion.

In Customs and Excise Commissioners v Barclays Bank plc, a recent case in which the issue of pure economic loss was considered, an important question raised was whether a bank, notified by a third party of a freezing injunction granted to the third party against one of the bank’s customers, affecting an account held by the customer with the bank, owes a duty to the third party to take reasonable care to comply with the terms of the injunction. The House of Lords unanimously disapproved the Court of Appeal's decision, that "assumption of responsibility" was indistinct and subsumed into the law of negligence. Their Lordships held that, because the bank was required by law to comply with the freezing order, there could not be said to have arisen any assumption of responsibility on Hedley Byrne grounds. Applying the Caparo test, it was held that, in the circumstances, it was not fair, just and reasonable to impose liability on the bank. The bank was therefore not required to reimburse Customs and Excise for the dissipated money.

16 [2007] 1 AC 171.
The examination of the above cases show that whilst it is easy to accept that pure economic losses should be treated differently from claims based on physical harm or damage to property, the specific boundaries for this distinction have not been clearly established in England. Further, the concepts such as “voluntary assumption of responsibility” and what is “fair, just and reasonable” give little indication of why recovery should not be allowed for pure economic losses (Giliker, 2001).

3.2. Pure economic loss relating to construction defects and the fear of incursion in to the domain of contracts

As far as pure economic losses based on construction defects were concerned, the application of the above tests to determine liability was finally put to rest with the decisions given in the landmark cases of *D & F Estates v. Church Commissioners for England & Others*\(^{17}\) and *Murphy v. Brentwood District Council*\(^ {18}\). In *D&F Estates*, the Church Commissioners owned a block of flats built by a firm of contractors (the third defendants) who had sub-contracted the plastering work. Fifteen years after construction the plaintiffs, the lessees and occupiers of a flat in the block, found that plaster in their flat was loose and brought in an action in tort for the cost of remedial work. The action in tort instead of contract was filed as there was no direct contractual relationship between the plaintiffs and the sub-contractors. The Court of Appeal found that the main contractor had employed a competent sub-contractor and thus there was no duty of care owed to the plaintiffs. Further, the court found that the cost of replacing the defective plaster was a pure economic loss and therefore not recoverable in tort. When the matter went up in appeal before the House of Lords, it was held that damages were not recoverable in tort in respect of the defect in the product itself; as such claims lay only in contract. Their lordships added that damages were recoverable in tort only where a defective product caused damage or injury other than to the defective product itself. Thus, in the absence of a contractual duty or a special relationship of proximity, it was held that a builder owes no duty of care in tort in respect of the quality of his work.

In *Murphy*, the plaintiff had purchased a house from the local council and the house developed several defects including cracks which appeared in the internal walls. The evidence produced in the trial showed that the damages had occurred as the result of the design of a concrete raft being defective and unsuitable for the site. It was argued on behalf of the plaintiff that the council had negligently relied on consulting engineers who had approved the design of the raft as suitable. The House of Lords concluded that if the only complaint was with respect to the physical integrity of the acquired structure, and not to damage to other property, the property owner's loss is properly characterized as purely economic as the loss is the diminution in the value of the building. Their Lordships reasoned that once the danger is detected, the risk of further damage is removed.\(^ {19}\) They added that, if such losses were to be treated as physical damage, a duty of care would arise as a matter of course on the basis of reasonable foreseeability alone.

\(^{17}\) *D&F Estates Limited & Others v. The Church Commissioners for England and Others* [1989] AC 177; 41 BLR 12.

\(^{19}\) Where the defect poses a risk to persons or property on immediately adjacent lands or the highway, damages may be recoverable according to the duty principles applicable to physical damage. \(^ {19}\) This is an exception left open by the House of Lords. *Murphy v Brentwood* [1991] 1 AC 398 at 475.
The overall effect of that would tantamount to implying into the law of tort a transmissible warranty of quality, in circumstances where no payment was made for the warranty. To do so would be too great an extension of the duty of care, and an unjustifiable incursion into the domain of contract law.\(^{20}\)

Thus in Murphy, the House of Lords found, based on public policy, that there was no course of action in tort. In the words of Lord Oliver:

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\text{“The affliction of physical injury to person or property of another universally requires to be justified. The causing of economic loss does not. If it is to be categorized as wrongful it is necessary to find some factor beyond the mere occurrence of the loss and the fact that its occurrence could be foreseen.”\(^{21}\)}
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Further, the House of Lords held that pure economic loss may be recoverable against a party who owes the loser a relevant contractual duty. “But it is not recoverable in tort in the absence of a special relationship of proximity imposing on the tortfeasor a duty of care to safeguard the plaintiff from economic loss.”\(^{22}\)

It is also useful to note that in Murphy, the argument, that imposition of negligence-based liabilities for pure economic losses relating to construction defects would be wider than the obligations imposed by the legislature found favour with their Lordships. In particular, it was noted that the Defective Premises Act 1972, which requires those who take on work in connection with the provision of a dwelling to do that work in a workmanlike or professional manner only obliges them to provide proper materials, so that as regards the work taken on, the dwelling will be fit for habitation. It does not impose a duty on them to provide building works that are defective free.\(^{23}\)

Thus, as Barlow (2001) points out, the cases of D & F Estates and Murphy have placed an almost insurmountable obstacle when seeking to recover, in negligence, the cost of repairing defects in their buildings from the contractors and sub-contractors whose negligent acts or omissions had caused the defects. Further, it should be pointed out that cases such as Murphy leave several complex and unanswered questions. To give an example, the determination that damage to property itself cannot be recovered in tort as that would tantamount to implying into the law of tort a transmissible warranty of quality, in circumstances where no payment was made for the warranty, will leave many innocent victims of building defects without any remedy against the party who had been directly responsible for the defect.

There is also uncertainty in the distinction between what should be considered “other property” as damages to other property is recoverable according to the decisions in Murphy and D & F Estates. As most construction works involves structures comprising

\(^{23}\) In Thompson v Clive Alexander & Partners [1992]59 BLR 81, the scope of the Act was further limited when the court held that it is not sufficient for claimants to complain of bad or unprofessional work, they had to prove the place was uninhabitable.
of distinct units and products, the question is whether the costs relating to removal and restoration of a defect free unit in a structure as a result of having to replace a defective unit could be considered “other property” and therefore recoverable from the party responsible for the defect. No clear answer has been found for this issue from the above cases.

Another question that could be raised is that, since it is accepted that contractors and construction industry professionals such as Architects and Engineers have a duty to take reasonable care in the design, construction and approval of buildings to avoid injury to persons and other property, what is the basis of that duty being treated as non-existent once the danger is detected by the plaintiff. This determination in *Murphy* leads to the contradiction that if someone is injured due to a construction defect, liability attaches to that injury, but if the defect is discovered just in time to avoid the injury, no liability attaches, irrespective of the fact that some one other than the party responsible for the defect has to pay to remedy the defect.

### 3.3. Developments after Murphy

As explained above the apparent effect of *Murphy* is that liabilities for defective workmanship in construction projects would be confined to the law of contract, except in circumstances in which the defective work has resulted in physical injury to person or physical damage to other property. Initially, the effect of such confinement was expected to protect the contractors from being sued for defective workmanship by those with whom they had not entered into any contractual relationship. However, the English law has since evolved, enabling third parties to sue the contractors for defective workmanship under “collateral warranty”. A collateral warranty gives a third party rights collateral to rights in an existing contract entered into by two separate parties. Provided that such warranties are issued in favour of third parties, it is not now possible for a third party who has an interest in a construction project to sue the contractor or any other service provider for the construction project for construction defects for which they are responsible.

As Lord Millett said in the case of *Alfred McAlpine Construction Limited v. Panatown Limited* 24, a leading authority on collateral warranty:

> "I agree with the Court of Appeal that the [collateral warranty] was primarily designed to cater for subsequent purchasers. This is also the view expressed by Mr. Duncan Wallace Q.C. in “Third Party Damages: No Legal Black Hole?” (1999) 115 L.Q.R. 394 and is confirmed by an article by Mr. David Lewis in (1997) 13 Const. L.J. 305. He notes that the widespread use of collateral warranties ... derives from the change in the law of tort which occurred in 1990 when the House decided Murphy v. Brentwood District Council...and departed from Anns v. Merton London Borough Council"

Another development in English law came about following the decision in *St. Martin's Property Corporation Ltd. v. Sir Robert McAlpine Ltd.* 25. In this case, an exception to the

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English law rule that a person cannot recover substantial damages for breach of contract where he himself has suffered no loss, which was recognised in *Dunlop v. Lambert*\(^{26}\) in 1839, was extended to construction contracts by the House of Lords. This exception being that, in contracts for carriage of goods, where it was contemplated that one party would transfer property in the goods to another after the contract was entered into, he could recover damages on behalf of the new owner if the goods were lost or damaged.

The decision in *St Martins* case was followed later in *Darlington Borough Council v. Wiltshier Northern Ltd*\(^{27}\), and in *Alfred McAlpine Construction Limited v. Panatown Limited*\(^{28}\). This development dramatically changed English law of contracts relating to construction as it enabled a party to a contract who has suffered no loss to sue and recover substantial damages on behalf of a third party, based on presumed intentions of the parties to the original construction contract.

The Contracts (Rights of Third Parties) Act which came into existence in 1999 now provides that a third party would have a right to enforce a contract where the contract expressly states that the third party is to be able to do so. It applies to all contracts entered into after 11 May 2000.

### 4. Pure Economic Loss in the US

#### 4.1. Restrictive Approach

The approach of the U.S. courts is very similar to that of the English courts when dealing with claims for pure economic loss. The U.S. position could be easily summed with the following quote from the judgment in the case of *Aas v. Superior Court*\(^{29}\) concerning claim for damages resulting from negligent constructing of a residence, where the California Supreme Court held that the plaintiff was not entitled to recover in tort for the costs of repairing and replacing a defective products:

“[a]ny construction defect can diminish the value of a house. But the difference between price paid and value received, and deviations from standards of quality that have not resulted in property damage or personal injury, are primarily the domain of contract and warranty law or the law of fraud, rather than of negligence. In actions for negligence, a manufacturer’s liability is limited to damages for physical injuries; no recovery is allowed for economic loss alone.”

The court held further that “(i)n actions for negligence, a manufacturer’s liability is limited to damages for physical injuries; no recovery is allowed for economic loss alone.” In other words, under *Aas*, the “economic loss rule” precluded recovery for

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26 [1839] 6 Cl. & F. 600.
29 24 Cal.4th 627 (2000), at 636.
damages such as “the difference between price paid and value received, and deviations from standards of quality that have not resulted in property damage or personal injury.”

In another case, *Carrau v. Marvin Lumber and Cedar Company*[^30^], windows installed in a luxury home had been treated with an ineffective preservative, with the result that they were subject to premature rotting within 3-4 years after completion of the house. As a result their were leaks and some minor damage to wallpapers, sheet rock and stucco. The plaintiff determined that all of the windows needed to be replaced. It was undisputed that replacement of the windows would also necessitate the performance of other work, such as removal and restoration of landscaping. Plaintiff obtained bids in the range of $450,000 to replace the windows and perform the related remedial work. However, the defendant refused to pay, although it did furnish the replacement windows. When the plaintiff eventually sold the residence, it was agreed with the buyer that $426,000 will be credited to cover the costs of installing the replacement windows. Subsequently, the plaintiff instituted legal action against the defendant for breach of warranty and strict product liability.

The court rejected the cause of action based on warranty as it was time barred. On the product liability claim, the court held that a plaintiff homeowner could not recover for defective windows against the manufacturer of their windows under a theory of strict liability in tort. The Court found, extending the holding of *Aas*, that the plaintiff could only recover in strict liability for the resultant damage from the defective windows and not for the defective windows themselves. The court broadly characterized *Aas* as holding that “a plaintiff is not entitled to recover in tort for the costs of repairing and replacing a defective product; recovery for those costs is available only under contract or breach of warranty law.” The court also held that the plaintiff could not recover damages for diminution in value of the residence due to defective windows. In this regard, the court stated “[W]hen the value of the home was diminished by the use of Marvin’s products, [the plaintiff] lost an economic benefit. He is not entitled to recover that benefit on a theory of products liability.”

Thus, *Carrau* appears to hold that no recovery is allowed for the costs of repairing collateral damage necessarily caused in repairing the defects, and suggests that the recovery of the costs of getting to the defects is also barred, at least in the absence of significant resulting damage actually caused by the construction defect. A key weakness *Carrau* is that under the above rationale, it promotes a multiplicity of sequential lawsuit every time resultant damage occurs, because a plaintiff is not entitled to recover for the defective conditions.

### 4.2. Statutory Relief for Homeowners in California

The legislature’s response to the precedence created by *Aas* was the enactment of a statute, the Senate Bill 800, commonly known as the “Right to Repair Act[^31^], which became effective January 1, 2003. It established a mandatory process prior to the filing of

[^31^]Title 7, Part 2 of Division 2 of the California Civil Code.
certain types of construction defect claims. It applies whenever there are defects alleged by a “homeowner” in new residential construction, subject to standards. It is clear that the legislative intent of this law is to afford both Homeowners and homebuilders the opportunity for quick and fair resolution of claims relating to construction defects.

The Act provides that any construction defect action against a builder, subcontractor, product manufacturer, or design professional groups (builders) will be governed by the standards set forth in it on new home construction. It defines construction defects according to standards of how a home and its components should function. These functional standards have different time limitations from the completion of the home to bring a claim for defect depending on the category. If the homeowner notifies the builder of a possible defect after the categorical imposed statute of limitation the defendant has an absolute defense and no duty to repair. Further, if a homeowner fails to file a written claim with builder in advance of filing a petition, the law provides for a legal bar to the action. Subject to these limitations, the Act provides a sound platform for victims of defectively constructed homes to file their claims and get the construction defects remedied, irrespective of the absence of any contractual relationship with the party responsible for the defect.

As additional protection for the homeowners, the Act also requires the builders to provide homeowners with a minimum one-year express warranty covering the “fit and finish” of cabinets, mirrors, flooring, interior and exterior walls, countertops, paint finishes and trim. The bill also permits builders to exceed the warranty standards and provide homeowners with other more extensive warranties, subject to builder choice.

In addition to protecting the interests of a homeowner against construction defects, the Act also sets forth certain positive guards available to the builders. These cover:

- unforeseen acts of nature in excess of the design criteria anticipated by the applicable building codes;
- homeowner’s unreasonable failure to minimize or prevent damages;
- homeowner’s, or his/her agent’s or employee’s, failure to follow recommended or commonly accepted maintenance obligations;
- defects caused by alterations, ordinary wear and tear, misuse, abuse, or neglect;
- defects barred by the statute of limitations;
- defects subject to a valid release; and
- the extent that defendant’s repair was successful in correcting the defects.

4.3. The Status after the Right to Repair Act

32 A “Homeowner” includes the owners, whether original or subsequent, of a single-family home or attached dwelling and homeowners associations. It does not apply to commercial buildings.
In the recent case of *Greystone Homes, Inc. v. Midtec, Inc.*\(^ {33} \), the California Court of Appeal ruled on two issues that had not been previously addressed under the Right to Repair Act, namely:

- whether a builder may recover for economic loss caused by a product manufacturer’s violation of the Act through a claim for equitable indemnity against that manufacturer; and
- whether that builder may bring a direct action for negligence against the manufacturer to recover its economic losses.

The plaintiff in this case (Greystone) was a builder (not a homeowner) of a housing project. It sued the manufacturer of a defective product (Midtec) after having incurred expenses to repair plumbing related defects in the project. Midtec filed a motion for summary judgment arguing *inter alia* that the Right to Repair Act only permits a homeowner (and not a builder) to bring an action pursuant to the Act and, since the Act does not apply, under *Aas*, the economic loss rule precluded Greystone from recovering additional damages for the cost to replace fittings that had not failed or caused property damage.

Concerning the first issue, the court concluded that a builder may bring an action for equitable indemnity to recover economic loss as a result of a manufacturer’s violation of the Act. The court explained that in an action for equitable indemnity under California law, both the builder and the manufacturer may be liable for construction defects that cause physical damage or property damage, so long as there is some basis for tort liability against the proposed indemnitor. The court held that the Act imposes such liability and specifically provides that product manufacturers shall be liable to homeowners “to the extent that the manufacturer caused, in whole or in part, a violation of the Act’s standards as the result of negligence or a breach of contract.” Thus, the court concluded that a homeowner may recover economic losses from a manufacturer for a violation of the Act’s standards that is caused by the manufacturer’s negligence or breach of contract. In the circumstances, the court concluded that Greystone’s derivative equitable indemnity claim was permissible because it was based on Midtec’s joint legal obligation with Greystone to the homeowners (and not Greystone’s direct liability to Midtec).

Concerning the second issue, the court ruled Greystone could not pursue an action directly against Midtec for negligence per se based on the alleged violation of the Act. The court explained that the Act does not contain any provision authorizing a direct action by a builder against an entity of any kind. Further, as Greystone did not fall into the class of persons that the Act was intended to protect, and as Greystone and Midtec did not share a “special relationship” to place them within a narrow exception to the economic loss rule, the court concluded that Greystone may not recover its economic losses from Midtec in a claim of negligence per se.

5. Pure Economic Loss in Australia

5.1. Liberal Approach

In 1995 the High Court of Australia clearly departed from the restrictive approach taken by the English Courts with regard to pure economic law, in the case of *Bryan v Maloney*. The High Court imposed a duty of care on a builder in respect of the diminution in the value of a house due to inadequate foundations that caused cracks and other defects a defect, which caused a pure economic loss to the owner. The court found that there was sufficient proximity between the parties, despite the fact that the owner (plaintiff) was a subsequent purchaser who had no contractual relationship with the builder. The court could see little distinction between the position of a first owner and that of a subsequent owner, when considering the question of proximity with the builder.

Distancing itself from the English approach, the High Court of Australia noted the following:

"One cannot but be conscious of the fact that the conclusion that Mr Bryan is liable in damages to Mrs Maloney in the present case is contrary to the views expressed by the members of the House of Lords in D & F Estates Limited -V- Church Commissioners and Murphy... Their Lordships' view ... seems to us, however; to have rested upon a narrow view of the scope of the modern law of negligence and a more rigid compartmentalisation of contract and tort that is acceptable under the law of this country".

In *Bryan v Maloney*, the existence of a contract between a builder and the original owner gave rise to a relationship of proximity between them that extended to cover the type of loss suffered. An analogy could therefore be drawn between this relationship and the relationship between a builder and a subsequent purchaser. This relationship was similarly characterised by an assumption of responsibility and reliance, which was considered to flow from the fact that ‘ordinarily’ the builder of a house undertakes the responsibility of erecting a structure on the basis that its footings are adequate to support it for the period during which it is likely that there will be one or more subsequent owners; and a subsequent owner will have no greater but often less opportunity to inspect and test the house than the first owner. Further, being unskilled in building matters and inexperienced in the niceties of real property investment, it was likely that, if the inadequacy has not become manifest, for a subsequent owner to assume that the house has been competently built.

The two considerations based on which the courts have been traditionally reluctant to recognise a duty of care in cases of pure economic loss were held to be inapplicable in *Bryan v Maloney*. As the builder owed the first owner a duty to take reasonable care in constructing the building so as to avoid pure economic loss, it was held that there could

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36 Ibid, 627–8 (Mason CJ, Gaudron and Deane JJ), 663 (Toohey J).
be no inconsistency between the extension of that duty to subsequent purchasers and the builder’s legitimate pursuit of their own financial interests. Further, Toohey J opined that restricting recovery only to an original owner might lead to ‘sham’ first sales with the purpose of insulating builders from liability.

*Bryan v Maloney* also held that builders of both residential and commercial buildings can be sued for economic loss arising from defective work, not just by the person who contracted with them to construct the building, but also those who buy the property at a later date, even though they have probably never met or had any form of contact with the builder. On its facts, this case widened the scope of damage for pure economic loss to embrace defects which are both structural and latent. Thus, an affected owner can bring an action under *Bryan v Maloney* at any time within 6 years after the defect becomes apparent.

As Hayano (1996) points out, the tort law applicable in Australia for construction defects, as defined by *Bryan v. Maloney*, presents a broader liability for contractors and construction professionals than was previously thought to exist. It raises the possibility of unlimited terms of liability and extends the duty to non-contractual parties (Wallace, 1997). Furthermore, as Hodge (2001) points out, it has the effect of stripping the protection that once was afforded to contractors and construction professionals by a properly constructed agreement.

### 5.2. Statutory Protection for Homeowners

In some Australian States, the legislative bodies have taken the initiative to introduce statutory provisions to protect the homeowners against construction defects. These initiatives have strengthened the liberal approach taken by the courts. For example, in New South Wales, the Home Building Act has since May 1997 given the extension of liability of builders to remedy construction defects in connection with residential building work, irrespective of contractual undertakings, statutory force. In addition to the statutory protection against building defects, the Act also provides that warranties on workmanship and quality of materials supplied will be implied into every building contract. This Act does not however apply to commercial buildings.

In December 2002 the New South Wales Government announced the creation of the Office of Home Building. One of the functions of the proposed office will be to provide an inspector to conduct an investigation upon receipt of notice of a dispute concerning residential building work. Currently, provisions have been made under the Office of Fair Trading for filing complaints on defective building works, provided that the building is less than 7 yrs old and the builder fails to respond to efforts to resolve a dispute about the alleged defects in the building work. Such complaints are mediated by the Fair Trading

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37 Ibid, 182 CLR 609, 626–7 (Mason CJ, Deane and Gaudron JJ).
38 Ibid 663.
39 Act 147 of 1989
40 Section 48.
41 Section 18.
staff and can lead to a building inspector visiting the property and deciding whether the builder is responsible for defective work. This can then lead to agreement by the builder to make repairs or to the Fair Trading building inspector issuing a rectification order to the builder42.

5.3. Current Status in Australia

Recently, in Woolcock Street Investments Pty Ltd v CDG Pty Ltd43, the High Court of Australia refused to extend the liability for pure economic losses to defects in commercial premises. In this case, the Court of Appeal had previously considered that the vulnerability of those who acquired commercial premises was considerably less than that of residential purchasers44.

Majority of the High Court confirmed that no duty of care was owed, and that ‘[n]either the principles applied in Bryan, nor those principles as developed in subsequent cases’ supported Woolcock’s claim45. In Bryan, the duty of care to avoid economic loss owed to the subsequent purchaser depended upon the anterior step of concluding that the builder owed the first owner a duty of care to avoid loss of that kind46. Therefore, the case required an equation of the builder’s responsibilities to the first owner with those owed to the subsequent owner, where assumption of responsibility and reliance were characteristics of the ‘ordinary’ relationship with both parties47.

One of the key reasons for the above conclusion was that, on the facts presented in Woolcock’s case, there was no reliance by the original owner on the respondents and no corresponding assumption of responsibility48. This was because the trustee company undertaking the development for the original owner had asserted control over the investigations performed for the purpose of constructing the foundations, and thus unlike in Bryan, this was not a case where the owner had entrusted the premises’ construction to the building professional. Thus, it was concluded that, as there was no duty of care owed by the respondents to the original owner, there could not be a corresponding duty of care owed to the appellant as subsequent owner.

The Court of Appeal’s finding that commercial owners were less vulnerable than residential owners found favour with the High Court. Defining vulnerability as a claimant’s ‘inability to protect itself from the consequences of a defendant’s want of reasonable care, either entirely or at least in a way which would cast the consequences of loss on the defendant’49, the High Court held that the information before them did not show that Woolcock was in this way vulnerable to the economic consequences of the respondents’ negligence50. Further, the court asserted that there was no evidence that

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43 (2004) 216 CLR 515
49 Ibid 530 (Gleeson CJ, Gummow, Hayne and Heydon JJ)
50 Ibid 533 (Gleeson CJ, Gummow, Hayne and Heydon JJ).
Woolcock could not have protected itself from the risk. As measures of protection that could have been taken, the court suggested warranties and pre-purchase inspections\textsuperscript{51}.

The above case is important as it provides some restriction on the application of Bryan v Maloney. It therefore provides an opportunity to re-examine the rationale and policy behind current jurisprudence governing builders' liability for pure economic loss in Australia. It should be said that, although the Australian courts have adopted a more liberal approach than their English counterparts, a clear formula that can be applied in connection with all cases of pure economic loss has not been developed so far by the Australian courts. The closest the Australian courts have come in doing this was in Woolcock, when McHugh J (one of the judges who gave the majority opinion) went on to reiterate that the principles he had enunciated in the previous decision in Perre v. Apand\textsuperscript{52} should be considered in determining whether a duty exists in "all" cases of liability for pure economic loss. He stated:

"The principles concerned with reasonable foreseeability of loss, indeterminacy of liability, autonomy of the individual, vulnerability to risk and the defendant's knowledge and its magnitude are, I think, relevant in determining whether a duty exists in all cases of liability for pure economic loss. In particular cases, other policies and principles may guide and even determine the outcome. But I do not think that a duty can be held to exist in any case of pure economic loss without considering the effect of these general principles."

In a commercial world in which all kinds of protection is available including insurance and warranties against commercial risks, another question that arises from Woolcock is that, to what extent is the distinction between commercial and residential properties fair when it concerns pure economic losses arising out of construction defects. If a purchaser of a residence is a multi millionaire, with ample expertise and resources at his disposal to cover any risks, would the court have arrived at a different conclusion, remains unanswered.

6. Pure Economic Loss in Singapore

6.1. Two-stage Test

This is an area of law in which the Singapore courts have also chosen to depart from the principles espoused by the English courts. Under Singapore law, it is possible for a claimant to recover financial loss arising from someone’s negligence if the financial loss resulted from physical injury or damage to the claimant's person or property. However, if the financial loss is not a consequence of physical injury or damage to the claimant's person or property, thus a pure economic loss, then the traditional approach has been to deny recovery of compensation unless there are further factors which make it appropriate to allow recovery.

\textsuperscript{51} Ibid 523, 533 (Gleeson CJ, Gummow, Hayne and Heydon JJ).
\textsuperscript{52} (1999) 198 CLR 180.
Until recently the law in Singapore relation to recovery of compensation for pure economic loss was substantially contained in two cases concerned with construction projects, decided in the 1990s. In *RSP Architects Planners & Engineers v Ocean Front Pte Ltd* (Ocean Front)[53], a management corporation (homeowners’ association) sued the developers of a condominium project which the members of the management corporation had purchased, for compensation arising out of faulty construction of common property. The court had to decide whether the management corporation had the capacity to maintain a claim against the developers and recover the cost of remedying the defects. The cost incurred in the remedial work was considered a pure economic loss.

In answering the above question, having considered several cases from other common law jurisdictions, the Singapore Court of Appeal concluded that there is no single rule or set of rules for determining whether a duty of care to prevent pure economic loss arises in a particular circumstance, or indeed the scope of that duty, and whether such a scope includes a duty of care to avoid pure economic loss. Thus, all the relevant factors have to be considered so as to determine the proximity of the claimant and the respondent. This would, in turn, inform the court as to whether the respondent owed the claimant a duty of care and whether the scope of that duty included a duty to avoid pure economic loss.

Having considered the relevant factors, the court noted inter alia that the management corporation was an entity conceived and created by the developers who built and developed the condominium, including the common property, and undertook the obligations to construct it in a good, workmanlike manner, and thus were solely responsible for such construction. Further, after completion of the condominium, the management corporation, as successors of the developers, took over the control, management and administration of the common property, and thus had obligations to maintain the common property. The performance of these obligations was dependent on the developers having exercised reasonable care in the construction of the common property. The developers obviously knew or ought to have known that if they were negligent in their construction of the common property, the resulting defects would have to be made good by the management corporation.

Warren Khoo, J who delivered the judgment held that:

"*Short of actual privity, the relationship between the management corporation and the developer was as akin to contract as any relationship could possibly be. As pointed out earlier, the developer of a condominium knows that the management corporation will come into existence from the moment he conceives of a plan to develop it. He also knows that the management corporation will take over the control management and maintenance of the common property, and that if the common property is not properly constructed and handed over to the management corporation in that state, the management corporation will have to incur cost to rectify the defects. Thus, the entity to which the duty is owed as well as the nature and extent of loss that is likely to be sustained by that entity are well known to the developer...*"

[53] [1996] 1 SLR 113
In the circumstances, the court concluded that there was sufficient proximity between the management corporation and the developers which gave rise to a duty on the part of the developers to avoid pure economic loss for the management corporation. Further, the court concluded that there were no policy considerations which militated against the view that the developers owed the management corporation a duty to avoid pure economic loss.

The second Singapore case mentioned above, *RSP Architects Planners & Engineers v MCST Plan No. 1075 (“Eastern Lagoon”)*,54 concerned a dispute in which a management corporation sued the architects of a condominium for the costs of rectifying defectively designed walls, contending that the architects owed the management corporation a duty of care. The Singapore Court of Appeal was asked to question similar to that raised in the *Ocean Front* case, namely, whether an architect (as opposed to a developer) owed the management corporation a duty of care to avoid pure economic loss. In answering the question in the affirmative, the court emphasized that the close relationship between the parties, and the assumption of responsibility by the Architect and the known reliance by the claimant, supported the view that a duty of care existed.

Thus, in the above two cases, the Singapore Court of Appeal used a “two-stage process” to consider, firstly whether there is sufficient degree of proximity to give rise to a duty of care and next, if such degree of proximity was found, whether there is any material factor or policy which precludes such duty from arising, considering whether pure economic loss was recoverable in tort. It is interesting to note that, although this two-stage process is similar to the ‘two-stage test’ in the English case, *Anns*, in the Eastern Lagoon case, the Singapore Court of Appeal rejected the process adopted by the English courts.

As can be seen from the case of *Sunrise Crane*55 and *TV Media Pte Ltd v. Andrea De Cruz*,56 although the Singapore courts adopted a two-stage test to determine cases concerning pure economic losses, when it concerns cases involving physical damage, the Singapore courts until recently continued to adopt the three-part test established in the English case, *Caparo*, namely, foreseeability, proximity and fairness, justice and reasonableness.

**6.2. Limited application of Ocean Front**

After the decision by the Singapore Court of Appeal, some may have thought that floodgates had been opened for cases claiming economic loss. However, this was not to be, due to the judgments given by the Singapore Court of Appeal in a subsequent case, *Man B&W Diesel S E Asia Pte Ltd & anor v. PT Bumi International Tankers & anor*57.

In this case which involved a claim based on pure economic loss suffered as a consequence of defects in a ship engine, the Court of Appeal held that there was no

54 [1999] 2 SLR 449
55 [2004] 4 SLR 715
56 [2004] 3 SLR 543
57 [2004] 2 SLR 300.
contract between PT Bumi, the ship owner and the defendants who had supplied the ship’s engine as PT Bumi’s contract was only with MSE, the ship building company, who was not a party to the action. The Court of Appeal held that neither manufacturer nor supplier of the engine owed a duty of care to PT Bumi. In reaching its decision, the Court attached importance special circumstances in PT Bumi, i.e., the limited recourse that PT Bumi had been content to accept under its contract with the shipbuilder. The court said that the correct approach was not to ask whether there was any justification for depriving PT Bumi of a remedy or whether the contract had deprived PT Bumi of its right to sue the sub-contractors, but whether there were any compelling reasons to extend the law and afford a separate remedy to PT Bumi. Further, the court added that it was not for the court to help a party, after the event, to improve his commercial bargain.

The Court of Appeal also cautioned against extending the decision of Ocean Front to new situations, particularly to a scenario which was essentially contractual. It also highlighted that Ocean Front and cases such as Bryan v Maloney were primarily concerned with economic losses suffered on account of damage to real property. It was unnecessary to indicate whether the duty of care should be extended to a claim for economic losses in respect of chattels.

6.3. Single test

In the recent Court of Appeal decision of Spandeck Engineering (S) Pte Ltd v Defence Science Technology Agency, the dispute was between a builder and a certifier in which the former had sued the latter for negligent certification. This case is important as it laid down an important common law principle regulating the duty of care in the tort of negligence. It brought about legal certainty to this area of the law, at least in Singapore.

The court in this case was asked to decide on two principal issues.

- whether the test to determine the existence of a duty of care in a negligence case depended on the nature of the loss suffered by the victim, namely, pure economic loss on the one hand and physical damage, personal injury and death on the other hand; and
- whether a certifier of payment certificates owed a duty of care to the beneficiary of the payment certificates to ensure that the beneficiary does not suffer pure economic loss resulting from an under-certification of the amount due under the payment certificate.

Having reviewed the law on duty of care, the court determined that rather than having different tests for physical losses and pure economic losses, it was preferable to have a single test in order to determine the imposition of a duty of care in all claims arising out of negligence. The court concluded that it was necessary to consider foreseeability of damage as part of the single test because it was a threshold question that has to be satisfied in any event in tort actions. Thus the court commented:

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58 [2007] SGCA 37
“In our view, a coherent and workable test can be fashioned out of the basic two-stage test premised on proximity and policy considerations, if its application is preceded by a preliminary requirement of factual foreseeability. We would add that this test is to be applied incrementally, in the sense that when applying the test in each stage, it would be desirable to refer to decided cases in analogous situations to see how the courts have reached their conclusions in terms of proximity and/or policy.”

The court added that, if the answer to the question is negative, then there was no necessity to proceed further with the case. However, if the answer is positive, the court held that the single test that should be applied in determining whether the defendant is liable to the plaintiff in any tort action (both, physical damage claims and pure economic claims) has two parts:

1. Existence of a duty of care towards the defendant.

In connection with this part the court held that there should be sufficient legal proximity between the plaintiff and defendant for a duty of care to arise. Proximity includes physical, circumstantial as well as causal proximity. The court commented that, assuming a positive answer to the threshold question of factual foreseeability and the first stage of the single test (legal proximity test), a prima facie duty of care arises.

2. Policy Considerations

If the first part of the test is satisfied, policy considerations should then be applied to the factual matrix to determine whether or not to negate this duty. Relevant policy considerations would include the presence of a contractual matrix which has clearly defined the rights and liabilities of the parties, and the relative bargaining position of the parties. In this regard, in deciding on a claim based on negligence where the relationship of the parties is also connected by a contract, the court placed importance on the commercial outcome of the claim by stating effectively that if the parties have already regulated their rights and responsibilities by the contract, the claimant should not be allowed to avoid the contractual limitations put on his claim by having a go in a claim under negligence. Therefore, the court concluded that it would have to examine the contractual matrix closely before deciding whether it would be in the interest of the commerce at large to send a signal that contractual arrangements can be side-stepped by a claim under negligence. The Court also held that the two stages of the single test are to be approached with reference to the facts of decided cases, although the absence of such cases is not an absolute bar against the finding of duty.

Having developed the single test, the court considered the issue of the certifier’s liability. The court concluded that although the case passed the threshold test of foreseeability, the fact that the relevant building contract provided a dispute resolution mechanism for the contractor to resolve disputes between the contractor and the employer through

59 Paragraph 73 of the judgment.
60 Paragraph 83 of the judgment.
61 See paragraph 83.
arbitration was an important point in the whole factual matrix of the situation. The Court concluded that the requirement of proximity was not satisfied since the certifier could not be regarded as having assumed responsibility towards the contractor as the latter was free to claim the amounts under-certified by arbitration proceedings, as was stipulated in the contract⁶².

7. Conclusion

This paper has argued that the restrictive approach taken by the English and US courts concerning claims for pure economic loss is unwarranted and unjustified, especially, given that like in any other tort case, pure economic loss results in a loss suffered by an unsuspecting innocent party due to some tortuous act of another. Thus, as concluded by the Australian and Singapore courts, there is no justification for allowing a tortfeasor to go free due to the fear that entertaining such legal actions might open the flood gates for some frivolous actions. Such excuses for denying claims by victims of construction defects for pure economic losses seems unjust and fails any rigorous and testable logic. A case by case approach in which each case is considered on its merit as the Australian courts do could be recommended as a better approach.

One significant weakness of the preference by some jurisdictions to entertain cases relating to pure economic loss in connection with construction defects only under contractual remedies is that, the victim of the contractual breach may be often left under compensated. This is because due to the precedence created in judgments such as Hadley v. Baxendale⁶³, courts might take the view that damages such as business losses due to closure of operations during repair works to correct the construction defects might be considered as too far afield from those reasonably in the contemplation of the contracting parties at the time of the construction⁶⁴. In other words if the victim of a construction defect sues the party responsible for the defect for contractual breach, the recoverability of consequential damages would hinge on whether the harm incurred was foreseeable to the defendant builder. Such limitations may not be imposed if legal actions are allowed under tort.

Even in the Australian and Singapore jurisdictions, it cannot be said that the doubts concerning the division between compensable claims of pure economic loss and non compensable claims of pure economic loss have been satisfactorily cleared. For example, as pointed out in this paper, in Australia, the distinction drawn between commercial properties and residential properties is not based on any sound legal reasoning. In Singapore, although the courts have now developed a single test, the room left for application of policy consideration in deciding the compensability of a claim is likely to attract issues such as how can tort law strike a balance between no compensation and too

⁶² See the discussion in Chan and Gunawansa, Asia Pacific Construction Law Casebook 2007, Chapter 6.
⁶⁴ In Hadley v. Baxendale the court concluded that the maker of a defective mill shaft was not responsible for the mill's lost revenues while it was shut down awaiting delivery of a new mill.
much compensation; and how should the legal systems resist the feared flood of claims, which leaves some uncertainty over the current status of the law applicable to pure economic loss.

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Environmental Crime and the Role of the Magistrates’ Courts

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Abstract:
There are broad and long-standing concerns with enforcement mechanisms and practice in environmental law. In particular, criticisms have been raised with regard to the low number of prosecutions, the level of penalties imposed by the courts and the ability of local magistrates’ courts to deal with environmental crime. Such dissatisfaction must be viewed within a complex contextual back drop. For many years there has been debate as to whether breaches of environmental regulation should in fact be seen as ‘real crime’. The current wider ‘better regulation’ agenda of the government is at the same time seeking to ease burdens on industry. There has also been a paradigm shift in the broader context of criminal justice from bringing offenders before the court and imposing sentence to the adoption of a wide range of fixed penalties and fiscal fines. The limited resources of government and regulator are also influential factors, especially in the current economic climate. These pressures are set against increasing environmental awareness and the imperative of global warming. There is also a body of thought that maintains that environmental crime should be viewed and dealt with more seriously than is currently the case. This paper explores the competing arguments and considers whether criticism of the current administration of justice in environmental cases in the magistrates’ courts (where the vast majority of cases are heard) is justified. Consideration is also given to the future role of the magistrates’ courts in the light of new provisions recently introduced in the Regulatory Enforcement and Sanctions Act, 2008.

Keywords:
Environmental law, Magistrates’ courts, Regulatory Enforcement and Sanctions Act, 2008.
1 Introduction

There has long been criticism of the magistrates’ courts and their ability to deal effectively with environmental law cases. Features of this include the low number of prosecutions, the level of penalties, the lack of ability in magistrates’ courts to deal with the complexity of environmental prosecutions, magistrates’ inexperience and lack of training and guidance.

The first section of this paper reviews these common areas of criticism. They are considered in turn although they are inextricably linked. The low level of prosecutions impacts upon magistrates’ experience and their ability to deal with the complexity of many environmental law cases. Inadequate training and guidance also affect the ability of magistrates to deal effectively with environmental law offences and deliver an appropriate level of penalty. It must also be borne in mind that, although many argue that the fines imposed in environmental cases are too low, there are those who do not view environmental crime as ‘real crime’ and thus believe that the level of penalties meted out by the magistrates’ courts is more than adequate.

The paper then proceeds to consider a number of additional factors that, it is argued, contribute to the perceived inability of magistrates to deal effectively with environmental crime. Consideration is given to the role of the Environment Agency and its approach to prosecution. Magistrates would be aided by clear presentation of the prosecution case and the presentation of written schedules and the practice in these areas is examined. Finally the lack of tariff guidelines for sentencing is considered.

Studies have previously been conducted into these various aspects of practice in the magistrates’ courts in 2003 (Dupont & Zakkour) and 2005 (Moran) and a further study was carried out in Salford in 2007 by Andrew. The first two sections of the paper draw upon the results of these studies as well as more current data in order to establish that trends identified from 1999 were still apparent in 2007.

Prevailing opinions about the nature of environmental crime, the Government’s agenda and limited resources form part of the contextual backdrop to current practice in the magistrates’ courts and criticism of the manner in which environmental justice is delivered there. The paper looks briefly at these elements of the external environment, which may influence practice and drive reform and then provides an overview of some of the solutions that have been suggested and reports prepared leading up to the Regulatory Enforcement and Sanctions Act, 2008 (RESA).

At a point when no orders have been made for civil sanctions, limited predictions can be made as to the effect of Part 3 of RESA. It certainly seems that the intention was to divert a part of environmental justice away from the courts. However, the possibility of many cases going to appeal in the new First Tier Tribunal may mean that ultimately this is not the case. There is also fertile ground for litigation in terms of the compliance of RESA with the provisions of Art 6 of the European Convention of Human Rights (ECHR). Some areas in which RESA might possibly be in breach of the Convention are considered in the final part of this paper.
2 Traditional Areas of Criticism

The level of penalties for environmental crime in the courts generally and in the magistrates’ courts specifically has attracted comment and criticism over some period of time. It is arguable that the small number of cases heard before the magistrates and their relative lack of experience in dealing with environmental cases, together with the lack of training and guidance available to them and the often complex and technical nature of the cases all contribute to the perceived lack of ability to deal with environmental crime and sentence effectively.

2.1 Level of Penalties

There is a considerable body of opinion that penalties for environmental crime in the courts are too low (Environmental Audit Committee (2004), Hampton Review (2004), DEFRA (2006)). The Environment Agency (EA), whose responsibility it is to enforce environmental law in England and Wales, has consistently voiced its frustration at the low level of fines imposed (e.g. Spotlight on Business, 2006). Importantly, as noted by both the Environmental Audit Committee and the Hampton Review, the penalties imposed, in the majority of cases, do not reflect the economic benefit derived from the non compliance and, therefore, do not act as a deterrent.

The study by Dupont & Zakkour found an average level of fine for organisations between 1999 – 2002 of £5887 and the survey of Salford Magistrates by Andrew for the same period produced a very similar result. The Andrew study revealed little change by 2004, with an average fine for organisations appearing before Salford Magistrates’ Court of £5825. The latest figures available from the Environment Agency (for 2007) indicate an average fine for organisations across all courts in England and Wales of £8000. The Agency note that there has been in the region of a 5% increase in the level of fine annually, which is just about in line with inflation. (Stott, 2009).

2.2 Inexperience

Historically there has been a very low number of environmental prosecutions (Carter, 1992) and this has been attributed to an informal regulatory style, incorporating a cooperative approach (Vogel, 1986). However, following the formation of the Environment Agency in 1995, a greater willingness to bring offenders to court has emerged (Moran, 2005). Nonetheless, prosecution numbers remain low. The average number of environmental offence prosecutions in England and Wales between 1999 and 2003, per court, was 14.

Dupont and Zakkour looked at one court in the South East of England and in a survey of 149 magistrates, out of 32 respondents, 12 had not dealt with any environmental prosecutions, nine with less than one per year, nine with one to two cases per year and two with two to three cases. During the same period, 19 separate defendants were dealt with at Salford Magistrates’ Court. Responses to the Salford survey also showed that Salford Magistrates had little experience of environmental offences. In fact one respondent commented ‘In 13 years on the Bench, I have never dealt with any of the cases identified in Annex 1’. In 2007, the Environment Agency, in England and Wales, brought successful prosecutions against 163 individuals (with a success rate of 95%).
The Agency notes that the number of prosecutions has been fairly static over the past 8 years (Stott, 2009).

2.3 Training and Guidance

When experience is lacking, training and guidance are of paramount importance. There is guidance in place for magistrates’ courts in the form of the Magistrate’s Court Sentencing Guidelines (a new edition of which was published by the Magistrates’ Association in 2008). However, there is only a small section that deals with both health and safety offences and environmental offences and, unlike with other criminal offences, there are no published tariff guidelines. (This latter failing will be discussed further in the next section of the paper). In 2003 the magistrate’s toolkit ‘Costing the Earth’ was published and this does incorporate example case studies. However, for guidance documents to be of benefit, magistrates must be aware of and utilise them. In the survey conducted by Dupont and Zakkour, one third of respondents were unaware of relevant guidance and one tenth had not read it. The Salford study showed similar results, with not a single respondent being aware of the magistrate’s toolkit.

The necessity to supplement guidance with training is acknowledged (Costing the Earth, 2003) and yet Moran found in the 2005 study that only 23 out of 198 magistrates questioned had received any training on environmental law issues in the preceding four years. The Salford study revealed that three magistrates had received training delivered by the Environment Agency. Concerns have been raised with regard to the prosecuting body training the decision makers (Parpworth, Thompson & Jones, (2005)). It is also interesting to note that despite having received EA training, the Salford Magistrates remained unaware of ‘Costing the Earth’, which does not feature in the Agency’s training package. Resources are clearly an issue here and there is certain to be a reluctance to dedicate training resources to an area in which few cases are actually heard in the magistrates’ courts.

2.4 Complexity of Cases

It seems that magistrates with little experience and training and limited awareness of available guidance are, on occasion, required to hear environmental cases, which, by their nature, are often complex and technical. There are those who doubt the suitability of the criminal courts to deal with such cases at all (Lord Woolf, 1992, Rowan-Robinson and Ross, 1994, Moran, 2005). Lawyers, themselves, are not immune to the complexities and this is illustrated in Parpworth’s (2007) analysis of two cases1. He notes that

‘the two cases serve as useful illustrations of the inherent dangers in charging a defendant with the wrong offence, or, if the correct offence has been charged then failing to present the case in the most appropriate way.’

This serves to demonstrate the intrinsic complexity of some environmental offence cases as well as the role played by the prosecuting authority.

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2.5 Summary

In summary, it does seem that certain features of environmental prosecutions in the magistrates’ courts, identified by commentators over the years, remain valid. Levels of penalties in the courts are still low and there are only a small number of cases brought before magistrates who have limited guidance and training to assist them with the often complex and technical issues involved.

3 Other Factors

In section two, above, the role of the Environment Agency as enforcer and prosecutor and the sentencing guidelines available to magistrates’ courts were touched upon. Arguably, these are potentially very significant factors, influential upon, what are perceived as, extremely low fines imposed by the courts. This section of the paper will examine these in further detail.

3.1 The Role of the Environment Agency

Over 90% of all environmental offence cases are brought by the Agency (Dupont and Zakkour, 2003). Hence, its role in determining the number of prosecutions coming before the courts must necessarily be a significant one. It has been suggested that the regulator ‘passes the buck’ to the magistrates’ courts (Watson, 2005). The argument being that there is no point in bringing cases before magistrates who do not understand the area of law and deliver derisory sentences and thus the low number of cases being prosecuted is explained. The Environment Agency denies any reluctance to bring prosecutions (Stott, 2003 – in response to Watson, 2003) but maintain that they are concentrating resources on behaviour that represents the greatest risk to the environment. It is interesting to note, however, that despite the Agency policy to prosecute all incidents of ‘major’ impact, Ogus and Abbott (2002) noted that in 1999 – 2000 only 23% of such incidents resulted in prosecution. They argue that the Agency is applying ‘the realistic prospect of conviction’ test too rigidly and this assertion is, to some degree, supported by the Agency’s 95% success rate. It should, however, be remembered that the strict liability nature of most environmental offences is also instrumental in the Agency’s high level of successful prosecutions.

The Environment Agency consistently criticises the low level of fines in the courts and yet there is a clear argument that the underlying problem may be the reluctance of the regulatory bodies to prosecute. As Watson (2003) argues

‘If prosecutions became more common magistrates would be better equipped to treat environmental offences as serious crimes’

(see also Moran, 2005). The result is a vicious circle. Most offences are not prosecuted, the magistrates gain little experience and deliver lenient sentences. This, in turn, discourages future prosecutions.
Criticism, suggesting a risk averse attitude on the part of the Environment Agency and a reluctance to prosecute, must, however, be considered within the context of limited resources and this crucial factor will be explored further in the next section of the paper. However, figures for 2004 show that the Agency spent only 3% of its regulatory budget on enforcement activity and as Watson (2004) points out ‘there is a powerful case could be made for devoting more resources to the prosecution of environmental criminals’.

3.2 Presentation of the Prosecution Case

Of those breaches of environmental legislation that do find their way to court, there is a further issue with regard to the presentation of the case to the magistrates. The complexity of many environmental offences has already been noted and this, coupled with the inexperience of the magistrates, suggests that clear presentation of the case and the relevant aggravating and mitigating factors would aid the magistrates in their decision and sentencing. The survey conducted of Salford magistrates by Andrew in 2007 addressed these particular issues. Respondents were of the view that, on the whole, prosecutors explained relevant legislation satisfactorily. However, answers to the questionnaire seemed to suggest that practitioners in Salford tended to ignore the recommendation in *R v Friskies Pet Care (UK) Ltd.*\(^2\) to provide written schedules of mitigating and aggravating factors. No respondent indicated with certainty that either the prosecution or defence had presented written schedules. This omission is significant in terms of magistrates determining an appropriate penalty.

3.3 Sentencing Guidelines

Magistrates’ courts would, no doubt, be further assisted by clear guidance for the lower courts with regard to sentencing for environmental law offences. The Environment Agency is of the view that the lack of specific criteria for sentencing (which are provided for mainstream crime) is one of the major reasons for disparity in sentencing. The Sentencing Advisory Panel (2000) also recognised the lack of experience of magistrates and the complexity of the sentencing exercise as well as the perception that the fines imposed by magistrates’ courts were too low. The panel noted that guidelines from the Court of Appeal would be an important contribution to consistency in sentencing for environmental offences in the lower courts.

The Court of Appeal had the opportunity to follow the Panel’s advice and set tariff guidelines in the case of *Environment Agency v Milford Haven Port Authority*\(^3\). It declined to do so, referring instead to guidance in the case of *R v F Howe and Son (Engineers) Ltd.*\(^4\). The Court of Appeal has twice since declined to issue tariff guidelines\(^5\).

In 2006, Macrory recommended that it would be helpful for the Sentencing Guidelines Council to publish sentencing guidelines for cases of regulatory non compliance and the Council is to consider this in its current work programme. The proposal is to develop

\(^2\) [2000] 2 Cr App R (s) 40.
\(^3\) [2000] 2 Cr App R (S) 423.
\(^4\) [1999] 2 AER 249 (CA (Crim Div)).
general guidelines regarding regulatory offences which could also encompass issues concerning environmental offences.

### 3.4 Summary

Reluctance on behalf of the Environment Agency to bring environmental prosecutions may explain the low level of cases seen before the magistrates’ courts. This directly impacts upon the experience of magistrates in terms of sentencing and may, therefore, in part, serve to explain the low levels of fines handed out. The magistrates are not aided in their sentencing function by the lack of a tariff guideline for environmental offences and the absence of written schedules of mitigating and aggravating features.

### 4 The Backdrop

There are clearly multiple factors at play that result in what some see as inadequate penalties for environmental crime. These have to be viewed in a context of scarce resources, attitudes to the environment and the current government agenda.

#### 4.1 Real Crime?

An important consideration when looking at the level of penalties in the magistrates’ courts for environmental crime is the variation in how seriously such offences are viewed. There is an argument that environmental offences are not, in fact, ‘real crime’ and even that they do not legitimately form part of the business of the criminal justice system. Some view such offences as mere ‘quasi crime’. Viscount Dilhorne in *Alphacell v Woodward* referred to environmental offences as

> ‘acts which are not criminal in the true sense but are acts which in the public interest are prohibited under statute’.

This perception will clearly affect notions of moral culpability and it may be that magistrates have their own views on this issue or that they are influenced by defence lawyers and this is reflected in the sentences imposed. The strict liability nature of most environmental offences may well serve this cause (De Prez, 2000).

On the other hand, there is an alternative view as expressed by Rt. Hon. Lord Justice Sedley (Costing the Earth, 2003).

> ‘environmental crime, if established, strikes not only at a locality and its population, but in some measure too at the planet and its future. Nobody should be allowed to doubt its seriousness’

This sentiment is echoed by the Environmental Audit Committee (2004).

#### 4.2 Shift in the Criminal Justice System

In mainstream crime there has been a move to alternative disposals such as administrative penalties. These are widely used by the Police and the Crown

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6. [*1972* AC 824].
Prosecution Service. In 2006, in excess of 51% of all criminal arrests were dealt with by alternatives to prosecution such as fixed penalties and conditional cautions (The Guardian, 2007).

This trend does not, however, align to developments in Europe. A new Directive on the protection of the environment through criminal law clearly recognises the importance of criminal sanctions in enforcing environmental regulation. It should, however, be noted that the Directive recognises that there are some member states that have no criminal sanctions for environmental law breaches at all and that a key aim is to bring all states up to a minimum standard.

### 4.3 The Better Regulation Agenda

The better regulation agenda is driven by the Department for Business, Enterprise and Regulatory Reform (BERR). It forms part of a programme of reform to address the complaints of business and frontline public and third sector workers about the time spent on regulation and the ways that they find rules frustrating. Key elements of the agenda are:

- Regulating only when necessary and doing so in a light-touch way that is proportionate to the risk
- Setting exacting targets for reducing the cost of administering regulation
- Rationalising inspection and enforcement arrangement
- Supporting compliance and tackling businesses that deliberately or consistently flout their regulatory responsibilities

BERR reason that better regulation promotes efficiency, productivity and value for money and that proportionate regulation and inspection can help to drive up standards and deliver better outcomes on the ground.

### 4.4 Resources

Lack of resources with the Environment Agency has already been mentioned and this is undoubtedly a factor in the targeting of enforcement action and the level of prosecutions. The Agency is heavily reliant on central government funding (60% grant aid) and a large proportion of its expenditure goes on flood defence (55% - 2006/2007). In 2006/2007, grant aid from The Department of Food and Rural Affairs (DEFRA) was reduced by a total of £28 million as a result of budget difficulties within DEFRA. Nor is the resource issue restricted to the funding of the regulatory body. Our system of lay magistrates requires central support and funds are necessary to provide training and publish guidance. The current financial climate can only serve to accentuate the scarcity of resource and make probable further decreases in grant aid to the Agency.

### 4.5 Summary

The factors considered in parts two and three above, which undoubtedly influence practice in magistrates’ courts, form part of a larger picture in which other external

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7 Dir 2008/99EC on protection of the environment through criminal law OJL 328 6.12.2008 p 28 – 37,
influences have contributed to the call for change in the way in which environmental offences are dealt with. There are recognised needs to conserve scarce resources, ease the burden on industry and align with a shift away from criminalisation of ‘quasi criminal’ offences.

5 Reports and Government Action

Given the criticisms outlined above, the ongoing debate with regard to environmental crime in the magistrates’ courts and the current trends identified in the preceding section, it is hardly surprising that attention has been focused upon regulatory crime generally and environmental crime in particular. DEFRA has commissioned a series of reports on such matters as sentencing, the possibility of an environmental tribunal or court, the use of civil penalties and enforcement. Two influential reviews in 2005\textsuperscript{8} and 2006\textsuperscript{9} subsequently led to the enactment of RESA in 2008.

5.1 An Environmental Court

There is a body of argument, which advocates that all matters relating to environmental law (criminal and civil) including planning law should be dealt with in a ‘stand alone’ environmental court. As long ago as 1992, Lord Woolf suggested that there was general justification for a specialised environmental court (Woolf, 1992). In the same year, Carnwath (1992), looking specifically at planning enforcement issues, suggested that

‘there may be a case for reviewing the various courts and combining in a single jurisdiction as in the Land and Environment Court of New South Wales’.

There have been mixed views expressed as to the success of the New South Wales project and its potential for application in this country (e.g. Day et al, 2001, Ryan, 2002, Stein, 2002). Support for an environmental court reached its peak early this century, and by 2004, Carnwath, who had previously supported the idea, admitted to being less ambitious about the project.

5.2 A Specialist Magistrates’ Court

Another alternative way of better dealing with environmental offences is by means of specially designated magistrates or district judges in home courts or even specially designated courts. This idea was supported by the Environmental Justice Project of 2004 and has found some support with commentators (e.g. De Prez, 2000). A similar model is adopted with health and safety prosecutions which are brought to a single magistrates’ court in a particular region\textsuperscript{10}. If such a model were to be adopted, training could then be focused upon a small pool of magistrates or district judges and their legal advisers.

\textsuperscript{8} Hampton Review (commissioned by the Treasury).
\textsuperscript{9} Macrory Review (adopted by the government).
\textsuperscript{10} There are ten across England.
5.3 The Hampton Review

This review, published in 2005, looked at regulatory systems in general. It advocated a risk based approach to regulation and the relief of the burden of regulations on business. The Report highlighted the low levels of fines, in particular for environmental offences and concluded that these were generally not commensurate with the severity of the offences and lacked deterrent effect. The Report also recognised the need to broaden the range of sentences for regulatory offences and advocated the adoption of administrative penalties. The possibility of introducing restitutive and/or restorative justice orders was also considered.

5.4 The Macrory Review

The Macrory Review very much complemented the Hampton risk based approach. It recommended non-criminal penalties, specifically monetary administrative penalties, in order to resolve some cases more effectively and quickly. The overall tenet was for a flexible system of regulatory sanctions that yet preserved the importance of the criminal prosecution. The Review recommended the adoption of enforceable undertakings and the strengthening of statutory notices as well as the consideration of restorative justice and other alternative sentencing options.

5.5 The Regulatory Enforcement and Sanctions Act, 2008

The 2008 Act adopted, almost wholesale, the recommendations of the Macrory Review. Part 3 of the Act creates civil sanctions in relation to regulatory offences. There is a series of sanctions, provision for which may be made by a minister, by order. A fixed monetary penalty is one option. This must be preceded by a notice of intent and there is provision for the possibility of payment of a lesser sum. The monetary penalty cannot exceed the maximum amount of the fine for the offence. Another alternative is the imposition of one or more discretionary requirements. These can take the form of a variable monetary penalty or a requirement to take whatever steps the regulator may specify. An offender can make an undertaking as to action and if this is accepted then the regulator can take this into account in deciding on discretionary requirements.

The power to serve stop notices is provided for in the case of serious harm to human health, the environment or the financial interests of consumers or when there is likely to be a relevant offence committed. Compensation is available. Non compliance with a stop notice is an offence. The regulator does not need to be satisfied beyond reasonable doubt that an offence has been or is likely to be committed in serving a stop notice. There is a further power to accept enforcement undertakings when there are reasonable grounds to suspect that the person has committed a relevant offence. This effectively allows for retrospective compliance or a restoration undertaking. Appeals are to a ‘General Regulatory Chamber’ of the First Tier Tribunal established pursuant to the Tribunals Courts and Enforcement Act, 2007. A DEFRA Project will consult with the Environment Agency and Natural England on the potential use of this range of civil sanctions. No orders are likely to be in place until at least 2010.

11 Sections 36 – 71.
12 Fairer and Better Environmental Enforcement Project.
5.6 Summary

A series of reports and recommendations have ultimately seen a move away from the notion of a discrete environmental court or specialist tribunal to the adoption of a broader range of possible sanctions, incorporating administrative penalties. The enactment of RESA reflects the risk based approach adopted by the Hampton and Macrory Reports and the BERR agenda to ease the burden upon business and conserve resources.

6 Consequences

The issue of the perception of environmental offences was discussed above. The introduction of administrative sanctions and the possible diversion away from the courts of certain sections of environmental crime can only serve to reinforce the idea that environmental offences are less serious than ‘traditional’ crime. Some see this development as heralding the beginning of the decriminalisation of environmental offences (Black, 2007). There is a recognisable paradox here as this trend sits alongside an increasing emphasis globally, regionally and nationally upon the global warming imperative and the serious consequences of environmental crime.

The risk based approach adopted by the Hampton and Macrory Reviews and reflected in RESA appears to be intended to reserve criminal prosecution for only the most serious of cases. It is difficult at this stage to predict the effect of the adoption of alternative sanctions when this, in fact, does occur. However, given the current prosecution policy of the Environment Agency and the evidence presented earlier in this paper with regards to the low level of prosecutions, the question might be asked as to how this will differ from the status quo (Black, 2007). In all probability, the new alternative sanctions will mean fewer environmental cases in the Magistrates’ Courts as the more serious offences will simply pass on to the Crown Court.

When regulators’ powers are extended such that these sanctions can be operated, the situation will exist whereby the enforcing body will also be making decisions with relation to criminal offences and penalties. This will mean a realignment of the courts and the regulators and, it is argued, the subsequent weakening of the enforcement process (Black, 2007). There is also a distinct possibility that the new administrative sanctions will simply be treated as a business expense by industry and cease to have any deterrent effect at all.

Much has been made of the time and cost to be saved by bringing fewer cases before the courts. The Minister of State (Lord Jones) when introducing the Bill on its second reading commented

‘Less time preparing for court might be bad news for lawyers – I used to be one – but is very good news for everyone else’.

However, it is predicted that there will be much business for lawyers in appeals to the First Tier Tribunal (Pickles, 2008). Those who championed an environmental court might wish to watch closely the development of the General Regulatory Chamber of the
First Tier Tribunal, which may well ultimately fulfil just the role that they foresaw for a specialist court.

There may, in fact, prove to be a wealth of richness in litigation if challenges under human rights provisions emerge. Despite being named as civil sanctions, it may be the case that, for the purposes of the European Convention of Human Rights (ECHR), the RESA sanctions will be considered criminal in nature (Maurici and Turney, 2008). This raises the possibility of challenges under Art 6.2 ECHR. It is arguable that the sanctions scheme fails to give effect to the presumption of innocence and there is no option for the subject to choose criminal proceedings\textsuperscript{13}. There is also some doubt about the adequacy of the appeal process, which is limited to errors of fact, errors of law, unreasonableness and the nature of the penalty. The burden appears to be on the subject (contrary to the presumption of innocence). Also, the regulator is, in effect, making the decision as to whether the matter is proved beyond reasonable doubt. Without recourse to a full appeal, this decision of the regulator will not be subject to review.

The Art 6.3 rights to a fair trial following the charge of a criminal offence may also be breached, in particular, the requirement for legal aid. The position with regard to appeals to the new tribunal body in this respect is currently unclear. It may be the case that there are other rights to be invoked such as protection against self-incrimination.

It is, as yet, unclear what kind of level of fixed penalty might be levied. Certainly, the penalty cannot exceed the maximum fine and figures in the region of £500 maximum have been mentioned. It may well be that another area of challenge will surround the proportionality of penalties. In the \textit{International Transport Roth}\textsuperscript{14} case, a fixed penalty was found to be incompatible with ECHR rights.

\section*{7 Conclusions}

Previous studies (Dupont & Zakkour, 2003 and Moran, 2005) have found that there are problems with the way in which our magistrates’ courts dispense environmental justice. The study conducted by Andrew (2007) seems to indicate that this has not changed. It would appear that lack of experience, guidance and training together with the complex nature of many environmental law cases, mean that magistrates are not in a position to always reach sound decisions on guilt and sentence.

It can be argued that the Environment Agency, through a risk averse attitude and a reluctance to prosecute, contribute to the consequent lack of experience in the magistrates’ courts. Magistrates are not aided in their task, either, by the way in which the prosecution case is presented, the lack of written schedules and the absence of tariff guidelines for sentencing.

Financial pressure, the better regulation agenda and a trend towards the use of alternative disposals in other areas of criminal offence have all been influential in a

\textsuperscript{13} As in Part 1 of the Criminal Justice and Police Act, 2001 and under fixed penalty notices in Part 111 of the Road Traffic Offenders Act, 1988.

\textsuperscript{14} \textit{International Transport Roth GmbH v SSHD} [2003] QB 728.
series of reviews on environmental justice. Calls for a discrete environmental court or tribunal have now fallen by the wayside and the two most recent reviews have led to the adoption of an Act that introduces civil sanctions for regulatory offences.

In all probability this will mean a further decrease in environmental cases coming before the courts and almost certainly so in the magistrates’ courts. It may not, however, mean an overall decrease in related litigation. There are likely to be many appeals to the First Tier Tribunal, which may ultimately take on some features of an environmental court. With potentially hundreds of relevant offences, challenges under human rights law may well provide another fertile ground for litigation.

With no orders yet made under RESA, it is far too early to assess its impact. However, if civil sanctions do signify the beginning (or in fact the continuation) of a trend to devalue environmental crime and become a mere business expense, then these will be unfortunate consequences indeed. One cannot help wondering if, by tackling some of the problems that surround the administration of environmental justice in our magistrates’ courts and perhaps following the example of the way in which our existing courts deal with health and safety offences on a regional basis, environmental justice might be better served.

8 References


15 The Hampton and Marcrory Reviews.


The South African Constitution: are sustainable buildings mandatory?
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Abstract:
The South African Constitution is widely recognised as one of the most progressive constitutions worldwide. The Constitution has a strong focus on human rights and the environment. This recognised through a requirement for reasonable legislation and other measures to be developed to ‘secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development’

This paper aims to understand the implications for the built environment of this statement through interpreting and expanding this into an explicit set of requirements for the built environment. The paper discusses these requirements in light of existing legislation and reflects on whether adequate measures are being taken in the built environment to implement and promote environmental aspects of the South African Constitution.

Keywords:
• Built Environment, Constitution, Sustainability

1 Introduction

This paper reviews the environmental and sustainability implications for the built environment of the South African Constitution. In particular, Section 24 on environmental rights is analysed to ascertain the implications and obligations of this for the built environment.

The analysis shows that the Constitution includes a set of explicit rights in relation to the environment and sustainable development. The Constitution also requires that these rights to be realised through ‘through reasonable legislative and other measures’. In order to ascertain whether these rights are being realised through these means the paper reviews key building-related legislation in the form of building regulations, health and safety legislation and environmental management legislation.

1 Section 24 of the South African Constitution
The review reveals that current building-related legislation only partially addresses the environmental and sustainability rights stated in the Constitution. The paper outlines a number of areas where legislation falls short of Constitutional requirements and makes some recommendations on how these gaps could be addressed.

2 The South African Constitution

Constitutions set out how government is organised and defines how power should be shared and wielded. Like a contract between those in power and those who are subjected to this power, a Constitution defines the rights and duties of citizens, and outlines the mechanisms to keep those in power in check. (South African Constitutional Court, 2009)

The South African Constitution was developed in 1996. As the supreme law of South Africa it may not be superseded and government and other parties may not violate provisions within this. It contains a Bill of Rights that enshrines the rights of all people in South African and affirms the democratic values of human dignity, equality and freedom. The Bill has sections covering equality, human dignity, privacy, freedom of religion belief and opinion, environment, property, housing, healthcare, food, water and social security, children, education, language and culture. Through a section on equality, the Bill requires that all people have full and equal enjoyment of these rights and freedoms:

\[
\text{Everyone is equal before the law and has the right to equal protection and benefit of the law.}
\]

\[
\text{Equality includes the full and equal enjoyment of all rights and freedoms. To promote the achievement of equality, legislative and other measures designed to protect or advance persons, or categories of persons, disadvantaged by unfair discrimination may be taken.}^2
\]

Rights in the Bill are however subject to limitations. These are outlined in Section 36 of the Bill:

\[
\text{The rights in the Bill of Rights may be limited only in terms of law of general application to the extent that the limitation is reasonable and justifiable in an open and democratic society based on human dignity, equality and freedom, taking into account all relevant factors, including}
\]

\[\begin{align*}
a. & \quad \text{the nature of the right;} \\
b. & \quad \text{the importance of the purpose of the limitation;} \\
c. & \quad \text{the nature and extent of the limitation;} \\
d. & \quad \text{the relation between the limitation and its purpose; and} \\
e. & \quad \text{less restrictive means to achieve the purpose.}^3
\end{align*}\]

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2 Section 9 of the South African Constitution
3 Section 36 of the South African Constitution
The role and responsibility of government is also outlined in the Bill. This specifically requires government to achieve the rights outlined in the Bill:

_The state must respect, protect, promote and fulfil the rights in the Bill of Rights._ 4

Environmental rights in the Bill of Rights include the right to an environment that supports health and well being. It also requires legislation to be developed to ensure that the environment is protected and that development that does occur is both sustainable and justifiable:

24. Environment

_Everyone has the right_

- a. to an environment that is not harmful to their health or well-being; and
- b. to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that
  - i. prevent pollution and ecological degradation;
  - ii. promote conservation; and
  - iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development 5

2.1 Implications of Section 24 of the Constitution for the Built Environment

There are a range of implications for the built environment of Section 24 outlined above. This requires some interpretation of the Section and for the following questions to be answered:

- What is defined as an environment?
- How is health and well being defined?
- What does ecologically sustainable development mean?
- What is meant by justifiable economic and social development?

2.2 The Environment

There is no comprehensive international treaty on human rights and environment that can be used to understand how the environment should be defined in the Bill of Rights (South African Human Rights Commission, 1996a). The 1972 Stockholm Declaration on the Human Environment adopted by the UN Conference on the Human Environment however begins to define rights and obligations of man in regard to the environment:

_Man has the fundamental right to freedom. Equality and adequate conditions of life, in an environment of quality that permits a life of dignity and well being, and he bears the solemn responsibility to protect and improve the environment for present and future._ 6

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4 Section 7 of the South African Constitution
5 Section 24 of the South African Constitution
6 UNEP http://www.unep.org viewed: 06/06/2009
The African Charter on Human and People’s Rights adopted by Heads of States of the Organisation for African Unity in 1981 sets out how the environment should be interpreted in terms of human rights within an African context:

All peoples shall have the right to a general satisfactory environment favourable to their development.\(^7\)

Section 24 of the Bill of Rights indicates that the environment can be defined both as natural and man-made environments. De Waal suggests that this definition includes ‘man made objects and cultural and historical heritage’ (De Waal 1999). Feris argues therefore that in interpreting Section 24, traditional rights, needs and values and the dignity of indigenous people should be taken into account (South African Human Rights Commission, 1996b).

2.2.1 Implications for the built environment

Therefore the following implications of the South African Constitution can be inferred for the built environment:

- The built environment should create environments favourable for the development of people.
- Built environments should take into account the traditional rights, needs and values of indigenous peoples.

2.3 Health and Well Being

The World Health Organisation (WHO) defines health in the following way:

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.\(^8\)

Given this broad definition it is clear that environments conducive to health and well being are likely to be described in different ways by different people and socio-economic groups. Wealthy people may wish to protect the environment in order to avoid mental or aesthetic discomfort. Poor rural people, on the other hand, would want to protect the environment because they rely on this directly for clean water and food. (South African Human Rights Commission, 1996a)

2.3.1 Implications for the built environment

Therefore the following implications of the South African Constitution can be inferred for the built environment:

- The built environment should ensure that built environments support physical, mental and social well being.

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Criteria used to define physical, mental and social well being in built environment must take into account, and respond to, the particular situation of the people who occupy and use these built environments.

2.4 Ecologically Sustainable Development

Principles from the Rio Declaration on the Environment and Development can be used to define the sustainable development. The principles below from the Declaration indicate that development must be equitable and that environmental protection must be integrated into development:

Principle 3
The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

Principle 4
In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

2.4.1 Implications for the built environment

The following implications of this definition for the built environment can be inferred:
• Development of the built environment should ensure that developmental and environmental needs of present and future generations are achieved in an equitable way.
• Conservation and protection of the environment should be integrated into any built environment development process.

2.5 Justifiable Economic and Social Development

Justifiable economic and social development can be interpreted through reference to other sections of the Bill of Rights. These sections include rights to housing, healthcare, food, water and social security and education:

26. Housing
Everyone has the right to have access to adequate housing.

27. Health care, food, water and social security
Everyone has the right to health care services, including reproductive health care.

28. Education
Everyone has the right to a basic education, including adult basic education; and

9 UNEP http://www.unep.org viewed: 06/06/2009
10 Section 26 of the South African Constitution
11 Section 27 of the South African Constitution
c. to further education, which the state, through reasonable measures, must make progressively available and accessible.
d. sufficient food and water.\textsuperscript{12}

It can be argued that development that helps to ensure that these rights are achieved can be classified as \textit{justifiable economic and social development}. Conversely, development that does not directly contribute to the achievement of these rights may not be deemed justifiable.

2.5.1 \textit{Implications for the built environment}

Therefore the following implications of the South African Constitution can be inferred for the built environment:
- Development of built environments that directly contribute to the achievement of rights outlined in the Bill of Rights may be deemed to be justifiable
- Development of built environments that do not contribute to the rights defined in the Bill of Rights may be deemed not to be justifiable.

2.6 \textit{Discussion}

Given the above interpretation of Section 24 of the Bill of Rights, it is possible to review current building related legislation in order to ascertain whether this is effective in upholding the Constitution. Legislation used to control building development in South Africa include the Building Regulations (South African Bureau of Standards 1990), the Occupational Safety and Health Act (Department of Labour 1987, 1988, 1983), and the National Environmental Management Act (Department of Environment and Tourism 1998). This legislation is reviewed below to ascertain its alignment with the environmental and sustainability building implications of the South African Constitution.

2.7 \textit{Health and Well Being}

Legislation on health and well being in built environments can be found in the Building Regulations and in the Occupational Health and Safety Act. The Building Regulations set out minimum requirements for lighting and ventilation (South African Bureau of Standards, 1990). Other aspects such as thermal and acoustic performance are not dealt with, because it is argued, these can only be judged in a subjective manner:

There are other aspects to a building which may affect only the comfort or convenience of people but many of these, such as acoustic or thermal performance, are judged in a subjective way and are not readily amenable to control in a sensible manner by regulation. It is also obvious that the market will limit the degree to which these matters can be considered in the design of a building.\textsuperscript{13}

\textsuperscript{12} Section 29 of the South African Constitution
\textsuperscript{12} Section 24 of the South African Constitution
\textsuperscript{13} SABS (1990), \textit{Code of Practice for the Application of the National Building Regulations}. South African Bureau of Standards, Pretoria. pp 101-115
The Occupational Health and Safety Act addresses health and well being through the Facilities Regulations and the Environmental Regulations for Workplaces. The Facilities Regulations require minimum standards for sanitation, changing rooms, dining rooms, drinking water and seating. The Environment Regulations for Workplaces sets out requirements for hot and cold working environments, lighting, windows, ventilation, space and noise.

The legislation does not address thermal conditions in working or living environments where temperatures are between 0 and 30°C. Temperatures between this range, for instance 2°C and 29°C, are therefore deemed acceptable, even though these may not be conducive to health and well being. This gap in legislation has resulted in many buildings such as housing, offices and classrooms being built without insulation and passive or active cooling or heating systems.

The legislation is not responsive to different requirements of sections of the population in terms of health and wellbeing. For instance, babies, children and sick people who are more sensitive to heat and cold are not catered for, and temperatures in school environments can reach 45°C. (Dolley and Hermanus, 2009)

Similarly, legislation allows poorly constructed housing with no insulation to be built. This is often occupied by people with few resources to counter, through heating or cooling, discomfort and ill health caused by high or low temperatures (Mathews et al 1995). Open fires are also used to heat housing, leading to suspended particulates being found to be between 3 to 12 times higher than those prescribed by the World Health Organisation (Terblanche 1992).

It can therefore be argued that building related legislation does not sufficiently uphold the right to health and wellbeing outlined in Section 24 of the Bill of Rights. In particular, building legislation does not prescribe any minimum thermal or acoustic standards in building. The lack of legislation in this area can lead to thermal and acoustic environments in buildings which are damaging to health and well being. In addition, the legislation does not address other issues such as the presence of volatile organic compounds in air, as a result of off gassing from carpets, adhesive or paint which have also been shown to have a harmful effect on health (Wieslander et al 1996).

2.8 Indigenous Construction

The Building Regulations are performance-based and aim to avoid prescriptive requirements. Theoretically this approach should allow, and encourage, alternative and indigenous construction materials and designs that are more affordable and supportive of health and well being. In reality however, local authorities have been wary of approving anything considered ‘alternative construction’ without further information, as outlined below.

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Where there is doubt as to the efficiency of any design or method of construction proposed the local authority may call for further information which normally would take the form of one or more of the following -
(i) a test report from the SABS;
(ii) a test report from the CSIR;
(iii) an Agreement certificate;
(iv) verification of a design by an independent Professional Engineer.  

This clause can be used by local authorities to prevent any construction other than standard ‘European’ type construction. This has resulting in most buildings in South African towns being constructed of brick and corrugated steel, even through in rural, unregulated areas, mud brick and thatch are traditionally used as building materials.

It therefore could be argued that building related legislation does not sufficiently uphold traditional rights, needs and values and the dignity of indigenous people, if this included in the definition of ‘well being’ outlined in Section 24 of the Constitution. It does this by making it more difficult, and more expensive, for alternative and indigenous building methods to be used by required test reports, certificates or verification from a professional engineer.

2.9 Ecologically Sustainable Development

The Building Regulations and the Occupation Health and Safety Act do not include any reference to sustainable development or conservation and protection of the environment. This however is addressed by the National Environment and Management Act (NEMA) (Department of Environment and Tourism 1998). This states that:

(3) Development must be socially, environmentally and economically sustainable.

(4) (a) Sustainable development requires the consideration of all relevant factors including the following:

i. That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

ii. that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

iii. that the disturbance of landscapes and sites that constitute the nation’s cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;

iv. that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;

v. that the use and exploitation of non renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;

vi. that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;

vii. that a risk averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and

viii. that negative impacts on the environment and on people’s environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied. 17

In order to implement these principles NEMA uses a number of mechanisms including the application of environmental management tools. These are required to:

a. promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment;

b. identify, predict and evaluate the actual and potential impact on the environment, socioeconomic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in section 2;

c. ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;

d. ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;

e. ensure the consideration of environmental attributes in management and decision making which may have a significant effect on the environment; and

f. identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2. 18

In addition, NEMA allows the Minister to identify activities which may not be commenced without prior authorisation. It can also be used to identify areas in which specified activities may not be commenced without prior authorisation:

(a) identify activities which may not be commenced without prior authorisation from the Minister or MEC;

(b) identify geographical areas in which specified activities may not be commenced without prior authorisation from the Minister or MEC and specify such activities; 19

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This legislation is used to control the development of activities such as billboards, large water reservoirs, masts (over 15m), roads (wider than 15m), hospitality facilities and landing strips in sensitive areas identified by provinces. Sensitive areas identified include conservancies, indigenous state forests, protected areas and areas zoned for public open spaces in urban areas.

While this legislation is a clear attempt to support the Section 24 of the Constitution there is a gap between the principles espoused in the Act and how this implemented. Chapter 1 of NEMA (see above) states that development must socially, environmentally and economically sustainable. This however is never fully defined or followed through in the Act, which instead dwells at some length on defining development activities and geographical areas where legislative control may be exerted. The legislation is not explicit on what types of development would be considered sustainable and therefore high density urban housing, which may be seen as more socially, environmentally and economically sustainable is not given preference or support over development that may be seen as being less sustainable such as golf courses or casinos.

It can therefore be argued that current legislation does not adequately define or describe sustainable development, or ensure that this achieved. Existing legislation tends to be used to limit particular types of development in specified geographical areas. It can be argued that sustainable development, as defined in the Constitution, has broader and more far reaching implications.

2.10 Justifiable Economic and Social Development

Building related legislation does not define justifiable economic and social development. This however is alluded to in Chapter 5 from NEMA (see above) which suggests that development should ‘maximise benefits’. This could be interpreted to mean maximising social and economic benefits.

Legislation, therefore, does not provide guidance on whether development can, or cannot be deemed justifiable. Without this, it is difficult to promote ‘justifiable’ development such as schools, housing and health facilities that ensure that rights in the South African Constitution are fulfilled, in preference to other development which does not.

Chan and Yung argue that greater flexibility should be used in the way building legislation is applied to ensure that there is greater flexibility and support for land uses that are beneficial to communities or which can be ‘justified’ in this way. In their review of building related legislation for Hong Kong they show that legislation tends to hamper innovation and can produce unsustainable infrastructure (Chan and Yung 2003).

2.11 Conclusions and Recommendations

This paper suggests that building related legislation does not adequately uphold and support Section 24 of South African Constitution. It suggests that the rights outlined in Section 24 have not been sufficiently translated into clearly defined minimum built environment requirements, or recognised and supported, through enabling legislation. A number of recommendations are outlined below which could be explored to ensure that building related legislation was more effective in meeting Constitutional obligations.
• **Health and well being:** Minimum thermal performance requirements could be prescribed for building. In particular, prescribing minimum R-values in roofs of buildings which is a low cost measure could be used to significantly improve health and well being in many buildings (Mathews et al, 1995).

• **Indigenous and sustainable construction:** Indigenous and more sustainable alternative construction should be recognised and supported through deemed-to-satisfy clauses in the building regulations. This would enable buildings with this type of construction to readily achieve approval from local authorities without additional expense.20

• **Sustainable development:** Sustainable development must be translated into mandatory requirements for the built environment. This could include mandatory energy and water efficiency measures as well as prescribed labour intensity, health and education performance requirements. 21

• **Justifiable development:** Justifiable development could be defined in legislation and steps taken to promote this over development that was less justifiable or unjustifiable. This legislation could be used to ensure that development that fulfilled Constitutional rights such as rights to housing, education and health were supported and achieved in preference to development that did not.

While these recommendations could improve building standards and equity, the law is still likely to be seen as a rule based system dictated by government. Building related legislation will continue to be used to define only minimum standards and may be seen as largely irrelevant to the design process (Patlis, 2005).

In order for sustainability and Constitutional requirements to be more effectively integrated into buildings, a more explicit and practical understanding of their implications for the built environment needs to be developed. This should be used to inform built environment decision-making processes in order to achieve built environments that were more sustainable and reflected the South African Constitution better. The law from this perspective would enable and support a process of integrated decision-making guided by practical norms based on human rights and sustainability (Reisman and Aaron, 1987)

### 3 References


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20 A move in this direction can be found in SABS 1989, Code of Practice for the construction of dwelling housings in accordance with the National Building Regulations. South African Bureau of Standards. Pretoria

21 SANS 204 developed by SABS in 2008 could be used as a basis for energy efficiency legislation for buildings.

Department of Labour (1987), *Environmental Regulation for Workplaces*, Department of Labour, Pretoria.


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Urban forest protection from the perspective of environmental law in Malaysia: issues and challenges

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Abstract:
Within a society, ongoing urbanisation can lead to the increasing importance of urban green spaces as contributors to the quality of the urban environment and urban life globally. Forest and tree resources are known to have a wide range of socio-cultural, economic and environmental values. The value of the forest is also increasingly recognised as extending beyond rural areas and so trees must become compatible with and functional in the urban environment. At present, the emerging realization of the importance of these values has become apparent to many countries, including that of Malaysia. Upon this realization, Malaysia began to consider ways to optimize and incorporate forest values within its urban environs in a sustainable way while responding to the wide range of needs, local priorities and expectations. This paper examines the scope of urban forest and the role of urban greening in enhancing the living quality of urban populations of Malaysia. The paper is deliberately biased towards environmental issues and aims at highlighting provisions under environmental law relevant to urban forest protection. Some issues pertaining to possible challenges that can undermine the efficacy of the law are also highlighted.

Keywords:
Environmental law, Environmental protection, Urban forest, Urban forest protection.

1 Introduction

Malaysia covers a total of 329 750 square kilometres and is geographically divided into two parts, The Peninsular Malaysia and the North Bornean territories of Sabah and Sarawak. Malaysia is a multicultural and multiracial society with the current population of 27.7 million (Department of Statistics Malaysia, 2009A). Malaysia’s humid tropical location provides excellent conditions for thousands of plant species to thrive and evolve (Abidin, 1999), and places it among the 12 countries internationally recognized as possessing mega diversity (Sani, 1998). However, like many other developing countries in Southeast Asia, Malaysia has experienced extremely high rates of urbanization especially for the past 20 years when the economy undergone major changes. These
changes have led to, among other things, significant influx of rural people and migrants to urban centers, and the creation of more urban areas around the country (Aiken, 1982).

The term “urban areas” as applicable in the context of Malaysia, is defined by the Department of Statistics (Department of Statistic Malaysia, 2009B), based on the Population & Housing Census Malaysia 2000 (Department of Statistics Malaysia, 2009C), as “gazetted local authority areas with a specified population threshold and gazetted areas with their adjoining built-up areas which had a combined population of 10,000”. The present trend in Malaysia is that the rural population is on the decline, whereas the percentage of urban population is on the increase with the projection of 75 per cent by the year 2020 (Department of Statistics Malaysia, 2009A). At present, urbanisation’s main primacy in Malaysia is the three main city regions of Kuala Lumpur, George Town and Johor Bahru, around which conurbations are being formed (Federal Government of Town and Country Planning Malaysia, 2009).

While continuous urbanization is inevitable, higher concentration of people and industry in urban areas have unavoidably caused considerable issues including that of assimilative capacity and environmental quality. Among environmental threat facing cities and urban areas of Malaysia are inland water pollution due to siltation, industrial and household discharges; air pollution from industrial and motor vehicle emissions; and deforestation and other land clearing activities (Department of Environment Malaysia, 2007). For Malaysia, in its effort to enhance the quality of urban environment as promulgated by National Policy on the Environment (Department of Environment, 2002), it is important that existing environmental issues are dealt with seriously.

Indeed, various measures have been, and can be, applied to help attain these quality living objectives. For this tropical country that has bountiful forests, protecting and maintaining such forests and other green spaces are among ways of dealing with environmental quality issues. It is generally accepted that urban forest is one of the resources of an urban area. It is part of the urban infrastructure and is integral to the quality of life of its residents as can be found, for example, within the Kuala Lumpur Structure Plan (City Hall Kuala Lumpur, 2003). For Malaysia which is facing continuous environmental threats due to its rigorous economic development, urban forest would definitely provide various benefits to the community. Among social benefits of urban forest are those relating to health, employment, education, recreation, aesthetic and landscape benefits. Whereas in the context of environmental protection, urban forest and other green areas can provide the following services to urban areas of Malaysia:

- climate change and air quality improvement;
- energy savings, reduction of global warming and carbon dioxide;
- noise abatement;
- water use, reuse and conservation;
- soil conservation;
- solid wastes and land reclamation; and
- nature conservation, wildlife habitat and biodiversity.
The importance of tree planting and green spaces within urban areas is getting more noticeable in Malaysia. This can be indicated by policy statements such as that of the National Urbanization Policy Malaysia (Federal Department Town and Country Planning Peninsular Malaysia, 2006) and the National Policy on the Environment Malaysia (Department of Environment, 2002). Nevertheless, matters relating to the protection and management of urban forest are still something rather new for this country. Initial study has shown that the term “urban forest” is not applied within any existing policies and legislations relevant to the matter (Mustafa, 2008). On the other hand, it comes under the range of various disciplines such as that of urban planning, forestry and even landscaping. The issue is further compounded by the facts that Malaysia practices a federal system of government whereby natural resources and environmental related matters can come within the jurisdiction of either federal or state government (Mustafa, 2009). In other words, there can be no specific law and agency that have exclusive powers over urban forests in Malaysia, but such powers are spread within various related laws and government institutions.

Despite the complexity of the matter, it is argued that environmental law can nevertheless offer certain degree of protection to urban forest. This protection can come in various forms such as that of environmental quality enhancement, natural resources conservation, and pollution control. This paper is meant to be a preliminary study to look as possible ways in which existing environmental law in Malaysia can help towards forest protection within urban areas. At present, there exist over 30 legislations in Malaysia that are directly related to environmental protection, and some of which are relevant to that of urban forest (Mustafa, 2008). However, for the purpose of this paper, examination will be done only on selected and most relevant legislations. Firstly, the paper seeks to identify the meaning and scope of urban forest for regulation purposes. Then it will look at possible legal protection given to urban forest against environmental pollution and other harms. After that, the paper will discuss possible challenges that can undermine the efficacy of these legislations towards urban forest protection.

2 Scope of Urban Forestry

When delineating the issue of urban forest particularly from the perspective of urban environmental protection, it is necessary to identify the context in which “urban forest” is understood. Generally, “urban forest” can be referred to as a part of the forest found within the built environment (Food and Agriculture Organization of the United Nations, 2009). However, in this paper, this concept will be looked at from a bigger perspective based on existing policies and laws of Malaysia relevant to the subject. For this reason, terms such as “open spaces” and “green area” (Federal Department Town and Country Planning Peninsular Malaysia, 2006) will be considered to be part of urban forest.

Arguably, urban forest and environmental protection work in both ways. On one hand, urban forest, if properly managed and protected, can help improve the environmental

1 See section 2 of the Town and Country Planning Act 1976, Act 172.
quality of urban areas. For a tropical country like Malaysia, wildlife and other natural resources such as rivers and trees are integral parts of a forest. Thus, pockets of urban forests, together with natural resources and wildlife therein, provide natural and tropical elements within urban areas of Malaysia. On the other hand, the protection of urban forest from harms associated with environmental degradation is also vital to ensure that such forest are well kept to enable the city dwellers to enjoy its full benefits. In this regard, environmental law can be applied to provide protections to urban forest, whether in the forms of pollution control, natural resources conservation, or even environmental impact assessment. Environmental related legislations relevant to urban forest protection are examined below.

3 Urban Forest Protection under Environmental Legislations

As already pointed out, environmental degradation and depletion of natural resources particularly due to land clearing and other economic related activities are among major threat to urban forests in Malaysia. In many urban areas such as Kuala Lumpur and Penang, greater urbanization means that land is getting to be a scarcer resource which is increasingly sought after. In urban areas of Penang for example, many forests reserved, including hills and catchment areas are already being cleared for the purpose of development (Ngai, 1998). When forests are being cleared, it can lead to many environmental problems such as deforestation, decimation of water catchments, destruction of endangered fauna and flora, soil erosion, landslides, water pollution, sedimentation and downstream flooding.

The roles of environmental legislations here are to provide protections to urban forest against such problems, apart from helping towards its enhancement and conservation. The most relevant legislation for this purpose is the Environmental Quality Act 1974\(^2\) which deals mainly with the prevention, abatement, control of pollution and enhancement of the environment (Mustafa, 2009). Arguably, while the term “urban forest” is not specifically available within this Act, its scope is nevertheless wide enough to cover that of urban forest. This is evident from the definition of relevant terms within the Act. For example, the term “environment” is defined as\(^3\):

> “the physical factors of the surroundings of the human beings including water, atmosphere, climate, sound, odour, taste, the biological factors of animals and plants and the social factor of aesthetics”.

The term “element” in relation to the environment for the purpose of the Act is defined to mean\(^4\):

\(^2\) Act 127.
\(^3\) Section 2 of the Environmental Quality Act 1974.
\(^4\) Section 2 of the Environmental Quality Act 1974.
“any of the principal constituent parts of the environment including water, atmosphere, soil, vegetation, climate, sound, odour, aesthetics, fish and wildlife”.

From the definitions above, it is argued that, despite the general nature of the Act, its scope is extensive to cover urban forest, being part of the environment and natural resources, for purposes that include health, safety and welfare of the public. The same argument applies when looking at the definition of the word “pollution” which is defined by the Act to mean:

“any direct or indirect alteration of the physical, thermal, chemical, or biological properties of any part of the environment by discharging, emitting, or depositing environmentally hazardous substances, pollutants or wastes so as to affect any beneficial use adversely, to cause a condition which is hazardous or potentially hazardous to public health, safety, or welfare, or to animals, birds, wildlife, fish or aquatic life, or to plants or to cause a contravention of any condition, limitation, or restriction to which a licence under this Act is subject”.

Within the Act, various environmental strategies introduced are relevant towards urban forest protection. One of which is environmental impact assessment (EIA) as provided under section 34A. Generally, EIA is considered essential for the purpose of sustainable development particularly in attaining the acceptable balance of environment protection and economic development.

Specifically, section 34A requires that any person intending to carry out proposed activities is required to submit a report containing an assessment of the impact the activity is likely to have on the environment. There are 19 activities classified as “prescribed activities” that require the submission of the EIA report for the purpose of section 34A. The list of these activities is provided in the Environmental Quality (Prescribed Activities)(Environmental Impact Assessment) Order 1987. They include activities relating to agriculture; airports; drainage and irrigation; land reclamation; fisheries; forestry; housing; industry; infrastructure; ports; mining; petroleum; power generation and transmission; quarries; railways; transportation; resort and recreational development; waste treatment and disposal; and water supply.

From the list above, it is contended that, there are a number of activities that may cause harm to urban forest or its surroundings if not properly regulated such as that of forestry or housing development. For these activities, possible adverse effect can occur in various forms. They include water logging, salt water intrusion, alteration of river features, soil erosion and sedimentation. For these reasons, EIA is important to ensure that not only the development of a particular project is properly located and planned, its environmental degradation is also avoided or minimised. Here, EIA can help ensure, among other

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5 Section 2 of the Environmental Quality Act 1974.
6 PU (A) 362/1987.
things, that urban forest or natural resources therein are not disturbed or polluted, and that
deterrence and mitigating measures are identified to protect existing ecosystems and
communities. Apart from that, EIA is also applicable to assess activities that are
indirectly affecting urban forest. They include that of waste disposal that may cause
pollution through the discharge of effluent. Strict penalty is imposed by section 34A for
those who failed to submit the EIA report, or to those who failed to abide by conditions
stipulated in the report namely a fine up to RM100000, or jail up to five years, or to both.

Another relevant strategy under the Environmental Quality Act 1974 is that relating to
pollution control. Under this Act, urban forest can be protection against pollution that
may come through various sources. For instance, section 24 deals with the control of soil
pollution and restricts any person from polluting any soil or surface of any land.
According to clause (2) of section 24, a person is deemed to pollute any soil or surface of
any land if he does any of the followings:

- he places in or on any soil or in any place where it may gain access to any soil any
  matter whether liquid, solid or gaseous; or
- he establishes on any land a refuse damp, garbage tip, soil and rock disposal site,
  sludge deposit site, waste-injection well or otherwise used land for the disposal of
  or a repository for solid or liquid wastes so as to be obnoxious or offensive to
  human beings or interfere with underground water or be detrimental to any
  beneficial use of the soil or the surface of the land.

Arguably, this section can be applied to protect urban forestry against pollution such as
from non-point discharges of a liquid wastes. The same provision may also be applied to
landfill owners, or any person who discharged wastes onto any urban forest and caused
such wastes to produce leachate that leaks and cause pollution to any water resources
within such forest. Under section 24, any person who is found guilty may be liable to a
fine of up to RM100 000, jail of up to five years, or to both.

Apart from soil pollution, the Act is also relevant to protect water resources within an
urban forest through section 25. It is contented that, being a tropical country, forests,
including that within urban areas, play an important role for Malaysia as water cathments
for the purpose of water supply. Any activity that disturbs urban forests may cause
disruption to water cathment and consequently affecting water availability. Under section
25, any person is restricted from emitting, discharging or depositing any environmentally
hazardous substances, pollutants or wastes into any inland waters. The scope of “inland
waters” is very wide to include “any reservoir, pond, lake, river, stream, canal, drain,
spring or well, or any part of the sea above the low water line along the coast, or any
other body of natural or artificial surface or subsurface water”\(^8\). Penalty imposes on any
person who is found guilty of committing an offence under this section will be a fine of
up to RM100000, jail for up to five years, or to both.

Another possible protection that can be given by the Environmental Quality Act 1974 is
that relating air pollution control, particularly due to open burning that causes haze. In
\(^8\) Section 2 of the Environmental Quality Act 1974.
Malaysia and elsewhere, haze, which is caused by the presence of a large number of particles suspended in the air, is a form of poor air pollution that affect health and wellbeing of the public (Sani, 1998). In the context of environmental quality protection, there is an interrelation between urban forest protection and air pollution control. Within cities and urban areas, forest and other green areas are pertinent in helping to minimize the effect of air pollution, notably from motor vehicle emissions and that of industries. However, activities involving the burning of forest areas, that are meant to provide new areas for housing, agricultural, industrial and other purposes, are major contributor towards the haze phenomenon (Department of Environment Malaysia, 2007). In order to deal with the haze issues, the Act introduces section 29A on the control of activities relating to open burning. This section imposes a complete ban on “open burning” by strictly prohibits any person from causing open burning on any premises, and any land. The penalty imposes by this section is a fine of up to RM500,000, and a jail term for five years, or both. Perhaps, this provision is not directly concerned with urban forest protection. However, it is argued that, the impact of such prohibition may deter possible clearance of urban forests and other urban green areas, and consequently help protect their wellbeing and that of natural resources therein.

While the Environmental Quality Act 1974 concerns mainly with environmental pollution control, the most important legislation in Malaysia on forest protection is the National Forestry Act 1984. This Act was enacted to provide for the administration, management and conservation of forests and forestry development within the states of Malaysia. Among the most relevant provisions on urban forest protection are sections 7 and 10 that empower the state government to constitute any land a “permanent reserved forest” and to classify these reserved forests under various classifications. They include:

- timber production forest under sustained yield;
- soil protection forest;
- soil reclamation forest;
- flood control forest;
- water catchment forest;
- forest sanctuary for wild life;
- virgin jungle reserved forest;
- amenity forest;
- education forest;
- research forest; and
- forest for federal purposes.

Once a forest land has been gazetted as a permanent reserved forest, various protections can be given to such forest. For example, under section 15 (1), any person is prohibited from taking any forest produce from a permanent reserved forest except under the authority of a licence. Penalty provided for any person who contravene this section is a fine not exceeding RM500,000 and to imprisonment for a term between one to twenty

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9 The Environmental Quality Act (Amendment) 1998, Act 1030, s.3.
10 Act 313.
years and imprisonment\textsuperscript{11}. Apart from that, offensive littering of reserved forest is also an offence under section 83 of the Act, namely to create an objectionable stench or degrades the beauty or the appearance of property or detracts from the natural cleanliness or safety of property. Among actions that constitute offensive littering under section 83 includes discarding any rubbish, trash, garbage, debris or other refuse; or draining of mining sludge, industrial effluent, sewage or the drainage from contaminated sources. Penalty imposed for offences committed this section is a fine not exceeding RM10000 or to imprisonment for a term not exceeding three years or to both.

Indeed, provisions within the National Forestry Act 1984 are very relevant in providing protection to forests including that within urban areas. For example, within Kuala Lumpur, there exist three reserved forests namely the Bukit Nanas Forest Reserves, Bukit Sungai Puteh Forest Reserve and Sungai Besi Forest Reserve. These residual forests are Kuala Lumpur’s very important areas of natural environment but at the same time are facing threat of development. Thus, provisions on permanent reserved forest are pertinent for the purpose of their protection.

4 Issues and Challenges

Examination here has shown the importance of environmental legislations in Malaysia in providing various protections to urban forest. However, like many other developing countries, common internal issues faced when enforcing these laws can seriously undermine their efficacy. Among these issues include that of manpower capacity, adequate funding, strictness of enforcement, and availability of implementation’s requisites. Additionally, external issues such as problems arising from the inherent fragmentation of the federal system, conflict of environmental authorities, and conflict of laws are other notable challenges faced by Malaysia. Being a federal system of government, possible clashes of laws may arise since urban forest protection and management cut across various sectors. For the same reason also, legislations such as the Environmental Quality Act 1974 cannot be relied upon in providing a full environmental protection to the urban forest. This is due to the fact that, despite being the most important environmental law, matters relating to natural resources conservation and urban planning relevant to urban forest come under the scope of other legislations. Thus, having different laws dealing with aspects of urban forest protection may cause possible conflicts among these laws, or among agencies enforcing them.

Another challenge faced is that of the conflict of policies particularly between economic development and environmental protection. Being a developing country that strives to achieve the status of a developed nation in the near future (Mohammed, 1993), economic development is therefore given prominence particularly under the country’s New Development Policy (Jabatan Perdana Menteri, 1991). The quest for economic growth has however involved the utilization of a great portion of the environment and natural resources, including that of forest. In order to respond to the demand for environmental protection and natural resources conservation, Malaysia began to treat environmental

\textsuperscript{11} Section 15(2) of the National Forestry Act 1984.
issues more seriously notably through the enactment of the Environmental Quality Act in 1974. However, it is a complicated task for Malaysia in coordinating the otherwise conflicting policies of environmental protection and economic development. There is always a strong pressure upon the government to meet economic expectations, which, in certain cases, has the upper hand over environmental protection (Sahabat Alam Malaysia, 2001).

One specific example of the possible clashes in policy and law can be found within the implementation of the EIA under section 34A of the Environmental Quality Act 1974. This issue relates to the facts that different authorities are in-charged of the whole EIA process. In any situation, a project proponent must submit the EIA report to the Department of Environment for approval before the commencement of the project. The Department of Environment, being an agency established to enforce the Environmental Quality Act 1974, has the power whether to approve the EIA report or otherwise. On the other hand, the power to approve the commencement of the project lies ultimately upon a different agency, namely the approving authority. In Malaysia, there are different types of approving authorities that has the power to approve any development project depending on the nature and geographical location of such project. These authorities include the National Development Planning Committee for the Federal Government sponsored projects; the State Executive Council for state government sponsored projects; the various local authorities or Regional Development Authorities with respect to planning approval within their respective areas; and the Ministry of Trade and Industry for industrial projects. This is where possible collision may occur. Such collision may not simply be confined to a jurisdictional clash but also a clash of economic and other interests when these agencies have different set of policy objectives with one another.

Similar example can be found within the application of section 7 of the National Forestry Act 1984. Whereas a state government is empowered to constitute any land as a “permanent reserved forest”, the actual legal meaning of the concept of “permanent reserved forest” does not carry the meaning of reservation in perpetuity. There is in fact a possibility for the excision of land from the permanent reserved forests as provided in section 11. Arguably, this further demonstrates the issue pertaining to possible conflict between economic development and urban forest protection. Specifically, by virtue of section 11, the state authority can excise such land on the following grounds:

- where it is no longer required for the purpose for which it was classified; and
- where it is required for economic use higher than that for which it is being utilized.

The second justification above for excision is the point of contention here on what constitute “higher economic use”, and who has the final say over such decision. For urban areas of Malaysia, especially areas that are facing greater demand on land such as those within Kuala Lumpur or Penang, this provision might pose a threat to urban forest protection. This is particularly threatening considering Malaysia’s aggressive

12 Section 11(1) of the National Forestry Act 1984.
development strategies that cause harms to natural resources, including that of urban forests (Ngai, 1998).

5 The Way Forward and Conclusion

Malaysia already recognized the importance of urban forest in enhancing the environmental quality of urban areas apart from providing esthetic values to the cities. Thus, from the perspective of urban development and environmental quality enhancement, it is vital that continuous attention is given to the importance of urban forest protection. In this regard, environmental law has been identified by this paper as an important mean in providing such protection. The paper already discussed various provisions relevant to urban forest protection that can be found within the existing environmental legislations in Malaysia. They include that relating to pollution control, quality enhancement and even forest conservation. However, while environmental law may be one of the most suitable mechanisms towards urban forest protection, there are underlying issues that need to be resolved. The paper has revealed possible issues that can undermine the efficacy of the law on the matter. They include that arising from internal problems, conflicts of laws and institutions as well as that of policies. While findings in this paper are not meant to be extensive and comprehensive, they are nevertheless important in highlighting challenges within urban forest protection that require further examination. For Malaysia, existing issues and their complexity should not be considered as stumbling blocks hindering effective application of the law on urban forest. On the other hand, Malaysia must put efforts to comprehend these and other challenges and move towards overcoming them. Arguably, if these challenges are met, and with commitments given towards the betterment of urban forest protection, it is possible that Malaysia’s objectives of sustainable and quality urban living environment can be achieved.

6 References


Legal frameworks for losses attaching to increased incidence of floods in an era of climate change

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Introduction

The broad context for this paper is the need to address the increasing exposure of people and their property to flood-related harms in consequence of climate change. The focus is from a UK perspective and is twofold. A first, general theme concerns ways in which losses in face of expected impacts of climate change can be indemnified, and which for the UK primarily entails thus far reliance upon (first party property related) insurance cover. Here the UK is in a position by no means common across equivalent jurisdictions, in continuing to depend predominantly on the commercial market for flood risk insurance, provided as standard. Considerable importance therefore attaches to the dynamics of the relationship between insurance providers and public policy makers. An attempt will be made to assess the continuing viability of commitment the status quo; and in so doing comparisons will be drawn between the UK’s approach and those in similar jurisdictions.

A second, more specific theme, consequential upon an approach to flood related losses based on privately available flood insurance, relates to problems affecting levels of insurance take-up. Whilst this phenomenon is typically relevant in respect of low income households, with an eye to the previously stated theme, it is becoming apparent that wider potential impacts must be anticipated, particularly in the event of reduced future availability and/or affordability of appropriate cover in consequence of actual and anticipated processes of climate change.

Background: the Summer 2007 English Floods

Serious floods affected large parts of England in 2007 (‘the 2007 floods’), causing extensive harm and suffering, particularly in Yorkshire, Gloucestershire, and the Thames Valley. The causes were two extremely high rainfall events, compressed within two short bursts, following a long period of wet weather which had left water tables exceptionally high; and resulting in mostly surface water, with to a lesser extent river, flooding. Thirteen lives were lost, and flooding directly affected around

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1 The support of the RICS Education Trust in funding a research project across several flood prone UK regions of the UK is gratefully acknowledged by the authors
2 The regions most affected were (in June) Humberside and South Yorkshire, with Derbyshire, Lincolnshire, and Worcestershire; and (in July) Gloucestershire, Herefordshire, Lincolnshire, Warwickshire, and Worcestershire, as well as the Berkshire and Oxfordshire in the Thames Valley
3 On some estimates representing a return period of a 1-in-150 year event
4 Pluvial flooding typically occurring where precipitation exceeds capacity for draining away, particularly a problem for urban areas with high ratios of non-porous surfaces (related also to sewer flooding where there is combined drainage)
5 Fluvial flooding occurring where river channel capacity is exceeded resulting in overtopping of banks
44,000 homes and 7,000 business premises. Whilst one of the most problematic features of the 2007 floods was the severe strain placed on service infrastructures (especially affecting supplies of water and electricity), it was also apparent that significant levels of under and non-insurance existed, affecting small businesses, but more especially householders.

In the aftermath of the 2007 floods the UK Government commissioned an independent review, chaired by Sir Michael Pitt, the objects of which were to draw lessons from events and to make recommendations for more effective future responses, and the final report was published in June 2008. Subsequently, a draft Bill (affecting England and Wales) has been proposed with the purpose inter alia of putting in place some key recommendations of that review. It is also the UK’s response to a 2007 EC Directive on the assessment and management of floods. It may appear surprising that the European Community had come also relatively late to such questions, but it has traditionally moved but cautiously into areas of spatial planning, and in relation to water has predominantly focused on quality and resource issues. However, in a way that prefigured a more strategic response also in the UK, a catalyst for the European Commission lay (as well as in the face of growing threats from climate change) in a series of major flood events. The Commission duly sought to reduce and manage risks to human health, the environment, infrastructure and property, through promotion of a risk-based approach, placing duties on Member States relating to the production of river basin flood risk assessments and mapping, and thence flood risk management plans. The priorities were stated as being based on goals of ‘prevention, protection and preparedness’, placed within a regime that accorded flexibility to Member States regarding the setting of management objectives and administrative responsibilities. Such an approach reflects a new generation of Community approaches to environmental protection, evidenced especially in the Water Framework Directive, the river basin management planning introduced under which will be of central relevance to the development of flood risk management plans under the new domestic legislation.

The UK proposal would further introduce for the first time a comprehensive regulatory structure in this area, with the objective of enabling improved risk

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6 See summary contained in Environment, Food and Rural Affairs Select Committee, Flooding, 5th Report 2007-08, HC 49 (May 2008), paras. 1-4
8 Draft Flood and Water Management Bill, Consultation Paper, Cm 7532 (Defra/Welsh Assembly Government, April 2009)
11 In particular, the 2002 Danube and Elbe flooding disaster, together resulting in around 700 fatalities and displacement of 500,000 people: see European Commission, Explanatory Memorandum to original proposal for a Directive on the Assessment and Management of Floods, COM(2006)15 final (18 January 2006)
12 Articles 4-8
13 That is, in accordance with requirements of Directive 2007/60/EC, note 9 above
management of all forms of coastal and inland erosion and flood risks, and enhancing to this end the strategic role of the Environmental Agency. This would include a commitment (again for the first time) to a coherent regulatory strategy for risk management in relation to ground water and surface water flooding (including for sustainable drainage systems for new developments). The aim overall is to afford communities what is described as greater ‘security, service and sustainability’, through enhanced planning for, and prediction of, floods, and improved protection of threatened water and other essential supplies. The proposals notably do not seek to address issues related to indemnity against losses that will continue to be borne primarily by individuals, and it seems that no significant amendments to ruling law and policy approaches are envisaged in the foreseeable future.

Of circa 23.5 million UK households, 2 million are regarded as being at risk from coastal or inland flooding, with 0.4 million of these categorised as at ‘significant risk’. Such problems are not confined to fluvial and coastal flooding, for (though more difficult to predict) around 1.6 million UK properties are at risk from groundwater-related flooding (not actually a major contributor in Summer 2007), with many more at risk from pluvial (or surface water) flooding. Numbers at risk are expected to increase, notwithstanding improved overall flood management, as a consequence of two main factors: the inevitability (despite recently more restrictive planning approaches) of further development in exposed locations, and more generally anticipated impacts of climate change.

Losses consequent upon floods are, as stated above, mainly met through the insurance sector. According to the Association of British Insurers (ABI), total insured losses relating to the summer 2007 floods amounted to around £3 billion. Other residual sources of disaster funding support exist, whereby mainly taxpayer-funded support is made available mainly from central Government, on an ad hoc basis, in the event of flooding and other disasters. At present support comes from three main sources. The first includes the more established schemes, in particular, Department of Work and Pensions payments from a ‘Social Fund’: consisting of either ‘Community Care Grants’ (CLGs) (non-repayable, for those on income-related benefits with no capital or resources); or Crisis Loans (repayable, for those on benefits or low income). Secondly, and more significantly, new Flood Recovery Grants (FRGs) were made available for the first time, administered by central Government, but paid to lower-tier local authorities for purposes of discretionary distribution to support local recovery work and those in greatest and most urgent need. These are not directed at compensation for loss, but those without insurance cover are likely to meet the criteria, especially in light of likely problems encountered as to habitability of

14 See further Pitt, note 7 above, 4.46-7
15 Claims representing around 13,000 domestic and 30,000 commercial policies (there were also 20,000 motor claims). Average property insurance claims costs were estimated at circa £30-40,000 (domestic) and £90,000 (commercial)
16 The European Solidarity Fund provides assistance toward governmental costs burdens in meeting the needs of urgent financial assistance in the event of an emergency Council Regulation (EC) 2012/2002 of 11 November 2002 establishing the European Solidarity Fund, OJ L 311/3 (14.11.02)
17 Amounting respectively to around £0.75k and £0.075k.
18 The amount disbursed in Summer 2007 was around £18.5 million
accommodation.\textsuperscript{19} Thirdly, voluntary gift aid produced significant sums, especially through the British Red Cross ‘National Floods Appeal’, applied through grants to local authorities and the voluntary sector for purposes of assisting those most in need.\textsuperscript{20} There were instances also of local funds being generated, for instance under a ‘Gloustershire Relief Fund’ (GRF).\textsuperscript{21} Further ancillary support for business, and local authorities in meeting the immediate costs of exceptional emergencies are not discussed further here.\textsuperscript{22}

\textbf{The UK’s Approach to Flood-related Losses}

Flood risk insurance has, since 1961, been offered in the UK as standard by the insurance industry, for purposes of households and business. Whilst the UK remains reliant on commercial insurance provision in respect of flood related harms, problems of risk assessment are producing increasing pressure for the markets. Heightened risks are posed by two particular factors: relating to first, a legacy of weak restrictions on development in inappropriate flood plain and other locations, combined with land management practices that have led to deterioration in natural drainage capacities, alongside increased budgetary pressures on the meeting of public flood defence commitments; and, secondly, the implications of the onset of climate change, including a changed pattern of sea level rise, alongside changing weather systems (with, from the perspective of a temperate region in which the UK is placed, markedly increasing precipitation levels and greater propensity for storms).

Continuation of insurance cover on the current basis into the longer term cannot be guaranteed. The insurance industry presently operates in accordance with a non-binding agreement between the UK Government and the ABI: the \textit{Statement of Principles on the Provision of Flood Insurance} (‘the Statement’), which was reviewed in the aftermath of the 2007 floods, culminating in a new, July 2008 Statement being agreed. The renegotiation was conducted at a time of intensified pressures from the industry and otherwise, on the state, respectively to increase both control over inappropriate development proposals and expenditure on defences. Indeed the basis for its continuation has been tied explicitly to progress by Government across a range of related policy areas, including as to the adequacy of flood defences.\textsuperscript{23}

Under the Statement, the insurance industry commits (until end June 2013) as follows: first, in circumstances where annual flood risk is ‘not significant’ (no greater than 1.3%, i.e. 1-in-75 years), to continue flood insurance for domestic properties and small businesses as standard; and secondly, in circumstances of ‘significant’ risk, to commit to maintaining cover only for existing customers and their (otherwise

\textsuperscript{19} Whilst the FRG was paid out to authorities subject to a ratio of numbers of households affected, Pitt raised some questions as to how the CLGs were largely disbursed within the Yorkshire and Humber region, expressing a need for studies into the incidence of non-optimised take-up elsewhere: see further Pitt, 28.15-16
\textsuperscript{20} This source generated proceeds of £3.8 million
\textsuperscript{21} Which Pitt reported also helped meet uninsured financial losses, as well as costs relating to damaged possessions, equipment and, for businesses, machinery’. GRF generated proceeds of £1.8 million
\textsuperscript{22} See Pitt, 28.20-67
\textsuperscript{23} Prior to the recent renewal of the arrangement the ABI has reported to the HC Treasury Select Committee, 4th Report, 2007-08, para. 124, that it would only be continued if there were considered to be adequate risk management by Government
satisfactory) successor. In each case, this is subject to the condition that the Environment Agency has announced and notified plans to reduce risk to below the ‘significant’ threshold over a 5-year timescale. It is notable that new property build, from 2009 onwards, has since been excluded from the above guarantee.

Looking beyond the above arrangements, the effect of the industry’s developing risk-based approach will inevitably lead to a greater incidence of differentiation of cover. This may have the further effect of gradually breaking down the wide degree of risk pooling on which the UK’s approach has arguably depended.24 Further, in consequence of threats to affordable risk insurance, questions will inevitably arise as to how far government is willing to step in as insurer of last resort, with even a long term potential for questioning the viability of the market in this sphere of risk response. The importance of such issues is likely to be exacerbated in the event of more intensified risky development patterns, especially to meet severe housing stock shortfalls, in the future.25

Some Comparative Perspectives within the EU

Whilst the continuation of the current arrangements is for now a successful exercise in holding the line, it is instructive briefly to consider the position in equivalent jurisdictions. Comparative treatment is problematic, in light of strongly divergent law, social policy and cultural traditions, as well as relative geographical vulnerabilities, which have both direct and indirect impacts on questions of indemnity against loss. After consideration of some approaches in Europe, attention will turn to the United States where, especially at the coasts (the eastern seaboard in particular) a legacy of inappropriate development and high vulnerability produces in certain respects interesting comparisons with the UK.

The UK’s arrangements, with flood insurance written by the commercial sector generally available as standard, are relatively unusual. The approach can be described as a form of half-way house, which in part avoids the effects of both a tendency to adverse selection (especially where incidence of insurance and non insurance reflects rational choice) which can threaten the advantages of risk pooling that is inherent in a wholly voluntary scheme; and the cross-subsidisation that is likely to result from a compulsory scheme, assuming that the costing of premiums is not wholly risk-based by reference to individual risks.

Looking first at the situation in Germany, where a scheme is founded on the availability of private insurance through the markets, experience demonstrates marked dissimilarities to those in place in the UK. There, natural hazards insurance (that is, extending beyond otherwise standard storm and fire damage cover), has since 1991 been available as a voluntary supplement to buildings and contents insurance.

24 See Huber, M. ‘Reforming the UK Flood Insurance Regime: The Breakdown of a Gentleman’s Agreement’ (2004) ESRC Centre for Analysis of Risk and Regulation, Discussion Paper n. 18, 17-18, describing a process of indirect regulation, whereby the industry as ‘regulator of last resort’ defines ‘conditions of insurability by deciding about land use and property values’

25 For instance, within designated areas for urban growth around London, along ‘the Thames Gateway’. This will in turn influence the distribution of Government allocations to the Environment Agency’s flood defence budget
Evidence suggests that there has been a low general level of take-up in large parts of the Federal Republic.\textsuperscript{26} Indeed costs of the central European floods in 2002 amounted to around €18 billion, of which €3 billion was borne by the private insurance industry.\textsuperscript{27}

The position in France offers a contrasting approach, albeit that it does not exclude the insurance industry, for available private insurance has since 1982 been supplemented by a scheme of state subsidised reinsurance. This achieves increased spreading of risk by way of a standard surcharge on all (motor, home or business) insurance policies; and encourages high levels of take up. The approach however has come at a cost, the surcharge having increased to 12\% (from an original 9\%), with further \textit{ad hoc} Government capital injections to make good shortfalls having been further required.\textsuperscript{28}

A greater contrast, if perhaps not such a strong point of comparison, can be drawn with the Netherlands. There, for a variety of reasons, but especially including the high vulnerability of its territory and hence strong public commitment to vital defences, has traditionally excluded commercial insurance coverage altogether in respect of such risks. In effect, the state operates as \textit{de facto} insurer of last resort,\textsuperscript{29} although for reasons similar to those already identified pressures for change appear now to be building.

\textit{Experience of Flood Loss Cover in the US}

A strongly contrasting picture, by reference to the above approaches, emerges from US experience. The US solution illustrates a tension between a commitment to the idea of insurance, alongside a recognition that in light of extreme levels of threat at many locations the markets are unable to absorb the risks in the ordinary way. In order to address significant levels of exposure,\textsuperscript{30} therefore, and following a prolonged post-war debate,\textsuperscript{31} a scheme offering federal (that is, state) cover commenced in 1968, under the ‘National Flood Insurance Program’ (NFIP).\textsuperscript{32} This offers in effect a

\textsuperscript{26} Thieken, AH, et al, ‘Insurability and Mitigation of Flood Losses in Private Households in Germany’ (2006) 26(2) Risk Analysis 383, 387, cite figures of 4\% (residential buildings) and 10\% (contents), and comparing higher residual insurance receptivity by consumers in the former East Germany, on account of formerly standard schemes (49.5\% of households affected by the 2002 Elbe floods).

\textsuperscript{27} Munich Re, \textit{Annual Review: Natural Catastrophes} 2002, 2003, \texttt{http://www.munichre.com/en/publications/default.aspx}. The disparity (cf note 26 above) partly reflects high levels of infrastructure damage, not insured by state agencies in the market

\textsuperscript{28} Cited by Pitt, note 7 above 2.11-12

\textsuperscript{29} L. Every & J. Foley, \textit{Managing Water Resources and Flood Risk in the South East}, Commission on Sustainable Development in the South East, 2005, 34; also, EUsrosion Project Report, \textit{Living with Coastal Erosion in Europe: Sediment and Space for Sustainability} (June 2004), 76, discussing the Netherlands (and Germany)

\textsuperscript{30} 12\% of the population reside in ‘special flood hazard’ areas (based on a 1-in-100 year return period); see further, Blanchard-Boehm, RD, Berry KL & Showalter, PS, ‘Should Flood Insurance be Mandatory? Insights in the Wake of the 1997 New Year's Day Flood in Reno-Sparks, Nevada’, 21 Applied Geography 199 (2001)

\textsuperscript{31} White, GF, \textit{Human Adjustment to Floods, 1945; Choice of Adjustment to Floods, 1964} (Chicago: Univ. of Chicago Press); Kates, RW, Hazard and Choice Perception in Flood Plain Management, 1962 (Chicago: Univ. of Chicago Press)

subsidised, voluntary scheme of state run insurance. The private insurance market is not excluded: there however a general willingness to cover against storm or hurricane damage is not extended to damage caused by floods or erosion. The NFIP is administered by the Federal Emergency Management Agency (FEMA), which body also maps exposed areas, as well as having a separate strategic emergency function. Cover is generally made available in respect of both flood and erosion risks, subject to local municipalities meeting certain conditions, which in particular relate to standards of flood mitigation management for new development. Key to the NFIP scheme is that cover, though subject to fixed upper limits, is provided irrespective of risk. The net subsidy effect sees premium costs typically around 40% less than would be the case under market conditions. This proportionately benefits not only properties in areas of higher risk but also existing properties, as opposed to newer development that is generally subject to more onerous conditions.

Overall take-up under the scheme has persisted at surprisingly low levels, reflecting its non-compulsory ‘insurance’ status. For instance, in research carried out across five varied communities and locations, all with historic experience of flooding, proportions of households with flood insurance fell within a range of between just 3.5 and 5.9%. Tighter FEMA measures – for instance in closer monitoring of mortgagor insurance, and in offering significant discounting of premiums – have contributed to higher levels of take-up; which was for instance estimated at around 46% of those households in New Orleans devastated in 2005 by Hurricane Katrina. Nevertheless the continuing low levels of take up can be explained on two main grounds: namely, problems of penetration in poorer areas, alongside, more generally, the availability as a near-certainty of generous federal subsidy in times of declared emergency.

33 See Burby, RJ, ‘Flood Insurance and Floodplain Management: the US Experience, 3 Global Envtl Change Part B: Environmental Hazards 111 (2001)
34 In March 2003 FEMA became part of the Department of Homeland Security: see S. King, ‘Hurricane Katrina Shows that America’s Free Market Does Not Have all the Answers’, Independent, 5 September 2005, inter alia suggesting a reorientation of hazard priorities
35 Such as lower floors of buildings to be above 100-year flood levels
36 $250,000 on residential property (plus $100,000 for contents); $500,000 on both business premises and contents
37 Burby, note 33 above
38 Browne, MJ & Hoyt, RE, ‘The Demand for Flood Insurance: Empirical Evidence’, 20 Journal of Risk and Uncertainty 291 (2000). This is despite the requirement since 1973 that in principle government related mortgage funding in such areas is subject to procuring cover
41 These include disaster assistance and casualty loss income tax deductions). Federal government promised to aid full rebuilding costs in the wake of the floods. Katrina-related insured losses (in respect of hurricane damage, mainly commercial, including to oil rigs, refineries and under marine policies, and related disruption) were variously estimated at $40-60 billion; and total losses at $125 billion: Knight, ibid..
It has been suggested that such widespread federal subsidy of natural risks leads to repeated cycles of loss, compensation, and reconstruction,\(^{42}\) so underwriting ‘a system of perverse incentives that have encouraged dangerous and irrational building patterns’.\(^{43}\) It can certainly be said that universal protection in such a form potentially exacerbates the operation of moral hazard, especially through incentivising risk taking in relation to location decisions with low levels of mitigation activity.\(^{44}\) It has even been argued that any move to make NFIP cover compulsory would come at the cost of further increasing moral hazard.\(^{45}\) This is questionable, for not only is the operation of behaviour in furtherance of moral hazard more complex,\(^{46}\) but careful attention to techniques of risk assessment and management can mitigate against such further downside risks.

The argument now turns to the more specific themes outlined at the head of the paper, commencing with consideration of particular problems from a UK perspective of non-insurance and continuing viability of private insurance. Thereafter the related, wider question concerning the implications for individuals and whole communities at vulnerable locations, should current arrangements persist, will be addressed.

**Implications of Gaps in UK Levels of Flood Insurance Take-up**

The UK approach outlined above entails a heavy reliance on individual autonomy (in terms of right of self protection balanced against potential liability for first party losses), alongside standard cover against loss. In consequence there are relatively high levels of take-up, especially as compared with apparent discouragement elsewhere, in light of such factors as unwillingness to meet additional costs or otherwise strong expectations of state help. Yet in the UK extensive problems of non-insurance also give increasing cause for concern. Nationally, for instance, around 25% of households have no ‘home contents’ insurance. In certain pockets the picture is markedly worse. Thus in the context of the Summer 2007 events, whilst around 75% of all flood losses were insured losses, non-insurance (including as to buildings, but more particularly as to contents, cover) affected around 75% of domestic properties in some affected areas. Underinsurance also generally remains a problem, and one which is of particular concern in respect of small businesses.\(^{47}\)

Low take-up has numerous consequences. Systemically, it undermines the value and effectiveness of general insurance provision, negating the fullest benefits to be derived from the spreading of risk. Whilst satisfied with the current system in relation to flood cover, the Pitt Report also looked to central Government and the insurance

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\(^{44}\) Blanchard-Boehm, 2001, note 30 above

\(^{45}\) McLeman, R & Smit, B, ‘Vulnerability to Climate Change Hazards and Risks: Crop and Flood Insurance’, 50(2) Canadian Geographer 217, 224

\(^{46}\) For instance, Thieken, note 26 above, cites a study in the aftermath of the 2002 Elbe floods, reporting higher risk awareness and participation in emergency networks on the part of insured parties (48.5 to 33.9%), as well as a greater likelihood of engaging in some self-protecting mitigatory action (28.5 to 20.5%)

industry to work to deliver a public education programme and develop options to improve the availability and uptake of flood risk insurance by low-income households. Individually, it results in the most deleterious impacts falling on the most vulnerable. Here the poorest sections of the community are the most exposed, being less likely overall to identify a need insure whilst at the same time being least able to self-insure.

Addressing Resistance Issues

Forms of exclusion can variously result from such factors as lack of awareness of risk, forms of psychological or cultural resistance, or resource related problems including inability or unwillingness to pay attendant costs. The effective channelling of targeted information appears an essential precondition to transforming flood related attitudes and behaviour.\textsuperscript{48} The Pitt Report cites two exemplary illustrations: first, in the US, outreach and media campaigns seeking to encourage increased measures of flood resilience and resistance;\textsuperscript{49} and in the Netherlands, a campaign seeking increased awareness amongst the public as to flood risks and consequences, encouraging improved preparedness.\textsuperscript{50}

Progress has been made in the UK regarding information-related measures. For instance, the Environment Agency (EA) remit includes a public information role, and it has focused on producing accessible guidance, including website availability of such documents as \textit{Preparing for a Flood} and \textit{Simple Ways to Protect Your Home from Flooding}.\textsuperscript{51} And yet the EA also points to concern at ‘widespread apathy’ and denial, with only 52\% of respondents aware of living in an at-risk area, and only 57\% taking any advance measures relating to flooding.\textsuperscript{52} This picture is borne out by figures that relate to levels of householder take-up of the EA’s direct emergency information alert service (that is, around the time of flood events). Its \textit{Floodline Warnings Direct} system, available generally via consumer ‘opt-in’ (with some automatic registration from publicly available sources) to the highest risk 276,000 households, has notably low levels of take-up, including 41\% for England & Wales as a whole.\textsuperscript{53}

Meanwhile, inability to pay remains a significant determining factor in non-take up of household insurance,\textsuperscript{54} a problem particularly endemic in the rental sector. Pitt encouraged any future ‘moves by the letting industry to introduce a voluntary code of practice to inform tenants of flood risk’. It is not clear how this might best be

\textsuperscript{48} See generally, Pitt, note 7 above, chapter 20
\textsuperscript{49} Such as the NFIP’s \textit{Floodsmart} scheme in the US; see Pitt, 2.10.
\textsuperscript{50} This is known as the ‘Think Ahead’ scheme: \textit{Denk Vooruit} (www.crisis.nl ); see Pitt, 2.22
\textsuperscript{51} Environment Agency, \url{http://publications.environment-agency.gov.uk/pdf/FLHO1007BNET-e-e.pdf}. The latter includes recommends the taking out of ‘adequate insurance. Flood damage is included in most buildings insurance policies, but do check your home and contents are covered’
\textsuperscript{52} Ipsos MORI, Survey for Environment Agency (April 2008)
\textsuperscript{53} This overall figure masks instances of even lower regional take-up (35\%, Midlands; 28\%, Thames; 17\%, North East; 9\%, Anglia).
\textsuperscript{54} Whilst it may be questioned how far behavioural boundaries can be classified as distinct, note that typical reasons for non-insurance suggested by Whyley, C et al (1998) ‘Paying for Peace of Mind: Access to Home Insurance for Low-Income Households (Policy Studies Institute) 60, include: price exclusion (49\%), lack of awareness (20\%), objection on principle (4\%); awareness/inaction (20\%); awareness/distrust (16\%); or cover refused (2\%)
achieved, and a requirement to attach suitable guidance and advice to contract information might be the best approach.\textsuperscript{55} Even in relation to social housing providers, whilst it appears that relevant information is generally provided by individual landlords, there is in place neither a duty-based scheme nor yet an agreed sector-wide code of practice. Important opportunities arise at the time especially of a tenant’s induction to raise such issues with a clear focus. Best practice appears to lie in the opportunities offered especially by certain larger providers for tenants to access contents insurance under schemes typically run in partnership with a named insurer, which schemes can usefully be supplemented by targeted guidance.\textsuperscript{56}

**Wider Implications for Location Dependent Vulnerabilities**

Returning to wider questions of exposure to risk in the UK, the present discussion must be seen in a context of greater levels of flood threat (including to the integrity of floodplains, and of coastal inundation). Here it is useful to look behind public policy and contract-dependent foundations by considering the wider liability context within which the system continues to operate. A wider framework for any debate concerning flood risk exposure can be seen in common law assumptions concerning protection against water damage and the various consequences for liability. Efforts to protect one’s property have traditionally been sustained by a venerable doctrine with murky foundations: a ‘common enemy rule’, which suggests that no liability will normally attach to operations to defend against water ingress onto one’s property. This is broadly subject to the proviso that, once having come onto such property, it is not then diverted elsewhere (save by means of natural channels). The key feature therefore is that defensive measures that protect say Property A from water ingress by inundation (by say pluvial or fluvial flooding) may lawfully increase risks for Property B or elsewhere. With even the state assumed to be able to rely on this rule, a consequence of what amounts to a strongly atomised system (from first principles blind to wider issues of public interest) is that risks must be borne by individual property holders (and thus also their insurers). The system reflects private property justifications in a domain that might arguably be better viewed as suitable for the acknowledgement of common good, or even common ownership, approaches. Yet in consequence of a common law stance to flood risk that appears to mirror the rooted lack until now of long-term strategic thinking in the UK,\textsuperscript{57} the potential costs attaching to increasing threats are still to be borne by individuals.

Indeed there is a real future risk that, paradoxically at a time of increased public pursuit of more sustainable approaches,\textsuperscript{58} especially should the terms of agreement under the Statement be substantially altered or withdrawn, insurance cover will become increasingly unaffordable or unavailable to many. Even now, maintenance of cover is not guaranteed, the insurance industry examining risks on a case by case

\textsuperscript{55} See further, Pitt, note 7 above 20.48
\textsuperscript{56} Gloucestershire County Council, in consequence of experiences during the 2007 floods, has further produced (in collaboration with Zurich Insurance) a flood guide (Your Essential Flood Guide), which is offered as a template for other local authorities and housing associations as an example of best practice
\textsuperscript{58} See for instance, Future Water – the Government’s Water Strategy for England (Defra, February 2008)
basis, a process best described as the use of ‘best endeavours’ to insure. Whilst, for now, existing customers and their successors (that is, contracting with the same insurer) can expect continued cover, availability and costings must be expected to reflect risk levels, as renewals will increasingly be adjusted in respect of for instance premiums and excess requirements.

Should this process accelerate, then increasing disaggregation in respect of insurance availability will result, reflecting differential risks in individual locations. Moreover, as has been seen in other contexts (such as data availability following advances in genetics), the availability of more sophisticated information, increasingly the case in respect of flood mapping models available to insurers, exacerbates this likelihood of ever more differentiated treatment of policy holders.59 As risk pooling arrangements in this context become less viable commercially, such resulting differentiation can only be countered by legislative intervention,60 with or without state underwriting of otherwise non-recoverable losses affecting a growing group of vulnerable people. Disproportionate impacts for the most vulnerable individuals and communities are therefore potentially severe. In this light it may for instance be necessary to question the reasonableness of maintaining expectations that all householders (and also certain business owners) must rely on insurance to cover flood related risks.61

Private Property Owners

In some ways, problems presented by vulnerable private owners are the more intractable, although a focus on improved information at the transaction stage will lead to incremental improvements through greater awareness and transparency. For instance, one avenue is via a fuller setting out of pre-contractual information for the benefit of those engaged in property transactions.62 Information may be available via selling agents, although statutory duties in relation to misdescription do not extend to any clear duty to inform potential purchasers. Solicitors should carry out flood risk searches of the EA (and more detailed, property-specific, data is available from private search agencies). It is left to good practice to raise preliminary enquiries in relation to flood risk, and this suggests that further review of the law profession’s standard inquiry procedures is required in relation to flooding.63 In order to maximise transaction-based information, Pitt somewhat tentatively called for agreement between relevant professional bodies to consider how to proceed for the future.64 An opportunity missed thus far can be seen in the exclusion of flood risk from the

59 For a brief discussion of the proliferation of data becoming available to enable more sophisticated geographical risk analysis and flood mapping, see C. Batchelor, ‘The Cold and Costly Reality of Climate Change Insurance’, Financial Times, 9 July 2005
61 Every & Foley, note 29 above, 43
62 See generally Pitt, note 7 above, 20.25-30
63 Water companies, where aware of any previous incident, may have information concerning pluvial (surface water, from drains or sewers) flooding, although this will only extend to ‘industry standard’ frequent events (that is, at least 1-in 10 years)
64 Pitt, note 7 above, 20.30
mandatory information categories that domestic property sellers are required to provide to buyers.65

Though as can be seen from the above conditions for insurability can be described as being in a state of flux, the prospect of blight has not thus far appeared to be a major factor, according to a 2004 survey for the RICS which pointed to the broader advantages of maximising information and indeed subsequent benefits in relation to terms of insurance that may follow.66 Further studies suggest ‘marginal’ adverse affects on market transactions for properties in areas with most frequent flood histories, although these may also be further alleviated by suitable resilience measures.67 In an interesting postscript Pitt identified a lack of flood resilience on the part of small and medium-sized enterprises, particularly with reference to preparedness, suggesting that ‘fire safety is often considered more important’ and calling for improved resilience measures as part of business continuity planning.68

Conclusions

There have been suggestions that a limited scheme for general state insurance might offer a coherent solution to problems considered above.69 There might for instance be selective replacement of private floods insurance as standard by a targeted state compensation scheme available to those in areas of high risk. Availability could further be restrictively defined in the case of new build developments. Yet this solution, even as part of a more strategic approach to society’s future relationships with water, is likely to be deeply unattractive to the state, both in light both of concern at potentially open-ended spending commitments and its traditional preference for the brinkmanship of the status quo. There may be further practical disadvantages, potentially for instance leading to the progressive withdrawal of insurance cover (as seen in the US).

The imposition of mandatory insurance requirements, the best known of which in the UK are those applicable to motor insurance (third party, fire and theft) and employers’ liability, would create significant practical, as well as to some ethical, difficulties in the field of housing. Such approaches are in any event unlikely to be acceptable in a first party context, that is, outside the fields of liability policy. A variant on the current arrangements would be to supplement the current scheme, by seeking to maintain conditions whereby private insurance remains as standard, but with the state operating as insurer of last resort. As has been seen, a scheme of a similar genus exists in France, and indeed UK analogies could also be drawn with the idea of a state-backed insurance pool as operated through Pool Re in respect of terrorist damage. In this way customers in high risk areas might be offered flood insurance, premium passing to the

65 The Report further recommended, at 20.34, that Home Information Pack searches be extended to flooding, plus further specific information to be required of the vendor, such as personal resilience measures carried out and indicative insurance quotes
67 Pitt, note 7 above, 20.36-40, citing an average loss of 9-12% in property value
pool, and in the event of the pool being exhausted then subject to the terms of any levy on insurers the state could underwrite the costs of further claims.

An alternative approach (which is also being fostered thus far through state assisted investment in informal methods of tackling financial exclusion more generally) is to secure incremental improvements to insurance take-up within the present system. Going further, and with particular reference to the (whilst particularly vulnerable also particularly accessible) tenanted sector, obligations could be placed – by way of a code of practice or mandatory requirements of the regulator, or otherwise explicit statutory obligation – upon social housing providers to both investigate the availability of contents insurance schemes and make such a scheme available to tenants (in partnership with an identified private provider or otherwise). Such schemes can offer low-cost terms, dependent on objective risk factors (albeit impacting on levels of cover), as well as those affecting insurability of particular individuals. Where such schemes are established then equivalent measures need to be in place to enable premium payments ‘with rent’, or where payments are to be made direct to the insurance company (that is, ‘at arm’s length’) to ensure that transaction costs are reasonable.

As for whether the UK’s current scheme (as will inevitably be adjusted in response to risk) could be retained, it might have appeared until recently that this may not be viable, especially in the face of climate change and pressures on the public purse, alongside related problems in maintaining the continued general engagement of the insurance industry. However, as has been seen, the Environment Agency has now assumed a wide general responsibility for strategic defence in respect of both inland and coastal flooding, and is seeking to establish a longer-term defence strategy in relation to targeted sources of threat. Whilst UK civil society may have preferred not to have started from here, problems in distribution of the kinds of risk discussed above strongly relate to the common good. In this context, especially in view of the now dawning public recognition of impacts of climate change, the implications for vulnerable individuals and communities of necessary strategic adjustments should be viewed in light of past experience: in other words, we are not starting from a putative year zero. The consequences of longstanding, now questionable public approaches to flood and coastal risk (and which arguably have given rise, even now, to certain legitimate expectations), can be described as having been ‘strategically determined’ rather than (as governments might prefer) the product of ‘random uncertainty’.70

Ultimately, as society seeks to adapt to and mitigate the risks from climate change, for so long as the UK also continues to rely on the insurance industry in relation to flood risk, then coherent strategies to maximise certainties (in what are becoming notably uncertain environmental times) – especially for those most threatened – have become essential.

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Eurocodes and the structural safety of existing buildings – considering the publication of the Dutch NEN 8700

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Abstract:
Since 1992 there have been a number of proposals to renew calculation methods available to assess the structural safety of existing buildings. But without operational results. Upon publication of the Eurocodes NL decided to renew and to include them in the Dutch building regulations. The question was how. One decided to develop a new Dutch national standard: NEN 8700. That shows how, in conjunction with the 58 Eurocodes, an expert opinion can assessed on the structural safety of an existing building. The Building Decree 2003 will refer to this standard for load actions that have to be taken into account, the response of the structure and the required strength of structure, and will reference to the Eurocodes. The set up of the new standard is explained. A building is classified as an existing building after it has been completed. So the standard applies to all building stock, but the owner primarily must ensure that during the design working lifespan the legally required performance remains satisfied accept accidents. The safety assessment of an existing building differs from that of a new one in ways that are elaborated:
- cost in relation to safety;
- safety in relation to the reference period;
- availability of actual status data versus design data.

Unlike the regulations that apply to new buildings the new standard includes:
- probability theory;
- harmonisation of the Eurocodes with safety of existing building constructions on a arbitrary moment;
- acknowledgement of durable safety requirements other than a 1 year period;
- exclusion of requirements pertaining to the uncertainties that may arise during the theoretical designlife;
- amendment of determination methods for the properties of the structural materials used; and
- the ability to review at any time the actual constructed situation.

The new standard also establishes the lowest limits of safety levels in the renovation, alteration or enlargement of an existing building. Reliability and load factors are summarized extracted from the underlying TNO report.
Keywords:
Safety assessment, regulation, existing building, renovation, standard, Eurocodes, NEN 8700.

1 Introduction

On October 1st 1992 the Building Decree came into force together with some 6 Ministerial Orders. As from that moment quantifiable calculation methods became available to assess the structural safety of existing buildings as laid down in the Building Decree and later the Building Decree of 2003.

These calculation methods were based on the well-known Dutch TGB standards series together with the more detailed regulations in the Ministerial Order on structural and user safety. This Order has been legally and administratively simplified a number of times but the content is unchanged. This Order was based on the TNO Building Research report B-91-832.

There have been a number of proposals since to publish a separate TGB series to deal with existing buildings, but this hasn’t come to anything.

The above-mentioned TNO report was issued in 2004 and published as TNO B&O report 2004-CI-R0159.

After the publication of the Eurocodes and the decision to include them in the Dutch building regulations (following the introduction of the third issue of the Building Decree in 2003) the question arose of what to do about the regulations concerning the structural safety of existing buildings. The choice was not difficult because making 58 standards to cover existing buildings or alternatively making 58 sets of follow-up regulations to cover existing buildings in the 58 Eurocodes was not an option. The choice was made to develop a new Dutch standard: NEN 8700. This standard shows how, in conjunction with the 58 Eurocodes, an opinion can be arrived at on the structural safety of an existing building.

The following research questions are solved for the Dutch situation:
1. What are the differences between the public requirements for structural safety between newly built buildings and existing buildings?
2. What are the backgrounds of the safety philosophy to motivate these differences and how can the assessment of the safety of existing buildings used in practice?
3. What are the logical structural safety requirements by renovation of the structure of existing buildings?

In a national or international perspective the research can be placed as following: New Eurocodes for the assessment of newly built buildings are introduced in the European Union. In the Dutch building regulations also requirements are given for the minimum performance of existing buildings. So the existing regulations have to be changed to bring them in line with the 58 Eurocodes parts. In 2010 the Eurocodes will
be compulsory. At that moment also the requirements for existing buildings and renovation should be available.

Within the EU discussion is opened to develop also Eurocodes for existing buildings. The Dutch NEN 8700 and background report can be a good starting point.

The main conclusions and recommendations of the project are:

a) The safety philosophy of newly built buildings can also be used for existing building and renovation.

b) The reliability-index can be decreased for the assessment of existing buildings and for buildings in renovation, because economical aspects have to be dealt with in another way than by newly built buildings. Because of another reference period the actions can be decreased. Also durability aspects are not the same. The way safety figures of the structure itself may be used gives also a different assessment.

c) The study and standards provide direction how to judge in a practical way whether the minimum safety requirements are fulfilled.
2 The structure

The intention is that the Building Decree 2003 will refer to NEN 8700 for load actions that have to be taken in account, the response of the structure and the required strength of structure. The new standard will make reference to the Eurocodes.

Figure 1 – Overview of the standards structure
The paragraphs in NEN 8700 correspond one-to-one with those in NEN-EN 1990. Where the content of the paragraph is the same then NEN 8700 refers to NEN-EN 1990. Therefore when reading NEN 8700 you need to have both documents in front of you.

3 Purpose of the standard

The standard applies to all existing buildings, regardless of their age. A building is classified as an existing building after it has been completed.

The owner of the building must ensure that during the reference period the legally required standards are or remain satisfied other than caused by an accident. The legally required standards are the safety standards required by legislation at the time of construction, unless a building permit as defined in article 40 of the Housing Act has expressly permitted a lower standard (for example in the case of renovation) or if knowingly or unknowingly an incorrect building construction is approved. The legal regulations that determine new structural safety standards apply to the entire reference period, which is defined as the design working life of the building.

If the legally required safety level is not met, then article 13 of the Housing Act may require the building owner to modify the building construction. Whether this is invoked depends amongst others like on the timing of the infringement in relation to the remaining service life of the building. The Municipal authorities have the discretion to accept a certain degree of deviation from the regulations.

A separate issue is the private relationship between contractual parties. If a contractual agreement has not been met then the disadvantaged party has the right to a civil law process and the other party is liable for not fulfilling his contractual obligations.

4 Main contents

The safety assessment of an existing building differs from that of a new one in a number of essential ways:

- Firstly increased safety levels usually involve more costs for an existing building than for buildings that are still in the design phase. The safety provisions embodied in safety standards have to be set off against the cost of providing them, and on this basis these costs are more difficult to justify for existing buildings. For this reason in certain circumstances a lower safety level is acceptable.

- Secondly the remaining lifetime of an existing building is often different than the standard reference period of 50 years or 15 years that applies to new buildings. This aspect plays an important role in determining if the building construction is still adequately safe.

- Thirdly in an existing building actual measurement can be made in order to gather the facts.
More information on these aspects and their influence in determining the reliability levels chosen in the standard is contained in a report produced by TNO and the Expertcenter Regulations in Building: TNO-Report 2008-D-R0015/B.

Unlike the regulations that apply to new buildings the requirements of the new standard include:

- The regulations in NEN-EN 1990 which concern probability theory. This pays no attention to individual structural materials but is dependent on the purposes for which the building is used and pays attention to the probability of load stresses occurring over a short reference period. Herewith account is taken of known actions on the building taken place in the past and the probable properties of the building itself and not the structural properties of the building products as products in the market from which the building is made.

- Taking the opportunity to harmonise the Eurocodes with the basic principles on the safety of existing building constructions on a arbitrary moment. The safety assessment assumes a remaining lifetime of 1 year. Reference periods in determining the size of the load factors are 1 year for buildings in class CC1A and 15 years for buildings in class CC1B, CC2 and CC3. This is therefore a different assumption to the durable safety requirements of a newly built construction. These have in the case of permanent buildings a design lifetime and a reference period of 15 or 50/100 years dependent on the class of the building. For this reason the reliability index $\beta$ and the load factor $\gamma$ can be lower than those for new construction.

- Formal acknowledgement that guarantees on the durable safety requirements need other than to cover a remaining lifetime period of 1 year.

- Excluding requirements that relate to the uncertainties that may arise during the theoretical, paper design of the building.

- Amendment of the methods to determine the properties of the structural materials used in the building; and

- The ability to review at any time the actual constructed situation (a review based on the original design may be sufficient where there are no indications that the actual situation is worse).

Because the introduction of the Eurocode standards NEN-EN 1990 up to NEN-EN 1999 represents a breakthrough in the traditional assessment methods, there is justification for further transforming the old ways of working to the way that has been adopted with the Eurocodes as described above. NEN 6720 assesses concrete on its cube compressive strength, whilst NEN-EN 1992 assesses concrete on its cylinder compressive strength. Timber has now introduced strength classes, whilst for years visual control was the method used despite the need for an objective strength assessment. These are just a few examples.

In the development of the new standard we have tried not to change the confidence levels by which building structures were declared unsafe and were upheld by legal bodies up to the time of publication of the new standard.

---

1 The NEN 8799 and the Eurocodes make a difference between the reference period which expresses the size of the loads to be taken as basis for the calculations and the service life or remaining lifetime. The remaining lifetime is the indicator for the safety of the structure when loads are applied.
In the transition from the TGB 1990 standards to the Eurocodes (NEN-EN 1990 to NEN-EN 1999) the safety classes recognised in NEN 6700 have been transformed to consequence classes. This classifies buildings differently than in NEN 6700. To avoid this having unintended effects for existing buildings the consequence class CC1 has been split into class CC1A and CC1B. Class CC1A includes buildings that according to NEN 6700 fall in safety class 1 and according to the Building Decree 2003 may be assessed using a reference period of 1 year until the time of the introduction of the new standard. In Class 1A human safety will be subsidiary.

5 Renovation

The new standard also establishes the lowest limits of safety levels in the renovation, alteration or enlargement of an existing building. These limits differ from those which apply to newly constructed buildings and which are laid down in NEN-EN 1990. Note that granting exemptions to a level of the standard that may be below an already legally sanctioned level is not the intention. By doing so the authorities would be accepting a lower standard than they had originally sanctioned. However the authorities could well take account of the building’s remaining lifespan when granting a permit for renovation, alteration or enlargement. The remaining lifespan can be different from that of an entirely new building. Exceptional circumstances also may occur whereby exemption could be granted, for example after the occurrence of an accident.

The standard does not contain specific rules relating to minimum safety levels for renovation, alteration or enlargement of a building whereby the remaining lifespan and therefore the reference period of the building to be renovated is taken into account. The TNO B&O report 2008-D-R0015/B does include recommendations for this.
6 Summary on reliability and load factors

Extracted from the TNO report and applies to the different situations the reliability indices are shown in Table 1.

Table 1 — Minimum values for the reliability index $\beta$ with a minimum reference period (extreme limit) of 15 years for CC1B

<table>
<thead>
<tr>
<th>Consequence class</th>
<th>Minimum Reference period for existing building</th>
<th>New construction(^{a}) $\beta_n$</th>
<th>Repaired $\beta_r$</th>
<th>Summoned $\beta_b$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>wn wd</td>
<td>wn wd</td>
<td>wn wd</td>
<td></td>
</tr>
<tr>
<td>1A(^{b})</td>
<td>1 year</td>
<td>3.3 2.3</td>
<td>2.8 1.8</td>
<td>1.8 0.8</td>
</tr>
<tr>
<td>1B(^{b})</td>
<td>15 years</td>
<td>3.3 2.3</td>
<td>2.8 1.8(^{a})</td>
<td>1.8(^{a}) 1.1(^{a})</td>
</tr>
<tr>
<td>2</td>
<td>15 years</td>
<td>3.8 2.8</td>
<td>3.3 2.5(^{a})</td>
<td>2.5(^{a}) 2.5(^{a})</td>
</tr>
<tr>
<td>3</td>
<td>15 years</td>
<td>4.3 3.8</td>
<td>3.8 3.3(^{a})</td>
<td>3.3(^{a}) 3.3(^{a})</td>
</tr>
</tbody>
</table>

wn: wind not dominant
wd: wind dominant
\(^{a}\) In this case the minimum limit for personal safety is normative.
\(^{b}\) In this case a distinction is made between class 1A (loss of life unacceptable) and 1B (danger of loss of life is small).
\(^{a}\) For reference period and service life NEN-EN 1990 applies.
\(^{a}\) For reference period and service life local authority discretion (≥ 15 years) applies
\(^{a}\) With a remaining lifetime of 1 year.
Figure 2 illustrates how the regulations are intended to work based on an example in consequence class 2 (with a service life of 50 years for new construction and 15 years for renovation and in both cases the wind is not taken into account).

Strictly speaking the reliability indices relating to various lengths of service life and remaining lifetime cannot be captured in a single graph because to do this the $\beta$'s should be calculated on the basis of 1 year. This has not been done.

Figure 2 – Effect of the regulations on structural safety shown in terms of the required reliability of the building against time.
Table 2 shows the conversion to load factors.

**Table 2 - Overview of load factors**

<table>
<thead>
<tr>
<th>Load combination</th>
<th>Permanent load</th>
<th>Dominant variable load</th>
<th>Extreme variable load</th>
<th>Permanent load</th>
<th>Variable load</th>
<th>Wind force</th>
<th>Fire</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Un-favourable</td>
<td>favourable</td>
<td></td>
<td>Un-favourable</td>
<td>favourable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference period</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15/50/100 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW CONSTRUCTION</td>
<td>Load factors ULS, New construction (STR/GEO and extreme)</td>
<td>Reference period is 15/50/100 years; service life is 15/50/100 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consequence class 1</td>
<td>1.2</td>
<td>0.9</td>
<td>1.35Ψo</td>
<td>1.35 Ψo</td>
<td>-</td>
<td>1.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Consequence class 2</td>
<td>1.35</td>
<td>0.9</td>
<td>1.50Ψo</td>
<td>1.50 Ψo</td>
<td>-</td>
<td>1.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Consequence class 3</td>
<td>1.5</td>
<td>0.9</td>
<td>1.65Ψo</td>
<td>1.65 Ψo</td>
<td>-</td>
<td>1.4</td>
<td>0.9</td>
</tr>
<tr>
<td>RENOVATION</td>
<td>Load factors ULS – Renovation (repair)</td>
<td>Reference period: dependent on the situation (≥ 15 years; service life: dependent on the situation (≥ 15 years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consequence class 1</td>
<td>1.1</td>
<td>0.9</td>
<td>1.35Ψo</td>
<td>1.35Ψo</td>
<td>-</td>
<td>1.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Consequence class 2</td>
<td>1.2</td>
<td>0.9</td>
<td>1.50Ψo</td>
<td>1.50Ψo</td>
<td>-</td>
<td>1.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Consequence class 3</td>
<td>1.3</td>
<td>0.9</td>
<td>1.65Ψo</td>
<td>1.65Ψo</td>
<td>-</td>
<td>1.3</td>
<td>0.9</td>
</tr>
<tr>
<td>EXISTING BUILDING</td>
<td>Load factors: ULS – Existing buildings</td>
<td>Reference period 1 year with CC1A 1 year and with CC1B and 2 and 3 ≥ 15 years; remaining lifetime 1 year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consequence class 1</td>
<td>1.1</td>
<td>0.9</td>
<td>1.35Ψo</td>
<td>1.35Ψo</td>
<td>-</td>
<td>1.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Consequence class 2</td>
<td>1.2</td>
<td>0.9</td>
<td>1.50Ψo</td>
<td>1.50Ψo</td>
<td>-</td>
<td>1.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Consequence class 3</td>
<td>1.3</td>
<td>0.9</td>
<td>1.65Ψo</td>
<td>1.65Ψo</td>
<td>-</td>
<td>1.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Extreme (6.11)</td>
<td>All classes</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>dominant&quot; multiply by Ψo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent on the reference period the following applies for variable loads: If NEN-EN 1991 has no directive, as with floor loads, then the following may apply:

\[
R_i = R_{0i} (1 + \frac{1 - \psi_0}{\psi_0 - 1})
\]

Where:
- \(R_i\) is the adjusted extreme value of the variable equally spread load for the remaining lifetime;
- \(R_{0i}\) is the extreme value of the variable equally spread load for a service life of 50 years;
- \(\psi_0\) is the \(\psi\) -factor value from table A1.1 in the standard;
- \(\psi\) is the service life or the remaining lifetime;
- \(t_0\) is the service life of 50 years.
Lessons on climate change mitigation and adaptation strategies for the construction industry from three coastal cities

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Abstract:

The success of climate change strategies depends on how well mitigation and adaptation measures are implemented. While mitigation has entered mainstream policymaking, adaptation still lags behind in many ways, especially in the case of building and construction industry, one of the biggest greenhouse gas (GHG) emitting industries in the world. This is observed and confirmed in this paper in comparing current initiatives in three coastal cities, namely, Miami-Dade, San Francisco and Singapore. The paper argues that mitigation strategies need not start from scratch and that the existing disaster management systems and knowhow could provide a good platform for adaptation programs in the construction sector.

Keywords: Climate Change Mitigation, Adaptation, Construction Industry, Policy, Coastal Cities

1. Introduction – Climate Change and the Construction Industries in Coastal Cities

Of the human induced causes of climate change, it is said that the energy sector is responsible for about ¾ of the carbon dioxide (CO₂) emissions in the world (IPCC, 2001). The construction industry is said to be not too far behind. According to the American Institute of Architects (AIA, 2000), the biggest source of emissions and energy consumption both in the United States and around the globe is said to be the construction industry and the energy it consumes each year. According to a briefing note prepared for the International Investors Group on Climate Change (Krus, 2004), the cement sector alone is said to account for 5% of global man-made CO₂ emissions. Further, mining and manufacturing of raw materials used in construction and the transportation of heavy building materials are said to be contributing significantly to climate change.

Weather related impacts such as hurricanes, flooding, and coastal erosion for which climate change at least partially responsible, would encourage the use of new building techniques and materials to withstand adverse weather conditions. Such events would also influence the choice of site for construction projects and the building designs, especially in coastal cities. However, a point to note is that the introduction of energy efficient technologies and environmentally friendly designs and construction methods as measures to mitigate and adapt to climate change is likely to influence cost increases in construction. Further, the various regulatory measures put in place to control the emission of GHGs) and promote green buildings are likely to increase the cost as well
as the complexity of construction. Furthermore, although some authors (e.g. Mimura et al., 1998) note that cost increases for disaster rehabilitation and countermeasures against natural calamities could expand the market for the construction industry, the flip side is that flooding and other extreme weather related events mentioned above that could damage buildings and infrastructure could cost countries billions of dollars to replace the damage. This would require diversion of precious funds earmarked for other development activities. Thus, whilst the GHG emissions by the construction industry is one of the major causes for climate change, the construction industry in coastal regions could also be one of the worst affected industries due to impacts of climate change.

2. Efforts to Reduce GHG Emissions

Several countries have been working towards reducing the emission of GHGs at the national level. Some effective regional initiatives too have been taken. Some of these initiatives take the form of specific legislation aimed at imposing penalties and taxation to force those governed by such legislation to adapt climate friendly behavioral patterns and to promote sustainable development. The reason for such specific measures being taken perhaps is the realization that the quest for sustainable development cannot rely upon voluntary or soft law mechanisms alone. Some others are mere policy initiatives without specific legislation to back them. There are also industrial standards that have been introduced, some being mandatory, and others merely voluntary. Some initiatives have come forth as a result of judicial activism in the law making process. The recent judgment by the US supreme court in the case of MASSACHUSETTS ET AL. v. ENVIRONMENTAL PROTECTION AGENCY ET AL., 549 U.S. 497 (2007), to overrule the decision made by the US Environmental Protection Agency (EPA), that it lacked the authority under the US Clean Air Act to regulate GHGs, and that, even if the EPA did have such authority the EPA should decline to regulate GHGs in relation to global warming, could be cited as a good example.

As far as the construction industry is concerned, the recent initiatives to mitigate climate change have focused attention on the environmental performance of buildings and construction activity, particularly, emissions from buildings. Thus, the focus of these initiatives is on mitigation. It is important to understand that mitigating climate change alone will not be able to avoid all impacts of climate change. In that circumstances, what we need is a three-pronged system of initiatives, namely those that: 1) Mitigate climate change by reduction of GHG emissions; 2) Minimize the impact of climate change related disasters through better preparedness; and 3) Measures to adapt to current impacts of climate change.

Initiatives that fall under the first category above are clearly visible in most countries. A good example would be the initiatives taken by Annex 1 countries to the Kyoto Protocol to reduce their GHG emissions by 5% below the levels that existed in 1990. Comparatively, the adaptation discourse to current impacts of climate change as well as initiatives to prepare for future threats lag behind in terms of both scale and depth. According to the IPCC, adaptation is “concerned with responses to both the adverse and positive effects of climate change.”, “It thus implicitly recognizes that future climate changes will occur and must be accommodated in policy” (IPCC, 1996). However, several reasons can be conjure to explain the delay in concerted effort on adaptation strategizing. Burton (1994) opined that there may be a perception that discussion on adaptation “could make a speaker or country sound soft” on mitigation. Another reason may be that adaptation is associated with ‘fatalism’ about the human effects on our climate. However, given that there is no scientific evidence that climate change could be completely reversed, there
is a need to anticipate and deal with the consequences of a changing climate while at the same
time working to achieve long term reductions in GHG emissions. A point to be made here is that,
if countries fail to take proactive measures to deal with the current impacts of climate change and
prepare the current generation for future impacts that might affect them, although the efforts to
reduce GHGs would benefit the future generations, the needs of the current generation would be
neglected and ignored. Furthermore, if appropriate policy frameworks and measures to implement
them are not put in place, certain actions that may be taken at individual levels to deal with the
impacts of climate change might negate some expected benefits of the current actions to mitigate
climate change. A simple example would be the case of individuals increasing the use of air-
conditioners and heaters to deal with current impacts of climate change, whilst the countries try to
introduce measures to reduce GHG emissions.

With respect to the construction industry, strategies that aim to increase the energy efficiency of
building technologies and utilize renewable energy sources are examples of mitigation policies.
One may even argue that mitigation strategies can help to strengthen efforts toward minimization
of, and adaptation to, climate change impacts. Specifically, it could be argued that mitigating
climate change will help to at least reduce the seriousness of likely negative effects of climate
change, in the event that they cannot be totally displaced. Coastal land loss is a likely outcome of
a rise in sea-level; an adaptive measure is to relocate coastal communities inland while
strengthening the coastal regions with appropriate embankments. Since this relocation will
increase the population in the cities or sub-urban districts, sustainable initiatives such as district
cooling will be required to reduce the energy requirement of these cities as an effective strategy
against the urban heat island effect. Simply put, mitigation strategies will complement and
support adaptation strategies.

In the circumstances, in assessing the climate change policy/legislation system of a country or a
city, one must study not only how well-developed are the three-pronged system of initiatives
mentioned above, but also the extent to which initiatives in each category reinforce and support
one another. In this paper, we focus on comparing amongst three coastal cities in two countries –
Singapore, San Francisco and Miami. Some of Singapore’s mitigation policies bear a strong
resemblance to the United States’ and since coastal cities will be worst hit by climate change
effects, comparing the mitigation and adaptation across these cities will reveal useful lessons for
other coastal regions as well.

3. POLICIES AND LEGISLATIONS IN SINGAPORE

Having ratified the Kyoto Protocol in April 2006, Singapore has made a voluntary commitment to
reduce its carbon intensity by 25% from 1990 levels by the year 2012. According to the
Singapore Ministry of Environment and Water Resources (MEWR), the country had achieved a
22% reduction in 2004 (MEWR, 2006). Further, according to figures from the National
Environment Agency (NEA), Singapore’s carbon intensity was at 0.28 kilotons per million
Singapore dollars in 1990. That figure has declined to 0.21 in 2005, representing a 25%
reduction. Thus, it could be said that Singapore is well on track to meet its reduction goals by
2012.

Until the late 1990’s, the laws on environment that existed in Singapore were diverse and
scattered throughout many Acts. Further, State Agencies in charge of environment related
subjects were many. However, this problem has been resolved to a considerable extent with the
enactment of two key statutes, namely, the Environmental Public Health Act (EPHA)\(^1\) which controls waste including toxic, domestic and industrial waste; and the Environmental Protection and Management Act (EPMA)\(^2\) which consolidated various laws including the Clean Air Act and the Water Pollution Control and Drainage Act. It applies to air, water, noise, land contamination and hazardous substances.

In 2002, Singapore established the National Environmental Agency (NEA)\(^3\). NEA’s powers include inter alia:

"...prescribe and implement regulatory policies, strategies, measures, standards or any other requirements on any matter related to or connected with environmental health, environmental protection, radiation control, resource conservation, waste minimization, waste recycling, waste collection and disposal and such other subject matter as may be necessary for the performance of the functions of the Agency"\(^4\).

Today, Singapore’s framework for environmental management is based on five fundamental principles, namely, control of pollution at source; pre-emption and taking of early action; the “polluter pays” principle; innovation and new technology; and environmental ownership. According to the Singapore’s Ministry of Environment and Water Resources (MEWR) it’s mission is to “to deliver and sustain a clean and healthy environment and water resources for all in Singapore.”

The legislations mentioned above, although dealing with the subject of environment, were not enacted with the specific aim of dealing with climate change impact. Thus, Singapore too has not passed any specific laws designed to reduce GHG emissions since ratifying the Kyoto Protocol. However, a strong national strategy has been put in place and promising industrial standards have adopted under existing regulations to help the country achieve its emission reduction targets. In addition, several mitigation schemes have been introduced to promote green buildings and energy efficiency. These are now included under the policy umbrella of the National Climate Change Strategy (NCSS).

### 3.1. Singapore’s National Climate Change Strategy

According to the NCCS, Singapore is committed towards addressing climate change in an environmentally sustainable manner that is compatible with its economic growth. The NCCS provides that in developing it, the country adopted the following guiding principles that climate change actions must:

- Be environmentally sustainable and compatible with the country’s economic growth.
- Need individual, corporate and government effort, as meeting the challenge of climate change cannot be solely a government initiative. Stakeholders from the various government agencies, industry representatives, academia, non-governmental organizations and the general public must be engaged in these initiatives.

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\(^1\) Cap 95
\(^2\) Cap 94A
\(^3\) National Environmental Agency Act (Cap 195)
\(^4\) Section 11 of the National Environmental Agency Act.
- Be developed through a consultative, multi-stakeholder approach, taking into consideration the views of stakeholders and the public at large.

The key mitigation initiatives or requirements for the construction industry are the following.

### 3.2. Mitigation Strategies

Energy use in buildings made up 16% of Singapore’s energy demand in 2004. Given Singapore’s
tropical climate, the need for air-conditioning forms a large part of its electrical demand. It is expected that rising temperatures would increase the demand for cooling. Thus, in order to promote buildings designed to encourage greater use of natural light and ventilation, and with proper insulation that ensures less energy is used to cool down buildings, the Building Construction Authority (BCA) of Singapore has established minimum energy efficiency standards under the Building Control Regulations. Specifically, air-conditioned buildings must be designed with a high-performance building envelope that meets the Envelope Thermal Transfer Value (ETTV) of 50W/m². The regulations also require air-conditioning equipment and lighting to comply with minimum efficiency standards prescribed in the Singapore Standard Codes of Practice for Building Services and Equipment.

To encourage best practices beyond what are specified in the standard building codes, two labeling schemes have been introduced by BCA (2007). The first of these schemes is the Green Mark Scheme (GMS) introduced in January 2005, which rates the environmental performance of a building based on energy efficiency, water efficiency, site/project development and management, good indoor environmental quality and environmental protection and innovation. Depending on the score, the rating is categorized in four levels – Platinum, Gold Plus, Gold and Certified. It enables the benchmarking of the building’s environmental performance and allows comparison between buildings.

The second labeling scheme is the Energy Smart Labeling Scheme. Developed by the Energy Sustainability Unit of National University of Singapore (NUS) and NEA, this was launched in December 2005, and is the first energy efficient building label in Asia. Under this scheme “Energy Smart” labeling is given to the top 25% most energy-efficient buildings in Singapore that also demonstrate good indoor environmental quality. It recognizes developers and owners who design and maintain efficient buildings and is also a benchmarking scheme, where building owners can compare the energy efficiency of their buildings against a national benchmark. It is a pre-requisite for an existing commercial building to achieve the Energy Smart label in order to win the Platinum Award, the highest award, under the Green Mark scheme.

In addition to the above, other mechanisms have been put in place in Singapore to help it achieve its abatement targets. The Building Energy Efficiency Master Plan (BEEMP) details the various initiatives taken by the BCA to fulfill a number of recommendations made by the Inter-Agency Committee on Energy Efficiency (IACCEE) on strategic directions to improve the energy efficiency of the buildings, industries and transport sectors. Carrying out energy audits of selected buildings, review and update of energy standards, introduction of energy efficiency indices and performance bench marks and the introduction of performance contracting (also known as ‘third party financing’ or ‘contract energy management’ – a means of raising money for investments in energy efficiency that is based on future savings) are among the key recommendations that have been made by the IACCEE.
The law relating to buildings, and matters connected therewith is contained in the Building Control Act\(^5\) (BC Act). This Act provides inter alia that the Minister may make regulations for or in respect of “Environmental sustainability measures that improve the total quality of life and minimizes adverse effects to the environment, both now and in the future”\(^6\). This is the enabling provision under the Act to pass regulations promoting environmental sustainability. In fact, Singapore has amended the BC Act to introduce mandatory provisions to ensure minimum environmental sustainability standards in the construction industry. This has been done by way of the new Building Control (Environmental Sustainability) Regulations 2008, under which certification under the GMS has become mandatory except for alteration to existing buildings that does not involve major retrofitting works is not subject to this requirement.

### 3.3. Adaptation Strategies

In the NCSS, the NEA identified the potential impacts of climate change in seven ways: increased flooding, coastal land loss, water resource scarcity, public health impact from resurgence of diseases, heat stress, increased energy demand and impacts on biodiversity. As such, adaptation policies are designed to address these seven potential impacts (NCSS, 2008).

In early 1970s, many areas in Singapore were prone to flooding during the monsoon months; over the last 30 years, the Public Utilities Board (PUB) has been implementing infrastructure policies to reduce flood-prone areas from 3200 ha in the 1970s to about 124 ha in 2006. It aims to further reduce the area to less than 66 ha by 2011. This is expected to help ameliorate inland flooding incurred by either by sea-level rises (that may make it more difficult for rainwater to drain back into the sea) or storm surges at the shoreline caused by strong winds blowing inward from the sea.

Singapore has a relatively flat coastline and being land-strapped means that the coasts of Singapore are well-utilized for a range of purposes, including recreational facilities and residential buildings. It is believed that sea level rise of up to 59 cm can result in some coastal erosion and land loss in Singapore. Currently, about 70% to 80% of Singapore’s coastal areas are protected by hard wall or stone embankments; the remaining 20% to 30% are either natural areas such as beaches and mangroves. According to our queries, the NEA and MEWR are looking into developing more efficient ways to strengthen and protect vulnerable regions.

Singapore has been successful in facing up to its limited water resources with a series of integrated water policies. Rising global temperatures may result in changes in rainfall patterns and thus reduce the amount of water captured and stored in reservoirs. Diversification of its water sources – a key component of its current water policy – will be helpful in tackling this likely rainfall reduction due to climate change. Specifically, Singapore has been successful, and is improving, in the recycling of used water to produce water that is safe enough to be consume (also known as NEWater); it is also developing desalination (MEWR, 2005).

An increase in global temperature will have profound effect on Singapore, which is a tropical island. Thus, innovative measures are needed to reduce or change the use of air-conditioners in buildings and facilities, as air-conditioners are one of the most energy-intensive mechanical systems utilized in cities as a response extreme heat. One way is to ensure that renewable energy resources are used to power the utilities; another approach is to increase the energy efficiency of these mechanical systems, either through a change in the design of the technology or

\(^5\) Cap. 29.
\(^6\) Sec. 49 (2) (e) (viii).
improvement in the operation and maintenance of the systems. A third way is to reduce the need for the use of air-conditioners by introducing new building design elements that would increase natural ventilation. In recent years, Singapore has also started exploring more extensive use of passive methods to reduce the heat island effect and the need to use mechanical ventilation systems. An example is the deployment of urban greenery in the city and modification of building layouts and designs to reduce the cooling load of buildings (for example, through the use of building materials with better thermal properties and lighter-colored building surfaces). Such policy targets to adapt to changing climate conditions also have the effect of contributing to climate change mitigation. This shows that mitigation policies can also serve as adaptation strategies and vice versa.

Singapore’s public health and medical policies have been developed to address inter alia the control of tropical vector-borne diseases, particularly dengue fever. Dengue patterns are affected by many factors, including climate (MOE, 2004). NEA is currently studying the link between climatic factors such as temperature, humidity and rainfall with dengue cases. Authorities have put in place a comprehensive mosquito surveillance, control and enforcement system, which includes a review of building designs to reduce potential breeding habitats, including forbidding the use of roof gutters in new buildings except in special circumstances (MEWR, 2008).

The most current planned policy strategies in Singapore that are relevant to dealing with climate change are setout in the Singapore’s Sustainable Development Blueprint that was released in April 2009 by the Inter-Ministerial Committee on Sustainable Development (IMCSD) which was established to formulate a clear national framework and strategy for Singapore’s sustainable development in the context of the emerging domestic and global challenges. This report titled, “A Lively and Livable Singapore: Strategies for Sustainable Growth” details several key goals and initiatives for the period from now until 2030 to improve resource efficiency and enhance Singapore’s urban environment (MEWR, 2009). Some of the key initiatives that are of particular relevance to the construction industry and the built environment are listed below:

- Reduction of the energy intensity (per dollar GDP) by 35% from 2005 levels by 2030;
- Targeting 80% of the existing building stock (by GFA) to achieve at least Green Mark Certified rating (minimum level of energy efficiency) by 2030;
- Introduction of Solar technology at 30 public housing precincts nationwide as a Pilot Project.
- The Housing Development Board (HDB) to reduce energy use of common areas of public housing by 20% to 30% and build more eco-friendly HDB housing.
- Providing 0.8ha of park land per 1,000 persons by 2030
- Implementation of a S$100 million Green Mark Incentive Scheme for existing buildings to undergo energy efficiency retrofitting;
- Introduction of a Green Mark GFA Incentive Scheme for new buildings that can attain Green Mark GoldPlus and Platinum rating;
- Incorporation of Green Mark GoldPlus and Platinum requirements will be as part of land sales requirements; and
- Improve air quality by reducing ambient PM 2.5 (fine particles) levels to an annual mean of 12µg/m³ and capping ambient SO₂ (sulphur dioxide) levels at an annual mean of 15µg/m³.

All of the above initiatives and goals and the others set by the Singapore Blueprint are commendable as effective and efficient means by which a country with hardly any natural resources is trying to incorporate concepts of sustainability into its development and nation building policy architecture. A key weakness in the blueprint is the lack of any significant focus on climate change adaptation. However, in summary, it could be said that Singapore has made preliminary connections amongst different mitigation and adaptation strategies; these include strategies relevant to the construction industry. In other areas of urban development, the various authorities are improving existing measures in anticipation of potential negative climate change impacts. However, more needs to be done for Singapore to be adequately ready to deal with the adverse effects of climate change. In particular, we take the view that more research is needed in the area of building designs with better adaptive capacity. Further, such research should be supported with appropriate legislations and implementation mechanisms.

4. Mitigation and Adaptation Strategies in San Francisco, California and Miami-Dade, Florida

Although the United States is not yet a signatory to the Kyoto Protocol, and at the Federal level not many significant initiatives have been taken to address climate change, as of 2006, 28 states have programs to curb CO₂ emissions. In addition, approximately 166 United States cities have agreed to apply the Kyoto emission reduction standards to their communities (Prato and Fagre, 2006). An example is the State of California. In August 2006, the California State Legislature passed the Global Warming Solutions Act (AB32) which is designed to reduce the state’s impact on global warming. AB32 requires a reduction of statewide GHG emissions to 1990 levels by 2020, using a mandatory statewide cap on emissions beginning in 2012. It covers emissions from electricity consumed in California as well as other “significant” sources of GHG emissions in the state to be determined by the California Air Resources Board (CARB).

Similar to California, the Governor of the State of Florida signed three executive orders in July of 2007 that set GHG emissions reduction targets for the state (PEW Centre, 2007). This lends support to a series of sustainable building related policies at the state level. The Florida Building Code (FBC) sets specific requirements on energy efficiency, which in turn dictates building design pertinent to energy consumption. For example, section 402.2 of the FBC states that the minimum operable area to the outdoors shall be 4 percent of the floor area being ventilated.

4.1. San Francisco Mitigation Strategies

Effective November 2008, Chapter 13C of the San Francisco Building Code requires all new buildings constructed in the city to meet green building standards in accordance to Leadership in Energy and Environmental Design (LEED) green building rating system developed by the US Green Building Council (USGBC). Detailed requirements for different types of new buildings are documented in the 2007 green building report (2007). For example, all new large commercial buildings (over 25,000 square feet or 75 feet in height) completed in 2008 must at least be certified by LEED and all new high-rise residential buildings (over 75 feet in height) completed
in 2010 must at least attain LEED Silver. According to the City’s Mayor’s Accountability Reports (2008), over long term, San Francisco’s Department of the Environment (SFDE) hopes to accomplish a reduction in CO₂ of at least 60,000 tons and an energy savings of at least 220,000 megawatt hours of power by 2012.

SFDE also provides various incentives to encourage the uptake of sustainable design and resource management. For example, it allows priority-permitting, which gives projects that commit to LEED Gold certification higher priority in permit processing through coordination with the San Francisco Planning Department (SFPD), Department of Building Inspection, and Department of Public Works (SFPD, 2006). According to SFDE, under the program titled “GoSolarSF”, rebates for installation of photovoltaic systems are available from the Public Utilities Commission. Further, supported by initiatives such as the California Solar Initiative, rebates and federal tax credits, the program can pay half the cost of a solar power system installed in San Francisco. Rebates are also provided for new and existing homes (single and multi-family) and commercial buildings to increase energy-efficiency. For example, under the California Multifamily New Homes (CMNH) Program, monetary incentives are provided for buildings that are 15% more energy efficient than required by the code (Title 24, California Code of Regulations). The CMNH advocates design strategies such as using high efficiency windows, energy efficient water heating systems, improved wall and ceiling insulation, high efficiency space heating and cooling equipment and high efficiency appliances and lighting (California Multifamily New Homes program). The EnergyStar is adopted as the scheme by which the building systems are assessed and selected; this exemplifies how policies at the local level can be integrated with federal ones.

At the county-level, to promote environmentally sensitive design and construction, the Miami-Dade County Commissioners passed an ordinance in June 2005 to expedite the permitting process for green buildings certified by LEED (United States Green Building Council (USGBC, 2009). This ordinance required all new county-owned and county-financed facilities and all major renovations of greater than 50% of replacement cost to achieve LEED Silver. County renovations owned/operated/financed of less than 50% of replacement cost are required to achieve LEED Certified of the appropriate rating system (New Construction, Existing Buildings, Commercial Interiors, Core and Shell).

4.2. Miami-Dade Mitigation Strategies

In May of 2006, Miami-Dade County passed an ordinance to require all new municipal or publicly-funded construction to incorporate LEED guidelines and principles. The ordinance also offered expedited permit review for all private residential or commercial projects pursuing LEED certification (USGBC, 2009). To coordinate with this incentive, in 2007, the Miami-Dade County Office of Sustainability was created through Ordinance 07-65; the Office amended the Code of Miami-Dade County to establish a Sustainable Buildings Program. Under this policy, new buildings in the county must attain at least the LEED Silver status and all remodeling/renovation projects to attain the LEED certification. This specification is different from the FGBC certification program, the latter of which allows for place-based adoption of the basic categories considered by LEED. In addition, according to the Miami-Dade Building Code Compliance Office (MBCCO), the county government requires buildings’ energy performance to be increased by 15% above that required in the 2004 edition of the FBC, effective with the implementation of the 2007 edition of the FBC on December 31, 2008 (MBCCO, 2009).
4.3. San Francisco Adaptation Strategies

The San Francisco Climate Action Plan (SFDE, 2004) underlines detailed challenges that the city will face on its infrastructure. It is said that if the city experiences 4 to 5 inches of rain over the course of a month, the water drainage system is capable of handling the rainfall; however, if that much rain were concentrated in the course of a week, there are likely damage to catchment systems, flooding of streets, and clogging of sewage drains. However, the Plan is primarily one focused on reducing GHG emission instead of adapting to future impacts.

In November 2008, Governor Schwarzenegger issued an Executive Order, S-13-08, to enhance the state's management of climate impacts from sea level rise, increased temperatures, shifting precipitation and extreme weather events. The California Climate Adaptation Strategy (CCAS) was later drawn up and under this strategy and six working groups were formed. One of these groups focuses on adopting its infrastructure and transportation systems to possible changes in the future. These groups have pre-empted inundation of rail lines and roads in the coastal areas and more frequent disruptions to travel due to storm surges. Potential solutions considered include relocating these roads and elevating of streets and bridges wherever practical and possible. (CCAS, Infrastructure Working Group, 2008).

In the above study, the infrastructure study group has identified a few likely changes to the urban areas. The group’s draft report (CCAS, Infrastructure Working Group, 2008) indicates that relative sea level is likely to increase at least by 0.3 meter (1 foot) across the region and possibly as much as 2 meters (6 to 7 feet) in some parts. As the sea surface temperature increases, there is an increase of 10 percent chance that hurricanes will form off the coast. Depending on the nature of these storms, facilities at or below 9 meters (30 feet) could be vulnerable to direct storm surges' impacts. While the expected increase in temperature may either increase or decrease the average annual rainfall, the intensity of individual rainfall events is likely to increase.

In the circumstances, the California state government as well as the San Francisco city administration should advocate the need to strengthen building codes in coastal areas to provide additional protection for properties from wind and storm surges. The placement and design of infrastructures (for example, wastewater treatment facilities and power plants) should be relocated to protected areas. Storm water management needs to be improved to minimize flooding; adoption of the Low Impact Development practices is one possible option. More shades and reflective surfaces through building and landscape design should be implemented to make buildings more comfortable under warmer climate. Further, as suggested by the Florida Planning Tool Box (2007) developed by the Florida Atlantic University's Center for Urban and Environmental Solutions, Retrofitting of roads and bridges via elevating them or developing engineering techniques that allow them to float or withstand flooding, are crucial to ensure the robustness of the transportation infrastructure.

4.4. San Francisco Adaptation Strategies

The County Government of Miami-Dade established the Climate Change Advisory Task Force (CCATF), under the Ordinance # 06-113 passed in July 2006. Membership and expertise of this force was drawn from various stakeholder groups and there is even a committee that is being assigned to look especially at solutions for the built environment. In May 2008, this Task Force recommended 35 actions that it believed would ready the county for adversarial effects of climate change (Miami Today, 2008). Those recommendations relevant to the construction industry
include acquiring of undeveloped lands and develop them for adaptive settlement (this in turn 
requires providing county with more financial support so that it can acquire these pockets of 
land), constructing of more facilities to store alternate fuels and curtailing further new 
developments along vulnerable coastlines.

5. Comparison of Initiatives in the Three Cities

Clearly, strategies for mitigation are far more elaborated than adaptation in the three coastal cities 
considered in this paper. This is largely due to the fact that we have been involved in mitigation 
discourse and policymaking longer than in adaptation. The common mitigation approach is rating 
buildings and communities according a set of sustainable design guidelines; these are usually 
supported by product labeling schemes (such as the EnergyStar scheme) that distinguish energy-
efficient building-related products.

Concerning the two US coastal cities, although the relevant state governments do not demand the 
acceptance of the LEED rating system, policies in Miami-Dade and San Francisco clearly 
advocate the use of LEED as the preferred sustainable design guideline. However, the fact that 
the states adopt a much more flexible mindset implies that the county and city governments are 
permitted to apply LEED and additional guidelines that may address local challenges, including 
any additional requirement on energy efficiency over what is required at the state level. In 
comparison, due to its smaller geographical size, and also given that Singapore is a city state with 
a unitary government; Singapore does not face such a situation. Singapore clearly does not have 
as many different types of voluntary schemes and incentive programs for adoption sustainable 
building practices as the others. However, both Singapore and Miami-Dade have promulgated 
laws and building codes requiring various categories of buildings to conform to local sustainable 
building standards.

Given that most of the adaptation strategic work plans were drawn up only in the past few years, 
the measures to cope with likely effects of climate change is less defined and more conceptual in 
nature. There are reasons to believe that the pace of adaptation policymaking will be faster than 
what we have seen for mitigation policymaking for the past decades. Firstly, although the 
discourse on mitigation began long before the IPCC confirmed the anthropogenic contribution to 
global warming in their fourth assessment in 2007, the resurgence in the discussion of adaptation 
started around the same time when people more clearly understand the magnitude of the 
challenges confronting the global mitigation efforts. Secondly, as we can see from the three cases 
considered, cities and countries are leveraging on their present capacities to address natural 
disasters and local developmental issues to boost up their adaptive capabilities. This theoretically 
means adaptation can be jumpstarted easily, using existing knowledge as the foundation.

Of the three cases, only the Florida Building Code explicitly considers disaster management in its 
building design. This exemplifies how existing sustainable building codes and standards should 
include guidelines on climate change adaptive technique. Although the LEED has not considered 
these even in its latest editions, counties and cities can certainly take the initiative to include 
demands for these techniques as additional standards. In fact, as we have seen in all these three 
cases, mitigation and developmental strategies can also help jurisdictions to adapt; these include 
using application of urban greenery and minimizing coastline erosions.

Adaptive policymaking is still in its infancy but there already exist programs that help cities build 
local level governance, which is very important in driving any essential mindset changes (for
example, local residents may need to be persuaded to learn evacuation drills in times of disasters. In fact, being part of the international network under the ICLEI means that member jurisdictions get to learn from one another, and then tailor global strategies to suit local conditions. This is something Singapore can certainly learn from the other two cities as well as other members of the ICLEI.

6. Lessons for Other Coastal Cities

It is important to understand that mitigation and adaptation are not alternatives and that both need to be pursued actively and in parallel. Mitigation is essential and adaptation is inevitable (UNFCC, 2006). Global efforts are more advanced in mitigation whereas adaptation actions are in their infancy. Our comparisons of these three coastal cities review that mitigation strategies for the construction industry are very similar to one another, although they modify fundamental standards to address local challenges.

Coastal cities should concurrently build their capacities for adaptation, leveraging on their existing mitigation strategies and disaster management systems. But this requires them to identify those mitigation measures that will also help them to adapt. Our review shows that there are major similarities amongst the cities’ adaptation approaches, with minor modifications of the general concepts to address local issues (such as coral reefs preservation). This shows that more international efforts on adaptation should be encouraged, and that the conventional assumption that adaptation, compared to mitigation, has a more localized scope is not entirely correct.

Governments should not leave adaptation entirely to social or market forces. Essential forms of adaptation will demand that institutions, both public and private, plan their strategies and take action in advance. Thus, in addition to introduction of necessary legislations and regulations, both the public sector and the private sector entities should take the initiative to promote industry guidelines and good practices as well as public awareness. Such initiatives from the private sector can include initiatives such as the promotion of novel building designs and construction standards by professional bodies of architects and engineers and industrial groupings consisting of contractors. Further, authorities and support agencies could also have a role in encouraging adaptation in new buildings and in retrofitting actions through motivating and educating the community, setting an example, providing incentives and regulation through approval functions.

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Family intervention tenancies: the de(marginalisation) of social tenants?

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Abstract:
As well as fulfilling the basic human need for shelter, a home is also a place where individuals can put down roots, engage with community, and exercise citizenship rights. At the same time as the United Kingdom government has been gradually disengaging from housing policy which guarantees accessible, decent and secure housing for all, it has introduced a raft of measures to address anti-social behaviour, particularly in relation to social housing.

This paper discusses the introduction by the Housing and Regeneration Act 2008 of Family Intervention Tenancies (FITs), i.e. voluntary, non-secure tenancies granted by registered providers of social housing to those against whom possession has, or could, have been ordered in relation to their former homes because of their anti-social behaviour. The aim is to improve behaviour by providing tenants (and/or members of their households) with intensive support services away from the location of their former properties so as to enable them to break links with local connections and make a fresh start. It is expected that in most cases FITs will run for between 6 months and a year or possibly even longer and, once the support programme has ended, they can be converted into a more secure form of tenancy. The paper considers whether FITs are another example of ‘authoritarian intervention’ in the private lives of a ‘marginalised underclass’, or of welfare conditionality or whether, in fact, they do offer a new opportunity for the ‘de-marginalisation’ of certain tenants and for breaking cycles of deprivation and social exclusion.

Keywords:
Anti-social behaviour, family intervention tenancies, housing,

1 Introduction

Over recent years, concern that anti-social behaviour is a widespread and possibly growing problem has led to the introduction of a range of legislative measures to deal with those who perpetrate it. Indeed, the present Government seems incapable of passing any housing legislation which does not include new provision relating to anti-social behaviour (Hunter, 2009:29). While most legal interventions have been either punitive or conditional in nature, Family Intervention Projects (FIPs), which ostensibly focus on rehabilitation, may be indicative of an important change of approach. However, the Family Intervention Tenancies (FITs) to which such projects can be linked have been constructed in such a way that they may prove to be yet
another means by which punitive sanctions can be used against problem tenants. This paper begins by explaining the nature of FITs. Attention is then turned to the reasons why social housing has been targeted by successive governments in relation to anti-social behaviour and the nature of the measures put in place to tackle it.

2 Family Intervention Tenancies

FITs are granted by local housing authorities and registered social landlords/registered providers of social housing to people against whom possession orders have or could have been made in respect of their secure or assured tenancies or those who (if they had a secure or assured tenancy) could have had such a possession order made against them. The final category means that they may also be offered to tenants of private landlords.

FITs carry no security of tenure and are offered for the purposes of providing ‘behavioural support services’. The ‘behavioural support’ comes through family intervention projects (FIPs) which provide intensive social work support to families who are homeless or at risk of eviction because of anti-social behaviour. Using an ‘assertive’ and ‘persistent’ style of working, project workers develop support plans for individual family members in an attempt to stop the offending behaviour. The purpose of FIPs is ‘to help rehabilitate these families so that they can ultimately live within the community without causing further nuisance’ (DCLG, 2008: 7.2)

A number of FIPs use ‘dispersed’ and ‘core’units. ‘Dispersed units’ - to which families move from their existing accommodation - are properties taken from general needs stock which have been specifically designated for use by the project. ‘Core units’ are purpose-built premises in which families live with project staff. Previously, because tenancies in dispersed or core units generally fulfilled all the requirements to be secure (under the Housing Act 1985) or assured (under the Housing Act 1988) and thereby enjoyed security of tenure, it could be difficult to move on families whose support came to an end or evict those for whom support proved ineffective (Hunter, 2009: 29). FITs are intended to provide the solution: ‘a simple means of moving families between mainstream and dispersed accommodation or purpose-built units’ (DCLG, 2008: 7.4).

Before entering into a FIT, the landlord must serve the prospective tenant with a notice stating why the new tenancy is being offered, any requirements in respect of behaviour support services, the security of tenure available under the tenancy and any loss of security of tenure which could result from taking it up. The tenant must also be notified that the offer need not be offered nor any existing tenancy surrendered. While FITs are therefore, ‘voluntary’, failure to accept the offer of such a tenancy may well be followed by the landlord seeking to repossess the tenant’s existing home. By ss 4ZA(5)(b) Housing Act 1985 and 12ZA Housing Act 1988 (introduced by s.297 Housing and Regeneration Act 2008), the notice must also identify ‘the dwelling-house in respect of which the tenancy is to be granted’. All FIPs involve outreach support to family members in their existing homes and it is clear that the wording of the legislation would permit FITs to be granted in such circumstances. Nevertheless, an explanatory memorandum issued by the Department of Communities and Local Government states that ‘FITs will only be offered to those families who are moved
into dispersed accommodation or purpose-built [i.e. core] units’ (DCLG, 2008: 7.3). At the end of the support period, the local authority or housing association should endeavour to find the family a new settled home as speedily as possible.

Where anti-social behaviour continues, it may be considered appropriate that the FIT should be brought to an end during the support period. Because a FIT confers no security of tenure, it can be terminated by notice to quit. However, before serving such notice, a local authority landlord must serve a written notice stating that, inter alia, it has decided to serve a notice to quit, and giving the reasons for its decision. Local authority tenants have a right to request a review of the authority’s decision to evict. While no statutory review process for housing association FITs exists, the Tenancy Services Authority (the new social housing regulator) expects associations to offer a review process which closely follows that offered by local authorities.

3 Anti-social behaviour: a growing problem?

The Crime and Disorder Act 1998 effectively defines anti-social behaviour as behaviour which causes or is likely to cause ‘harassment, alarm or distress to one or more persons not in the same household’ while the Housing Act 1996 refers to conduct ‘capable of causing nuisance and annoyance to any person’ and/or ‘use of the premises for unlawful purposes’. The elasticity of the term and the absence of any commonly agreed definition - let alone a consistent legal definition - has two consequences. First, taken with the lack of any reliable recording by landlords and other agencies, it makes it difficult to assess the size and severity of the problem. For most people in England and Wales, anti-social behaviour is not a major concern. It is, however, a serious issue for a sizeable minority in some areas, notably those in inner city and deprived areas (Millie et al, 2005: 11, 13). Nonetheless, although ‘there is little hard evidence as to the extent of anti-social behaviour and whether this has changed over time’ (HCHAC, 2005: 12), there does seem to be a consensus among social landlords that there is a genuine upward trend which is often associated with drug and alcohol misuse and disruptive behaviour by mental health sufferers (Pawson et al, 2005: 30). Whether, however, there has been an actual rise in misconduct is unclear. That victims are increasingly inclined to report incidents may stem in part from the publicity given by the media to anti-social behaviour which has, in turn, raised its political profile but it may also be that social landlords are more willing to respond to it (ibid: 30). Possibly too, communities are less able or willing to reach an informal solution to problems and disputes between their members.

Secondly, the absence of a standard definition makes it more difficult to develop an effective policy response or to judge the effectiveness of legal or other remedies. It is clear, however, that since the 1990s, anti-social behaviour has become a common feature in politics and the media and a range of strategies has emerged. Flint suggests that the problem has been, and will continue to be, addressed on at least four levels: prioritisation within rhetoric and discourse; changes in the housing management practices and policies of landlords; multi-agency partnerships; and an increasing range of legislative powers (Flint, 2004b: 4). It is the last of these on which this paper will

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1 Crime and Disorder Act 1998, s.1(1).
2 Housing Act 1996, s.153A.
focus. However, before exploring the place of FITs in the context of other legal interventions in housing, it is worth considering why - although problems can arise in any tenure - social housing is where they appear to be most commonly encountered and why it has been the focus of government interventions.

4 Anti-social behaviour and social housing

Areas of bad urban housing have existed in Britain ever since the industrialisation of the nineteenth century encouraged mass migration to the towns and cities (Papps, 1998: 640). Until the development of council housing, the urban poor lived in privately rented accommodation situated near centres of industry and commerce (ibid). Well into the post-war period, crime and social disorganisation tended to be associated with these declining neighbourhoods which were dominated by deteriorating housing and high levels of turnover (Murie, 1997: 24). The expectation that such problems would be solved by slum clearance proved to be ill-founded. Nevertheless, even though parts of the council stock in most cities had a poor reputation and were avoided by all except those who had no choice (ibid: 28), most areas of council housing consisted of stable neighbourhoods occupied by respectable employed working class families, their ‘informal and formal processes of social control’ often being linked to ‘family and kinship networks, and workplace relationships’ (ibid: 24). In estates where there was a dominant local employer, neighbours often worked together - frequently belonging to the same trade union - ‘and the disciplines and relationships associated with work spilled over into the organisation of neighbourhoods’ (ibid). The association of crime (and, it may be added, anti-social behaviour) with council housing is not therefore ‘inherent in council housing provision’ but can be explained in terms of the sector’s changing role (ibid: 25).

Even though it has declined in size over the last twenty five years and now accommodates some of the most economically deprived households, social housing is expected to deal with and manage the consequences of ‘risks that are being decontainerised as a result of welfare restructuring’ (Allen and Sprigings, 2001: 392-3). Thus, as well as having to house sexual offenders, individuals requiring care in the community, refugees and asylum seekers (often in the most difficult to let local authority stock), it is also expected ‘to tackle the perpetrators of anti-social behaviour’ (Flint, 2004b: 4). Most policy interventions appear to be based on the premise that problems occur in social housing because of ‘deficiencies in the conduct and cultural and social capital of residents’, rather than a recognition that ‘the actions of government and the utilisation of resources by more affluent and powerful populations’ are themselves partly responsible for ‘the spatial concentration of social problems’ (Flint and Rowlands, 2003: 216). A reason exists therefore for government intervention. Most tenants of local authorities have secure tenancies which are subject to the Housing Act 1985 while those with housing association landlords are likely to have assured tenancies governed by the Housing Act 1988. Despite the use of various mechanisms such as large-scale voluntary stock transfers and arm’s length management organisations to transfer ownership and management of much social housing out of local authority control, social housing in the UK is still owned by an easily identifiable and closely regulated group of providers. Governmental
intervention is made possible therefore because social housing provides a legal, organisational and often geographical framework which is absent from other tenures.

Card notes that the changing nature of ‘the political discourse surrounding anti-social behaviour’ has contributed to the identification of social housing and its tenants as ‘marginalised or excluded’, such labels allowing for ‘more punitive and rehabilitative measures to be applied to those who fail to conform or fail to act responsibly towards the community in which they live’ (Card, 2001: 201). Hawarth and Manzi take a similar view, suggesting that the concepts of ‘social exclusion’ and ‘residualisation’, although not themselves explicitly judgmental, ‘nevertheless allow an implicit agenda to be shaped, within which traits of stigma and culpability can be introduced’ (Hawarth and Manzi, 1999: 158). The designation of social housing as a ‘safety-net’ limited to those in greatest housing need has, they argue, contributed to the shift in housing management practice towards more interventionist policies designed to deal with a ‘marginalised underclass’ (ibid: 159). Because the allocation of local authority housing is subject to the discretion of local authority officers and members, their role as ‘gatekeepers’ and ‘the designation of tenants and housing applicants as ‘deserving’ and ‘underserving’’ has become more explicit in housing discourse. The categorisation of local authority residents as ‘passive recipients of welfare’ may mean that they are more inclined to accept ‘authoritarian intervention’ in their private lives and the fact that these interventionist policies have been introduced against the background of reduced funding means that ‘moral values’ can assume a greater prominence (ibid: 153).

The responsibilisation agenda of recent governments has also had a part to play in the ways in which anti-social behaviour is perceived and addressed. The notions of ‘social protection, social rights and collective provision’ associated with a post-war welfare state in which universal access to health, education and social insurance was seen as a passport towards social citizenship (Marshall, 1950) have given way in recent years to market-oriented policies and a focus on individual responsibilities which emphasises the obligations and responsibilities of welfare recipients. As Rose explains,

‘The state is no longer to be required to answer all society’s need for order, security, health and productivity. Individuals, firms, organizations, localities, schools, parents, hospitals, housing estates must take on themselves – as ‘partners’ – a portion of the responsibility for their own well-being’ (Rose 1999: 142).

Instead of being required to answer all society’s needs – including order - the state has become a facilitator, an enabler or animator (ibid).

Anti-social behaviour has come to be seen as a community concern with everyone being urged to ‘play their part in setting and enforcing standards of behaviour’ (Home Office, 2003: 1.14). A consequence of this increased emphasis on the civic responsibilities of individuals has been the identification of local neighbourhoods as the most appropriate location of government intervention and the greater weight placed on ‘social and communal relations…in the success and sustainability of policy interventions’ (Flint, 2004b: 7). While the affluent who are seen as successful citizens and consumers, increasingly live ‘an individualistic and privatised existence’, poorer
groups, including social housing tenants are urged ‘to adopt collective neighbourhood-based responses to their social exclusion’ (Flint and Rowlands, 2003: 223).

5 Legal responses to anti-social behaviour

Legal responses to anti-social behaviour may be seen as having taken two forms. The first is premised on the belief that, as discussed above, anti-social behaviour is a problem of social housing, and more particularly those who occupy it. The second does not link the problem to a particular tenure or even housing in general but acknowledges that it affects the wider community (Hunter, 2001: 223). Nonetheless, the Government has continued to introduce housing-specific measures to deal with anti-social behaviour. However, they may also be said to recognise the fact that social landlords are ‘senior stakeholders’ in the community which can ‘demand and …draw in other service provision when necessary’ (DTLR, 2002: 7).

Throughout the history of social housing, landlords have sought to control access to their housing and the conduct of their tenants (Burney, 1999) but they have become increasingly dominant concerns in recent years. By controlling access and excluding ‘undesirable’ applicants from their housing, landlords can avoid potential anti-social behaviour. As a result of changes made to the allocations process by the Homelessness Act 2002, ‘unacceptable behaviour’ is now a ground upon which local authorities may treat an applicant as ineligible for housing or deny them ‘reasonable preference’. At the same time, the move towards choice-based lettings is aimed towards the creation of sustainable communities in which a sense of community cohesion can be fostered and social control exerted over standards of behaviour.

A feature of this responsibilisation of tenants has been a transactional discourse of right and responsibilities, with tenants being made aware that keeping their home is conditional upon responsible behaviour towards neighbours and the community (Home Office, 2003).

‘…[T]he state’s conceptualisation of the tenant has shifted from the protective embrace of much of the 19th century towards a more responsibilised conception…[in which] the tenants are required to exercise their own self-regulation and to conform to the norms of civil society. There is a twin meaning here of responsibility – it relates, at once, to the necessity for the tenants to conform to the contractual relationship with their landlord; but it also relates to a broader (non-legal) contractual relationship with their community or neighbourhood. The state has become concerned with how the tenants should exercise their responsibility qua tenant’ (Cowan and McDermont, 2006: 155).

As such, it is symptomatic of ‘a broad and far-reaching shift towards greater conditionality in welfare’ which is predicated on the view that welfare assistance should be made available only to those who fulfil certain conditions regarding their own behaviour and that of their children. Deacon suggests that this ‘marks the abandonment of the largely structural explanations of deprivation and exclusion which dominated left and centre left thinking for much of the post war period’, and
also recognises the role played by ‘the choices’ lifestyle and culture of the poor themselves’ (Deacon, 2004: 912). The ‘non-judgmentalism’ on which the provision of welfare rights was formerly based has thus been replaced by the adoption of a more moralistic approach.

An example of welfare conditionality in the housing context can be found in introductory or starter (i.e. probationary) tenancies which local authorities and housing associations may use in order to assess the suitability of tenants for fully secure or assured tenancies. A landlord who wishes to recover possession during the trial period (which may be extended to last for up to 18 months) must obtain an order for possession but is not required to prove any grounds although its decision to evict is subject to review. It can be argued, therefore, that in contrast to households in other tenures who are not required to earn their security, the introductory or starter tenancy involves the withholding of a secure or assured tenancy until such time as the tenant has shown himself to be ‘deserving’ of a settled home (Haworth and Manzi, 1999: 161). Some maintain that this distinctive treatment may be said to reinforce images of a ‘marginalised underclass’ in social housing which facilitates the use of ‘punitive solutions’ (ibid). An alternative view is that introductory tenancies can help to build sustainable communities, the existence of which depends on tenants feeling confident that compliance with their tenancy agreements will enable them to ‘keep their long-term family homes’ (Law Commission, 2002: 1.21, 1.22).

Repossession - the archetypal, punitive method of dealing with anti-social behaviour - is only partially effective in that it fails to deal with the underlying causes of problem behaviour and can simply result in the problem being transferred elsewhere - often to the private sector. Generally speaking, landlords will consider possession proceedings only in respect of ‘serious’ offences, e.g. violence or threats of violence, racial harassment and illegal possession of drugs or drug dealing. Occasionally, however, where other measures have been unsuccessful and the perpetrator’s behaviour remains unchanged, some landlords will - as a ‘last resort’ - serve notices seeking possession in cases of less serious but persistent nuisance, e.g. noise nuisance or dog fouling, hoping that ‘the shock value of a notice’ can help to alter a tenant’s conduct where all other means …have failed’ (Pawson et al, 2005: 79). Deciding whether or not a case should be pursued via possession action will also depend on, e.g. how confident the landlord is that the complainant (and/or aggrieved and frightened neighbours) will be able and/or willing to provide credible evidence in court, and whether the alleged perpetrator was subject to any form of vulnerability such as mental ill-health which could affect his behaviour.

The courts have often looked towards the impact that the offending behaviour will have had and could continue to have on adjoining occupiers but the interests of the immediate community in the repossession process have been made explicit by the insertion of new provisions into the Housing Acts 1985 and 1988 by the Anti-Social Behaviour Act 2003. Now, in deciding whether it is reasonable to order possession
on grounds of ‘nuisance and annoyance’, the courts are directed to consider the effect
that anti-social behaviour has had on ‘persons other than the person against whom the
order is sought’ and ‘would be likely to have’ if the conduct were to be repeated.3 In
London and Quadrant Housing Trust v Root,4 the Court of Appeal held that in
deciding to make an outright possession order rather than a postponed order, the judge
had correctly applied the relevant provisions in balancing the needs of the tenant and
her three children against the very considerable hardships (including threats and
intimidation) to which the neighbours had been exposed. This was despite the fact
that the main perpetrator of the anti-social behaviour was the tenant’s partner who had
departed from the property, having been made the subject of an ASBO excluding him
from the immediate area. The total breakdown in the relationship between the tenant
and her neighbours meant that, in the words of Sedley LJ in Lambeth LBC v Howard5
‘the shadow of the past [was] too heavy upon the present’ to allow for those
relationships to be repaired (para. 39). The case preceded the introduction of FITs.
Today, the use of a FIT in such a situation – involving the removal of the family to a
dispersed or core unit – would clearly be preferable to repossession but whether the
landlord would want to offer one is another matter. In Root, even after the tenant’s
partner had moved out, the outside of the premises remained in an unacceptable state
and the tenant refused access to the landlord’s officers to inspect the inside. There was
said to be not only a breakdown in the relationship between tenant and neighbours but
also between the tenant and her landlord. If FITs are to work an element of
reciprocity between landlord and tenant is essential. The latter must be prepared to
accept behavioural support but, in the first place, the landlord must be prepared to
offer it.

More intensive housing management and a greater use by social landlords of ‘formal,
punitive forms of social control’ (Flint and Rowlands, 2003: 222) such as introductory
tenancies, demoted tenancies and repossession may be regarded as sitting uneasily
alongside the pressure being placed on local authorities to adopt a ‘holistic’ approach
by developing strategies which address the underlying causes of anti-social behaviour
and which therefore involve ‘prevention and resettlement as well as enforcement
action’ (Hunter and Nixon, 2001: 90). There is a tension too between the role of
social landlords as agents of social control and the consumer-oriented’ approach to the
delivery of housing services in which social tenants are portrayed as active citizens’
who should be involved in decision-making processes’ and be able to exercise choice.

While recognising their conditional nature, Dean suggests that measures which seek
to enforce the obligations which people owe to each other are ‘not incompatible with
policies to widen opportunities for self-fulfilment and to reduce social exclusion’ and
that it is a mistake to view them therefore as ‘necessarily disciplinary in intent or in
effect’ (Deacon, 2004: 911). FIPs can therefore be interpreted as a means of
addressing ‘the underlying causes’ of anti-social behaviour and enabling the families
involved in such projects to play their part as ‘active citizens’. Despite the
reservations of some commentators, who regard FIPs as a further example of top-
down punitive authoritarianism which forces parents ‘to fulfil their responsibilities by
conforming to normative definitions of successful and competent parenting’, thus
helping to secure ‘wider goals of economic prosperity and social stability’, (Parr,

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3 Housing Act 1985, s.85A ; Housing Act 1988, s.9A.
4 [2005] HLR 28 (CA).
2008: 5) they have generally proved successful in curbing anti-social behaviour (see Nixon, 2008). Uncertainties remain however as to the use of FITs.

Repossession on the discretionary ‘nuisance and annoyance’ grounds of the housing Acts 1985 and 1988 depend upon the court being satisfied that it is reasonable to make an order. This means that ‘the judge is to take into account all relevant circumstances as they exist at the date of the hearing...in...a broad commonsense way as a man of the world,...giving such weight as he thinks right to the various factors’.

It may well be that the landlord’s failure to offer a support package to the family who is in situ may make it unreasonable to make an order. On the other hand, judges may be more inclined to consider it reasonable to make an outright order for possession if an offer of an FIT has been made, even if it has been declined. Landlords may make it a matter of policy therefore to offer a FIT when commencing possession proceedings and if an outright possession order is made and a warrant for execution is carried out, it will be too late if the support package fails to materialise. As indicated above, a FIT can be terminated by 28 days’ notice to quit and no grounded to be proved. Indeed, the legislation does not require the notice to quit to be triggered by anti-social behaviour and there is a risk therefore that landlords who suspect that they might have difficulty in securing possession through the normal statutory channels may be tempted to offer FITs which are then ended prematurely.

Conclusion

Possibly because it is the tenure in which ‘active citizenship is represented as normalised conduct’, (Flint, 2004a: 901) self-regulation and responsible behaviour are taken for granted in the owner-occupied sector. While, historically, this has also been the case with regard to private rented sector - a tenure which, from the viewpoint of security of tenure, has been the subject of extensive ‘deregulation’ over the past two decades - intervention in the context of anti-social behaviour has been extended here too via selective licensing. No doubt this is attributable in part to the fact that private renting is the only resort for many of those who are evicted from social housing. Even so, it is social renting however which continues to be the centre of policy interventions.

The metamorphosis from what Card describes as ‘social’ to ‘community’ government in which ‘governments no longer govern from a “social” point of view but through individuals as members of the many and various communities to which they belong’ results in a differentiation between the ‘affiliated’ and the ‘marginalised’ (Card, 2001: 203). Thus, instead of accepting the existence of an ‘environment of diversity and value pluralism’, ‘politicians and professionals have attempted to narrow the boundaries of ‘acceptable behaviour’ and to become increasingly prescriptive in their approaches’ (Hawarth and Manzi, 1999: 157). Of course, ‘diversity and value pluralism’ may entail ‘unacceptable levels of anti-social behaviour which can destroy people’s enjoyment of their home and public space and undermines community spirit’ and it is those ‘families whose behaviour destroys communities’ who are likely to become the subject of FIPs. It should be remembered that ‘the families themselves become socially excluded and sometimes homeless...[and] children’s physical and emotional development and educational attainment can be severely damaged’

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* Cumming v Danson [1942] 2 All ER 653 (CA).
It is to be hoped therefore that FITs will prove to be agents of positive change than simply a new vehicle for securing possession from ‘undesirable’ tenants.

References

Respect Taskforce (2007), *Family Intervention Projects - a toolkit for local practitioners*
Equitable distribution of low-cost houses: a Malaysian legal perspective

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Abstract:

It has been stated in the Ninth Malaysia Plan that continuous efforts shall be undertaken to ensure all Malaysians of all income levels shall have access to adequate, affordable and quality housing with greater emphasis on the lower income group with better urban services and healthy living. The Ninth Malaysia Plan also emphasised that the private sector shall be encouraged to build more low-cost and low-medium-cost houses in their mixed-development projects while the public sector shall concentrate on building low-cost houses as well as houses for public sector employees. It is therefore sufficiently clear that the government has been employing serious strategies in achieving this aim. Despite the active involvement of both public and private sectors in providing low-cost houses to the lower income group however there are a few drawbacks in implementing the objectives of the Ninth Malaysia Plan. For instance the issue of improper distribution of low-cost houses has always been brought up by certain quarters in society.

This paper will delve into the Open Registration System (“ORS”) introduced by the Ministry of Housing and Local Government of Malaysia (“MHLG”) in managing the registration of intended purchasers of low-cost houses and distributing it to the targetted groups. This paper will try to identify the drawbacks of the system and suggest reforms in terms of legal and institutional frameworks.

Keywords:
Housing Law, Housing Policy, Low-Cost Houses, Open Registration System, Equitable Distribution.

1. Introduction

According to the record of the Department of Statistics Malaysia, until 9th September 2008, the population of Malaysia is approximately 27.73 million\(^1\) consisting of a multitude of ethnicity, race and religion. Apart from that it is estimated that until July

2006, there are approximately 800,000 illegal immigrants\(^2\) which to a certain has become a liability to the Malaysian government especially in achieving the objective of having zero-squatters. This is because under the zero-squatters’ policy, the intention of the government is to clear the squatters by the year of 2005. However even the time has passed, the target is still failed to achieve. One of the reasons is that there are many illegal immigrants who set up illegal settlement areas, especially in the area close to the urban areas. Irrespective the Malaysian government has introduced the low-cost houses scheme mainly to cater the needs of the lower income bracket of the population to own houses, the policy excluded illegal immigrants i.e. non-citizens from enjoying such a benefit. Consequently in general zero squatters’ policy seems to be mere fantasy.\(^3\)

As far as the low-cost houses scheme is concerned, from early independence until the time of the Ninth Malaysian Plan, there are several of policies affecting the low-cost houses which have been introduced and implemented. In this paper, discussions from the legal perspective will be based on the issue of distribution of low-cost houses under the recent policy of ORS.

2. Brief Overview on Law and Policy on Low-Cost Houses

The Malaysian government through its various Malaysia Plans has continuously addressed the issue of poverty as well as housing of the poor. This is in line with the Istanbul Declaration on Human Settlement and Habitat Agenda (1996) to ensure adequate shelter for all. Through Vision Development Plan 2001 (which will be carried out during 2001-2010), the government will be the main provider of low-cost houses while the construction of medium and high cost houses are left to the private sector. A significant number of low-cost houses have been constructed both by public and private sectors during various Malaysian Plans.

The mechanisms used to implement the Malaysian housing policy are translated through various policies that have been introduced beginning from the colonial period until the Malaysian Development Plan as shown in Table 1.\(^4\) Similar with other developing countries, the Malaysian housing policies were drafted to tackle the need of public housing for the medium and lower income groups (Vincent and Joseph, 2000).


Consequently, the Malaysian government has also formulated the uniform price, design and size for the low-cost houses as shown in Table 2.

In relation to the ceiling price of low-cost houses, the Real Estate and Housing Developers Association (REHDA) has forwarded its memorandum (Memorandum on Budget 2009) dated 21st April, 2008 to the Ministry of Finance seeking the government’s consideration to increase the minimum ceiling price of low–cost houses from RM42,000 (about USD11,865) per unit to RM60,000 (about USD16,950) per unit. In the same memorandum it has also appealed for the government’s consideration to allow private developers to concentrate on other categories of houses and the government will take part an active role in providing low-cost houses. It is yet to see whether this memorandum is going to be considered by the government or not. Even though Malaysia is not considered as a welfare country, but serious commitment of government is needed in ensuring that its citizens will have a better quality of life by owning an affordable houses. Hence the pressure from private developers should not be a reason for Malaysian government to sacrifice this basic need of the lower income groups. In order to balance the interest of developers, government and citizens, certain incentives should be given to developers that involve in the construction of low-cost houses to enable them to deliver houses at the quality and price control by the Government.

Table 1 : Summary of Malaysian Housing Policy
(Source : Various Five Year Malaysia Plans)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Period</th>
<th>Focus of Attention</th>
<th>Strategies</th>
<th>Key Documents</th>
<th>Policy Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colonial Period</td>
<td>Before 1957</td>
<td>• Housing for government staff Quarters</td>
<td>• Construction of government quarters based on department requirement.</td>
<td>• Briggs Plan, 1952</td>
<td>• Government are the key player in housing provision</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Resettlement of people during communist insurgencies to the new village.</td>
<td>• Building of houses in the new settlements with facilities for more than 500,000 people.</td>
<td>• Land Resettlement Act, 1956</td>
<td>• Physical oriented</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Resettlement of people to Felda Scheme</td>
<td>• Planning and development of Felda Scheme with the housing and facilities.</td>
<td>• Housing Trust Ordinance, 1949</td>
<td>• Ad-hoc policies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Provision of housing especially for low income people in urban areas.</td>
<td>• Setting-up of Housing</td>
<td>• G. Ruddock Report, 1950's</td>
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<td>------------------------------------------------------------------------------</td>
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<tr>
<td>Early stage of Independence</td>
<td>1957-1970</td>
<td>• Continuing the colonial government policies with minor improvement.</td>
<td>• Implementation follow the colonial policies with limited budget.</td>
<td>• Housing Trust involved actively low cost housing development in urban areas such as KL and Penang.</td>
<td>• Private sector to concentrate on medium and high cost housing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Emphasis on housing especially for low income group in urban areas.</td>
<td>• Housing Trust involved actively low cost housing development in urban areas such as KL and Penang.</td>
<td>• Private sector to concentrate on medium and high cost housing.</td>
<td>• Private sector to concentrate on medium and high cost housing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Private sector involvement in housing provision.</td>
<td></td>
<td>• Private sector to concentrate on medium and high cost housing.</td>
<td>• Private sector to concentrate on medium and high cost housing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Improvement of basic infrastructure.</td>
<td></td>
<td>• Private sector to concentrate on medium and high cost housing.</td>
<td>• Private sector to concentrate on medium and high cost housing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Implementation of Human Settlement concept in housing development.</td>
<td></td>
<td>• Second Malaysia Plan to Fifth Malaysia Plan (1971-1990)</td>
<td>• Private sector as key player in housing provision including low cost.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Housing for low income group was given priority in national policies.</td>
<td></td>
<td>• Second Malaysia Plan to Fifth Malaysia Plan (1971-1990)</td>
<td>• Private sector as key player in housing provision including low cost.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Private sector play as key player in housing provision.</td>
<td></td>
<td>• Second Malaysia Plan to Fifth Malaysia Plan (1971-1990)</td>
<td>• Private sector as key player in housing provision including low cost.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• High rate of rural-urban migration</td>
<td></td>
<td>• Second Malaysia Plan to Fifth Malaysia Plan (1971-1990)</td>
<td>• Private sector as key player in housing provision including low cost.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Private sector was responsible to built large portion of housing for people including low cost.</td>
<td></td>
<td>• Second Malaysia Plan to Fifth Malaysia Plan (1971-1990)</td>
<td>• Private sector as key player in housing provision including low cost.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Ceiling price for low cost house was set at RM25,000 in 1982.</td>
<td></td>
<td>• Second Malaysia Plan to Fifth Malaysia Plan (1971-1990)</td>
<td>• Private sector as key player in housing provision including low cost.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Government established state agencies.</td>
<td></td>
<td>• Second Malaysia Plan to Fifth Malaysia Plan (1971-1990)</td>
<td>• Private sector as key player in housing provision including low cost.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Encourage national unity in housing development.</td>
<td></td>
<td>• Second Malaysia Plan to Fifth Malaysia Plan (1971-1990)</td>
<td>• Private sector as key player in housing provision including low cost.</td>
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<tr>
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</tr>
<tr>
<td></td>
<td>– Continue implementation of NEP policies and strategies.</td>
<td>– To build more affordable housing especially low and low medium cost housing.</td>
<td>– National Development Plan, 1991</td>
<td>– National Development Plan, 1991</td>
<td>– Private sector still play as key player in housing provision but government created many new laws and guidelines to ensure quality housing.</td>
</tr>
<tr>
<td></td>
<td>– Human Settlement Concept with emphasis on sustainable development.</td>
<td>– Low medium cost housing as major component in housing provision since Seventh Malaysia Plan (1996-2000)</td>
<td>– Sixth and Seventh Malaysia Plan (1991-2000)</td>
<td>– Agenda 21 (UNCHS), 1994</td>
<td>– Government created new laws and guidelines to control private sector</td>
</tr>
<tr>
<td></td>
<td>– To ensure all people regardless of their income to live in decent house.</td>
<td>– Emphasis on squatters elimination by the year 2005</td>
<td>– The Habitat Agenda 1996</td>
<td>– Government as key player in provision of low cost housing</td>
<td>– Encourage more private developer to</td>
</tr>
<tr>
<td></td>
<td>– Private sector continue to responsible in housing provision for the people.</td>
<td>– Government created new laws and guidelines to ensure quality housing.</td>
<td>– Vision Development Plan 2001</td>
<td>– Eight Malaysia Plan, 2001 - 2005</td>
<td>– Governm ent as key player in provision of low cost housing provision</td>
</tr>
</tbody>
</table>

| Vison Development Plan    | 2001 - 2010 |  |  |  |  |  |
|---------------------------|-------------|-----------------|-------------|-----------------|-------------|
|                           | – Emphasis on sustainable urban development and adequate housing for all income group. | – Continue effort to provide the guidelines and inculcate the citizen understandin g towards sustainable development and encourage citizen to participate in housing development in line with Local Agenda 21. | – Vision Development Plan 2001 | – Vision Development Plan 2001 | – Governm ent as key player in provision of low cost housing provision |
|                           | – Housing development will be integrate with other type of development such as industry and commercial. | – Encourage more private developer to | – Eight Malaysia Plan, 2001 - 2005 | – Eight Malaysia Plan, 2001 - 2005 | – Government as key player in provision of low cost housing provision |
|                           | – Emphasis on ICT. | – Government as key player in low cost | – Encourage more private developer to | – Government as key player in provision of low cost housing provision | – Government as key player in provision of low cost housing provision |
|                           | – Government as key player in low cost | – Government as key player in provision of low cost housing provision | – Government as key player in provision of low cost housing provision | – Government as key player in provision of low cost housing provision | – Government as key player in provision of low cost housing provision |
housing provision and private sector for medium and high cost housing.

<table>
<thead>
<tr>
<th>Category</th>
<th>House Price Per Unit</th>
<th>Target Groups/Income per month</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before June 98</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Cost</td>
<td>Below RM 25,000</td>
<td>Below RM 750</td>
</tr>
<tr>
<td>Low Medium Cost</td>
<td>RM 25,001 – RM 60,000</td>
<td>RM 750 – RM 1,500</td>
</tr>
<tr>
<td>Medium Cost</td>
<td>RM 60,001 – RM 100,000</td>
<td>RM 1,501 – RM 2,500</td>
</tr>
<tr>
<td>High Cost</td>
<td>More than RM 100,001</td>
<td>More than RM 2,501</td>
</tr>
<tr>
<td><strong>After June 98</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Cost</td>
<td>Below RM 42,000 (Depend on Location)</td>
<td>Below RM 1,500 (Depend on house type)</td>
</tr>
<tr>
<td>Low Medium Cost</td>
<td>RM 42,001 – RM 60,000</td>
<td>RM 1,501 – RM 2,500</td>
</tr>
<tr>
<td>Medium Cost</td>
<td>RM 60,001 – RM 100,000</td>
<td>Not stated</td>
</tr>
<tr>
<td>High Cost</td>
<td>More than RM 100,001</td>
<td>Not stated</td>
</tr>
</tbody>
</table>

Apart from that there are several sets of statutes, regulations and policies which have been introduced to govern the development of the housing industry including the development of low-cost houses. For instance as early as 1969 when private developers started to involve themselves actively in the housing industry, the Housing Developers (Control and Licensing) Act, 1966 (now known as the Housing Development (Control and Licensing) Act, 1966 has been enacted mainly to govern housing development undertaken by private developers. At present the application of the Act has been extended to both public and private developers as well as societies. Following the Act several other regulations have been enforced to control the business of housing development of developers such as the Housing Development (Control and Licensing) Regulations 1989 and Housing Development (Tribunal for Homebuyers’ Claim)
Regulations 2002. Similarly the enforcement of the Strata Titles Act, 1985 and the Building and Common Property (Management and Maintenance) Act, 2007 are also significant since there are many multi-storey buildings comprising of low-cost houses. Besides that other statutes governing land development in general are also significant to the development of low-cost houses. This would include *inter alia* the National Land Code 1965, the Town and Country Planning Act, 1974, the Street, Drainage and Building Act, 1976 and the Uniform Building By Laws, 1984.

Besides that through the New Economic Policy, since 15\textsuperscript{th} August 1982 the federal government has imposed a policy (continuing at present) that at least 30 per cent of the houses developed by private developers under one particular project should consist of low-cost units. This requirement may be considered as a mandatory social obligation imposed by the government towards private developers even though practically developers will cross-subsidise the regulated cost price of low-cost houses by increasing the cost of other categories of houses. However there are certain circumstances where private developers are given exemption to this policy. This may happen when the projects undertaken are within the areas that are considered as “prime and elite areas”. For instance areas within having close vicinity to the city centre and where the land price is at an optimum. For instance, Sri Hartamas, Damansara Heights and Kenny Hill in Kuala Lumpur and Sierramas in Sungai Buluh, Selangor. It is therefore not really accurate to state that the government policy on 30 per cent above has been fairly implemented.

The Ninth Malaysia Plan has come out with several packages to promote homeownership for the lower income group. Among others, buyers of low-cost houses are given full stamp duty exemption on all instruments, including loan agreements. (Malaysian Government, 2006). On the other hand, in terms of housing provision, an allocation of RM330,000,000.00 also is provided to the National Housing Department to complete 6,500 units to be rented out or owned under the People’s Housing Programme in 2009. In addition, the National Housing Department will also build 33,000 low-cost houses (House of Representative, March 2009).

Similarly in order to ensure that the construction of low-cost houses adopt certain minimum standards of design and quality, the Construction Industry Standard 1 and Construction Industry Standard 2 (CIS 1 and CIS 2) have been introduced by the Construction Industry Development Board (CIDB) to provide guidelines of design for single storey low-cost houses and multi-storey building of low-cost units respectively. Nevertheless the application of policies and guidelines issued by the federal level is subjected to the endorsement by the state authority since land (including housing) falls within the powers and jurisdiction of the state.\footnote{Ninth Schedule of the Malaysian Federal Constitution. Under the Federal Constitution, there are three lists that listing the powers and jurisdictions of the federal, state and joint powers and jurisdictions of federal and state. This is known as federal list, state list and concurrent list respectively. Housing is then fall under the state list.}
3. An Open Registration System (ORS)

3.1 ORS 1997

The computerised ORS for low-cost houses has been introduced in 1997 by the Ministry of Housing and Local Government but was not standardised (Ministry of Housing and Local Government, 2004). The ORS comprised three main data collections. The data is used by the Ministry of Housing and Local Government to ensure only the targeted and eligible buyers will be able to buy and eventually own low-cost houses in Malaysia. (Rashid et al. 1997) The data criterion are:-

a. The Applicants’ monthly income;

b. The Applicants’ background-occupation, size of family, health, etc., and

c. The extent of housing needs of the applicants-displaced persons, squatters, etc. (Rashid et al. 1997)

The main purpose of ORS among others is to provide a countrywide “waiting list” of eligible low-cost house buyers, to standardised the criterion for the selection of eligible buyers that are considered qualified and therefore be “shortlisted,” to avoid misconduct in the selection of eligible low-cost house buyers and to make the selection process more transparent (Ministry of Housing and Local Government, 2004).

In order to implement the objectives of the ORS, the *modus operandi* of the ORS is begun by imposing certain criteria that shall be considered in determining the eligibility of the applicant to buy the low-cost house. Certain scores (marks) will be given and an applicant then will be registered in the list. The shortlisted applicant will then be called for an interview. The processes involve several stages and agents of the Ministry of Housing and Local Government. The marks score for each criteria are shown in Table 3 while the process of application is shown in Chart 1 below:

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Marks</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Lost of house</td>
<td>100</td>
<td>29.85</td>
</tr>
<tr>
<td>b.</td>
<td>Monthly household income</td>
<td>50</td>
<td>14.93</td>
</tr>
<tr>
<td>c.</td>
<td>Status of current house</td>
<td>50</td>
<td>14.93</td>
</tr>
<tr>
<td>d.</td>
<td>Marital status</td>
<td>25</td>
<td>7.47</td>
</tr>
<tr>
<td>e.</td>
<td>Occupation</td>
<td>25</td>
<td>7.47</td>
</tr>
<tr>
<td>f.</td>
<td>Dependents (child)</td>
<td>25</td>
<td>7.47</td>
</tr>
<tr>
<td>g.</td>
<td>Disabled</td>
<td>10</td>
<td>2.98</td>
</tr>
<tr>
<td>h.</td>
<td>Other dependents</td>
<td>10</td>
<td>2.98</td>
</tr>
<tr>
<td>i.</td>
<td>Age of applicant</td>
<td>10</td>
<td>2.98</td>
</tr>
</tbody>
</table>

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The administrative framework for the ORS as shown in Chart 1 above seemed to be ideal and able to minimise the problem of lack of transparency and political influences in selecting buyers of the low-cost houses. However it has been observed by the committee that was set up by the National Land Department to study the implementation of ORS (1997) that there are several weaknesses in the system.  

The study entitled “A Study to Determine Criteria for Eligibility and Appropriate Scoring System for Low-Cost Houses under the ORS, IIUM-NHD, 2004” was conducted between May 2004 and February 2005. This finding has been presented in the Asia-Pacific Network for Housing Research Conference: Housing and Globalization, Kobe University, Kobe, Japan, 6-8th September 2005.
include: weaknesses in the selection criteria and marking scheme, bureaucracy, lack of transparency and groups with special needs were not given due consideration.

3.2 ORS 2006

In view of the abovementioned drawbacks, the new ORS was launched in 2006 which is aimed at having a uniform system that comprises of the three main features that is (a) year-long open registration; (b) award of points and (c) on-line selection of low-cost housebuyers in all states.

Under this new system, all states would use a standard form for applicants to register for a low-cost house. Among the conditions are the applicant must be a Malaysian aged 18 and above, does not own a low-cost house and has a household income of not more than RM2,500 a month. Besides that, through the Ninth Malaysia Plan, the eligibility to purchase low-cost houses is not mainly for the lower income level but also for other less advantaged groups that include single mothers, families with many dependents and those with handicapped members (Malaysian Government, 2006). Thus the ORS now is available for a more wider group of people as compared to when it was first introduced in 1997.

The success of the system is dependent on the proper implementation by the relevant government agencies at federal and state level. It is therefore hoped that it will promote an equitable distribution of the low-cost houses and promoting a sustainable housing policy. The ORS is therefore supposedly enabled to overcome or at least minimise the problem of duplication in data and duplication of applications from the people. Hence, it seems that the possibilities of cheating and irregularities could also be minimised, Nonetheless even after about 12 years of the implementation of ORS, there are still about 500,000 peoples who are already registered under the ORS in all states which are still waiting for the low-cost houses (New Straits Times, 11th January 2009). It is quite a surprise to see these figures since all states had imposed 30 per cent requirement on the private developers to develop the low-cost units in each project that they undertake and there was active participation from the government agencies; among others the State Economic Development Corporation and the Department of National Housing. Thus there are certain mechanisms that must be used to improve the situation.

4. A Few Proposals for Implementation of ORS

The first proposal is related to enforcement of specific law on distribution of low-cost house. It has been mentioned earlier that one of the problems of the ORS when it was

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8 There were differences of criteria, sub criteria and maximum marks considered by the states in determining the eligibility to purchase the low-cost houses. For instance the Ministry of Housing and Local Government set up 66 criteria and sub criteria and the maximum marks was 335. On the other hand the state of Selangor set up 94 and 86 respectively. See A Study to Determine Criteria for Eligibility and Appropriate Scoring System for Low-Cost Houses under the ORS, IIUM-NHD, 2004

9 At the time of the OPR been introduced in 1997, specific form was used but the states added with their own criterias and conditions.

10 http://www.kpkt.gov.my/kpkt/main.php?Content=sections&SectionID=150&DC= (Accessed on 5th May 2009) At the time when the OPR introduced in 1997, the income of the applicant should be less than RM1,500 per month (about USD426)

11 Considering the ORS has been established since 1997.
first introduced is non-uniformity of the practices among the states. The state may add their own criteria that do not comply with the guidelines given by the Ministry of Housing and Local Government. This has led to a problem for instance, where a centralised database cannot be created and therefore may be a person is qualified to purchase a low-cost house in Selangor but not in Kelantan. Besides that due to in absence of a centralised database, there would be the possibility where one person may register at more than one state and therefore may acquire more than one unit of low-cost house.

In order to curb this problem the federal government has a power to impose this standard guideline to the states on the rationale of creating a uniformity of the system. Even though land is a state matter as provided in List II of the Ninth Schedule of the Malaysian Federal Constitution, the federal government by virtue of Article 74 of the Federal Constitution can enact any statute to ensure uniformity of certain laws that shall be applied to whole Peninsula Malaysia or Malaysia. The Land Acquisition Act 1960 and Street, Drainage and Building Act 1976 are the two examples of the statutes that have been introduced mainly to create the uniformity of the application of law of the states in Peninsular Malaysia. Therefore any criteria or process or modus operandi of the ORS should not remain as “Guidelines”, but should be incorporated in a proper statute. It is suggested that a statute regulating the low-cost houses (or now is proposed to be called as affordable houses\(^{12}\)) be enacted. For instance there is the National Affordable Housing Act enforced by the US Department of Housing and Urban Development mainly to cater to all matters related to affordable housing for instance on mortgage, houses for the disabled, repair and tenancy. If there is a specific statute, then all policies and guidelines relating to low-cost houses or even public housing may be organised in a form of statutory provisions having the force of law. For instance the CIS 1 and CIS 2 that were mentioned earlier can become part of the regulations. This suggestion is based on the concern of the author of the practice of certain local authorities which do not bother enough to tie up the approval of the building plan (for the low-cost or public housing) subject to compliance with certain policies and guidelines relating to low-cost houses (and public housing). However once the policies and guidelines become law, there is no way for those impositions to be simply lifted out.

The second proposal is imposition of restriction in interest against the title of the low-cost house. (Wan Nor Azriyati and Nor Rosly Hanif, 2005) alleged that there are a few of purchasers of low-cost houses rent the houses or sell the houses soon after purchasing it. This conduct may cause insufficiency of supply of the low-cost houses because the same purchasers may register again under the ORS. Under the law it is possible that this conduct may be curbed by specifying a restriction in interest on the title of the low-cost house. “Restriction in interest” is referred to as any limitation imposed by the State Authority on any of the powers conferred on a proprietor or on any of proprietor’s powers of dealing\(^{13}\) where in this respect the restriction in interest that may be imposed is that no transfer of the low-cost house can be affected unless with the permission

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\(^{12}\) The Housing Research Centre of the University of Putra Malaysia proposed that the term low-cost should be renamed as affordable house. The “rebranding” of the term of the low-cost probably may change the perception of certain quarters who always think that low-cost means low price and low quality.

\(^{13}\)Section 5 of the National Land Code, 1965.
granted by the state authority. The transfer may be allowed only when the state authority is satisfied that the new purchaser is also a person that is entitled to own a low-cost house. The new proprietor then shall observe the same restriction in interest that was imposed on the original proprietor. Therefore although a purchaser enjoys indefeasibility of title over the house but there are certain restrictions in interest on his title that he is subjected to.

The third proposal is the imposition of special conditions on the title of the low-cost house. “Condition” under the National Land Code 1965 refers to any conditions attached to the land but it does not include restriction in interest. In this respect the low-cost house shall not be allowed to be rented out. In the event of failure by the proprietor to observe the said condition, the State Authority has the power to take action against the proprietor by way of forfeiture.

The fourth proposal is equitable consideration on other disadvantaged groups. As already stated earlier, the Ninth Malaysia Plan identified that the ORS 2006 should consider the disadvantaged group to purchase the low-cost houses. However it is suggested that similar criteria under ORS imposed on others shall be imposed on these groups too, but the priority shall be given to them. Similarly disabled persons shall be given priority only when they fulfil the criteria to purchase the low-cost houses. However the 20% discount on the purchase price of a low cost house for disabled persons, as announced in the budget 2004 should be implemented immediately.

The fifth proposal is related to the standard sale and purchase agreement between the vendor and the purchaser of the low-cost houses. In Malaysia the sale and purchase agreement of a house (regardless of category of houses i.e. either low-cost, medium cost or high cost) between a purchaser and a developer which is developing more than four units of houses is regulated by the Housing Development (Control and Licensing) Act, 1966. Pursuant thereto a statutory form of contract of sale and purchase of a house is already incorporated therein. It is suggested that, the standard form of contract involving the sale and purchase of a low-cost house should be different from others. This standard form may emplace under the proposed specific statute as proposed in the first proposal above. Similarly the loan agreement for financing the purchase of a low-cost house between a financier and a borrower-purchaser should be different from other type of houses. This is because in the ordinary loan agreement there would be a clause on the right of a financier to foreclose the property upon default of a borrower-purchaser to serve the loan. In order to protect the low-cost purchaser, it is suggested that there should be one clause in the loan agreement that provides for the case (default of borrower-purchaser) to be referred to the special tribunal or arbitration before foreclosure action is taken by a financier. Therefore it is suggested also that this standard loan agreement for financing of a low-cost house can be part of the regulation pursuant to the proposed act as mentioned in first proposal above.

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14 Section 340 of the National Land Code 1965 provides that upon registration of the title (or interest as the case may be) the proprietor is guaranteed of their title from being challenged.

15 Section 5 National Land Code 1965.

16 Provision on forfeiture is available in Part Eight of the National Land Code 1965. The state authority has a power to forfeit the land from any proprietors in two circumstances i.e. when there is a breach of condition and non-payment of rent.
The sixth proposal is related to the process of the ORS. It is suggested that the list of successful applicant should be displayed to the public at a prominent venue. For instance it can be displayed at the land office for a month to enable any person to object. This is to ensure there is transparency in the selection of buyers of the low-cost houses.

5. Conclusion
The issue of distribution of low-cost house is always alleged to be allied with political influence in which who has a close link with the governing party, will have a better chance to purchase low-cost houses irrespective whether he is qualified or not. The government has to work hard in proving that his allegation is false and the ORS is the best model that the government must fully implement and consequently can proudly assert that there is equitable distribution of low-cost houses in Malaysia. Besides that if the government feels that the existing policies and guidelines have deteriorated, it is better for them (the government) to consider having a proper statute to regulate all issues and matters under one particular statute.

References


Common area design in high-rise residential buildings and its building control in Asia Megacities -- a Study of Singapore, Hong Kong and Beijing

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Abstract:
Urbanization in many Asia cities has shifted the majority of city residents into sky-living buildings. However, traditonal neighbourhood communities, which normally expand horizontally, are never transformed into high-rise houses. Rethinking the sky-living model brings renovations to both architectural design and building regulation controls. Innovative cases and studies from Singapore, Hong Kong, and Beijing are thus considered to be interesting references. Practice review, data analysis, and comparative studies are used to make this comprehensive research. Lastly, the common area, as a key component of reforming vertical communities in high-rise residential buildings, will be concluded with further discussions of its building regulation control.

Keywords:
common area, high-rise residential building, vertical community, building control

1 Introduction

1.1 The Urbanization Process and Emergence of Sky-living
In the last few decades, many Asian cities have experienced a very rapid development. The urbanization process has caused a dramatic increase in the urban population. However, limited buildable land resources in many cities cause problems in city expansion, which have inevitably changed city growth from horizontal spread to struggles with vertical growth. As a result, skyscrapers have become dominant in urban life, and the traditional living patterns have been changed simultaneously. More and more horizontal neighbourhoods have been wiped off of the city maps and replaced with sky-living buildings. Cities like Singapore, Hong Kong, and Beijing have established dense housing strategies for many years.

1.2 Concept of “Vertical Community” and Building Control
In the earlier stages, high-rise residential buildings were created with a simple duplication of many stacked up dwelling units. This piling-up model made a simple house type, which subsequently reformed the dwellers’ traditional living community in both physical and mental aspects. The traditional living community was formed by a
familiar group of dwelling units. These residents shared common spaces for various activities like Chinese courtyard-living, where communities expanded in horizontal manners. However, these common spaces were removed when all dwelling cells were superimposed on top of each other within dense rigid structures. High-rise houses solved the critical habitation demand at the beginning, while creating distant neighbourhoods in the sky.

It was not until recent years that the vertical community in sky-living was addressed in some Asia cities for improving the sky-living environment. Refreshing ideas, designs and practices were tested for new sky-living models. However, as highlighted by designers and developers, the building control revolution was very critical to this exploration. It should be more supportive in design control issues. So, examples of contemporary experiments of new sky-living models with relevant building controls from Singapore, Hong Kong and Beijing are thus presented for reference.

2 Cases and Building Control

2.1 Singapore Housing Exploration of Sky Garden Living

The Singapore government tried to encourage downtown living in the 2001 concept plan of the city centre. The Urban Redevelopment Authority (URA, 2001) indicated that the purpose was to increase the total number of homes from 30,000 to 120,000 in the long term. With this background and the pursuit of new ideas of sky-living buildings, an international competition of “the pinnacle @ Duxton”, launched in 2001, opened the most interesting discussions about future sky-living in Singapore.

The site is about 2.5 hectares with a gross plot ratio of up to 8.4, which is triple of the normal 2.8 for public housing. The project can provide 1,500 to 1,800 homes, and is required to offer creative solutions for providing communal spaces within the sky structures.

2.1.1 Central Public Sky Garden

![Figure 1. The Pinnacle @ Duxton by ASAU Singapore, 2001](Source: Singapore Architects, 2001)

The winning scheme was designed by a local firm “Arc Studio Architecture + Urbanism.” It has seven high-rise towers woven together by two sky gardens on the 26th and 50th floors. Pavilions, lush plantings, a jogging track, a walking trail and look-
out viewpoints are integrated with the sky decks at both mid-level and on the rooftop. Community spaces are also provided in two gardens creating a warm touch to the 1,800 residential units. At ground level, a natural park is designed as open space with urban linkages to the surroundings.

This scheme was subsequently constructed and it should be finished in 2009. However, there are questions regarding the huge scale sky gardens. Can such large gardens and facilities help to promote social interactions? How can safety and security issues such as controlling numerous anonymous crowds in these big public sky gardens be solved? Will the biggest gardens help to create a sense of belonging in the vertical community reformation? Doubts have been raised followed by extensive discussions. However, there is another comparable merit prize scheme, which brings more consideration of the scale of common areas and issues of relevant building controls.

2.1.2 Dispersive Common Sky Yard

Local architecture firm WOHA presents a different model of dispersive common sky yard design. As explained, these sky parks are suspended in vertical gaps of seven mega-towers. Each yard is created for a smaller cluster of around 20 to 30 residential units, having approximately four to six stories in height. With such smaller scale nature-parks, the architect wishes to create a common-shared vertical neighbourhood, which gives the residents a sense of community belonging and privacy. Most sky yards face east-west with greenery planted to filter out strong tropical sunshine and wind. The scattered yards provide a comfortable outdoor space for communal activities.

Both schemes focus on redesign of the common area in high-rise residential buildings. They approach different scales of sky-gardens or sky court-yards integrated with the common areas. Such invention of sky communal spaces may bring issues of redefining the common area and modifying its building control in high-rise houses.

2.1.3 Singapore Building Regulation Control on Sky-Living Buildings

In Singapore current building control system, the URA plays an important role. The key control variable of GFA (gross floor area) was adopted by the URA in 1989 for all developments. In this system, the overall development GFA contains two parts of floor areas: the dwelling unit internal floor area and the external common area. That is:

\[
\text{Overall Development GFA} = \text{Habitation Unit GFA} + \text{Common Area GFA}
\]
However, the government development charge is computed by the overall development GFA, which makes it a critical part of development cost. So, to create more habitation area, which is the only sellable GFA to buyers, developers will always maximize the habitation part and minimize the common areas as a balance.

Recently, to encourage innovative designs in sky-living buildings, the URA refined the building codes to allow qualified common areas to be GFA exempt from the overall development GFA calculation. That makes the large sky gardens possible. But for smaller ones, it may not work that well.

Building Control on Sky Garden -- “Concept of 45 Degree” and GFA Exemptions

As the URA control requires (URA, 2007), the sky garden areas that could be exempt from development charge computations are defined by the 45 degree line taken from the underside of any permanent or opaque structure. To further qualify, it must fulfil the following conditions.

(1) The sky gardens, as open-sided terraces, must be accessible to all occupants.

(2) Access to the sky terrace must be from common areas ONLY.

(3) The Sky terraces are used for communal activities or for landscaping.

(4) At least 40% of the perimeter wall of a sky terrace must be open.

Furthermore, on top of this exemption, additional residual areas falling outside the 45-degree line could be exempted with a cap of 20% of the same floor plate, subject to the following criteria (URA, 2007):

(1) The areas within the 45-degree line must occupy at least 60% of the floor plate. The remaining 40% (max) can be used for complementary uses.

(2) The residual area must form an integral part of the sky terrace remaining unenclosed, communal, and non-commercial in nature.

(3) At least 60% of the perimeter of the sky terrace floor should be kept open with low walls.
Figure 3. Plan Illustration of the Concept of 45 Degree and Residual GFA Exemption
(Source from URA, Singapore, 2007)

As the above diagram illustrates, these controls secure the quality of sky garden designs in the following areas:

(1) Enough height and good space quality can be secured in the sky terrace. The higher the sky garden, the more GFA could be exempt, which is beneficial to both developers and users. That creates a platform for further recreating various vertical communities in sky level through different innovative architectural approaches.

(2) Public usage and easy accessibility is available.

(3) Good environmental quality is ensured. The control of perimeter openness provides better interactions to external environment both in view, natural lighting, and in ventilations at sky level. The landscaping and facility provisions could also make sky gardens lively.

(4) Flexibility in future alteration and additional designs are possible. The additional GFA exemptions give sky gardens flexible areas for future changes in upgrading landscaping or communal space.

2.2 Hong Kong Private Domestic Building Study

Rapid city growth, with limited buildable land resources, makes HK one of the densest and highest cities in the world. Normal residential blocks are always 20 stories or above, with 6 to 10 dwelling units located around the central circulation core at every story. To increase living population density, the habitation area is always maximized and the common area is compressed to the least possible space. Many developments follow the lowest control standard to design the common area which worsens the space quality both in the natural environment and in the social communities.
2.2.1 Hong Kong High-rise Residential Building Block

The above residential floor plan and its versions are typically used for many houses built in HK since the 1970s. To maximize the habitation area, common corridors are designed to minimum width, and shortened to the most efficient length. But, the living quality in such buildings is poor. There is no direct sunlight or natural ventilation in the common corridors. The condensed floor plan also limits every unit with restricted external facing, which caused a series of problems in natural lighting, cross ventilation, privacy issues, etc. The two-meter wide recess gap, as regulated in building codes for lighting and ventilation, never works well for its purposes, but causes even more dead angles worsening the problem. As Wong comments (Wong, 2002) the typical plan of “8 units per core” in HK residential building designs is the perfect solution to maximize development profit through increasing the habitation efficiency. The living quality in both internal units and external common areas is thus sacrificed. The only way to overcome this profit-based design is to reform the building controls in HK.

In recent years, HK building authorities have realized the serious problems of poor living conditions and have tried to pursue innovation design models. More GFA exemptions are granted for many green building designs and features, such as balconies. However, as pointed out by researchers, the local building ordinance, as a key control regulation established in the 1950s, could never act as an effective promoter without positive essential reformations.

2.2.2 Building Control on Domestic Buildings

Like the Singapore system, Hong Kong building controls also uses GFA as a key control variable in residential development. The difference from Singapore is about the control of sellable areas. In the HK system, the sellable area includes both habitation unit GFA and common area GFA. There is no clear definition or specific controls on each part. In fact, most developments will maximize habitation area for more usable space. The key means in securing this is through the control of habitation efficiency.

Habitation Efficiency = Habitation Unit GFA / Overall Development GFA

As shown in the above formula, the higher efficiency a project has, the larger habitation area it could get. In thousands of HK domestic buildings, the habitation efficiency is controlled at approximately 80%, some even as high as 90%, with the widely used application of the typical “8 units per core” floor plan. Such efficiency control not only
leads to many environmental problems, but also creates uniform designs in HK houses. In local building control systems, the mixed-component GFA makes any pertinent control requirements even more difficult. Although building codes have GFA exemptions to encourage design flexibilities and enhance living quality, these can be easily abused. As a result, the quality of common areas could hardly be secured, and the formation of vertical communities in sky-level becomes even more difficult.

From a real estate perspective, many interviewed developers wish to provide more communal sky gardens for dwellers. However, in current systems these common spaces consume overall development GFA, and cause a reduction in the habitation area. Ultimately, many innovative designs are still restricted by the building controls.

To promote vertical communities and support innovations in sky-living buildings, there are two possible improvements for the current HK building code.

(1) Differentiate controls on common areas and private habitation areas in high-rise residential buildings. It is just like the current Singapore system, and with this precondition, further specific requirements can be released specifically to common space promotions.

(2) Keep current controls on floor areas and impose a maximum limit to the habitation efficiency, which indirectly secures the common floor area provision.

Take the typical “8 units per core” floor plan as an example. As shown in the table below, the habitation efficiency in this plan is around 86%. Assuming that the overall floor area is 10,000 square feet per level, the private habitation units GFA (Part I) is 8,600 square feet and the common area GFA (Part II) is 1,400 square feet. As shown in the following table:

![Figure 5. Comparison of Two Means of Adjustments in Building Control for Better Common Areas in HK Sky-living Buildings](image)

In the first proposal, by separating controls into two parts, building codes can keep the control requirements of Part I, which secures the residents’ population density. Furthermore, building codes could design more specific controls on Part II, which could
not only ensure the basic circulation need but also promote creations of vertical community spaces. For example, more GFA exemptions could be focused on Part II to enhance the common space quality.

In the second proposal, building codes could predefine a spectrum of approximately 60-70% for habitation efficiency of sky-living buildings subject to the development nature. With this imposed range, the proportion of habitation areas and common areas is controlled, which indirectly secures the common space quality.

Proposal one keeps the dwelling population density while creating a larger or higher building block. Proposal two preserves the building mass while reducing resident density. In fact, both proposals could be feasible subject to the site and urban design conditions. For urban sites, when building bulk is significant and needs to be strictly controlled, the second method would be more appropriate. For other sites with less stringent requirements on building mass, the first method would be a better solution.

2.3 Beijing Mixed-use Residential Building Design Experiment

Beijing has undergone tremendous change in the past few decades. In regard to city housing, thousands of traditional low-rise courtyard houses were wiped out from the old city patterns, and replaced by more and more high-rise houses. Simultaneously, the original living model and neighbourhood communities were removed. High-rise houses, as functional machines of habitation, had formalized Beijing with thousands of blank sky structures everywhere. Unfortunately, most houses are mainly focused on basic living functions and omitted the transformation of previous community space for the sky dwellers. Only ten years ago, the SOHO (Small Office Home Office) projects started to design larger common areas in mixed-use houses and brought about a new thinking of reforming the vertical communities within sky-living buildings.

2.3.1 Beijing SOHO Buildings

The first remarkable SOHO project is the SOHO New Town located in the eastern city centre and built in the 1990s. Different from other houses, the concept of small offices in residential buildings requires more common areas as business support, which identifies an important change in high-rise house design. The second project of JianWai SOHO further popularized the idea with broad discussions about vertical neighbourhoods in sky-living.

SOHO projects, due to their small office-business nature, are available for public access, and need more communal and office-work facilities. The developments provide more areas for this by enlarging common corridors and lift lobbies. Larger common sky void spaces are also proposed in buildings for flexible usage. These re-natured common areas make SOHO buildings a real mixture of various occupancies.

Although, there has been some criticism in regard to abuse of those transformed common areas, the flexible provisions in common space create a sustainable platform for both common activities and individual extensions. Vibrant identities are formulated through different expressions in using the areas. Some common areas are used as office or house extensions; some are turned into business gallery exhibitions; and some are even used for art performances.
Beijing SOHO projects have not only tried a refreshing model of mixed-use sky-living buildings, but also brought new issues to building regulation controls on new building typology. In fact, local building codes do not have appropriate regulations for the SOHO type. However, it is this grey area in between office and house control that is utilized by developers for advantages from both sides to create flexible designs in common areas.

2.3.2 Building Control on SOHO in Beijing

Common corridors and lift lobbies are usually the most important components in common areas. In many SOHO projects, developers have difficulty with this since many of these areas are in a control gap of current building codes. For example, according to office building requirements, the minimum corridor width is 1.4 meter for double-loaded offices within a length of 40 meters; this requirement is 1.2 meter in residential buildings. Other than the density control issues, fire safety control also has different requirements for office and residential buildings. All different requirements need to be clarified for SOHO buildings, while no specific control strategy can be applied. According to normal building control strategy for mixed-occupancy buildings, if it is non-separated occupancies, the entire building must be regulated according to the most restrictive requirements in height, area, and fire protections for each of the multiple occupancies (Ching, 2007). However, Beijing SOHO projects have tried a different strategy. Some controls follow the looser requirements; some follow the stringent ones; and some uses compromised requirements.

In overall development density control aspect, JianWai SOHO follows the more relaxed ratio of office requirement in building distance control, and creates a business environment for the overall project.

In building common area controls, the corridor width is designed following the looser office requirement, while the corridor length is controlled according to the travel distance requirement in fire evacuation, which uses the stringent residential requirements.

However, the control gap still leaves some problematic issues, such as privacy concerns, ownership, and building maintenance. Furthermore, there is no control on GFA.
exemptions for such common area provisions. As a result, the private-owned unit area is decreased with more common-shared area provided, which certainly limits the further provision of the common areas.

3 Conclusion and Discussions

As more people move into sky-living houses, the design of vertical communities in high-rise buildings is becoming critical. The above cases illustrate different transformation models in reforming the neighbourhoods at sky level. From the in-depth analysis and comparison of current popular GFA-based building control systems, the relationship between habitation areas and common areas is uncovered. Common areas, as a key component of reform in the vertical community, are examined. It further suggests that the code-writing strategy should be more objective-based thinking. To achieve this, for many GFA-based building control mechanisms, a re-understanding of building performance is first needed. Based on that, clear categorizations in controlled GFA can be established, which secures the controls to be more pertinent and effective. Then, GFA exemptions could always perform as a good promotive tool for the objective. This GFA promotion tool shall be used with full consideration of urban issues, such as ground level openness, building bulk control, building height control, etc. Building codes shall also leave proper control gaps for innovative explorations. In this aspect, performance-based codes are more advisable than prescriptive-based codes.

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Between the Lines: the spirit behind land agreements

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Abstract:
Land agreements negotiated between British authorities and indigenous groups were part and parcel of colonial expansion. Although current interpretations of the historical agreements which formed the basis for European settlement and rights in land acknowledge that a variety of forms of evidence (written, numerical, verbal and pictorial) are admissible in law, and generally recognise that the spirit of an agreement is paramount, special difficulties (principally those of culture and language) are associated with getting to the heart of such agreements. Typically, the written words of legal texts have been scrutinised minutely, but forms of evidence other than the written words have been neglected. This paper compares the unwritten evidence for treaties and concessions in three countries, namely Canada, New Zealand and Zimbabwe. Examples include wampum belts in Canada, and surviving verbal synopses of written documents, for example explanations by missionary translators, which were often couched in figurative or metaphorical language and, at the time, may have carried considerable weight. Despite agreements being negotiated verbally, the official version is generally the written document with appended signatures or written marks. From an indigenous point of view, the verbal agreement often carries greater weight, especially when ratified by some form of cultural protocol, for example smoking a pipe of peace. Failure to recognise such verbal covenants and protocols has at times led to misunderstandings about the spirit of land agreements. The paper concludes that legal processes today not only need to be cognisant of written law but should also pay greater attention to unwritten forms of evidence. In particular, imagery resorted to at the time of negotiation has proved itself pithy, well suited to capturing the essence of negotiating points, and capable of providing enduring mental images that should rightly be drawn on to colour legal interpretation today.

Keywords:
Treaties, land tenure, legal evidence, aboriginal title.

1 Introduction

Land agreements negotiated between British authorities and indigenous groups were part and parcel of colonial expansion, and formed the basis for European settlement and rights in land. Although current interpretations of these agreements acknowledge that a variety of forms of evidence are admissible in law, and generally recognise that the
spirit of an agreement is paramount, special difficulties are associated with getting to the heart of historical agreements. Typically, written documents have been scrutinised minutely, but forms of evidence other than the written words have sometimes been neglected. This other evidence includes records of debates, discussions and promises offered prior to signing. These were often couched in figurative or metaphorical language, which often carried considerable weight in swaying opinion. However, despite a person’s word being paramount from an indigenous point of view, especially when ratified by some form of cultural protocol such as smoking a pipe of peace, the official version of an agreement today is generally the written document with appended signatures or written marks.

This paper examines and compares the discussions leading to the treaties and concessions and the agreements made between colonial authorities and indigenous groups in three countries, namely Canada, New Zealand and Zimbabwe.

2 Canadian Treaties

British sovereignty was asserted over the lands and the people of Canada by the Royal Proclamation of 1763 but the possession of the lands of the Indians was not ceded and no lands could be purchased other than through the Crown. There is nothing especially remarkable about that: Sovereignty over territory (imperium) is quite different from proprietorship of lands (dominium). However, the explicit statement of that fact reinforces the necessity for the Crown thereafter to negotiate, and record by treaty, the cession of lands from the Indians to the Crown. The negotiation of such treaties must therefore be put under the spotlight to determine what was agreed upon and what was ceded.

A series of treaties were negotiated and signed as part of the inexorable westward expansion of colonial control and settlement of the interior prairie lands of central Canada. Most of these treaties were similar in their official wording although they were signed under different circumstances. Treaty 7, signed in 1877 in southern Alberta, is used here as a representative example of Canadian treaties. The Crown’s sovereign authority over the prairie land was under threat because there was no actual presence of any Canadian authority in southern Alberta until the first arrival of the North West Mounted Police (NWMP) in 1873. The treaty commissioners were keen to establish the treaties over the prairie provinces to make their sovereignty claims apparent on the ground:

The Aboriginal intent was to extend the hand of friendship to the imperial Crown and to protect the Aboriginal way of life and livelihood. To the Crown’s consciousness, such protection brought the Aboriginal nations and their lands within the jurisdiction of the United Kingdom. The imperial Crown needed the treaties to justify its jurisdiction in North America to other nations (Henderson, 1997:75).

The indigenous peoples of southern Alberta include the Siksika, Stoney, Peigan, Sarcee and Blood bands. They came together as the Blackfoot Confederation, under a well respected chief, Crowfoot, who had developed a close and trusting relationship with
Colonel Macleod of the NWMP. On this basis Crowfoot was able to call together the various bands to negotiate land sharing and access agreements with the treaty commissioners. The historical records indicate that the preliminary discussions to the treaty were almost exclusively concerned with what the chiefs and individuals of the nation would receive by accepting the treaty. There is “no evidence to indicate that the issue of ceding or surrendering the land was ever raised by the commissioners in the discussions” (Treaty 7 Elders, 1997:255) and it appears that the treaty was never read out in full (Treaty 7 Elders 1997:258). Local missionaries likely knew about the Blackfoot resistance to land surrender issues, and they probably sent warnings to the commissioners about the potential for disagreement. This may be why the land surrender was never raised for discussion and was only written into the treaty after the discussions and negotiations. Furthermore “First Nations would not consider making a treaty unless their way of life was protected and preserved. This meant the continuing use of their lands and natural resources.” (RCAP 1996:174 Volume 1)

The treaty commissioners, in their discussions with the Indians, were at pains to emphasise the expectation that the continuity of the Blackfoot way of life – their occupation, hunting and access to all their lands – would be assured (Morris, 1880:268). However, the written treaty presented to them included an agreement to “cede, release, surrender, and yield up to the Government of Canada for Her Majesty the Queen and her successors forever, all their rights, titles and privileges whatsoever to (their) lands …” (Treaty 7 text).

The continuing conflict about the legal effect of the treaty, therefore, is whether the written words of the treaty, validated by signatures and recorded in the historical written records of the Crown, take precedence over the oral agreement represented by negotiations and discussions, validated by the protocol of smoking the sacred pipe, and recalled in the oral histories of the indigenous people. Formal agreements of many kinds were often also recorded in Wampum belts that reinforced the stories and recorded the treaties with the Crown. For example, Borrows interpreting a treaty wampum belt, tells us that:

… the bed of this agreement is white, which is to represent the purity of the agreement, and that people were to live together in peace and friendship and respect, and this motif of peace, friendship and respect is repeated in … three white rows separating the two purple rows indicating that people can live together, they can create a shared space in the territories they found themselves in, in peace and friendship and respect. At the same time, there are these two purple rows that separate the white rows, that are to indicate that the British Crown would go down their river of life in their ship of State dealing with their own affairs and our people would go down the river of life in our canoe controlling our affairs (Borrows, 2006).

In contrast with this symbolism:

marks on a printed sheet of paper had about as much significance for many aboriginal peoples as the colours and patterns of a treaty belt had for many English. The treaty was neither the written memorial nor the belt but the
agreement reached by the parties during the oral exchanges (Slattery, 2000:208).

The language used in this cultural meeting place is therefore of great significance to understanding the relative positions of both parties. The Crown commissioners regularly resorted to the language of fraternity. It is the language of the self-assured civilized man wishing to get agreement to its position by bolstering the status of the illiterate native (who, nevertheless, has all that which the Crown seeks). The Queen is portrayed as a benevolent mother figure for the Indians, and the settlers as their brothers. “Colonial officials participated in ceremonial exchanges and adopted the language of kinship to describe the relationships this confirmed, but it subsequently became evident that their view of what took place at these meetings differed profoundly from the Aboriginal understanding of events” (RCAP 1996:646 Volume 1).

On the Indian side, the figurative language employed illustrated their world view and regularly made reference to nature: the soil, rivers flowing, and the sun shining.

At the signing of the treaty at Blackfoot Crossing, Red Crow pulled out the grass and gave it to the White officials and informed them that they will share the grass of the earth with them. Then he took some dirt from the earth and informed them that they could not share this part of the earth and what was underneath it, because it was put there by the Creator for the Indians’ benefit and use (Treaty 7 Elders, 1997:114).

There was no mention made to sell land; or to sell what is underneath the land; or to sell the mountains, trees, lakes, rivers, and rocks. And we didn’t say to sell the animals that travel on the land – the ones that we eat – or the birds that fly, or the fish that swim. The Old People didn’t get asked to sell these things. They were told “the Queen will be like your mother, and she will take care of you until the Sun stops shining, the mountains disappear, the rivers stop flowing, and the grass stops growing” (Calf Robe, 1979:21).

From the Blackfoot perspective, the ‘magnificent gift’ (Friesen, 1999) to the Crown and the settlers was the opening up of their traditional hunting lands to some form of open access. They were not alienating their land forever in a way that would exclude them from it. They were saying the Europeans could come onto the land, to use it for their purposes, and the Indians would retain access to it for their purposes; in effect, “we can all share this land”. It is obvious that the Blackfoot people could not have been aware of the incompatibility of uses and the western requirement for private property and exclusive ownership; sharing was not what land-hungry settlers wanted.

2.1 Treaty Protocol

Different cultural and legal traditions create different views about what gives an agreement validity. The Europeans placed total emphasis on the written text that had to be duly authorised by signatures. The pomp and ceremony was an important adjunct to

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1 Text of Treaty 7: “Her Indian people may know and feel assured of what allowance they are to count upon and receive from Her Majesty's bounty and benevolence.”

2 See Treaty 7 Elders, 1997:90 and also Taylor, 1999:43,
the signature, hence there was a good deal of formality attached to the process. This included dressing up (and the presence of the NWMP assisted in this colourful display of formality) and making speeches. In actual fact, Indian signatures were not collected on Treaty 7, but a name was recorded and an X mark was inserted. Usually the Indian signatory did not even write the X, but was merely asked to touch the pen – a rather remote enactment of a signature! Dempsey (1972:105) relates the story that Crowfoot in his apprehension of being swindled by the treaty commissioners reached for the pen but did not actually make contact with it.

The Treaty commissioners were prepared to add aboriginal ceremonies to their own to recognise that these were reciprocal bargains, and to this end they were comfortable indulging in the pipe ceremonies and allowing for Blackfoot celebrations. It is doubtful, however, if they understood the significance of an agreement made in the presence of the pipe, from an aboriginal point of view: “The Indians have utmost and absolute belief in the sacredness of the pipe. In the presence of the pipe, only the truth must be used and any commitment made in its presence must be kept” (RCAP, 1996:64-5). In other words, for the Blackfoot, the pipe has intense spiritual and moral force, and it validated the oral agreement as the true interpretation of the treaty.

The treaty negotiations were conducted alongside the ceremony of the pipe, but it is likely that the Treaty commissioners saw these aboriginal ceremonies and protocol as merely heathen entertainment (Taylor, 1999:18).

The Treaty 7 elders remembered smoking the pipe to bless and solemnize a treaty that was to enable them to live in peace and harmony. By smoking the pipe of friendship they did not need to know all the details (some of which were subsequently used against them) of the treaty. Once the pipe had been smoked they believed that they would be ‘taken care of’ and that their lives would be enriched by the government’s ‘magnificent gifts’ and ‘sweet promises’ (Treaty 7 Elders, 1997:324-5).

The agreement to the written treaty was compromised by failures in treaty settlement protocol on the part of all parties. The agreement to the content of the oral discussions was similarly compromised by the misunderstanding of the significance of the pipe ceremony. The treaty therefore, cannot be viewed as a meeting of the minds.

3 Zimbabwean treaties and concessions

Nineteenth century treaties and concessions in Zimbabwe have to be viewed in the light of the Matabele war which, by 1894, established conquest as the method of acquiring territory rather than treaty-making. However, earlier agreements still warrant scrutiny since grievances surrounding their signing continue to this day, in particular over verbal assurances given at the time. The first recorded treaty over Zimbabwean soil, signed by Mzilikazi with the Boers in 1853, was primarily a right of way over Matabele territory. This was followed by the Tati and the Shashi concessions (Warhurst, 1973:56,63). Thereafter, apart from a minor concession in 1871, no further concessions or treaties

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4 For example, see (Magaisa, 2008).
were granted until 1888, when Lobengula signed both the Moffat treaty and the Rudd concession. By the Moffat treaty, he agreed not to give away any part of his territories without the sanction of Britain. Lobengula’s motives are a matter of conjecture but what is certain is that, as with the prior treaties, no land rights were conveyed.

The written terms of the Rudd concession are straightforward – it was a mining lease signed by three representatives of a mining company, for an initial sum then a fixed monthly amount. A missionary, the Reverend Helm, was present during the negotiations to ensure they were fair and in the interests of the natives, and he signed as a witness and to certify that the document had been fully interpreted and explained. In any case, there would have been little need to lie about the Rudd concession, which may have been “the thin end of the wedge” for the British but which, in itself, did not give away much and, in particular, conveyed no rights in land (other than in a negative sense of agreeing not to grant land without the permission of the grantees). It is the verbal assurances made at around the time of the concession that have since given rise to grievance, and it is here that figurative language first plays a significant part in conveying exact shades of meaning. It should be noted that Thompson, as interpreter, held the view that “All discussion with natives on grave matters was in my time carried on more or less in metaphor, a style carrying much weight when skilfully used” (Rouillard, 1977:128).

Thompson confined himself to metaphorical terms that he believed would be best understood by the Matabele, which meant sticking mainly to guns and cattle. Thompson likens Lobengula’s dominion to a dish of milk that is attracting flies (a reference to other countries interested in securing mineral rights in the country) and explains that what is sought is not land, only the right to dig for gold.

I likened his country to a cow and said, “King, the cow is yours. If she dies the skin is yours, if she calves the calf is yours. I only want the milk.” The Matebili regarded milk as only fit for children, and not food for men (Rouillard, 1977:188).

Thompson explained what was meant by the sole right to mine gold by pointing out that it was inadvisable to have two bulls in one herd of cows, which one induna agreed was simply asking for the pair of them to fight rather than looking after the cows. Furthermore, in order to allay fears, Thompson made the point that no one gives somebody an assegai if he expects to be attacked afterwards. In other words, if the whites planned to overthrow the Matabele they would hardly arm them with guns (Rouillard, 1977:130).

Lobengula signed the concession, but in the following months his fears were played upon by rival concession-hunters at Bulawayo, who suggested that the king study the word “land” used in the concession. One of the whites, at a council with 300 indunas,  

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5 Councillor, advisor, chief e.g. of Lobengula.
6 A similar proverb is found in Swahili: ‘Two bulls do not live in the same cowshed’. Parker, quoted in (Pongweni, 1989:7).
7 The assegai is figurative: one thousand Martini-Henry breech-loading rifles were offered with one hundred thousand rounds of ball cartridges.
challenged Thompson to explain the word, to which he cleverly replied by asking the indunas if they could tell whether a beast is male or female when shown only part of its hide. When they replied that the rest of its body would need to be seen, Thompson said that he too, could only interpret the word ‘land’ if shown the context (Rouillard, 1977:176).

3.1 “Ten White Men”

Looking back over a hundred years, one phrase continues to trouble writers; a verbal promise allegedly made to Lobengula that only ten white men would be working in his country. However, although it seems that ten men must have been mentioned, it is unclear just what that occasion was. One account is from the Rev. Helm who, in a letter to the London Missionary Society dated some five months after the signing of the concession, writes:

The Grantees ... promised that they would not bring more than 10 white men to work in his (Lobengula’s) country, that they would not dig anywhere near towns etc & that they & their people would abide by the laws of his country & in fact be as his people (Hiller, 1949:227).

This statement might mean that the promise was made by Rudd and his party at the time the concession was signed (Blake, 1977:47), but Helm’s use of ‘the grantees’ is ambiguous and could equally well have applied to only two of the grantees at a date later than the signing of the concession, or even by other members of the mining company at a still later date.

In the months following the signing of the concession, Lobengula, seeking reassurance, decided to send two indunas to Britain, bearing two letters. The first letter, authenticated by Helm, was a declaration of Lobengula’s territorial claims and a request to the Queen for protection under the Moffat treaty. The second letter, quite possibly a forgery, said that the indunas were making the journey to confirm on Lobengula’s behalf that there was a queen, and to ask for someone to be sent by the Queen herself to help with troublesome concession seekers. The reply, written by Lord Knutsford for the Queen, seems a veiled attempt to protect future British interests. Couched in figurative language worthy of Thompson himself, it cautions Lobengula not to put too much power into the hands of those who come first and exclude others equally deserving: “A King gives a stranger an ox, not his whole herd of cattle, otherwise what would other strangers eat?” (Blake, 1977:50).

One last treaty should be mentioned in the Zimbabwean context, namely the Lippert Concession, obtained from Lobengula in April 1891 on behalf of Lippert, a German financier (Cherer Smith, 1978:35). Strictly, this was untenable in written or customary law, for it reneged on the Rudd concession by which Lobengula had contracted not to grant land without the permission of the grantees,8 and Lobengula also did not really have the power in custom to grant land rights in Matabeleland (Palmer, 1977:27). The Lippert concession was probably an attempt to outmanoeuvre Rhodes by securing the land rights to the country. It granted “The sole and exclusive right, power, and privilege

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8 At that stage effectively the British South Africa Company, since its creation on October 29th 1889.
for the full term of 100 ... years to lay out, grant, or lease ... farms, townships, building plots and grazing areas; to impose and levy rents, licences and taxes thereon, and to get in, collect and receive the same for his own benefit; to give and grant Certificates ... for the occupation of any farms, townships, building plots and grazing areas” (Palmer, 1977:27). Subsequent confirmation of the concession by John Moffat seemed to be a case of the end justifying the means, since Moffat firmly believed that “only the disappearance of their military state could save the Ndebele” (Warhurst, 1973:64). Although further details of the concession are beyond the scope of this paper, when Rhodes bought the concession it served to buttress the Rudd concession, whose weakness was in not giving control over land. Thompson, when asked by Rhodes about the signing of the Lippert concession, says that, knowing Lobengula’s feelings about land, he was probably unaware of what he had put his signature to (Rouillard, 1977:189).

To complete the picture of land agreements, a claim by the Matabele community that their right to the unassigned land in Southern Rhodesia had survived conquest was summarily dismissed by the Judicial Committee of the Privy Council in favour of the Crown (Privy Council, 1918:233), then in 1923 Southern Rhodesia was granted responsible government. Apart from a side-step in which “UDI” was declared, this was the status quo when Zimbabwe was granted independence from Britain in 1980.

4 The Treaty of Waitangi, New Zealand

In three relatively simple articles, the English version of the Treaty of Waitangi is essentially about sovereignty (ceded to the British Crown), property rights (retained by Maori for so long as they wished) and citizenship (protected for all people) respectively. In the Maori language version it is more explicitly about kawanatanga (governing authority granted to the Crown), rangatiratanga (Maori authority over their own property and lives) and tikanga (protection of Maori custom) respectively. The conflicts between these different words and therefore different understandings have been intensively argued, and they are largely unresolved, except to the extent that there is general agreement that the focus should be on the principles expressed by the Treaty rather than the words. It is however acknowledged that it is unlikely that Maori would have signed the Treaty if they had been required to relinquish their rangatiratanga or mana (personal and tribal authority). Henry Williams offered his verbal endorsement of the proposed Treaty, saying that the missionaries fully approved of it, and that it was “the act of love towards them on the part of the Queen, who desired to secure to them their property, rights and privileges” (Rogers, 1998:165 & Orange, 1987:45).

It is further generally acknowledged that, while the Maori chiefs at Waitangi on the 6th of February may have been party to some discussions about the content of the Treaty, it is more than likely that the Crown representatives, sent around the country “like travelling quacks, selling some cure-all elixir”, were more concerned with gathering additional signatures on copies of the Treaty than with explaining its terms and implications (Moon, 2002:132).

9 The Unilateral Declaration of Independence by the Rhodesian government, in 1965.
The Colonial Office had long asserted a desire to ensure that Maori understanding was clear. The instructions to Captain Hobson were explicit, namely that “… the free and intelligent consent of the natives, expressed according to their established usages shall be first obtained.”

As it turned out, the application of the Treaty by the Crown relied more on the established usages of English law, and Crown deeds to land regularly trumped native title.

So how did Maori envisage the Treaty guarantees and protections? Te Kemara, in the debate leading up to the signing of the Treaty, complained that the Governor (representing the Queen) would be “up” and he would be “down low, small, a worm, a crawler” (Caselberg, 1975:44). He was clearly concerned that Maori signatories risked losing their mana. As Rogers (1998:170) comments, “All the implications of sovereignty in its legal sense they may not have understood, but that they were to become lesser chiefs under the Queen’s authority they could grasp quite well.”

On the other hand, the northern chief, Noperia Panakareao, understood from the Treaty that “the shadow of the land goes to the Queen, but the substance remains to us … We now have a helmsman for our canoe”, which seems to suggest an understanding of a benevolent and guiding Queen who nevertheless was a titular head only. Noperia Panakareao would not hold that view for long. A scant eight months later, observing the practical implementation of the Treaty, he is quoted as saying: “The Substance of the land goes to the Europeans, the shadow only will be our portion” (Ward, 1968:Preface).

There is conflicting evidence about whether Maori understood the implications of selling land, and the exclusive rights that were subsequently claimed by the settler owner. Maori certainly recognised the importance of land to their continued ways of life, and many understood the worthlessness of the items of exchange:

The land will remain for ever to produce food, and after you have cut down the old trees to build houses, the saplings will continue growing, and in after years will become larger trees; while the payment I ask for will soon come to an end. The blankets will wear out, the axes will be broken after cutting down a few trees, and the iron pots will be cracked by the heat of the fire (Te Waharoa to Rev. Brown at Matamata 1835 in Caselberg, 1975:29).

The protocols of manaakitanga (host responsibilities) at Waitangi were imperfectly met by Hobson, and after two days of discussions the invited Maori chiefs were ready to return to their homes. The signing ceremony was thus completed quickly on 6 February under the fatherly figure of Hobson and his colourful entourage. As each chief signed the document, they shook hands with Hobson who announced each time ‘He iwi tahi tatou’ – ‘We are now one people.’ This was perhaps wishful thinking, but arguably is the basis to suggest that the spirit of the Treaty was one of partnership between equal peoples.

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10 Instructions from the Marquis of Normanby to Captain Hobson, R.N. Downing Street, August 14th 1839.
11 In cases such as R v Symonds (1847) NZPCC 387 and Wi Parata v Bishop of Wellington (1877) 3 NZ Jur. (NS) 72.
The meeting at Waitangi between representatives of the Crown and chiefs of the northern confederation represented the effort made to obtain the free and intelligent consent of Maori to the Treaty provisions. There is strong evidence that the verbal discussions there focused on what would be protected for Maori – their rights to and authority over their lands (Orange, 1987:46). Recent judicial analysis of the effect of treaties with indigenous people,\(^\text{13}\) support the view that it is the understandings of the indigenous signatories that should prevail.

5 Discussion and conclusions

The treaties and land agreements in the three countries discussed above have had significant adverse effects on historical and current relationships between the Crown and the indigenous people. An important aspect of the spirit of land agreements was the attempt to establish trust relationships between the contracting parties around the time of the treaty proceedings. For example, Lobengula seeks reassurance from Thompson that his “heart is white towards the Matebili” (Rouillard, 1977:186), the words of Henry Williams that the Treaty of Waitangi is “the act of love towards (Maori) on the part of the Queen” carry considerable weight because he has proved trustworthy over a number of years, and Crowfoot’s trust relationship with Colonel Macleod is instrumental in enabling negotiations. Misunderstandings and grievances have developed in regard to the indigenous understanding of the verbal agreements and the Crown’s acceptance and implementation of the written documents. These grievances have fuelled mistrust between the parties to the treaties that has betrayed the original trust relationship asserted by the signatories.

Similarly, in asserting their inherent superiority over the indigenous tribes, the colonial authorities were expected to model standards of honourable behaviour. In all three countries, the British Queen is invoked by the Europeans as representing a level of justice higher than governments.\(^\text{14}\) The natives often acknowledged the overriding authority of the Queen and were led to expect that the Europeans would act honourably. They were often surprised when they did not. For example, “What took Ngai Tahu by surprise was that … promises were broken, when according to their ‘savage’ code of behaviour the promises of rangatira like Kemp or Mantell were sacrosanct,” (Evison, 1993:492-3) and Lobengula accuses Thompson of “having two words,” i.e. lying (Rouillard, 1977:196).

Honourable intentions were expected from these cross cultural agreements, and after the various cultural protocols were completed, honourable implementation was assumed. In Canada’s case, indigenous protocols such as the smoking of a sacred pipe were a significant symbol of honourable intention, while in both New Zealand and Zimbabwe the formalities of the ceremony enhanced the expectation of the honourable implementation of the verbal understandings.

Europeans acted as if what was written and signed was of paramount importance, and they seemed to see no impediment to verbal misrepresentation in order to gain consensus. The natives, on the other hand, appeared to set most store by the verbal

\(^{13}\) Clearly summarised by the Waitangi Tribunal, 1997:386-388.

\(^{14}\) almost one of ideal justice - even divinely ordained
discussions and assurances supported by the trust relationship as it had developed. Verbal assurances and explanations often drew on figurative language, with references to soil, rivers, grass, mountains, sun, cattle and motherhood. The use of such natural symbols suggests that these aspects of the natural world were viewed as being more generically understood and better representing the nature of agreements than the monocultural legal jargon of the written document.

It is apparent that perceived injustices that still fester today trace back to the verbal exchanges just as greatly as to the written agreements. Legal and administrative processes and settlements today are cognisant of the written word and black-letter law, but they should pay greater attention to ways in which trustworthiness was established and to unwritten forms of evidence. In particular, the figurative language used at the time of negotiation has proved itself pithy, well suited to capturing the essence of negotiating points, and capable of providing enduring mental images that should rightly be drawn on to colour legal interpretation today.

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The Juridical Security of the Immovable Property in Belgium

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Abstract:
The Belgian immovable legal system goes back to the origin of the Kingdom of Belgium. This system has some flaws that need to be listed and analyzed. The General Administration of the Patrimonial Documentation (GAPD) which, since the reform of the Federal Belgian administration, has as assignment to manage all the immovable data (but also movable data), has focused on that issue.

GAPD (General Administration of the Patrimonial Documentation) develops and implements its projects, i.e. in respect of legal certainty, in conformity with some concepts: UNIDENT (identifying immovable in an univocal way); PRECAD (giving a previous identification); etc.

Besides, GAPD has concluded numerous agreements and partnerships with the major players of the real estate sector, always with a view to improving the legal certainty, namely with: the Notaries; the Private Surveyors; the Institute of Estate Agents; the Belgian National Geographical Institute; the Provinces, the Regions, the Towns, etc.

GAPD has also set up the following processes and projects: the project “Status of Public Officer for some Surveyors”; the preliminary cadastration; the project KADAU, (study of the feasibility of the creation of a juridical cadastrable in Belgium); the creation of a databank of the plans of the private surveyors.

Keywords:
Cadastre, Immovable Property, Legal Certainty, Notaries, Surveyors

1. Introduction

The legal certainty in the Kingdom of Belgium was not fundamentally altered since the creation of that Kingdom. It is then essential to describe its primary legal basis and to precise its complex administrative structure and this, before addressing the flaws of the Belgian legal immovable system. The main aim of this paper is to present the answers that can be given by the GAPD (General Administration of the Patrimonial Documentation).
2. The origins of the property laws in Belgium

2.1. The modes of acquiring immovable property and rights in rem in immovable property

2.1.1 Mode of acquiring is taken to mean any fact or act that, by virtue of the law, gives rise to a right or causes the transfer of a right.

The modes of acquiring are original or derived.

The original modes are those that give rise to a new right, which did not exist in another person before.

The derived modes are those that make acquire a right that already exists in another person, who just transfers this right.

So, the original modes are purely acquisitive, whereas the derived modes are both types of deeds of transfer and acquisitive deeds.

The interest of this distinction resides in the fact that the nature and the extent of the right acquired via a derived mode are determined by the nature and the extent of this right in the person to whom one succeeds. “Nemo plus juris ad alium transferre potest, quam ipse habet” (Renard, 1979).

2.1.2 Original modes of acquiring: occupation and acquisitive prescription (usuacapion)

Occupation is the mode of acquiring something that does not belong to anyone, by taking possession of it with the intention of becoming its owner. Historically, occupation is at the basis of all ownership.

It is important to note that vacant immovables are the property of the State \(^1\). Therefore, they may not be occupied.

The acquisitive prescription, or usuacapion, is the original mode of acquiring property as a result of prolonged legal possession during a certain time (general rule: 30 years)\(^2\) \(^3\).

\(^1\) Art. 713 interpreted by the preparatory papers of the Belgian Civil Code

\(^2\) Art. 2262 of the Belgian Civil Code

\(^3\) However, there are specific rules for prescription after 10 or 20 years, in particular with respect to immovables \textit{ut singuli} where notably two conditions are required: the existence of a just title (deed of transfer) and the good faith of the possessor.
The sole ground of the acquisitive prescription is its social interest. The acquisitive prescription is the technical institution intended for ensuring the certainty of the legal relations. It dismisses imprecise claims, eliminates the difficulty of giving proof by exempting the possessor from what is rightly called, as far as ownership is concerned, the “probatio diabolica”, i.e. proof by way of the existence of the right in its successive holders. Thus, prescription consolidates legitimate property titles that are inadequate to constitute evidence and compensates for the lost title. Only in very particular instances, prescription will lead to unjust consequences: the fact that it establishes is almost always in conformity with the law (Renard, 1979).

2.1.3. Derived modes of acquiring

There are three derived modes of acquiring:

1° intestate successions, i.e. legal successions;
2° testamentary gifts or wills;
3° agreements or contracts, including i.e. sales and gifts made inter vivos.

2.1.4. Definition and attributes of the right of ownership

Ownership is the right to enjoy the use of something and to dispose of it in the most absolute manner, provided that one does not put it to a use prohibited by the law or the regulations.

This definition, however, expressly reserves the limitations that the laws or the regulations may impose on ownership.

2.2 The Mortgage Registry

The law of 16 December 1851, which was amended and completed in particular by the law of 10 October 1913 and which replaced Title XVIII on Privileges and Mortgages in the Belgian Civil Code, not only revised this matter; it also organized certain measures of publicity in respect of rights in rem in immovable property other than privileges and mortgages.

An administration called Mortgage Registry has been entrusted with organizing this publicity. At least one Mortgage Registry Office is established in each Juridical District; the official in charge of the office is the Recorder of Mortgages and the registers that he keeps are called registers of the Mortgage Registry. However, all these expressions are inaccurate or at least incomplete; the Recorder of Mortgages not only provides the publicity of mortgages but also of all the rights in rem in immovable property (Renard, 1979).

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4 Art. 544 of the Belgian Civil Code
3. The Administrative Structure of Belgium

3.1 The Organization of the State

The Kingdom of Belgium is a country in North-West Europe. Straddling the cultural boundary between Germanic and Latin Europe, Belgium is home to two main linguistic groups, the Flemings and the French-speakers, plus a small group of German-speakers.

Belgium’s linguistic diversity and related political and cultural conflicts are reflected in the political history and a complex system of government.

3.2 The Political Role of the King

In the political field, the King’s function does not entail the exercise of personal authority. It is by his suggestions, advice, warnings and encouragements that the King acts towards the political actors. His perspective is one of continuity of duration.

3.3 The Federal Government

The Federal Government performs the Federal Executive Power.

The Government implements the legislation. The Government also participates in the legislative power, through its right of initiative. The Government can submit bills to the Parliament and has the right to propose Amendments. A bill that has been approved by Parliament only becomes law after signature by the Government, i.e. the King and the competent Minister(s).

3.4 The Regions

Apart from the Federal State, there are three Regions. The names of the three Regional institutions are borrowed from the names of the territories they represent. So, we refer to (from North to South) the Flemish Region, the Brussels-Capital Region and the Walloon Region.

Regions have powers in fields that are connected with their regions or territories in the broadest meaning of the terms.

So, the Flemish Region, the Brussels-Capital Region and the Walloon Region have powers relating to the economy, employment, agriculture, water policy, housing, public works, energy, transport (except Belgian Railways), the environment, town and country planning, nature conservation, credit, foreign trade, supervision of the provinces, communes and intercommunal utility companies, etc.
3.5 The Communities

In addition to the three Regions and the Federal State, there are three Communities. They are based on the “languages”. So, we talk about the Flemish, French and German-speaking Communities.

Giving that the Communities are based on the concept of “language” and language is “dependent on the individual”, a number of other powers are obviously associated with the Communities. The Community has powers with respect to culture (theatre, libraries, audiovisual media, etc.), education, protection of youth, social welfare, aid to families, immigrant assistance services, etc.

4. The Structure of the General Administration of the Patrimonial Documentation (GAPD) before the reform:

4.1 Cadastre

The Belgian Cadastre was installed by Napoleon during the French occupation of the Belgian territories. Notwithstanding the will to create a juridical cadastre of the “Land Book” Type, in fact, as a result of the way in which it has been set up, the Belgian cadastre is of the “Personal” Type. Registration in the cadastral file and in the cadastral plans does not ipso facto implies the existence of a “title deed”.

Transfers with respect to the exercise of a right in immovable property are only registered in the Cadastre on the basis of the “Official” plan. In practice, the percentage of reliability of the cadastral registrations is very high. Only a small percentage of the registrations are liable to contain “ancestral” errors or inaccuracies. As a result of the quality of resurveying and of the authentication of the persons concerned, in numerous cases, one can say that the Belgian Cadastre has characteristics of a juridical system. For example, the parts of the territory which have been consolidated or those parts that have been expropriated have a “Juridical Guarantee” as far as cadastral registration is concerned.

Contractual transfers of rights in immovable property must be drawn up by a Public Officer (usually a Notary) so that they can be transcribed at the Mortgage Registry Offices. Therefore, it is necessary that the immovable covered by the transaction be identified (in particular at the graphic level) in the most complete manner and without any uncertainty.
4.2 Registration

Registration serves as the basis for drawing up the Cadastre, thanks to the information taken from the registers relating to the deeds transferring and declaring title. It facilitates the control of the obligations imposed by law on the public officers, drafters of the authentic deeds. The registers kept at the Registry constitute a precious source of documentation to which, subject to certain conditions, the public is given access, namely:

a) subject to certain conditions, copies of the registrations can be issued to private individuals;

b) proof of the origin of immovable property must be issued to any interested party.

The registration formality has a very significant consequence in civil law: it provides the deeds subjected to it with a legal date. This is very important because, in principle, a deed must have a legal date in order to have effect to third parties.

4.3 Mortgage Service

Publicity is made by way of registers. The registers are kept at the Mortgage Registry Office established in the principal town of the judicial district where the immovable is situated. There are two main registers, the register of the transcriptions and the register of the registrations (privileges and mortgages).

Transcription consists in a copy of the deed, with a margin where Article 3 of the Belgian Mortgage Law must be mentioned. Registration consists in a copy of a statement (or summary of the deed containing the essential indications: name, identity of the parties, detail of the encumbrances that burden the immovable and the identification of the immovable).

As the transcription and the registration require some time, the legislator created a register in which the Recorder of Mortgages registers the deeds as soon as they are submitted to him for publicity. The Recorder of Mortgages closes this register on a day-by-day basis. He mentions a brief analysis of the deed to be transcribed or registered.

The Belgian legislator established a personal publicity system based on the name of the owner. It is the name of the owner of the immovable which constitutes the basis of the publicity regime. Thus, a sale is recorded on the basis of the name of the buyer who becomes owner. Likewise, a mortgage is recorded on the basis of the name of the person who has burdened his immovable.

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5 Art. 144 of the Belgian Estate Duty Code
6 Art. 1328 of the Belgian Civil Code
Obviously, in the personal system, the person who is owner or mortgagor must be identified exactly. Moreover, the identification of the last owner of the immovable may not give an exact picture of the status of the immovable. This is the case in the event of e.g. transfer by death, legal transfer, encumbrance registered in the name of a previous owner, etc. In reality, in order to know the exact status of an immovable in the personal system, one has to establish the chain of transfers from person to person until the date on which all the rights that may exist on the immovable concerned have lapsed, i.e. during thirty years.

“Publicity does not purge the deed of its defects”, in the sense that, in the personal system, the publicity does not have any effect on the validity of the deed, nor on the content of the rights created by this deed. If, in the personal system, the original seller was not really the owner, the transcription of the title of the buyer will not validate the sale and the entire following chain of transfers will remain vitiated and subject to annulment, notwithstanding the Publicity (Grégoire, 2006).

5. The structure after the Reform

5.1 The reform of the Belgian Ministry of Finance

The “reform of the Belgian Ministry of Finance”, has resulted in the creation of new organization charts, new structures and new missions.

In replacement of the former Administrations, there are entities and administrations that regroup the different missions entrusted to the Federal Public Service Finance.

Entity 2 – the General Administration of the Patrimonial Documentation – regroups the former Cadastre, Registry and Public Property Administrations as well as the Mortgage Registry Offices, i.e. all the administrative sectors dealing with movable and immovable patrimonial matters.

The missions thus gathered and consolidated are distributed among 5 administrations:

1. Surveys and Valuations (Cadastre);
2. Legal Certainty (Registry and Mortgages);
3. Patrimonial Services (Acquisition Committees);
4. Non-fiscal Collection (Registry);
5. Collection and Exchange of Information.
5.2 Surveys & Valuations (Cadastre)

The administration Surveys & Valuations determines and verifies the different values of immovables (the cadastral income, the market values in respect of registration duties and inheritance taxes, the rental value), measures the parcels of land and the constructions, determines the property boundaries as well as the administrative boundaries within the framework of the updating of the cadastral plan and the development of a Geographic Information System (GIS).

5.3 Legal Certainty (Registry and Mortgages)

The administration Legal Certainty collects the registration duties and the inheritance taxes, which are mainly transferred to the Regions, the mortgage duties, the court fees ... Through the intermediary of the Mortgage Registry Offices, the administration Legal Certainty publishes the verified deeds of the public officers and updates its documentation in the light of these deeds.
5.4 Patrimonial Services

The administration Patrimonial Services acquires, amicably or through expropriation, immovables that are useful or absolutely necessary to the realization of the infrastructures decided on by the public authorities. In its capacity as real estate agent and at their request, this administration sells the immovables of these authorities. In its capacity as “Public Notary”, it draws up the authentic deeds relating to the acquisitions and the sales as well as certain special deeds on behalf of public enterprises. This administration also manages the private immovable patrimony of the State, either by renting it out or conceding it, or by putting it up for sale.

6. Legal Certainty of Immovable Property in Belgium

6.1 Authentic deed and intervention of the Surveyor

When a Public Officer authenticates an immovable transaction, the intervention of the Notary firstly concerns the identification and the origin of the title deeds.

According to the Chamber of Paris Notaries, the Notary, a Public Officer, a professional in private practice, is the impartial drafter of the will of the parties; he makes the whole extent of the obligations they are taking on known to them, draws up these undertakings clearly and provides them with the authentic character. This authentic character provides the deed with a legal date, a date that cannot be contested; the deed has probative force, which makes that the facts stated and established by the notary cannot be contested; the deed is enforceable as of right by the simple fact that it is submitted to an enforcement agent.

But still all too often, nothing is guaranteed as far as the surface area, the boundaries of the parcels, and easements, if any, are concerned.

For instance, in accordance with the custom of the Company of Brussels Notaries, the seller does not guarantee the surface area indicated; the description of the immovables is given by way of information only; the immovables are sold encumbered with all the easements, even if they are hidden, without recourse against the seller; the mere reference to a plan included in the specifications can never in itself give rise to an easement; as regards any disputed joint ownership, the purchaser has to directly agree with the interested third parties, without intervention of the seller nor recourse against him.

On the other hand - and the contrary would beat everything! -, it is made clear that the immovables are sold unencumbered with any debts, privileges and mortgages.

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7 www.paris.notaires.fr
8 Article 4 of the general conditions for public sales in Brussels; www.brunot.be
In this respect, the Royal Federation of Belgian Notaries\(^9\) underlines the number of formalities required when preparing dossiers; we cite in particular the exact identification of the sellers and the purchasers, their civil status and their capacity; the examination of the title deeds and the rental situation, as well as the examination of the town and country planning provisions or the examination of the basic deed where an immovable forming part of a forced co-ownership is concerned, etc.

7. **CASE STUDY: “Path of an agreement on an immovable and on the price”** (path from the compromise of sale to the end of the mortgage loan)

The actions to be taken concerning the signing of a compromise for the sale of an immovable\(^10\) principally are the following. This compromise is filed with a Notary who consults the database of the Cadastre (on line) in order to identify the immovable concerned and in particular the name of the “owner” registered in the cadastral file. On the basis of this information, the Notary requests a mortgage certificate from the Recorder of Mortgages of the District in which the immovable is situated in order to know the encumbrances [mortgage(s), attachment(s)] which burden the immovable. Concomitantly, he also applies to the Registry office to establish the thirty-year origin of the immovable in order to give evidence, if necessary, that the seller and his predecessors, if any, at the very least have owned the immovable in a non-clandestine, non-equivocal way, without violence and continuously for thirty years.

Next, the original of the authentic deed is presented for the registration formality and the Notary pays the duties. The Registry office sends the original of the deed back to the Notary and, on the basis of this deed, the transfer is registered in a computer program that carries out the transfer in the files of the Cadastre as well as in the files of the Registry. The Notary sends the deed to the Recorder of Mortgages (in whose district the immovable is situated) with a view to ensuring its Publicity. The Recorder of Mortgages analyses the deed: identification of the parties to the deed – normally by means of the numbers in the National Register of Individuals –, identification of the immovable and of the legal operation; this deed is scanned (image) and the Repertory of persons is completed; notes are made in the margin of the deed. Finally, the Recorder of Mortgages calculates his remuneration and the taxes (mortgage duty and stamp duty), affixes the stamp on the deed and sends it back to the Notary.

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\(^9\) Annual report 2003 of the Royal Federation of Belgian Notaries, p. 6, www.notaire.be

\(^10\) Application of Article 1583 of the Belgian Civil Code: mutual consent to the price and a clearly defined immovable

The improvement of the legal certainty is made with some concepts like: identifying immovable in an univocal way (UNIDENT); giving previous identification (PRECAD); abolishing the geographical spreading; consolidating date with respect to persons, their duties; performing all the formalities on the basis of single request; updating the patrimonial documentation independently of the collection of duties…; increasing the value of or data…

9. Improvement of the Legal Certainty thanks to the Collaboration of GAPD with

9.1 The Notaries

The DER.VE (Electronically Recognizable Document - Sale) project is aimed at data exchange between the administration Legal Certainty and the Royal Federation of Belgian Notaries. First, the data that must be structured should be determined. At first, however, only the deeds of pure sale of full ownership of immovables will be concerned. The formalized agreement will be developed in the e-notaries and Stipad Systems. Consequently, the Notary will send an Electronically Recognizable Document (DER) containing structured data as well as the electronic authenticated copy of the deed to the competent office. Such a deed will not have to be submitted as a hard copy for the registration nor the mortgage formality any more.

9.2 The Private Surveyors

The convention is an agreement reached by the surveyors and GAPD. This agreement is optional and is not in any way obligatory for practising as surveyor.

In this convention, the surveyor undertakes to draw his plans in accordance with standards that will enable the Administration to make best use of these plans, both from the juridical and the technical point of view. In return, GAPD undertakes to make access to part of its documentation easier for him.

9.3 The Professional Institute of Real Estate Agents

The Professional Institute of Real Estate Agents (IPI) and GAPD concluded a collaboration protocol aimed at i.e. the exchange of patrimonial data.

11 STIPAD: Patrimonial Documentation Integrated Processing System
This protocol also provides for the collaboration of the real estate agents on the study of the patrimonial units (unique identifiers of immovable objects) and on the drafting of structured models of lease agreements and compromises of sale which can be submitted for registration through the internet.

Eventually, the real estate agents should have access to certain data relating to the immovables put up for sale in order to be able to include information confirmed by GAPD in their compromises of sale.

9.4 Partnerships

Other partnership agreements were also concluded between GAPD and the National Geographical Institute, the Provinces, the Regions, the Towns, etc in order to prevent redundancy of data and to improve the, in particular juridical, reliability of the data.

10. Improvement of the Legal Certainty with

10.1 The Project of the “Private Surveyors’ Plans” joined to the deeds declaring or transferring title

10.1.1 Use of the plans by the Administration

The “Cadastre” Administration needs the surveyors’ plans drawn in the framework of an immovable transaction for updating the cadastral plan. The latter document is the graphic basis for identifying the immovables.

At the level of the Administration, few plans are transcribed at the Mortgage Registry Offices. The Registry Administration does not keep the plans. For its needs, the Cadastre Administration archives copies of the surveyors’ plans. It gets these plans either via the Registry Administration which provides it with a hard copy (made upon the registration of the deed) or via the surveyor if the latter entered into an agreement with the “Cadastre” Administration.

10.1.2 Objective of the Administration

The Administration aims at two objectives:

- optimising the updating of the cadastral plan by using surveyors’ plans drawn in accordance with certain standards and the format of which allows these plans to be processed semi-automatedly;
- creating a database of authentic information as regards property delimitation.
In concrete terms, the Administration proposes to oblige the Notary and the Surveyor to submit a plan before presenting the deed for the Formality.

These objectives are complementary because, by creating the database of the surveyors’ plans, the Administration sets up the single source of information as regards property delimitation, on the one hand, and makes sure that it receives all the plans it needs for its functioning, on the other.

10.2 The Project “Status of Public Officer for some surveyors”

There is also a plan to confer the status of public officer to the surveyors as regards their missions:

- of boundary marking;
- of drawing and signing plans intended for the recognition of boundaries, a transfer, the settlement of joint ownership, or for any other report identifying landed property, and which may be submitted for transcription or for the registration of a mortgage.

10.3 The Preliminary Cadastragation

A new immovable (e.g. a new parcel resulting from a division) used to be registered after the sale transaction. The aim of the preliminary cadastration is to identify the immovable univocally before any transaction. Since the immovable has been identified, all the documents relating to this transaction bear a unique identification, thus reinforcing the juridical character of the patrimonial documentation.

10.4 The KADAU Project, study of the feasibility of the creation of a Juridical Cadastre in Belgium (Study up to 2010)

The KADAU project of GAPD provides for a preparatory study of the feasibility of an authentic cadastre. The evolution of the present Belgian cadastre (a mainly technical and fiscal cadastre) into an authentic cadastre is of crucial importance to the performance of the missions of GAPD.

For the citizens, the setting up of an Authentic Cadastre is a guarantee of legal certainty as regards immovable property.

The study looks into the feasibility by taking technical and functional as well as juridical parameters into account. The decision on the setting up of a juridical cadastre will be taken on the basis of the results of the preparatory study, which will run until 2010.
10.5 Creation of a Databank of the plans of the Private Surveyors

Systematically scanning the surveyors’ plans archived at the Cadastre Administration was the first phase in creating this authentic source. This database contains about 1,600,000 plans. Now, the next phase is to take care of all the new plans.

In future, the surveyor and/or the citizen who wants to get information as regards property delimitation can find this information by applying solely to GAPD or by consulting this database.

11. Conclusion

The different stakeholders of the Belgian immovable system have identified the legal certainty flaws of that system. The missions assigned by the political power to the GAPD consists mainly in improving the Belgian immovable system and in suppressing its redundancies. This tends to implement a legal cadastral system.

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Planning at the urban periphery in Australia: issues relating to private residential back and front yards

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Abstract:
This narrative focuses on three planning issues affecting the suburban residential periphery in Sydney, Australia: (i) amenity, (ii) biodiversity conservation and (iii) bushfire potential. All relate to private front and back yards, which provide key elements of the residential landscape. Embedded in the paper is the complexity of the planning system and the subsequent inconsistency between dealing with the three issues. Considerable attention is paid to local government and its changing legislative terrain. In particular, several local statutory planning instruments are investigated to illustrate this. The conclusion calls for further research while stressing more action is warranted within and outside the planning system in an integrated manner. Two significant matters comprise community support and regional structures.

Keywords:
Amenity, biodiversity, bushfires, suburbs, yards.

1 Introduction

The garden is a fundamental element of the residential environment, especially in low density suburbia. In heavily urbanised Australia, front and back yards play a crucial role for citizens seeking their own private open space experiences. Due to sunny attractive climes, many houses extend into the garden – both physically and ideologically - providing a key function in everyday life. The garden is part of the house itself. It is where family and social activities take place, such as cricket games, barbecues and lazing under shady eucalypts. Depending on the householder, this may broaden to, inter alia, built-in playgrounds, vegetable growing and/or planting and maintaining indigenous trees (Head and Muir, 2007). Whilst recognising the variation of approaches to private open space, the paper focuses on the potential ecological nature of the garden and the various conflicts that can arise.
Although the above observations apply across all Australian urban landscapes, this paper focuses on Sydney’s periphery. Australia’s biggest city is surrounded by national parks to the north and south, the Pacific Ocean to the east and generally undulating lands towards the Blue Mountains to the west. Apart from (i) the rapid vertical residential expansion in central Sydney and key suburban hubs, including transport nodes, and (ii) the surge of in-fill development across all residential areas, apart from the environmentally sensitive, housing is marching west. A statutory instrument was introduced in mid-July 2006 with the explicit aim to “co-ordinate the release of land for residential, employment and other urban development in the North West and South West growth centres of the Sydney Region”\(^1\).

As western Sydney continues to grow, three critical issues demand scrutiny. All relate to private residential open space:

- enhancing and protecting neighbourhood amenity;
- conserving biodiversity; and
- minimising threats from bushfire.

This paper will address each one below, with particular attention to local government which is forefront of land use regulation and community involvement. While the third sphere of government suffers from no formal recognition in the Australian Constitution, it is nevertheless embedded in Australian governance.

2 The Emergence and Current Situation of Statutory Town Planning in NSW

The first comprehensive planning legislation in NSW occurred in 1945 with insertion of Part XIIA into the then Local Government Act 1919 (NSW), which went far beyond building and subdivision control. The regime enabled the making of statutory planning scheme ordinances (PSOs), mainly to provide regulatory zoning provisions. Curiously, although the legislature relied heavily upon UK law (Freestone, 1998), Britain followed a different pathway soon afterwards in 1947. Australian jurisdictions have since remained glued to stringent zoning patterns. But due to inadequate resources and limited thinking, councils were slow to adopt planning as a vital function. Instead, it was the State Government that drove metropolitan planning through the Cumberland County Planning Scheme (CCPS) of 1951. This dealt with post-war urban expansion, thereby assisting development of the “Australian suburban dream” (Alexander, 2000, 102) i.e. detached houses surrounded by large well-watered lawns alongside almost identical townscapes. Local PSO-making did not flourish until the late 1960s and 1970s. In many places, standardised ‘interim’ instruments were handed down by the State Government with the same emphasis on zoning and standards regardless of geographical location.

In 1980, Part XIIA was replaced by the Environmental Planning and Assessment Act 1979 (NSW) (EPAA). This reflected the emergence of ‘modern environmentalism’, encouraging forward thinking plan-makers to move beyond land use conflict. In addition, local communities demanded greater input in plan preparation and implementation.

\(^1\) State Environmental Planning Policy (Sydney Growth Centres) 2006, cl 2.
Another factor was regional planning, acknowledging that many issues apply across administrative and arbitrary borderlines. This led to a cascade of strategic non-statutory instruments. The most current is *City of Cities: A Plan for Sydney’s Future Sydney* (more commonly known as the ‘Metropolitan Strategy’) introduced in 2005 with its various existing and forthcoming sub-strategies. Adjacent to this is the Growth Centre policy wherein the State Government has promised an ongoing supply of land for low density homes for Sydney’s West. This reflects a fierce political push for residential expansion at Sydney’s periphery. Its implementation is currently taking place via the South-West and North West Growth Centres. The South-West sector is predicted to contain a capacity for about 110,000 new homes.

In terms of statutory plans, the EPAA introduced a series of statutory ‘environmental planning instruments’ (EPIs). At the time of writing, these have been reduced to State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs). SEPPs deal with matters of state or regional significance. A relevant example is *SEPP (Sydney Regional Growth Centres) 2006*, which provides the statutory basis for the two residential sectors mentioned above. The LEP, however, is the fundamental EPI that local government prepares and implements. As a result of legislative and policy reforms in 2006, the State Government introduced a standard ‘LEP template’. Each of the 152 councils across NSW must abide by the template in redesigning its own LEP. Only a handful of ‘templatised’ LEPs have yet been gazetted. By providing standard definitions of many types of development and laying down formulae for specific zones, the template offers a comfortable level of uniformity. In some circumstances, however, it might be argued as a means to erode creativity in local plan making (Kelly and Smith, 2008).

SEPPs and LEPs tend to provide regulatory rather than incentive clauses. Nevertheless, they can reach far beyond uses such as buildings, reservoirs and mines. Under section 26 EPAA, an EPI make provisions for, *inter alia*:

(a) protecting, improving or utilising, to the best advantage, the environment,
(b) controlling (whether by the imposing of development standards or otherwise) development …
(e) protecting or preserving trees or vegetation,
(e1) protecting and conserving native animals and plants, including threatened species, populations and ecological communities, and their habitats,
(f) controlling any act, matter or thing for or with respect to which provision may be made under paragraph (a) or (e) …

It is clear that an LEP may regulate front and back yards. For instance, it may require consent for the removal of one or more specified trees. Alternatively, pursuant to the LEP, the decision-maker may approve a residential estate subject to certain trees being retained. A council might even demand that a proposal be redesigned in order to retain identified vegetation.

There is concern, however, that contemporary detached dwellings in Sydney’s west suffer from small yards. The modern home is often enormous. Under the 2008 NSW Housing Code (part of *SEPP (Exempt and Development Complying Codes) 2008*), allotments of between 450 and 600 sq metres can accommodate up to 50 per cent
building coverage (Department of Planning, 2008, 8-12). But this excludes driveways, verandas, terraces and even swimming pools and spas, leaving little room for back yard cricket or front yard sub-forests. Furthermore, these types of developments need not undergo environmental assessment; instead, there is a straightforward ‘tick the box’ approach to obtain permission. This kind of urban sprawl is therefore advancing across far-flung suburbia. What planning issues might directly spring to mind?

3  Amenity

Protection of amenity is immediately relevant. Notably, its meaning is intangible. It was described more than four decades ago as the “hardest worked word in planning language” (Wilcox, 1967, 361), which is still relevant today. Amenity often relates to the visual aesthetics of a place. Accordingly, in the suburban context, in addition to parklands and street verges, residential gardens play a crucial role especially via front yards which are more visible to passers-by. Because it is an extremely subjective concept, it reflects personal/community preferences and culture. In the broader context, landholders may prefer to change their neighbourhood landscapes with exotic trees rather than maintain what might appear as tedious scrub (Kelly, 2006). For instance, assemblages of the remnant Cumberland Plain Woodland in western Sydney might be regarded as drab, with land holders planting colourful species such as the South American jacaranda or a variety of tropical palms. Of course, such temptations are visible across all suburbs. In smaller gardens, however, they are less likely.

Throughout Sydney, the flat Wianamatta Shale based lands that dominate the western suburbs are easily seized for residential development. Closer to the coast and bays, the far steeper Hawkesbury Sandstone landscapes are used for municipal bushy parklands (Schoer, 1983) and, since the 1980s, well-engineered residential development (Berzens, 1984). Because close location to bushy locations is a symbol of affluence (Sandercock, 1975), more attention is now being paid to integrating private residential land with ‘safe’ indigenous bushland – i.e. away from spiders and prickly plants. In the expanding Sydney’s west, this leads to shrubs rather than towering trees.

The notion of amenity is embedded in Australian urban planning law. In NSW, the CCPS required that amenity be taken into account in determining a development proposal. Although the provision contained a strong flavour of protecting residential lands from industrial emissions, a court judgment made it clear that amenity embraced “the pleasurable appearance of a neighbourhood in the eyes both of residents and passers-by”. As the planning system moved onwards, councils directed their energy to “the protection of local amenity, usually residential amenity” (Harrison, 1988, 27). When the EPAA was introduced, decision-makers were required to consider “the existing and likely future amenity of the neighbourhood” when determining a development application. This comprised one of 27 matters, which were reduced to five in 1998 deleting the

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2 County of Cumberland Planning Scheme, cl 27(e).
3 Vacuum Oil Co Pty Ltd v Ashfield Municipal Council (1956) 21 LGRA 8 at 12, per Sugerman J.
4 Environmental Planning and Assessment Act 1979 (NSW), former s 90(1)(o).
‘amenity’ reference\(^5\). It no longer has any mention in the EPAA at all. The judiciary, however, has made it clear that the shortened list is not exhaustive\(^6\), thereby ensuring amenity to remain steadfast alongside other express and implicit factors.

Amenity protection can be expressed in individual LEPs. In *Campbelltown (Urban Area) LEP 2002*, for instance, which covers a small part of the rapidly developing Sydney’s south-west sector with a current population of about 150,000 people, there are about 20 explicit references to amenity. The term, however, is again not defined. It is almost amorphous. The relevant clauses include an overall aim to “maintain and enhance the amenity of the urban area of the City of Campbelltown”\(^7\) in addition to the need for the decision-maker to hold the opinion that a development proposal is “consistent” with the stated objects if the zone before consent may be granted\(^8\). Such zonal objective provisions are reasonably strong (Kelly and Smith, 2008). Numerous other clauses relate to a variety of matters including heritage provisions\(^9\), agriculture\(^10\), mining\(^11\) and a specified area for urban expansion\(^12\). Clearly, amenity is entrenched in the LEP even though the provisions are sporadic.

*Liverpool LEP 2008*, which applies to the local government area directly north of Campbelltown and is part of the South West Growth Centre, confines only a handful of references to amenity. This instrument is a pioneer that follows the LEP template. But again, amenity remains undefined. Similar to the Campbelltown LEP, it is addressed in the main objectives to “maintain suitable and offer a variety of quality lifestyle opportunities to a diverse population”\(^13\). Further examples relate to temporary use of land, various zonal objectives especially in relation to residential zones\(^14\), minimum subdivisions size\(^15\) and foreshore building lines\(^16\). Perhaps the most interesting provision is the optional template clause relating to ‘[p]reservation of trees or vegetation’\(^17\) that requires permission for removal or damage. This item derives from ‘tree preservation order’ (TPO) provisions from the CCPS\(^18\) and many subsequent local instruments. Indeed, such clauses originate from British planning ordinances (Cullingworth, 1967). As Liverpool LEP demonstrates, amenity remains a vital component of the statutory planning jigsaw.

Amenity is a frequently raised issue before the Land and Environment Court of NSW, especially in merits appeal cases. In many situations, however, it is only one of many

\(^5\) *Environmental Planning and Assessment Act 1979* (NSW), s 79C(1).
\(^7\) *Campbelltown (Urban Area) Local Environmental Plan 2002*, cl 2(1)(c).
\(^8\) See, for example, *Campbelltown (Urban Area) Local Environmental Plan 2002* cl 9(2)(d), 13(2)(e), 22(2)(b) & 24(2)(d).
\(^9\) *Campbelltown (Urban Area) Local Environmental Plan 2002*, cl 50(e).
\(^10\) *Campbelltown (Urban Area) Local Environmental Plan 2002*, cl 36(d).
\(^11\) *Campbelltown (Urban Area) Local Environmental Plan 2002*, cl 63(b).
\(^12\) See, for example, *Campbelltown (Urban Area) Local Environmental Plan 2002*, cl 51D(c)(viii).
\(^13\) *Liverpool Local Environmental Plan 2008*, cl 1.2(2)(c).
\(^14\) *Liverpool Local Environmental Plan 2008*, see, for instance, cl 2.3 zones R2 Low Density Residential.
\(^15\) *Liverpool Local Environmental Plan 2008*, cl 4.1 zones R1 Low Density Residential.
\(^16\) *Liverpool Local Environmental Plan 2008*, cl 4(1)(e), 4.1A(1)(e).
\(^17\) *Liverpool Local Environmental Plan 2008*, cl 79(1).
\(^18\) *County of Cumberland Planning Scheme*, cl 40(1).
considerations before the Court. In regard to TPOs, judicial actions tend to involve criminal actions. For instance, in *Holroyd CC v Skyton Developments Pty Ltd* (2002) 119 LGERA 225 at 229, Cowdroy J emphasised that “breach of a tree preservation order is a serious offence”. The defendant was found guilty of removing two trees in the western suburb of Westmead, including a Queensland Fire Wheel twelve metres in height which was reported as providing “existing amenity” and “colour, shade and screening” (at 227). The defendant admitted guilt and was fined $A15,000. This and many other judgments illustrate how amenity is cemented in planning law. It relates directly to the appearance of suburban gardens.

4 Biodiversity Conservation

Biodiversity is a different concept altogether. It is based on science and represents a far more recent phenomenon. As will be seen, it is complex but in a different way. The *National Strategy for the Conservation of Australia’s Biological Diversity* defines it as “the variety of all life forms – the different plants, animals and microorganisms, the genes they contain and the ecosystems of which they form part of” (Commonwealth of Australia, 1996, 1). Accordingly, it embraces the drab and the fetid that exist well beyond the amenity spectrum.

Whilst the precise origins of the term are arguable (Adam, 2009), Jeffery (1997, 4-5) refers to a “snappy abbreviation” composed by the co-director of the 1986 American ‘National Forum for BioDiversity’ who recognised references to ‘Biological Diversity’ in earlier scientific papers. The term has since become far more fashionable, often found in tourist brochures and newspaper articles. In a recent weekly gardening column from the *Sydney Morning Herald*, the author warns readers that because Australia has “one of the worst records for loss of biodiversity” our “[g]ardeners can be of great help to native birds and animals by cultivating indigenous plants to provide green corridors” (Maddocks, 2009, 25). The essence is no different to Beatley’s (2000) academic paper on retaining biodiversity in American backyards, even in small gardens. All this reflects the fact that biodiversity conservation need not be restricted to the pristine. On the other hand, massively manicured and minimised suburban gardens might be more of a museum than a working green environment.

Biodiversity conservation in Australia is crucial for regional, national and global purposes. Its international dimension is incorporated in the *Convention on Biological Diversity*, signed by many countries, including Australia, at the 1992 Rio Earth Summit. Australia’s worldwide bio-magnitude rests on its ‘megadiverse’ nature. It is “geographically more isolated” than other with rich biodiversity and the “only one … predominantly in the temperate region” (New, 2000, 23). Possingham (2008) adds that a huge number of Australian species are endemic. Yet conservation biologists, policy-makers and environmental lawyers must consider well beyond listed species to other aspects, such as ecological assemblages. As Adam warns (2009, 19), “the ‘big picture’ approach is not being adopted and attention and resources are still on listed species”. It is here where the complexity intensifies. Specifying where the boundary of an ecological community exists is scarcely easy.
All spheres of government in Australia are involved in biodiversity conservation law and policy. Strategic documents have been designed at each level, including local government (Australian Local Government Association and Biological Diversity Advisory Council, 1999). Furthermore, many councils have prepared voluntary biodiversity policies, which rely on sufficient monetary resources, political backing and staff expertise. They do not carry statutory force but instead may offer incentives such as free or subsidised seedlings and specialist advice. Such programs are very different from regulatory control, with documents providing useful education material for local citizens. For example, Penrith City at the western rim of Sydney has produced its own strategy. It contains, *inter alia*, information for the community explaining the meaning of biodiversity, potential for public involvement in its conservation, a table of aims and outcomes, and a list of local vegetation communities. The document appears to be directed towards educating the community with delightful photographs and helpful explanations (Penrith City Council, n.d.). In contrast, Liverpool City offers a far more scientific approach with tables, technical information and a series of sub-issues such as suggested strategies, proposed actions, recommended policies (eg conservation targets, corridors and connectivity), tools and resources plus detailed maps (Liverpool City Council and Ecological Australia, 2003). Environmental consultants have performed a substantial role here. Despite the difference between the manuscripts, both reflect a commitment to biodiversity conservation. Some councils do not even possess such policies. Notably, both Penrith and Liverpool draw attention to the Cumberland Plain Woodland, a listed threatened ecological community under the *Threatened Species Conservation Act 1995* (NSW) (TSCA). Upon European settlement, this ecological community covered over 120,000 hectares. It has since been decimated to less than ten per cent. There is no doubt that some of these communities can be found on private land, including small but important patches in residential yards. What advantages might the planning system present here?

The TSCA piggybacks on the EPAA by demanding special requirements if a proposal is to have significant impact on a listed threatened species (eg koala), population (eg little penguins at Manly Cove) or ecological community (eg Cumberland Plain Woodland). All development applications must undergo the ‘seven part test’ to determine the effect of a proposal; if it is decided that the impact is significant, a ‘species impact statement’ must accompany the application. This might relate to, for example, a residential subdivision in a bushy acreage in Sydney’s west or erection of a building where a listed ecological community exists. Assessment is mostly carried out by councils or consultants on their behalf. Even if it is decided that the environmental impact will be ecologically devastating, approval is still possible. The end result will be informed habitat destruction. As noted by Riddell (2005, 446), “the balance is skewed strongly in favour of development and economic growth”.

All this highlights the need for strategic planning rather than *ad hoc* decisions. The growth centres offer minimum hope without detailed green sub-regional plans. In relation to LEPs, *Campbelltown (Urban Area) LEP 2002*, for example, contains only one

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19 *Environmental Planning and Assessment Act 1979* (NSW), ss 5A & 78A(8)(b).
reference to biodiversity which relates to a particular release area, stating one of the objectives as to:
“conserve and enhance the biodiversity of the Precinct through the management of areas of conservation significance and riparian corridors and the retention of remnant vegetation native vegetation within residential and business zones”\(^{20}\).

Another objective relates to “creating compact urban centres”\(^{21}\), adding an element of competition between the stated factors. The objective of the overall LEP referring to “biological listings, remnant native vegetation and associated buffers”\(^{22}\) suffers from the same weakness.

Liverpool includes only one reference to biodiversity, ensuring that a proposal on land recognised as “high biodiversity significance” cannot fall within the list of ‘exempt developments’ which enable proposals to escape the development control process\(^ {23}\). Otherwise, clauses for nature conservation relate to certain zones such as the ‘large lot residential’ zone, and the modern TPO-derived provision on ‘preservation of trees and vegetation’\(^ {24}\). As noted earlier, Liverpool LEP adheres to the LEP template. The TPO provisions confuse both amenity enhancement and biodiversity protection (Kelly, 2006). More clarity is needed.

5 Bushfires

The third issue is bushfire. Unlike the other subjects, it can involve loss of human life and property. It therefore attracts more public attention than, say, disturbance of a fragment of Cumberland Plain Woodland and its replacement by non-native species in a neighbour’s front yard. Memory of the sheer impact of bushfires in Victoria in February 2009 with the death of 173 people lingers in the Australian psyche. Although it severely directly affected rural townships, its proximity to Melbourne must have caused considerable discomfort amongst many peri-suburban dwellers. In other cities, bushfires have actually reached the suburbs. In 1967, bushfires came extremely close to Hobart’s CBD destroying about 1300 houses and many lives (McAneney, Chen and Pitman, 2009). In 1994, bushfires unexpectedly leapt across a valley in southern Sydney to destroy homes with one person dying from heat and smoke as she attempted to reach the swimming pool in her back yard (Cockerill, 1994). Further bushfires occurred in a relatively new southern suburb in 2001/2002. In 2003, Canberra received the tragic shock of bushfire with four tragic deaths and loss of 530 houses (Odger, Ryan and Wells, 2003). In addition to these were the ferocious ‘Ash Wednesday’ fires in Victoria and South Australia in 1983. This short list excludes many other fire disasters since colonisation.

As stressed by Gillen (2005), Sydney is especially prone to bushfire. It enjoys a subtropical climate with “summer temperatures frequently reaching the high 30s centigrade and bringing low humidity and warm conditions” (at 466). He goes further to

\(^{20}\) Campbelltown (Urban Area) Local Environmental Plan 2002, cl 51D (b)(i).
\(^{21}\) Campbelltown (Urban Area) Local Environmental Plan 2002, cl 51D(c)(ii).
\(^{22}\) Campbelltown (Urban Area) Local Environmental Plan 2002, cl 2(2)(c).
\(^{23}\) Liverpool Local Environmental Plan 2008, cl 3.3(2)(g).
\(^{24}\) Liverpool Local Environmental Plan 2008, cl 5.9 & 7.6.
observe that Sydney “is located in the zone of highest bushfire frequency in Australia” (at 466). This automatically leads to concerns about the urban periphery (McAneney, Chen and Pitman, 2009). Various commentators (see Gillen 2005; Little 2003; Troy 1999) highlight the spate of low density housing across potentially fire prone areas.

Bushfires are unpredictable. Any idea that they can be prevented altogether makes little sense unless we accept landscapes of concrete. Australian bushland “is designed by nature to burn” (Cunningham, 2003, 26). One approach involves mitigation, including cooperation with community members (Marton and Phillips, 2005) or at least raising their awareness of potential catastrophe. Guidance on how to plan ahead is crucial. This leads to the need to consider strong and clear messages for householders. For example, residents may be warned against inappropriate exotic or native plant trees and shrubs, such as vegetation that deposits heavy amounts of dead or decaying debris. Landholders may also need to check if their roof gutters become dangerously full of flammable leaf litter.

The 2001-2002 bushfires spurred major legislative change. The Rural Fires Act 1997 (NSW) (RFA) underwent alteration with not only a “streamlined process for the environmental impact assessment of bushfire hazard reduction works (e.g. prescribed burning)” but also the “creation of a Bush fire Environment Assessment Code” (Little, 2003, 29). Furthermore, the EPAA was amended to, inter alia, ensure that consent authorities must receive endorsement from the Rural Fires Service before approving subdivision for residential or rural residential uses. This relates to the need to utilise the planning system to strategically help minimise the advent of fire damage.

In some outer wealthy established suburbs, especially to the north and south of Sydney, insufficient consideration was once given to the potential impact of bushfire in planning design. There are communities with, for example, one road access. Properties may be located on ridge tops above steep sideslopes and close proximity to bushland. This is where bushfire hazard reduction is cardinal for safety purposes. But as Little (2003) contends, more attention must be paid to the planning system in order to circumvent such problems. For example, siting principles can be improved. Greater setbacks that separate housing from bushland can be effective. Inclusion of perimeter roads can be valuable. Documents have been prepared to assist better planning on the ground (Little, 2003), such as Planning For Bushfire Protection, a guideline prescribed by both the EPAA and the RFA Regulation.

In terms of LEPs, provisions relating to bushfire are common at the urban periphery. This is the result of firm directions by the State Government. Inclusion of bushfire provisions is a relatively new ingredient in the complex planning pudding. Campbelltown (Urban Area) LEP 2002 contains numerous clauses. In various zones, such as Rural Future Urban, bushfire hazard reduction needs consent; in others, especially special roadway zones, consent is not required provided it complies with a Bushfire Management Plan prepared under the RFA. Another provision states that nothing shall stop the granting of
consent for removal of any tree “for the purpose of creating a fire protection zone to protect a dwelling house”\textsuperscript{27}. It is plain that human safety overrides amenity here. There is also a vital clause demanding that a ‘development control plan’ (DCP) – i.e. a non-statutory plan that adds detail to the LEP – be prepared for ‘urban release land’ to ensure “amelioration of natural and environmental hazards, including bush fires”\textsuperscript{28}. These clauses appear to provide a mix of bushfire hazard reduction and preventative planning.

Curiously, the LEP template is sparse regarding references to bushfire. The only clause that stands out states that “bush fire hazard reduction may be carried our on any land without consent” (at cl 55). This provision is mandatory, and is found in Liverpool LEP 2008. Other clauses in the Liverpool LEP relate to its overall aims\textsuperscript{29}, complying development\textsuperscript{30} and, similar to Campbelltown, the need for a DCP for urban release lands to address bushfire\textsuperscript{31}. Obviously the NSW Government agreed with Liverpool City Council to add more provisions to the template. They should be welcomed although they are scarcely outstanding. Perhaps more attention needs to be given to the forthcoming DCPs.

Ultimately, the issue leads to ongoing management by the landholder. While planning may lead the way in a strategic sense, owners of land must take care in choosing plants for their gardens and maintaining their allotments. If they wish to live at the urban periphery, reliance on governmental help alone is insufficient. Despite this, detailed plans backed by sound expertise and regulation can provide far more than reports that gather dust on government shelves.

6 Conclusion

This paper presents a conundrum. It approaches three very different issues relating to front and back yards that warrant their own individual approaches. Yet they all must be integrated in a manner that serves the public interest. The first item, protection of amenity, deals essentially with neighbourhood appeal. It is strictly a matter of local concern, involving establishment and maintenance of green charm. In contrast, biodiversity conservation engages international and national influences translated to regional and local levels. It can directly compete against protection of amenity. Yet a council can still encourage landholders to plant pleasant locally indigenous shrubs. The third issue, protection from bushfire, cannot be underplayed. It attracts strong media interest and immediate government response, especially when there is loss of human life.

All three factors raise the potential of the planning system in balancing competing objectives. But priorities may need to be fixed. Adherence to strategic approaches rather than \textit{ad hoc} decisions is imperative. Coordination with other innovative tactics, such as tax subsidies and education campaigns, must take place. Communities must be involved. This leads to a role for local government that goes beyond command and control.

\textsuperscript{27} Campbelltown (Urban Area) Local Environmental Plan 2002, cl 30(5)(a).
\textsuperscript{28} Campbelltown (Urban Area) Local Environmental Plan 2002, cl 42I(2)(f).
\textsuperscript{29} Liverpool Local Environmental Plan 2008, cl 1.2(2)(f).
\textsuperscript{30} Liverpool Local Environmental Plan 2008, cl 1.2(2)(f).
\textsuperscript{31} Liverpool Local Environmental Plan 2008, cl 3.2.
Many councils are already involved in assisting and training local residents on appropriate plants for their gardens, including free or subsidised seedlings. Advice on what should be removed is another feature. In achieving this, councils may, for instance, hold friendly public forums, courses and workshops, letter drops, club presentations and excursions. Teaching at local schools and establishing special plots of land to preserve and introduce preferred native species is more than possible. These mechanisms can bring together the three key issues raised earlier. Matters such as local floral symbols and bushfire history are crucial. The advantage here is that it moves away from the notion of an over-regulatory ‘nanny state’. On occasions, hard decisions must still be made. But a well informed community will be in a better position to tolerate this. Otherwise, a system in the hands of developers will flourish. Of course, the problem of limited local government funding cannot be ignored.

A further need is to reinforce regional planning. This is a central plank of the NSW Department of Planning (DoP), with its regional strategies and growth centres policy. The DoP has thankfully moved away from its fixation of LEP-checking in the 1990s. Perhaps a softer approach to reasonable changes to the LEP template sought by individual councils would assist further, provided key regional objectives can be met. The DoP itself continually combats against other agencies that carry their own agendas. The existence of robust well-articulated regional plans containing a degree of flexibility to deal with worthwhile political and/or scientific change might lead the way.

The elements of sound regional plans must filter down to suburban front and back yards. Their designs and management are critical to meet the layers of issues discussed throughout. A vital link is local government, operating at the environmental coalface with close community connections. In order to achieve better outcomes, improved financial resources are essential. Special environmentally-related funding warrants close scrutiny. Amongst the myriad of factors, improvement of private open space is a core factor in the environmental pie.

7 References

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Political forces and urban land ownership reform in transitional China

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Abstract:
This paper critically reviews the evolving concept of urban land ownership and evaluates the impact of political forces on the changed patterns of land allocation in the context of both central planning and transitional economic period of China. Its purpose is to illustrate how the detachment of land ownership provision from its socialist political symbol contributes to the development of real estate sector and how the concept of land ownership should be identified in the new era of marketization. China used to have a system of central planning land ownership under which the potential yields from land values were suppressed. Comprehensive, yet gradual changes were initiated since 1979 to erect market-oriented allocation system in the process of devolving using rights from state ownership, in parallel with the opening up economic reforms. However gradual institutional changes of the property rights shaped by the incremental experimentation and reform allowed socialist-shaped land using rights to continue operating. The ambiguously-delineated policies on property rights have created valuable opportunities for all market participants and local governments to capture some of the state-owned assets to pursue their own economic interests. Consequently, land assets could not be efficiently distributed with the interference of political power. Two conclusions will be drawn from this study, firstly, an economic-based notion of land ownership has evolved naturally with the changed social and economic background, highlighting the elimination of political forces on defining land value in the new era. Secondly, the involvement of political power in the land asset distribution will lead to the market failure and social conflicts. For the development of a healthy real estate market, these political forces should be attenuated otherwise the potential value of land resources will be deteioriated.

Key Words:
Central Planning, Market Mechanism, Transitional Economy, Urban Land Ownership
1. **Introduction**

This paper critically reviews the evolving concept of urban land ownership and evaluates the impact of political forces on the changed patterns of land allocation in the context of both central planning and transitional economic period of China. Its purpose is to illustrate how the detachment of land ownership provision from its socialist political symbol contributes to the development of real estate sector and how the concept of land ownership should be identified in the new era of marketization. Two stages of reforms are addressed with respect to the endorsement of political power on land ownership, prior-1978 reform and 1978 onwards.

2. **Political Implication of Urban Land Ownership during the Central Planning Period**

China’s land system has generally remained different from those of the western jurisdictions. Following the dogma of Marxism, China set up a socialist economic system with state ownership of land resources when the Chinese Communist Party came into power in 1949 (Liu 1994). The socialist government insisted that the ability to control land resources was crucial to the security of the newly founded socialist state as land ownership had been recognized as the only source of all other wealth.

In the urban area, the government exercised monopolistic power over land resources, which erected state-owned landownership as part of the socialist system. The state owned all urban land and allocated it to socioeconomic units called *danwei* for their own use free of charge for an indefinite period. The state performed a dual role in this process, both as the economic property owner and as political administrator of land. As these work units were also state-owned, land use rights and land ownership were institutionally inseparable. The amounts of land allocated to *danwei* were determined by the political connection and political implication in which the social economic productions were organized. In other words, land resources were allocated to *danwei* in accordance with the political ideology of the work units rather than economic efficiency (Zhu 2002).

According to *The Constitution of the People’s Republic of China* adopted on December 4, 1982, urban land ownership was vested in the state.\(^1\) No organization or individual

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\(^1\) The Constitution of the People’s Republic of China, adopted at the Fifth Session of the Fifth National People’s Congress on December 4, 1982, promulgated for implementation by the National People’s Congress on December 4, 1982 and amended for the first time in accordance with “Amendment to the Constitution of the People’s Republic of China” adopted at the First Session of the Seventh National People’s Congress on April 12, 1988, for the second time in accordance with “Amendment to the Constitution of the People’s Republic of China” adopted at the First Session of the Eighth National People’s Congress on March 29, 1993, for the third time in accordance with “Amendment to the Constitution of the People’s Republic of China” adopted at the Second Session of the Ninth National People’s Congress on March 15, 1999 and for the fourth time in accordance with “Amendment to the Constitution of the People’s Republic of China” adopted at the Second Session of the Tenth National People’s Congress on March 14, 2004. Although People’s Republic of China has in practice established state-owned land ownership from the very beginning of its foundation, explicit constitutional acknowledgement was seen until the enactment of the Constitution 1982.
may appropriate, buy, sell or release or unlawfully transfer land in other ways. In the legal dimension, land was entrusted to the state who as the trustee would manage the asset in the interest of the whole people. In practice, the state was the real owner in the centralized ownership system, as so-called “the whole people” could not jointly enjoy land ownership in an alternative way except in the way of state entrustment. As the constitution banned land transaction, land was not considered as a commodity and had no commercial value to be reflected in the market (Chan and Kwok 1999). The state has made it clear through the constitutional announcement that the economic value of land was not a priority in that time as it sought to maintain the strength of socialism. The state’s obsession with safeguarding absolute control over land circulation system that allowed it to maintain its grip on socialist polity left it keen to land ownership and usage system. The lack of economic channel for the transfer of land use rights and ill-defined property rights resulted in land-use deficiency and triggered serious social conflicts and disputes surrounding the allocation of land (Yao 2003).

3. Political Implication of Urban Land Ownership during the Economic Transition Period

3.1 Initial Stage with Progressive Land Ownership Reform

China’s urban land reform was initially stimulated by the increased demand of land of foreign investors. Economic liberalization began in late 1970s, with much foreign investors, especially overseas Chinese being attracted by the unexplored economic market in China. The concept of public ownership was then changed in response to the ongoing economic reform to facilitate economic growth. As land was seen as an important resource to lure investment, granting of land without land using fees or at substantial low prices was quite frequent during the initial period of the economic reform. Land has also become one of the major assets of a Chinese partner to invest in Sino-Foreign Equity Joint Venture. According to the Law of the People’s Republic of China on Chinese-Foreign Equity Joint Venture,

“…The investment of Chinese joint venturers may include the right to the use of a site provided for the joint venture during the period of its operation. If the right to the use of the site does not constitute a part of a Chinese joint venturer's investment, the joint venture shall pay the Chinese Government a fee for its use……”

The permission of the site use rights as part of the joint venturer’s investment contribution and the claims of land-use-fees otherwise indicated the emergence of the commercial value of the land and the increased attempt to remove the political influence

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2 The fourth paragraph of Article 10 of the Constitution of the People’s Republic of China, adopted at the Fifth Session of the Fifth National People’s Congress on December 4, 1982, promulgated for implementation by the National People’s Congress on December 4, 1982.

from the institution of land (Chan and Kwok 1999). The concept of land use right was thus created to develop the inherent value of land (Chan and Kwok 1999). The granting of site use rights was a breakthrough reform compared with the full prohibition of land leasehold during the command economic period. However land was still not allowed to be alienated, reflecting the strong social characteristic of political ideology (Li 2000b).

In 1988, Article (iv) of the PRC Constitution was amended to include “the right of land use could be transferred in accordance with the relevant legislation”. The new rule clarified the recognition of land use rights and legitimized its transfer under the general requirement of absolute state land ownership. The revised Land Administration Law thereof set forth more detailed measures in response to the constitutional amendment (Li 1999). The concept of “Chinese socialist market economy” was firmly established in the regard of land market (Potter 1991). However more specific and enforceable rules were not specified under the constitutional and ministerial legal framework, such as the issue of transferability of huge amounts of allocated land in the market. This issue was later addressed in the land conveyance regulation promulgated in 1990 (Rydin Rodney et al. 1990).

In the context of gradual reforms, the problems relating to property rights were intensified by the remaining characteristics of central planning land system and the marketization of real estate development (Zhu 2002). In a broad-stroke, the demand for a wide range of land resources introduced by dynamic economic growth and excessive inward investment has been discovered, reflected in dramatic increases in the land values in many coastal cities. Substantial demands for industrial sites and commercial buildings have brought about explosive growth in building construction. The state-owned work units, who used to be allocated the land free of charge but suppressed from gaining profits from it under the central planning structure, seemed to automatically acquire such rights and were eligible to turn those rights into joint venture investment. Incentives such as increased land demand and uprising prices have also been put in place for those state agents to seek the opportunity to claim profit from the possessed land. Consequently, while those who purchased land from the market need to pay land using fees for their uses, those who were allocated the land by political background and political connection prior to the economic reform were not required to do so and the free acquisition allowed them to quickly organize reconveyance at steep discounts if they need to (Zhu 2002). With the continuous existence of allocation of land, the commercial land market was inevitably affected (Zhu 2002). Although land was no longer identified as the political symbol subject to strict central control, its political implication continued to emit tremendous influences on the operation of real estate market.

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4 Article 2 of Amendment to the Constitution of the People’s Republic of China, adopted at the First Session of the Seventh National People’s Congress on April 12, 1988, where it stated that:

The fourth paragraph of Article 10 of the Constitution [1982], which provides that “No organization or individual may appropriate, buy, sell or let land or otherwise engage in the transfer of land by unlawful means” shall be amended as: “No organization or individual may appropriate, buy, sell, or otherwise engage in the transfer of land by unlawful means. The right to the use of land may be transferred according to law”.
According to the revised *Land Administration Law* in 1988, there was no clear delineation of property rights for those holding allocated land in the era of traditional central-planning system (Cao and Edwards 2002). The extent to which land using rights of the local government and *danwei* agents should be devolved from the full ownership of the state principal was not clearly established and thus some economic rights over urban land were falling into the open domain subject to access by *danwei* land holders (Zhu 2002). The existing land holders of *danwei* have in practice become the *de facto* controllers of the allocated land, which evolved from the old socialist institution of using rights (Zhu 2002). In other words, when the former institution of legislation regulating property rights did not come into force, an informal arrangement in terms of decentralization of land property have emerged with the economic incentive in place. During this period, marketization has begun to influence the economic structure with the surge of real estate development as a new profitable industry (Huang 2004). The land value was substantially accentuated by the fledging land market and widespread redevelopment construction, giving rise to the increased private trading between real estate developers and *danwei* land holders for the sites they were holding. Tentative and informal recognition of *danwei* land holders’ entitlements meant they were not under the umbrella of legal endorsement of transferability. With the deepening of land reform, *de facto* control would be regulated at some points (Zhu 2002). Land holders were therefore eager to seek all possible opportunities to convert the incomplete property rights into capital proceeds (Zhu 2002). As a result of selling these rights in haste, land assets were flowing into over-supplied development market and their value depreciated (Zhu 2002).

The political ideology of land property rights continued to be reflected in soft budget constraints derived from the central planning social institution. Soft budget restraints were the institutional setting based on socialist norms which precluded the risk bearing from the decision-making process. It remained in the regime of transitional economy property ownership, within which *danwei* land-holders exercised *de facto* control over land assets but without bearing full legal responsibility as the property rights were not stipulated by the law (Zhu 2002). As a result, *danwei* agents could enjoy the profit returns from their actions but did not have to bear the substantial risks in the case of business failure. The increased demand stimulated by fledging real estate market, in parallel with the hasty transactions generated from insecure property rights and also compounded with the soft budge constraints evolved from the central planning regime, presented strong incentives for the *danwei* agents to trade their land use rights in the free market (Zhu 2002).

Another dominant political factor shaping property rights came from the performance of government officials. The decentralization of decision making occurred during the era of political and economic reform to give more incentives to local governments and State-Owned Enterprises (SOEs) for local development. Local governments also wished to see more building erected because booming scene looked good for their political records (Zhang and Sun 2006). Consequently, perverse incentives were put in place for officials pursuing the promotion to transform land assets into high buildings (Cao and Edwards 2002). In order to acquire their political assets, local governments preferred to transfer land using rights through the concealed forms of negotiation, by which they were able to attract more investment for the real estate development (Zhu 1999). Instead
more transparent forms of conveyance, such as bidding and auction at market rates were not admired. The fact of the extensive phase-in of the political influences in real estate sector continued to be reflected in the erection of political connection network by the real estate developers. The informal institution of guanxi, or personal connection, which allowed real estate developers with political connection to acquire illegal benefits from the forged connection with local government leaders, reinforced the private arrangement in the process of state land transfer (Cao and Edwards 2002). The role of political connection was thus highlighted in China’s real estate sector for long, resulting in the manipulated distortion of the market force (Li 2008).

Political character of land ownership evolved from the previous socialist economic institution, compounded with political value of land asset externalized in the market economy for government officials to pursue their own interests, resulted in the inefficient allocation of land resources and the dramatic distortion of land market. There was the widespread existence for danwei land holders to relinquish the sites they were holding for industrial use or real estate development through voluntary transactions with the potential buyers. If a site was planned for redevelopment, the policy required the compensation for the sitting tenants, who were quite probably the employees of the previous danwei units (Liao 1994). The compensation had to recognize the land rights vested in danwei employees for the sites they were holding by taking into account not only the building to be demonished, but also the market value of the sites (Liao 1994). A substantial number of commodity buildings were thus built on the land without formal leasehold as the property rights prior to conveyance were incomplete (CSSA 1992).

The concerns about the rights on socialist allocated land and its impact on market distortion continued to be reflected in the spontaneous change of land use from non-commercial to commercial activities (RGCULUM 1990). The local authorities acquiesced the illegitimate change of land use with the approval acquired from their land administration departments who reportedly shared the generated profits (RGCULUM 1990). The status of market force was undermined when the distribution of land asset was exposed to the multiple forces of market incentives, rent-seeking behaviour of danwei land holders and the bargaining position of government authorities (Zhu 2002).

The arrangement of land allocation through political advantages undermined the market conditions seeking to maintain equal competition. It seemed that if it was the economic failure to take land as pure political asset as China had done during the central planning era, then the permission of access to guanxi-sustained land market seemed to result in both economic failure and political corruption.

3.2 The Stage with Radical Land Ownership Reform

With the Amendment to 1988 Constitutional Law and the 1988 Land Administration Law, the main thrust of land regulatory framework was brought by the Interim Regulation of the People’s Republic of China Concerning Assignment and Transfer of the Right to the State-owned Land in Urban Areas (Rydin, Rodney et al. 1990). It
provides the conceptual foundation and regulatory prerequisites for the implementation of land development regulations, with which they are to be used (Li 1999).

The more significant implication of this provision is the clearly delineated rights on allocated land. According to the new rules, the land user of any allocated land had to make up for the payment of the assignment fees if the reconveyance was intended. This measure shrugged off the prolonged disparity between land allocated and land purchased in the same market by treating allocated land retrospectively as being purchased from the very beginning. The privilege where the allocated land holder was able to capture windfall wealth from the market by selling the land allocated by the state has been removed (Tang, Haila et al. 2006).

However the reservation of agreement-based land use right transfer could still be a source of corruption if not properly regulated. As the private agreement was still one of the eligible ways to grant land use rights, political factors still existed in the land market although to a less extent (Li 1999). According to the unofficial statistics before June 2002, about 95% of all land use rights were granted by bilateral agreements between local bureau and grantees with only 5% via invitation of tenders or auction (Anonymous 2003). The lack of transparency in granting land use rights has resulted in concealed transactions between local authorities and real estate developers with the state bearing the woeful loss of tax revenues.

The land policies have been advanced rapidly, resulting in the gradual elimination of private agreements in the granting of land use right in terms of construction land. With the enforcement of the PRC Administration of Urban Real Property Law in 1995, the danwei and SOEs were required to purchase land-use rights from the state and existing land users had to pay land using fees for the assignment of land use rights. Free assignment of land for commercial purpose has drawn an end with the enactment of the new rule.5 Revised land administration law also required the land use rights for commercial, tourism or entertainment purposes or for the construction of luxury housing shall, upon certain conditions, be granted by auction or invitation of tenders, otherwise they will be granted by negotiations.6 The rules were further clarified in the Provisions on the Grant of State-Owned Land Use Rights by Invitation for Bids, Auction and Price Listing effective on 1st July, 2002.7 The new provision stipulated the land for commercial purposes, such as private enterprises, commerce, tourism, recreational use or commodity residential development had to go through the process of invitation of bids, auction or price listing, with an exclusion of private agreements.8 The same principle applied if there were two or more parties interested in the same piece of land for a specific purpose other than those referred to above.9 The regulation did not refer to the land use for industrial purpose which was generally believed to be still negotiable.

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6 Ibid.
8 Ibid.
9 Ibid.
by agreements until 2006 where granting of industrial land was required to go through the procedure of tenders, auction or listing.\(^{10}\)

With the adoption of these rules, the approach of invitation for bids, auction and price listing has been widely recognized to apply to almost all types of commercial land use granting. Thus the scope of acquisition by agreements for commercial purpose has been substantially reduced. The state later strengthened the administration on the agreement-based assignment by introducing the public notice mechanism.\(^{11}\) Under the 2006 Guidelines, the granting of state-owned land use rights by agreements shall be required to give public notification, disclose relevant informations such as land location, land use purpose, granting period, potential leaseholders, etc.\(^{12}\) During the public notice period which was normally 3 days, if any objection arose with respect to the disclosed information and such objection was confirmed by government examination, the land granting process would be terminated.\(^{13}\) Otherwise, if no objection arose or if the objection was vetoed by the government examination, the parties may proceed with the land grant contract.\(^{14}\)

Although currently the holding of allocated land and granting of land use rights via bilateral agreements is still an extant norm, the legal prohibition squeezes its operational space and non-market allocation mechanisms of private agreements are gradually diminished (Zhu 2002). Meanwhile, while some investors may be able to renegotiate the terms of the land use contracts to avoid regulatory burdens, it may not always be possible with the enhancement of transparency in terms of land use rights granting procedures.

4. Conclusion

Transitional China is a vivid example identifying the shifted role of land from the political asset to the economic property as a way forward.

China’s study indicates the inevitable trend of the evolved land ownership concept from the political asset to the economic property which reflects deep economic and social transformation, with profound impact on the establishment of well-organized real estate market. The separation of ownership and land use rights essentially lays the foundation for the establishment of the open real estate market in the 1990s in China. The nature of land as economic assets has been recognized where market forces began to affect land values in a more explicit way (Zhu 2002).

However the preceding analysis also indicates the devastating effects of introducing political forces in China’s land market, which are primarily seen in the impact of land

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\(^{10}\) Guidelines for Grant of State-owned Leaseholds by Invitation for Tenders, Auction and Listing, promulgated by the Ministry of Land and Resources on May 31, 2006 and Effective as of August 1, 2006. Guo Tu Zi Fa [2006] No. 114.


\(^{13}\) Ibid.

\(^{14}\) Ibid.
transactions through administrative processes, including administrative land allocation, negotiable agreements with local authorities as well as the introduction of political connection in operation. The emerging real estate market structured by transitional economy motivated danwei agents with active market participation, but the problem surrounding the socialist political character of land led to the inefficient allocation of land resources, as market instrument was obstructed by political influences exerted upon land asset.

China has been pushing forward its land policy reform. Although the basic rule of the state-owned land system will still continue for the foreseeable future, it is clear the system is to change over its using rights to reflect the demand of global market. To ensure the continuous and healthy development of land market, China still need to push forward its legal reform for political provisions, in particular, in terms of reduced political force involvement in market-oriented land allocation.
5. References

The Impact of BEE Legislation on Shareprice
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Abstract:

The Republic of South African Government passed legislation, the broad-based Black Economic Empowerment (BEE) Act No. 53 of 2003, in January 2004 to enforce BEE in all sectors of the South African economy. There are seven areas of focus where a company can score points and achieve BEE status or BEE accreditation, namely; ownership, employment equity, managerial control, skills development, preferential procurement, enterprise development and socio-economic investment. The main purpose of the proposed research is to determine if the different types of strategies employed in the BEE transactions yield different results on shareholder value by monitoring the impact each strategy has on the share price. The main hypothesis is to either support or disprove the hypothesis that the different strategies or methods employed to achieve BEE status will impact differently on share-prices of companies. From the main hypothesis, several sub-hypotheses can be drawn: firstly, the transfer of ownership as a means of achieving BEE status has no effect on share-price, that is, when companies undergo an acquisition or a merger, there should be no impact on the share-price of the new company; secondly, that employment equity has a positive impact on share-price; thirdly, managerial control as a means of achieving BEE status has a positive effect on share-price, that is, companies employing managerial control as a means to achieving BEE status should impact positively on their share-price; fourthly, the announcement of skilled employees taking key positions in companies as a means of achieving BEE status has a positive effect on share-price, that is, companies employing skills development as a method of achieving BEE status are likely to have a positive impact on their share-price; fifthly, that preferential procurement as a means of achieving BEE status can either have a negative or positive impact on share-price depending on the nature of the vendor providing the service to the company, that is, when a vendor is in the same industry as the company, positive effects can be expected on the share-price; sixthly, that companies that choose enterprise development as a means of achieving BEE status will be negatively impacted on their share-price; and lastly, companies that choose socio-economic development as a means of achieving BEE status will be impacted negatively on their share-price.

Keywords:
Black Economic Empowerment (BEE), Scorecard, Strategies, Share-price
1 Introduction

The main purpose of the Republic of South African Government passing BEE legislation was to enforce BEE in all sectors of the South African economy in trying to redress the imbalance in the South African economy which is racially biased. The racial imbalance in the control of the economy is a result of the discrimination and segregation laws passed by the “old” government which disempowered certain races of the people. Most of the laws were passed in the 1950’s and 1960’s and included Group Areas Act and Bantu Education Act as two examples given in this paper. The Group Areas Act of 1950 introduced restrictions for “non-whites” to move around the Republic freely and also introduced restrictions on “non-whites” to land ownership in certain areas of the Republic, notably urban areas. This was a great source of economic disempowerment and resulted in adverse poverty amongst the “non-whites”. The Bantu Education Act of 1953 introduced separate curriculum for different races in the Republic which resulted in certain races in the population having inferior education and again disempowered as they could only qualify for unskilled employment. The BEE legislation seeks to address some of these imbalances through an organised and transparent process.

Since the BEE Act was passed into law in 2004, different industries and sectors of the economy have drawn different strategies in trying to comply with the Act. From 2004, there was the introduction of industry charters, whereby different industries in the economy, including the construction and property industries, introduced means, strategies and industry targets for member companies to assist them achieve BEE status. The Government lagged behind in providing direction and clear guidelines on how companies should go about addressing compliance with the BEE legislation. As a result, before 2007, each industry in the economy had different targets and means of achieving BEE status and there were huge inconsistencies across industries. It was not until the Government, through the Department of Trade and Industry, introduced the BEE Codes of Conduct on BEE, part of which is the BEE scorecard. The two components of the scorecard are the generic scorecard and industry specific scorecard which has different targets for different industries. The BEE scorecard introduced a uniform method of scoring companies’ performance in achieving BEE status and complying fully with the BEE Act. The BEE scorecard also allows companies to be assessed and compared across industries.

2 The Proposed Research

The proposed research will determine if the different classification or types of strategies employed in the BEE transactions yield different results on shareholder value. In terms of the Department of Trade and Industry Code of Good Conduct on BEE, there are seven areas of focus where a company can get score points for BEE participation, namely; ownership, employment equity, managerial control, skills development, preferential procurement, enterprise development and socio-economic investment.

2.1 Main Hypothesis

It is expected that the different strategies or methods employed to achieve BEE status will impact differently on share-price of companies.
H₀: Different strategies do not yield significantly different results on shareholder value for companies embarking on BEE transactions.

H₁: Different strategies have different impact on shareholder value for companies embarking on BEE transactions.

2.2 Sub-hypotheses

The second level of research looks at each strategy or method of achieving BEE status and investigates what impact that strategy has on the share-price.

2.2.1 Ownership

Smit and Ward (2007) could not find any positive abnormal returns on mergers and acquisitions on the JSE Securities Exchange that were statistically significant. A KPMG survey in London found that 53% of mergers and acquisitions destroyed shareholder value (Brewis, 2000). On the other hand Swaminathan, Murshed and Hulland (2008) found that value can be created on a merger and acquisition when strategic alignment is the focus of a consolidation strategy and when a merger of companies with dissimilar resource configuration is implemented to achieve diversification. Swaminathan et al stress the importance of strategic emphases alignment in the creation of positive shareholder value in mergers and acquisition. Copeland and Weston (1988) found that industrial relatedness was a key antecedent of successful mergers and acquisitions because mergers between firms in related industries outperformed those among firms in unrelated industries.

Transfer of ownership has no effect on share-price. When companies undergo an acquisition or a merger, literature indicates that there is no impact on the share-price of the new company. Literature suggests that companies transferring ownership as a means of achieving BEE status should have no impact on their share-price.

2.2.2 Employment Equity

Kato, Lemmon, Luo and Schallheim (2005) found that Japanese firms exhibited abnormal stock returns of about 2% around the announcement of stock options to executives. Kato et al found evidence that well designed executive compensation created shareholder value. Sesil, Kraumova, Blasi and Kruse (2002) found that firms in American new economies that were offering broad based stock options were outperforming their counterparts who did not offer any stock options to their employees. Oyster and Schaefer (2004) considered the economic justification of using stock options as a means of compensation and found that stock options are a good means of retention strategy as the stock options have a vesting period. These stock options also serve as means of sorting staff as pessimistic staff tend to leave and optimistic staff tend to remain in the company.
Employment equity has a positive impact on share-price. Literature suggests that companies employing employment equity as a means of achieving BEE status should have a positive impact on their share-price.

2.2.3 Managerial Control

Smith (1990) found overwhelming evidence that the performance of a company after management buyout increased. Smith found that the operating profit after the management took control of 58 companies increased. Kaplan (1989) also found evidence of a gain in company performance after management took control of companies. Frankfurter and Gunay (1993) derived a model that explained the theory of the anticipated gains in share-value from management buyouts. Frankfurter et al found that the gain is a result of the premium management is willing to pay external shareholders in anticipation of economic gains from the buyout. Himmelberg, Hubbard and Palia (1999) studied further the impact of managerial ownership and performance and found reasons for managerial control in companies. Himmelberg et al found no econometric evidence that managerial control improved or impacted negatively on the share-price of companies. However, Himmelberg et al found that the performance of the companies was more stable and had less volatility on the share-price.

Managerial control has a positive effect on share-price. Companies employing managerial control as a means to achieving BEE status should impact positively on the share-price.

2.2.4 Skills Development

Khallaf and Skantz (2007) found that the appointment of chief information officers in 98 companies in America added value to the share-price of the companies. Khallaf et al found that the key driver of the creation of value was based on the educational qualifications of the appointed individual. The market perceived experienced and qualified personnel to have the potential to add value to the performance of the company. Dehning and Stratopoulos (2003) confirmed also that for a firm to have competitive advantage, the appointed personnel should have managerial and technical skills. Rockart, Earl and Ross (1996) confirmed that successful innovation in companies is achieved through skill and managerial experience. Chevalier and Ellison (1999) found that funds managed by individuals who attended highly reputable undergraduate institutions have higher excess returns compared to those managed by individuals who attended less reputable institutions.

Announcement of skilled employees taking key positions in companies has a positive effect on share-price. Companies employing skills development as a method of achieving BEE status are likely to have a positive impact on their share-price.
2.2.5 **Preferential Procurement**

Oh, Gallivan and Kim (2006) identified transactional risks associated with firms outsourcing services that influence investors' reactions to IT outsourcing announcements. Oh et al identified the risks as; the size of outsourcing contracts, difficulties in performance monitoring, asset specificity of IT resources, vendor capability, and the lack of cultural similarity between client and vendor. Lee and Kim (1999) found several behaviors that were linked to cultural similarity, which, in turn, predicted improved outsourcing partnership outcomes, such as information sharing behavior and the overall quality of communication between firms. Fitzgerald and Willcocks (1994, page 94) identified "the existence of a cultural fit between the client and vendor organizations" as one antecedent of IT outsourcing partnership, while other researchers (Kakabadse, et al, 2003) stressed the importance of recognizing and managing cultural similarities and dissimilarities in IT outsourcing relationships.

Preferential procurement can either have a negative or positive impact on share-price depending on the nature of the vendor providing the service to the company. When a vendor is in the same industry as the company, positive effects can be expected on the share-price. Literature indicates that companies that have chosen preferential procurement as a means of achieving BEE status should be negatively impacted on their share-price.

2.2.6 **Enterprise Development**

There is very limited literature that has investigated the impact of funding external enterprises’ development that are not subsidiaries of companies and the impact it should have on the performance of the companies or share-price.

Funding that is external and that shareholders perceive as no value add to the bottom line of the organization has no impact on the share-price of corporations. It can be expected that certain corporations will be impacted negatively by enterprise development as shareholders may view this as waste and not adding any value to the business. The companies embarking on external funding would have to show to shareholders how the company will eventually benefit from such an exercise. A simple link would be to link the company’s BEE credentials to qualification for Government tenders which could boost the company’s income in the future.

Companies that choose enterprise development as a means of achieving BEE status will be negatively impacted on their share-price.

2.2.7 **SOCIO-ECONOMIC DEVELOPMENT**

There is very little literature that link socio-economic investment to the performance of a company or its share-price.
Funding external projects that shareholders perceive as no value-add to the bottom line of the organization have no impact on the share-price of corporations. It can be expected that certain corporations will be impacted negatively by enterprise development as shareholders may view this as waste and not adding any value to the business. In a similar way, the companies embarking on socio-economic funding would have to show to shareholders how the company will eventually benefit from such an exercise. In a similar manner, making a simple link between the company’s BEE credentials to qualifying for Government tenders could boost the company’s income in the future.

Companies that choose socio-economic development as a means of achieving BEE status will be impacted negatively on their share-price.

3 Conclusion

It is clear from the literature reviewed and the sub-hypotheses that the different strategies or approaches to BEE transactions will each have a different impact on the share-price of companies embarking on BEE transactions.

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The role of law and legislation in quantity surveying maturity

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Abstract:

Proposal: The quantity surveying profession is interlaced within Law and Legislation. Previous research by the Department of Quantity Surveying and Construction Management at the University of the Free State showed that law and legislation is a key dimension indicating quantity surveying maturity. The South African Act 49 of 2000 provides for the establishment of a juristic body known as the South African Council for the Quantity Surveying Profession (SACQSP) to protect the public and regulate and improve the quantity surveying profession. During 2008 the Council for the Built Environment, enacted by Act 43 of 2000, proposed a single juristic body to serve as an umbrella council for architects, engineers, project- and construction managers, and quantity surveyors. This proposal was put on hold by the Minister of Public Works on the 9th of October 2008. This paper investigates the role and necessity of quantity surveying legislation and the influence thereof on quantity surveying maturity.

Methodology: The South African Quantity Surveying Profession Act 49 of 2000 and the Council for the Built Environment Act 43 of 2000 is scrutinised. This paper also tests the proposal of the Council for the Built Environment (CBE) as well as the response from the SACQSP and other building industry councils. The reasons the Minister of Public Works decided to put the amendment proposal on hold are also investigated.

Conclusion: South African legislation plays an integral role in quantity surveying maturity and the development of the quantity surveying profession. Legislation protects the South African public in their use of professional quantity surveying services.

Value: Light is shed on the reasoning behind the CBE’s proposed amendments and the Minister of Public Works’ decisions. The outcomes may assist with the decision making processes for amendments to current and future legislation.

Practical implications: The SACQSP contributes to the growth and development of the SA economy by facilitating the production of appropriately qualified quantity surveyors. The SACQSP also ensures adherence to national and international recognised codes of practice by the profession. The SACQSP therefore plays an integral part in the maturity of South African quantity surveyors, the quantity surveying profession and society.

Key words: Law and Legislation, Quantity Surveying Maturity, Quantity Surveying Act
1. Introduction

Not all professions within a specific country are governed by Law and Legislation. The status of many professions as learned societies relies on the need for the services required by the market. Discipline and control in respect of ethics and standards are upheld by established professional bodies such as the Royal Institute for Charted Surveyors (RICS), International Cost Engineering Council (ICEC) and Charted Institute of Building (CIOB) (Verster, Hauptfleish and Kotze, 2008).

Hypothetically the South African quantity surveying profession is provident to be governed by an regulating act i.e. act 49 of 2000. This act aims to ensure standards and discipline in respect of the profession by means of the Council for the Quantity Surveying Profession (SACQSP). Furthermore South African quantity surveyors may obtain membership to the Association of South African Quantity Surveyors (ASAQS) instituted by the same act. The ASAQS assist their members through a number of products and services.

The Council for the Built Environment where however of the opinion that the act does not contribute to transformation and felt that the technical procedures as to how to implement the transformational issues are not in place (Wortmann, 2008: E-mail correspondence).

Subsequently the Council for the Built Environment (CBE), the South African Council for the Quantity Surveying Profession (SACQSP), the proposed alternative from the CBE and the reaction to the proposal from the SACQSP are being reviewed.

The quantitative study follow the qualitative study. The quantitative study attempts to identify the importance of the SACQSP to the South African public and South African Quantity Surveying Profession through a perception questionnaire.

Through previous research by the Department of Quantity Surveying and Construction Management at the University of the Free State, Law and Legislation has been identified as one of the dimensions of a matured quantity surveying society since the quantity surveying profession is governed by law and legislation.

The value of being knowledgeable about the maturity of a society was introduced to the University of the Free State by the Project Management Group of the Wirtschafts University of Economics and Business Administration, Vienna (Austria) in 2005. To appreciate the maturity of a society a maturity model of the society may be compiled to identify the societies current stand and its strengths and weaknesses. The maturity model may also be used as a management tool to strategize for future development (Garies, 2005: 32).
2. Qualitative Study

2.1 The Council for the Built Environment (CBE)

The CBE was established as a statutory body by Parliament (Act 43 of 2000) to provide leadership to, and ensure good governance of the professions, while serving as a two-way channel for co-ordination input, into the structuring and development process, between the built environment professions and government (SACQSP, 2009a: online).

The Act was passed by Parliament along with the suite of Acts regulating and re-establishing the six built environment councils for Architects, Engineers, Landscape Architects, Quantity Surveyors, Project and Construction Managers and Property Valuers (SACQSP, 2009a: online).

The CBE Act was introduced in order to address certain shortcomings in the built environment and to enable a climate for ongoing transformation and development of the professions to take place. In terms of the CBE Act the council is, among others, responsible for transforming the professions act as a conduit between Government and the built environment professions, fostering growth of the professions and contributing to the creation of a dynamic built environment (CBE, 2009: online).

Table 1 illustrates the different statutory councils and their position towards the CBE.

Table 1. Statutory councils for the built environment

(Source: SACQSP, 2009b: online)

| South African Council for the Quantity Surveying Profession (SACQSP) |
|-------------------|-------------------|
| South African Council for the Architecture Profession (SACAP) | ↔ |
| Engineering Council of South Africa (ECSA) | ↔ |
| South African Council for the Landscape Architecture Profession (SACLAP) | ↔ |
| South African Council for the Project and Construction Management Profession (SACPCMP) | ↔ |
| South African Council for the Property Valuation Profession (SACPVP) | ↔ |
| South African Council for the Built Environment (CBE) | ↔ |
2.1.1 Functions of the Council for the Built Environment (CBE)

The objectives of the council for the built environment are to:

- Promote and protect the interest of the public in the built environment.
- Promote and maintain a sustainable built environment and natural environment.
- Promote ongoing human resource development in the built environment.
- Facilitate participation by the built environment professions in integrated development in the context of national goals.
- Promote appropriate standards of health, safety and environmental protection within the built environment.
- Promote sound governance of the built environment professions.
- Promote liaison in the built environment in the field of training, both in the Republic of South Africa and elsewhere, and to promote the standards of such training in the republic.
- Serve as a forum where the representatives of the built environment professions may discuss the relevant:
  - Required qualifications;
  - Standards of education;
  - Training and competence;
  - Promotion of professional status; and
  - Legislation impact on the built environment; and
- Ensure the uniform application of norms and guidelines set by the councils for the professions through the built environment (CBE, 2009: online).

Figure 1. Illustration of the current South African Built Environment
(Source: Own figure)
Figure 1 illustrates the positioning of the CBE within the South Africa Built Environment.

2.2 The South African Council for the Quantity Surveying Profession (SACQSP)

The South African Quantity Surveying Practice has benefited from a governing institution in one form or another since 1903 (Norman, 1985: 16).

The Association of South African Quantity Surveyors was formed in 1971 with the proclamation of Act 36 of 1970. This legislation with subsequent amendments governed the profession up until the establishment of the SACQSP in terms of the Quantity Surveying Professions Act (Act 49 of 2000) which was promulgated on 26 November 2000 and came into operation on 26 January 2001 (CBE, 2007).

2.2.1 Functions of the South African Council for the Quantity Surveying Profession (SACQSP)

The SACQSP performs a variety of functions, such as:

- Setting and auditing of academic standards for processes of registration through a process of accreditation of quantity surveying programmes at universities and technicons.
- Setting and auditing of professional development standards through the provision of guidelines which set out post qualification requirements for registration in categories of registration.
- Prescribing requirements for Continuing Professional Development and determining the period which registered persons must apply for renewal of their registrations.
- Prescribing a Code of Conduct and Code of Practice and enforcing such conduct through an Investigating Committee and a Disciplinary Tribunal.
- Identification of work of a quantity surveying nature that should be reserved for registered persons by the CBE, after consultation with the Competition Board.
- Advising the CBE and Minister of Public Works on matters relating to the quantity surveying profession and cognate matters.
- Recognition of professional associations.
- Publication of a guideline tariff of fees for consulting work, in consultation with government, the profession and industry (SACQSP(a), 2009: online)

Figure 2 illustrates the abovementioned responsibilities of the various built environment councils, specifically the SACQSP, towards the stakeholders within the built environment.
From figure 2 it is clear that the SACQSP and other statutory councils for the built environment fulfil an important coordinating function between the built environment and the Department of Public Works. Figure 2 also shows that the Department of Public Works is only one of six stakeholders serviced by the SACQSP.

Figure 3 illustrates the positioning of the statutory councils in respect of the responsibilities towards the built environment and the responsibilities towards the Minister – and Department of Public Works according to Act 42 of 2000.
3. Proposal From The Council For The Built Environment

3.1 Preamble from the Minister of Public Works

In the preamble to the proposed amendment to the statutory regulatory framework of the built environment professions by the Minister of Public Works, he mentioned that since 2000 the Department of Public Works (DPW) have had to grapple with issues of access to the professions. He also mentioned that there are shortcomings in the present regulatory model as well as a need for the organised professions to serve the imperatives of the national democratic revolution (South Africa. Department of Public Works, 2008: 3).

3.2 The DPW Mid-Term Review: Shortcomings In The Present Regulatory Framework

In 2003 the Department of Public Works commissioned a study entitled “The role of the Built Environment Professions in Enhancing Construction Industry Development in South Africa”. This study was commissioned by the DPW as part of a mid-term review of the DPW’s policies pertaining to the built environment professions. Both the CBE
and the professional councils were required to give feedback on the progress of the councils towards:

- Implementing policy;
- Constraints being faced by the various councils in implementing policy;
- Constraints in policy and legislation enabling councils to implement policy; and
- Future actions required from the DPW to implement policy.

Consequent upon the mid-term review and reports provided to the DPW, the DPW has identified a number of challenges facing the built environment professions. These challenges have, in turn, given rise to a need for the DPW to determine whether the legislation governing the built environment professions and the professional councils constituted in terms thereof, fulfil their mandate and whether there is a need to amend existing legislation to enable the CBE and the professional councils to fulfil their legislative mandate (South Africa. Department of Public Works, 2008: 6,7).

3.3 The DPW mid-term review: Findings

The following challenges facing the built environment professions have been identified:

- The emigration of built environment professionals.
- Limited access to built environment educational programmes, particularly for historical disadvantaged individuals.
- Limited opportunities for potential graduates to get practical training in the working environment—a requirement for graduating.
- The law level or registration of built environment professionals with the professional councils, resulting in insufficient funding of professional councils.
- The lack of integrated planning and action by the professional councils and the CBE. The current legislative framework provides for the professional councils and CBE to be independent juristic bodies and accordingly there is no strong link between the CBE and the professional councils in terms of executing Government policy and their legislative mandate.
- There is a lack of alignment between the work of the professional councils and national imperatives that changes from time to time (South Africa. Department of Public Works, 2008: 7,8).

Following the study commissioned by the DPW in 2003 and the resultant interaction between the DPW, the CBE and the professional councils, the DPW is of the view to review the current legislative framework within which the built environment profession operate (South Africa. Department of Public Works, 2008: 7).

3.4 The implications of the proposal by the Minister of Public Works

The Minister proposes that a single juristic body be established to be named the “South African Council for the Built Environment” (SACBE). This body will serve as an umbrella body for professional boards to substitute the current professional councils. (South Africa. Department of Public Works, 2008: 12).
The current professional councils will be converted into professional boards which do not have juristic personality. Although the professional boards are not independent entities they will retain autonomy in respect of matters relating to the built environment professions which they regulate (South Africa. Department of Public Works, 2008: 15).

Figure 4 illustrates the proposal by the Minister of Public Works.

![Diagram](https://via.placeholder.com/150)

Figure 4. Proposal by the Minister of Public Works (Source: Own figure)

The impact of the proposal by the Minister of Public Works is identifiable by comparing Figure 1 and Figure 4.

Any decision of a professional board, relating to a matter falling entirely within its ambit, shall not be subject to ratification by the council and the council shall for this purpose determine whether a matter falls entirely within the ambit of a professional board. Although it is proposed that professional boards no longer be independent entities it is clear from the proposed functions and powers of the SACBE and the professional boards that there will be a clear distinction between the powers and functions of the SACBE and those of the professional boards (South Africa. Department of Public Works, 2008: 18).
The proposed changes in policy thus seek to establish a principle in terms of which the SACBE is given the overarching responsibility of dealing with all matters relating to strategic policy, implementation of Government policy and advising Government on matters falling within the scope of the built environment professions (South Africa. Department of Public Works, 2008: 18).

The professional boards on the other hand retain function of self regulation of the profession in matters relating to accreditation of training institutions, education and training, registration of professionals and maintaining and enhancing the dignity as well as the integrity of the relevant built environment professions. This role the professional boards will fulfil under the guidance of the SACBE, which will ensure universal application of norms and standards by the professional boards (South Africa. Department of Public Works, 2008: 18, 19).

It is further envisaged by the Minister of Public Works that the current professional councils will cease to exist and all their assets, liabilities, rights and obligations will be transferred to the SACBE. This will enable the SACBE to have the necessary economies of scale in regard to financial, human and other physical recourses to support all the professional boards in fulfilling their legislative mandate (South Africa. Department of Public Works, 2008: 19).

4. Reaction From The South African Council For The Quantity Surveying Profession (SACQSP)

In reaction to the proposal from the Minister of Public Works, Prof Gaye le Roux (2008: 1), as Registrar on behalf of SACQSP in a letter dated 28 March 2008, repudiated all the allegations with regard to the lack of integrated planning between the CBE and the SACQSP. According to Prof le Roux the SACQSP has responded willingly and readily to all requests by, and mandated submissions to, the CBE.

Le Roux (2008: 1) made it clear that the SACQSP finds the proposed amendments of the statutory regulatory framework as an unpleasant surprise. The SACQSP were not consulted by the CBE prior to the decision to revise the current statutory regulatory framework according to Le Roux (2008: 1).

With reference to the findings of the DPW’s 2003 mid-term review of the built environment profession, Le Roux (2008: 1) stated it on record that no interaction between the Council and the DPW occurred, specifically in respect of the revered mid-term review.

The SACQSP are cautious that a number of concerns such as immigration of built environment professionals, limited access to educational programmes and low levels of registration of professionals are not applicable in the extent context. According to the SACQSP the lack of integrated planning and action by the professional councils and the CBE is entirely rectifiable by the CBE and not due to a lack of willingness by the councils (Le Roux, 2008: 2).
The SACQSP noted that the shortcomings do not apply equally to all the statutory councils, and the fact that some councils are challenged by some or all of these shortcomings should not be used against all councils. The SACQSP also noted that the trajectory of accomplishments that supported the national imperatives in respect of the quantity surveying profession could be demonstrated with facts by the SACQSP. The SACQSP is concerned that the proposed oversight structure and functions of the proposed SACBE is too unwieldy to lack the cited shortcomings in the present regulatory framework (Le Roux, 2008: 2).

5. Quantitative Study

5.1 The Dimensions of a Matured Quantity Surveying Society

During 2008 the University of the Free State conducted a research study to determine the most important dimensions for a matured Quantity Surveying Society. A selected group of 107 registered professional quantity surveyors were requested to respond to a questionnaire formulated by the Department of Quantity Surveying and Construction Management. Fifty-six responses were received from the invited group reflecting a fifty-two percent (52%) response rate.

The questions in the questionnaire were answered individually by the respondents in order to determine their perceived opinion on the importance of each dimension’s role and influence on the profile of the quantity surveying profession, specifically related to South Africa. However, this may also be true in respect of quantity surveying in other social systems and/or nations and perhaps for other professions.

The respondents were also requested to give their opinions on the level of maturity of the quantity surveying profession related to the 11 dimensions, among others, Law and Legislation. This was a perception test only, but may be valuable to understand the anticipated difference between opinion of maturity and perhaps the under-valuation by respondents of a very important dimension or determinants for a learned society (Verster, et al., 2008).

Table 2 shows the respondents’ response averages for all twenty questions related to the 11 dimensions as determinants for the South African quantity surveying profession, to be considered a mature and learned society (Verster, 2008: 11).
Table 2. The importance of Maturity Dimensions

(Source: Verster, 2008: 11)

<table>
<thead>
<tr>
<th>1 - Dimension</th>
<th>Average on 1 to 5 scale</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Education</td>
<td>4.0</td>
<td>80%</td>
</tr>
<tr>
<td>B. Training</td>
<td>4.0</td>
<td>80%</td>
</tr>
<tr>
<td>C. Mentorship</td>
<td>4.6</td>
<td>92%</td>
</tr>
<tr>
<td><strong>D. CPD</strong></td>
<td><strong>4.0</strong></td>
<td><strong>80%</strong></td>
</tr>
<tr>
<td>E. Research</td>
<td>4.0</td>
<td>80%</td>
</tr>
<tr>
<td>F. Marketing</td>
<td>4.1</td>
<td>82%</td>
</tr>
<tr>
<td>G. Infrastructure</td>
<td>4.0</td>
<td>80%</td>
</tr>
<tr>
<td><strong>H. Law and Legislation</strong></td>
<td><strong>4.7</strong></td>
<td><strong>94%</strong></td>
</tr>
<tr>
<td>I. Standardisation</td>
<td>4.4</td>
<td>88%</td>
</tr>
<tr>
<td>J. Management Practice</td>
<td>4.1</td>
<td>82%</td>
</tr>
<tr>
<td>K. Total Quality Management</td>
<td>3.8</td>
<td>76%</td>
</tr>
</tbody>
</table>

| 2 - Opinion | Quantity surveyors as a mature learned society | 3.9 | 78% |

Results in Table 2 were captured from using a 5 point Likert scale where A to K ranging from 1 = not important and 5 = most important. For testing opinions shown as 2:, a 5 point Likert scale was also used where 1 = not at all and 5 = completely.

Respondents indicated that all 11 dimensions are seen as very important to establish a mature learned society. The weighting of each could not be done from the results and more research is needed, but it is reasonably clear that the dimensions selected by the research group are seen as important especially law and legislation.

The respondents also indicated strongly that Law and Legislation as a dimension to determine the maturity of a quantity surveying society is very important with an average response of ninety four percent (94%). Law, acts, regulations and professional ethics were almost unanimously identified as vitally important.

The questionnaire also tested the perception of the respondents to establish the importance of Continuing Professional Development (CPD), and their opinions in respect of the current number of hours per year required by the SACQSP. The respondents indicated with an average response of eighty percent (80%) that CPD is an important dimension which contributes towards the maturity of a professional society. This strengthens the necessity for a constitutional body, like the SACQSP, to manage the CPD requirements.

The aim of legislation is to protect the South African public in their use of professional Quantity Surveying services. The SACQSP is the nurturing body which specifically addresses the law, acts, regulations and professional ethics in the Quantity Surveying Profession(South Africa, 2000).
The opinions of respondents related to sub-dimensions may also be noteworthy. Sub-dimensions are seen as elements that may be important in supporting the eleven main dimensions.

Table 3 illustrates the averages on a 5 point Likert scale, ranging from 1 = not important and 5 = most important to measure sub-dimensions related to each of the 11 dimensions included in the questionnaire.

Table 3. Sub-dimensions: the expected level of graduate education and profile of professionals
(Source: Verster, 2008: 11)

<table>
<thead>
<tr>
<th>SUB-DIMENSIONS</th>
<th>1-5 Scale</th>
<th>%</th>
<th>Average</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1. An honours degree</td>
<td>4.4</td>
<td>88%</td>
<td><strong>4.00</strong></td>
<td><strong>80%</strong></td>
</tr>
<tr>
<td>1.2. Number of Masters and Ph.D degrees present in a professional society</td>
<td>3.4</td>
<td>68%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3. Education providers with international accreditation</td>
<td>4.3</td>
<td>86%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4. Education of technicians</td>
<td>3.9</td>
<td>78%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Training</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1. Post-honours training (two years)</td>
<td>4.0</td>
<td>80%</td>
<td><strong>4.05</strong></td>
<td><strong>81%</strong></td>
</tr>
<tr>
<td>2.2. SACQSP (three years)</td>
<td>4.1</td>
<td>82%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CPD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1. Obligatory career CPD</td>
<td>4.2</td>
<td>84%</td>
<td><strong>4.00</strong></td>
<td><strong>80%</strong></td>
</tr>
<tr>
<td>4.2. SACQSP rules: 25 hours CPD per year</td>
<td>3.8</td>
<td>76%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Marketing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1. Identity and status of profession’s growth</td>
<td>4.1</td>
<td>82%</td>
<td><strong>4.10</strong></td>
<td><strong>82%</strong></td>
</tr>
<tr>
<td>6.2. Profession’s official marketing strategy</td>
<td>4.1</td>
<td>82%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.1. Institutional support and control</td>
<td>4.0</td>
<td>80%</td>
<td><strong>4.00</strong></td>
<td><strong>80%</strong></td>
</tr>
<tr>
<td>7.2. Training and technical support (EduTech)</td>
<td>4.0</td>
<td>80%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Law and Legislation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.1. Discipline and control by Act, regulations, code</td>
<td>4.7</td>
<td>94%</td>
<td><strong>4.70</strong></td>
<td><strong>94%</strong></td>
</tr>
<tr>
<td>8.2. Professional ethics</td>
<td>4.7</td>
<td>94%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An honours degree with international accreditation as entry level is identified by the respondents as most important for a mature professional society.

Currently this responsibility is delegated to the SACQSP through Act 49 of 2000 by the South African Government (South Africa, 2000).

In 2.2 of Table 3 the respondents indicated with an average of eighty two percent (82%) that the current post-honours training period of three years as required by the SACQSP is a necessity.

Analysing the above, it is clear that in respect of the sub-dimensions that respondents were almost unanimous in identifying the value of a Quantity Surveying Act and a statutory body like Act 49 of 2000 and the SACQSP.
6. Conclusion

The quantitative study showed that South African legislation plays an integral role in quantity surveying maturity and the development of the quantity surveying profession. Legislation protects the South African public in their use of professional quantity surveying services.

The literature review indicated that the Council for the Built Environment are of the opinion that the different statutory councils are not performing according to expectations.

Even some of the statutory councils are anxious about the built environment in South Africa. According to The Sunday Independent (2008: 9), professional experts in the South African construction industry are concerned about a downward decline in the various technical professions, especially the engineering profession.

The Minister of Public Works proposed amendments to the statutory regulatory framework of the built environment professions as a counter action to prevent further deterioration of the professions and the building industry.

On reaction to the proposal the Engineering Council of South Africa (ECSA) states in their media release on 6 March 2008 that it has become increasingly important for the ECSA to remain autonomous because of issues of national crises, which can be linked to the engineering skills shortage in South Africa. ECSA highlights furthermore the role the organisation plays not only to the profession, but to the industry and all other relevant stakeholders and target publics (Goba, 2008: 1).

It was noticed that the ECSA and the SACQSP opposed the proposed amendments of the statutory regulatory framework of the built environment professions.

The SACQSP was of the opinion that the proposed structure separates responsibility and accountability and will likely create governance problems. The SACQSP felt it is inconceivable that a single board will effectively and adequately monitor and control activities of boards that oversee the roles of the various built environment professions with wide ranging expertise and interests (Le Roux, 2008: 2).

7. Recommendation

In October 2008 the Minister of Public Works placed the proposed amendment on hold till further notice.

It was noticed that both the SACQSP and the ECSA claimed that no interaction between the CBE and the statutory councils occurred, specifically in respect of the referred mid-term review or the proposed amendments to the statutory regulatory framework of the built environment professions.
Since the proposed amendment was based on the mid-term review it is recommended that the CBE should make the mid-term review public and open for discussion by the statutory councils.

Should the Minister of Public Works feels it is still necessary to make amendments to the statutory regulatory framework it is recommended that the Minister first consult with all the statutory councils in order to find a common solution.

It is further recommended that the Minister of Public Works could allow the statutory councils including the CBE to remain functional for a predetermined trail period. This may indicate the functionality of the current statutory regulatory framework.

Furthermore each statutory council could incorporate a CBE division within each council which could streamline the communication between the CBE and the other statutory councils.

Finally it is proposed researchers undertake a quantitative study with regard to the functionality of the current statutory framework. Should the study show that the current statutory framework is functional it may be used as recommendation not to amend the current statutory framework.
8. References


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Use of moral theory to analyse the RICS Nine Core Values and RICS Rules of Conduct

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Abstract:

Ethics is a vitally important issue for professionals. The general public has trust and belief in professionals because of their professional knowledge and the high quality services that they can offer, but it is also due to their high level of conduct of the professionals.

The aim of this paper is to discuss the use of moral theory as a framework to analyse the nine RICS Core Values (RICS, 2006) and the RICS Rules of Conduct for Members (RICS, 2007). The chosen moral theories are 'deontology', 'utilitarianism' and 'virtue ethics'. Data were collected through semi-structured interviews, comprising twelve chartered surveyors from the three major RICS disciplines: Building Surveying, Quantity Surveying and General Practice. Their views on the application of the moral theory to explain the RICS ethical principles were gathered.

The interviewees have mixed opinion on the use of moral theory on explaining RICS Core Values and Rules of Conduct. There is a slightly stronger view that deontology is the most suitable moral theory. This is because the surveyors do not know the outcome when they are working on it, so the best strategy is to ensure they have undertaken the process correctly. On the other hand, the interviewees who have been RICS members for longer and have more involvement with the RICS professional ethics tend to think that virtue ethics is the most appropriate theory to explain RICS ethical standards as they understand the importance of the correct ‘result’ and ‘process’.

The interviewees generally welcome the move from the 60-page RICS Rule Book to 10-page RICS Rules of Conduct. However, they have suggested some improvement, which is to refer to the separate Policies and Helpsheets on Handling Clients Money, Complaints Handling Procedures and Professional Indemnity Insurance in the Rules of Conduct.

Keywords:
Ethics, Moral Theory, RICS Rules of Conduct, RICS Core Values
1 Introduction

Ethics is a vitally important issue for professionals. A profession is largely a creature of public demand. Such organisations remain in existence because of the continuing need by the public for them and the services of their members. The underlying reason for a high level of conduct by any profession is the need for the public to have confidence in the quality of the services offered by the profession. Professions can only survive if the public have confidence in them. For a profession to command public confidence there are two essential elements, professional knowledge and ethical conduct (Chalkley, 1994). Therefore, the cost of ignorance of ethics is potentially very high. Aside from any effects on the professionals themselves, it can also have a significant impact on the quality of services that are provided to clients and thereby on the resultant public perception and image of the profession.

Unethical behaviour can impose negative costs at personal, group and organisational levels, such as increasing client dissatisfaction, decreasing productivity, profitability and low working morale. An organisation that constantly creates a negative ethical impact will encounter a diminishing market for its services and withdrawal of public approval. This is especially the case for the construction industry due to the inter-organisational relationship of the project team. Suen et. al. (2006) echoed this comment, stating ‘since construction professionals are working under temporary organisational settings, which means, in practice, setting up special units to support ethical conduct they face certain technical problems. There is no doubt that managing ethical behaviour in construction organizations is possible, but it is not an easy task’ (p.264).

Bowen et. al. (2007) further listed the various business and professional ethical issues facing the construction industry, including conflicts of interest, negligence of customer needs, unfair competition, poor professional integrity and responsibilities. The recent ‘price-fixing’ scandal shows that there is ethical concern for the UK construction industry. On 17 April 2008, the Office of Fair Trading (OFT) announced it had issued a Statement of Objections (SO) to 112 companies alleged to have engaged in bid rigging activities/ anti-competitive behaviour, particularly covering pricing, in the construction sector. This allegation is not a one-off accusation for the construction industry, the evidence received by the OFT in the course of its investigation indicated that cover pricing was a widespread and endemic practice in the construction industry as a whole (OFT, 2008). The finding of a FMI Corp survey conducted in USA in 2004 also showed that bid shopping is one of most critical ethical issues facing the construction industry (Business Environment, 2004; Contractor’s Business Management Report, 2004 and EC&M, 2004). Eighty-four percent (270) of respondents of the same survey, including owners, architects, construction managers, consultants, contractors and subcontractors expressed their concern on decreasing ethical standards, said they had ‘experienced, encountered or observed construction industry-related acts or transactions that they would consider unethical in the past year’. Sixty-one percent of the respondents think that the industry has been ‘tainted’ by unethical acts. Research on professional ethics of surveyors conducted in the UK shared the same finding: 62 (38%) respondents think that ethical standards decreased over the last decade (Poon, 2006).
Some former British colonial territories, such as Hong Kong, have also shared concern on ethical issues for several decades. During the 1980s, the most notorious ethical scandal of the Hong Kong construction industry was ‘salt water’ buildings. About 100 reinforced concrete building blocks were noted to be deteriorating with abnormal speed and after only 15 years of building life. In the 1990s and 2000s, there have been ‘short-piling’ construction scams and other recent issues of unethical behaviour for construction professionals including corruption, overcharge and defective works. The ‘Salengane’ case discovered some unqualified suppliers had become approved contractors of the Hong Kong government by bribing local civil servants. The case involved a total of HK$16.8 million of loss.

The cost of unethical behaviour is high. There are not only the financial costs to the companies which deliver the services, but also to the whole industry. According to the FMI Corp survey, 61% of respondents believe that unethical behaviour affects the cost of getting projects built. Thirty-five percent of respondents think that 1% to 2% of the total project cost is the cost of unethical behaviour, while twenty-five percent of respondents estimated that between 2% to 5% of the total cost is lost because of different types of unethical behaviour conducted by the construction project team (Parson, 2005). Jeff Tickal, wrote in ‘The Contractor’s Compass’: ‘the actions of a few unethical; contractors cloud the reputation of the entire construction industry’ (Contractor’s Business Management Report, 2004: p.12). This is exactly the case for the recent ‘price fixing’ scandal in the UK which adds further blight to the UK construction industry, on top of the impact from the recent slow-down in economic conditions.

2. Rationale for conducting this research

Previous research on the professional ethics of construction and surveying professionals has been generally a-theoretical. The following are typical examples: the impacts of ethical dilemmas on surveyors’ decision making; identifying typical ethical problems for the surveying profession and their causes; identifying surveyors’ views on ethical behaviour; studying surveyors’ rating and ranking of stakeholders’ interests when they face ethical dilemmas and finally studying how professional ethics influence construction performance. However, there is lack of research on the Codes of Practice of professional organisations, which to codify some degree the relationship between professionals, their professional body and the wider society. In addition, previous research has not used moral theories to study and analyse professional ethics for construction and surveying professionals.

The aim of this research is to investigate surveyors’ understanding of professional ethics. It will explore the theoretical foundations of professional ethics. It will also investigate how the nine Core Values of the Royal Institution of Chartered Surveyors (RICS) (RICS, 2006) and the current RICS Rules of Conduct for Members (RICS, 2007) can be explained by the traditional moral theories. This reason for focusing on Rules of Conduct for Members is that there has been longer standing history of having a Code of Practice for Members. As the first stage of the wider research project, the author intended to focus on the aspect which is more familiar with the respondents.
3. Literature review

3.1 Moral Theories

3.1.1 Deontology

Deontology or duty based theory, is an approach to ethics that focuses on the rightness or wrongness of actions themselves. This can be contrasted with the consequences of those actions as the foundation for rightness, for example, in the consequentialist theory of utilitarianism.

The rigorous version of deontology was developed by Kant (1785/1898). It focuses on duty or moral obligation. The term ‘deon’ comes from Greek and means duty, so in the general sense a deontological theory is concerned with our duties, obligations and responsibilities to others.

Kant saw a sharp difference between self-interest and morality and proposes that an action only has moral value if is performed from duty. Kant proposes his Categorical Imperative (1785/1898, p.438):

‘Act only on that maxim whereby thou cast at the same time will that it should become universal law’

A different version of the Categorical Imperative reads (Kant, 1785/1898, p.47):

‘So act as to treat humanity, whether in thine own person or in that of any other, in every case as an end, never as means only’

3.1.2 Utilitarianism

Utilitarianism is consequentialist theory. It was developed by Bentham (1748/1832) and Mills (1808/1873). Under the consequentialist principles, an act's rightness or wrongness is determined by the goodness or badness of the results from it.

Telelogical or consequentialist ethics judges the rightness or wrongness of an act by its consequences. The most elaborate consequentialist theory is that of utilitarianism, as propagated by Bentham (1979/1962). In the definition of his disciple Mills (1981/1962, p.257) stated:

‘Utility, or the Greatest Happiness Principle holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness’
3.1.3 Virtue ethics

Virtue ethics, in the West, traditionally was developed by Plato and Aristotle. It is a branch of moral philosophy that emphasises character rather than rules or consequences, as the key element of ethical thinking. In contrast to the universal emphasis on moral duty in deontology and on general happiness in utilitarianism (Preuss, 1998), Aristotle emphasised the importance of a person's character for morality. He suggests that highest human good is happiness, not in a crude material sense, but in a comprehensive meaning which carries connotations of flourishing and well-being. Virtue theory emphasises character, rather than rules or consequences, as the key element of ethical thinking. This highest good is closely linked to the function of a human being, which is to obey reason, as this is the main characteristic to set humans apart from other living beings.

3.2 Development of RICS’s Guidance on Ethical Standards

RICS is an institution with Royal Charter. The objective of the Institution is to ‘maintain and promote the usefulness of the profession for the public advantage’. RICS has paid great attention to ethical standards for construction and property professionals. Increasing the ethical standards of surveyors is one of the top priorities of the RICS’s ‘Agenda for Change’. The aim of this Agenda is to increase public recognition of the value of the RICS qualification as the unrivalled mark of professionalism worldwide. Under this principle, the RICS has conducted major work with the aim of increasing ethical standards of its members.

The RICS first published the old ‘Rule Book’ on 1st January 2004 and it was updated in January 2006. In the 2006 edition (RICS, 2006), the nine RICS Core Values were also announced. They are:

- Act with integrity
- Always be honest
- Be open and transparent in your dealings
- Be accountable for all your actions
- Know and act within your limitations
- Be objective at all times
- Always treat others with respect
- Set a good example
- Have the courage to make a stand

These principles are adaptable to reflect changes in legislation and changes in society’s expectations of the profession. The RICS expects members not only to demonstrate a knowledge and understanding of these principles, but also to demonstrate a commitment to meet these ethical standards and maintain the integrity of the profession.

The most recent major review of all aspects of the RICS Regulations was undertaken by Sir Bryan Carsberg in 2004 to 2005 (Carsberg, 2005). As stated in the Carsberg Report
(2005), Sir Carsberg commented on some principles that have governed his approach to preparing the Report and formulating his recommendation. He emphasised the importance of self-regulation which is fundamental to any profession. He stated that ‘strong ethical codes are the heart of what it means to be a profession and a professional body is therefore fitted to regulate its members. In a professional body, ethics come together with expertise to create a basis for sound regulation. The public interest in the United Kingdom has benefited for more than a hundred years from having strong professional bodies practising self-regulation. The merits of continuing with this system seem to be clear’ (Carsberg, 2005: p.4).

The new Rules of Conduct for Members and Rules of Conduct for Firms have started to apply from 4 June 2007 following Carsberg’s review. The aim of the principles is to help surveyors in doubt about how to handle difficult circumstances or in situations where there is a danger that members’ professionalism may be compromised. This has demonstrated that the RICS is committed to maintain the ethical standards of the surveying profession in order to ensure that the wider public interest is protected.

One of the key changes of the reform package is the reduction of the RICS’s 60-page Rule Book to fewer than 10 pages of principles, in two parts. The first part covers individual personal and professional conduct and applies to all RICS members. The second part covers conduct of business matters and applies to firms. It reduces the burden of regulations on members and positions RICS as a bold, cutting edge professional regulator for the 21st Century. It is also the first time in the RICS’s history that separate regulatory guidance to firms has been offered.

The RICS’ new principles-based Rules of Conduct for Members are:

- Integrity
- Competence
- Service
- Lifelong learning
- Solvency
- Information to RICS
- Co-operation

4. Methodology

The methodology for conducting this research is qualitative in nature. Semi-structured face-to-face interviews were chosen as the method for collecting data. Quantitative methods, such as the use of questionnaires were considered to collect data. However, these were rejected because they were not able to give opportunity for the interviewer to explain the various approaches to Moral Theory. Also, the views of the participants are required for this research.

The other types of qualitative data collection strategy, such as focus group, were considered. These were rejected as the interviewer would like to have detailed
discussion with each interviewee. Also, it is difficult for the practical arrangement of focus group as the interviewees are working in different organisations.

The interviewees were selected by the interviewer with the aim of ensuring that there is a balance of the interviewees, who have different professional backgrounds. An e-mail was sent out to invite the interviewees to participate in the research projects. Once they agreed, a document which explains the definition of the three moral theories, information about the nine RICS Core Values and RICS Rules of Conduct for Members, the nature of the interview and the interview questions were sent out to them. The definition and short explanation of the various ethics theories were sent to the interviewees prior to the interview. These information were abstracted from Section 3 of the paper. In addition, the detailed description of the RICS Core Values (RICS, 2006) and RICS Rules of Conduct (RICS, 2007) were also been sent to all interviewees prior to the interview. At the start of the interview, the interviewer explained the moral theories and asked the interviewees whether they understand the information of various moral theories which had been sent to them. The interviewer is prepared to explain the theories further. Generally speaking, the interviewees who are more experienced and have involvement in professional ethics have better understanding of the moral theories. They understand the difference in principles and focuses of these three moral theories. On the other hand, some of the less experienced interviewees who also have not had involvement in professional ethics had not heard of these ethics theories and the interviewer is needed to explain to them in detail.

5. Data Collection

The data was collected through semi-structured interviews with Chartered Surveyors. Twelve surveyors, include four Building Surveyors (BS), four Quantity Surveyors (QS) and four General Practice Surveyors (GP), were be interviewed. The reason for focusing on these three disciplines is that they are major professional areas of the RICS and they have the largest number of members. The aim of the interviews is to seek targeted interviewees’ comments on the use of moral theory to explain the RICS Core Values and RICS Rules of Conduct for the Members.

Firstly, some background information of the interviewees was sought:

- Discipline
- Duration of having full RICS membership
- Current role
- Involvement with the RICS activities, in addition to as a member
- Involvement in issues or activities related to professional ethics

Table 1 shows some background information of the interviewees. The interviewees were also asked to comment on which moral theory is most suitable to explain the nine RICS Core Values and RICS Rules of Conduct as overall. Then the interviewees were also asked to comment on the suitability of the moral theory for each Core Value and each Rule of Conduct. Furthermore, the interviewees were also asked for their comments on the improvement of the RICS ethical principles and Rules of Conduct.
Table 1: Description of Interviewees

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Discipline</th>
<th>Duration of full RICS Membership (Years)</th>
<th>Involvement with professional ethics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GP</td>
<td>6</td>
<td>Uses professional ethics to underpin his day-to-day professional practice</td>
</tr>
<tr>
<td>2</td>
<td>QS</td>
<td>5</td>
<td>Applied relevant RICS guidance when teaching relevant subject</td>
</tr>
<tr>
<td>3</td>
<td>BS</td>
<td>23</td>
<td>None</td>
</tr>
<tr>
<td>4</td>
<td>BS</td>
<td>15</td>
<td>Ask APC candidates professional ethics related questions at RICS APC1 interview</td>
</tr>
<tr>
<td>5</td>
<td>QS</td>
<td>47</td>
<td>None</td>
</tr>
<tr>
<td>6</td>
<td>BS</td>
<td>20</td>
<td>None</td>
</tr>
</tbody>
</table>
| 7           | GP         | 13                                      | • In his current role, he teaches RICS Rules of Conduct for Undergraduate Year 2 students  
• When he was a practitioner, he was required to comply with the RICS Rules of Conduct and had Professional Indemnity Insurance for his company |
| 8           | BS         | 30                                      | • As Chairman of RICS APC interview, he asks professional ethics related questions to candidates  
• He also ensures that he underpins the subject matter of the modules which he teaches with professional ethics |
| 9           | GP         | 21                                      | None                                 |
| 10          | QS         | 30                                      | None                                 |
| 11          | QS         | 26                                      | • Conducted research on professional ethics in 1990s. The outcome of that research project was that the RICS set up the RICS Professional Ethics Working Party and was a member of this Working Party |

1 APC is the RICS Assessment of Professional Competence
The mean value of the duration of the full RICS membership is 22 years and thus the sample consists of very experienced Chartered Surveyors.

4. Research Findings

4.1 Nine RICS Core Values

The interviewees have mixed views on the use of moral theory to explain the nine RICS Core Values. Three respondents commented that more than one moral theory can be used to explain the nine RICS Core Values, one respondent advocated the use of two moral theories (deontology and virtue ethics) while the other two respondents commented that all moral theories are relevant to the explanation of RICS Core Values. There are mixed view on respondents’ comments on the use of moral theory to explain the RICS Core Values. However, the one common theme is that the interviewees who have been RICS members for longer and have more involvement with RICS professional ethics tend to have stronger opinions. They tend to think virtue ethics theory is the most appropriate theory to explain professional ethics because they acknowledge the importance on ‘doing the right thing during the process’ and ‘ensuring the final outcome is correct’

The dominant moral theory for explaining the RICS Core Values is deontology. This followed by virtue ethics and utilitarianism. They received eight responses, five responses and three responses respectively. The respondents think that deontology is the most appropriate moral theory for explaining RICS Core Values because it stated the importance of duty and moral obligations. It is also related to the correctness of actions and to ensure to do the right thing in the process. Interviewee 2 commented that 'RICS is more concerned with the process rather than the outcome'. The other interviewees echoed this comment and they stated that the surveyors do not know the outcome when they are working on their actions, therefore, the best thing that they can do is to ensure the correctness of the procedures. Also, if the members have been charged for negligence or breach of Rules of Conduct, it is important for them to demonstrate that they have done the right thing in the process.

On the other hand, Interviewee 8, who has been a RICS member for 30 years and a Chairman for RICS APC Panel has a totally opposite view. He stated that 'the RICS Core Value is all about utilitarianism. The RICS aims to ensure that the client does not come to any harm when they receive services from the RICS members. Therefore, the way that the RICS acts is an utilitarianism approach'.

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2 There are twelve respondents. Two respondents identified two moral theories and one respondent used three moral theories to explain RICS Core Values. Therefore, there are sixteen responses in total.
Some other respondents have broader views on the use of moral theory. They think that the RICS has concerns on the process as well as the result. Therefore, they think virtue ethics is the most appropriate moral theory as it considered the characteristics of both utilitarianism and deontology. Interviewee 7 commented that 'utilitarianism is not the correct one to explain the RICS Core Values. The RICS is very concerned with how you get there, deontology is also not the correct one as it is only concerned with the process. RICS is very concerned with how you get there as well as the final outcome. So, I would think it is more about virtue ethics as it considers both utilitarianism and deontology'. This comment is further echoed by Interviewee 11, who has substantial experience on research on professional ethics and involvement with the RICS activities. He stressed the thought or thrust of the nine RICS Core Values are related to the Chartered status of the RICS which means it is for the good of the member but more significantly for the good of the public. In turn, the outcome is critical to the RICS in the society. However, the implications for the Core Values are about governing the rightness and wrongness of the actions for the members. Therefore, he commented that virtue ethics is the most suitable moral theory as its core principles are about 'doing the right things'.

Overall, there is a very mixed view on the use of the moral theory. The common theme is the respondents think the RICS has great concern on ethics and it aims to ensure the interest of the clients and the general public are protected.

4.2 RICS Rules of Conduct

Similar to comments for the RICS Core Values, the respondents have different views on the use of moral theory in the RICS Rules of Conduct. Five respondents commented that deontology is the key moral theory to RICS Rules of Conduct; four respondents think it should be utilitarianism and three respondents commented it should be virtue ethics.

The comments on the use of utilitarianism are the same as for explaining RICS Rules of Conduct, that is to ensure the clients are not subject to any harm as a consequence of the negligence of the surveyors. The interviewee 8 stated 'the RICS's concern is that the clients do not come to any harm. If the surveyors do any harm to the clients, it will bring disgrace to the Institution and the professional itself'. It follows the fundamental principle of utilitarianism on ensuring there is a good final outcome. Interviewee 3 also echoed this comment as he thought that the focus of Rules of Conduct does not have process involved but is about the rightness or wrongness of the outcomes. These two interviewees have similar professional backgrounds; they are Building Surveyors and have been RICS members for over twenty years. On the other hand, there are no consistent comments from the General Practice surveyors and Quantity Surveyors.

Interviewee 6 summarised the major difference on the use of moral theory for the RICS Core Value and RICS Rules of Conduct. He stated that ‘the RICS Core Values is more emphasised on the ethical principles, which is more about governing members' behaviour. It is more about deontology. While, the RICS Rules of Conduct is more
about making the procedures function well and focus on achieving a good final outcome, so it is more about utilitarianism’.

4.3 Improvement of the RICS ethical principles and Rules of Conduct.

Generally, the interviewees found that the RICS has offered clear guidance on ethical principles. They welcome the introduction of the new Rules of Conduct. They found them straightforward, simpler and easily to follow. Also, the interviewees welcome the idea of having separate Rules of Conduct for Firms.

On the other hand, the interviewees suggested some improvement that could be made. The current RICS Rules of Conduct for Members do not mention some key ethical issues such as Complaints Handling Procedure, Handling Clients Money and Professional Indemnity Insurance. Although there are separate Policies and Helpsheets which give more guidance to the members on these issues, they are not cross-referenced or referred to the Rules of Conduct for Members document. Interviewee 11 suggested that one of the improvements is to add these documents or cross-reference them to the Rules of Conduct.

5. Conclusion

This research aimed at investigating the use of moral theory to explain the RICS Core Values and RICS Rules of Conduct for Members. The chosen moral theories are deontology, utilitarianism and virtue ethics. The approach taken to conduct this research of a qualitative nature. Twelve semi-structured interviews were conducted. The interviewees are Building Surveyors, Quantity Surveyors and General Practice Surveyors.

The interviewees have mixed opinion on the use of moral theory on explaining RICS Core Value and Rules of Conduct. The interviewees commented that all three moral theories can be explained in RICS ethical principles in some respect. There is a slightly stronger view that deontology is the most suitable moral theory. The argument is that the surveyors do not know the outcome when they are working on it, so the only thing that they can do is to ensure the process is right. Also, if there is any claim for negligence for their activity in the future, they can provide the arguments that they have done it correctly. On the other hand, the interviewees who have been RICS member for longer and have more involvement with the RICS professional ethics tend to think that virtue ethics is the most appropriate theory to explain RICS ethical standards as they understand the importance of the correct ‘result’ and ‘process’.

The interviewees generally welcome the move from the 60-page RICS Rule Book to 10-page RICS Rules of Conduct. However, they have suggested some improvement, which is to refer to the separate Policies and Helpsheets on Handling Clients Money, Complaints Handling Procedures and Professional Indemnity Insurance in the Rules of Conduct.
This paper has presented the finding of research on investigating the surveyors’ view of the use of Moral Theory to analysis the Rules of Conduct for Members. There are some interesting findings from this research which could lead to future research.

The first suggested future area for research is the use of Moral Theory to explain the Rules of Conduct for Firms and it can then compare the results with the findings as presented in this paper. The second suggested area is to research on wider surveyors’ view on the use of moral theory to analyse RICS Rules of Conduct and the suggested improvements which can be made. It aims to find out surveyors’ theoretical understanding on professional ethics and the areas of improvement that can be made.

6. Acknowledgements

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7. References


The built environment: disciplinary knowledge base and implications for educators

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Abstract:
The built environment subject area is now well-established as a recognised field of study. However, because of its vocational orientation it is usually defined in terms of a particular range of professional activities and aptitudes. In consequence the theoretical nature of its academic knowledge base is poorly developed. This has consequences for research and teaching practice within the field. Using established literature on the historical approaches to knowledge categorisation a theoretical model is proposed. This defines the built environment as an applied, but theoretically coherent, interdiscipline with a common epistemological axiomatic. The practical benefits of the model are illustrated by examples in the context of curriculum design, research strategy and the research-teaching nexus.

Keywords: built environment, disciplines, knowledge, research, teaching.

1 Introduction

The built environment subject area is now established as a recognised field of study by the international academic community. However, its identity has traditionally been defined in terms of the traditional construction and property professions from which it has emerged, and more recently, by the cultural and behavioural aspects of its international research activities.

Although there is broad acceptance that the field is multidisciplinary, there has been little attempt to define the cognitive nature of its particular knowledge base, nor to consider the implications of this for research and teaching practice. Studies of the field are few in number (for example, Temple 2004) and tend to be characterised by a pragmatic and issue-driven approach to the subject, with little attempt to understand its underlying academic base. This may reflect a more general suspicion of the value of theory within the field (Koskela 2008).

When cognitive issues have been discussed, they have tended to be addressed in a piecemeal fashion, for example in the isolated contexts of construction management (Loosemore 1997), surveying (Walker 2001), architecture (Penn 2008) or real estate (Diaz 1993). Works of this nature have also largely drawn on the personal experiences
of the authors, and on literature published by other built environment writers, rather than on established academic sources.

By neglecting the established literature on disciplinary characteristics these studies have missed the opportunity to develop a consensus within a recognised theoretical framework. This lack of a recognised theoretical disciplinary base for the built environment subject area is well recognised (Betts & Lansley 1993, Loosemore 1997, Brandon 2002) and has inhibited decision making in both the research and teaching arenas. The current paper explores these issues in the context of the historical and theoretical approaches to knowledge categorisation. Based on these approaches it proposes a model of the built environment as an applied, but theoretically coherent, interdiscipline and demonstrates how this can be used to aid decision making in particular areas.

2 Knowledge Categorisation

Human society has found it necessary to categorise the various forms of knowledge since at least the times of Ancient Greece in order to render the world intelligible. Although, over time, these categorisations have taken a number of different forms three major themes emerge which contribute to modern views about the nature of academic knowledge.

2.1 The Unity of Knowledge

The first of these is the notion that, although knowledge may be categorised according to disciplines, it nevertheless maintains a unity which transcends any divisions so created. This was first articulated by Plato (ed. Waterfield 2003). Aristotle later developed the concept into a hierarchy of subject areas with Philosophy, a higher, universal and undisciplined field of knowledge, binding all other fields together (trans. Lawson-Tancred 1998; Rowe 2002).

This idea of the unity of knowledge survived the progressive emergence of organised disciplines within universities from the late Middle Ages onwards. It is evident, for example, in Descartes’ analogy of philosophy as a tree with the disciplines making up its roots, trunk and branches (trans. Sutcliffe 2001) and also in Kant’s concept of an architectonic of the structure of all knowledge (trans. Meredith 1978). It is, of course, also preserved today in the name of the Doctor of Philosophy (PhD) degree which is awarded for research in any area of knowledge.

2.2 Distinction between Pure and Applied Knowledge

The second major theme concerns the idea that knowledge can naturally be categorised as either pure or applied. Pure knowledge is based entirely on theory whilst applied knowledge involves the application of theoretical knowledge in a particular practical context. Aristotle identified three classes of disciplines. Although he described an intermediate class which was concerned with ethical issues, his main distinction was between the theoretical and what he referred to as the productive disciplines. The theoretical class included mathematics and the natural sciences whilst engineering was an example of a productive discipline (trans. Lawson-Tancred 1998; Rowe 2002).
The idea of pure and applied disciplines is a familiar one and Boyer (1990) has recently described it in terms of the scholarship of discovery as opposed to the scholarship of application. The distinction echoes the philosophical distinction between propositional (or factual) knowledge and practical knowledge of how to do something (Audi 1999).

2.3 Influence of C.P. Snow

The final theme concerns the distinction between the sciences on the one hand and the arts and humanities (often jointly referred to simply as the arts) on the other. Until the end of the eighteenth century the term “science” was used interchangeably with “philosophy” to refer to scholarship in all branches of knowledge.

This changed from the early nineteenth century when the description became restricted to the natural sciences which by that time had become concerned with the investigation of external phenomena through empirical methods. The success of the natural sciences enhanced their credibility and this, in turn, influenced the development of the social sciences which also later chose to adopt empirical methods.

Due to the greater unpredictability of the social world, there were inevitably differences between the methods adopted in the natural and social sciences. Nevertheless, a far wider gulf started to emerge between these sciences collectively, and the remaining disciplines in the arts and humanities which continued to follow traditional patterns of scholarship.

By 1959 this gulf had been given popular expression by CP Snow in his now infamous Cambridge Rede lecture, *The Two Cultures and the Scientific Revolution* (Snow 1959). The resulting media publicity ensured that the arts / science divide passed into the popular culture and, no doubt partly for this reason, it has continued to play a dominant role in disciplinary categorisation to the present day.

3 Conceptual Models

Each of these three themes is reflected in the various conceptual models which have been developed since the 1960s to explain the nature of disciplinary differences. Within these models the unity of knowledge and pure / applied themes are generally dealt with implicitly and most attention is focused on what this paper has described as the arts / science distinction.

In fact most of the models develop their ideas under this theme from Kuhn’s (1962) *The Structure of Scientific Revolutions*. In this seminal work Kuhn argued that science proceeds, not through a process of incremental development, but by periods of uneventful “normal science” interspersed by periods of rapid change (or “paradigm shifts”) following a crisis in the prevailing epistemological and methodological paradigm.

Within his thesis he noted that different academic disciplines are characterised, to varying degrees, by the presence of paradigms that prescribe the appropriate problems of study and the validity of methodologies to be employed. Whilst some fields (typically the natural sciences) are characterised by highly developed paradigms, others
(for example the humanities) are less so and research within these disciplines therefore tends to be more idiosyncratic.

Lodahl and Gordon (1972) used Kuhn’s thesis to develop the so-called “paradigm development” model whereby variations in academic disciplines could be measured according to their position along a scale of paradigm development. The results of their study into university departments in the physics, chemistry, sociology and political science disciplines appeared to support the validity of the model and this has subsequently been used by others in a number of other studies (Braxton and Hargens 1996).

The most widely used model is however that developed by Biglan (1973). This also draws on the concept of paradigm development which it uses to place disciplines on a continuum from “hard” (paradigmatic) to “soft” (non-paradigmatic). The model also explicitly incorporates the pure / applied theme which enables it to identify any discipline on a hard-soft / pure-applied matrix. Based on Biglan’s empirical findings the position of individual academic disciplines can be plotted on the matrix as illustrated in Figure 1.

![Figure 1: The Biglan Disciplinary Model (Chynoweth 2008)](image)

It will be seen that the natural sciences fall into the bottom left (hard-pure) quadrant whilst the arts and humanities are to be found in the bottom right (soft-pure) part of the matrix. In fact, there is a continuum from the natural sciences on the far left hand side of the diagram, through the social sciences in the centre, to the humanities and finally to the arts on the far right hand side. This transition reflects the progressive relaxation of paradigmatic requirements and the increasing level of personal input by the individual scholar into the academic enterprise. The matrix is completed by the inclusion of the applied axis. The applied sciences, which serve the engineering professions, appear in
the top left (hard-applied) sector whilst the social and creative professions are found in the top right (soft-applied) quadrant.

A number of subsequent studies have tested the validity of the Biglan model. These have demonstrated its ability to effectively distinguish between disciplines (Lattuca and Stark 1995) and it now has general currency amongst higher education researchers (Braxton and Hargens 1996).

4 The Built Environment as an Academic Subject

The precise boundaries of the built environment subject are not fixed but Griffiths (2004) has described it as “a range of practice-oriented subjects concerned with the design, development and management of buildings, spaces and places”. The relevant UK Research Assessment sub-panel defines the field as including “architecture, building science and engineering, construction, landscape and urbanism” (HEFCE 2005).

It will be seen that each of these definitions describes the field in terms of its various fields of application, rather than by attempting to define its cognitive base. This is entirely appropriate for an applied field but it does mean that the various descriptions fail to provide a basis for understanding the nature of its knowledge base. In order for this to be achieved it is first necessary to understand the nature of the work actually undertaken by its academic community and the particular fields of expertise which are employed by its scholars.

![Figure 2: The Built Environment Knowledge Base (Chynoweth 2005)](image-url)
The curriculum content of built environment undergraduate programmes provides an indication of the relevant areas of expertise. A further indication is provided by the UK Quality Assurance Agency’s subject benchmark statements within the various fields of application identified above (for example, QAA 2002). The Royal Institution of Chartered Surveyors has also defined its academic base by reference to particular areas of knowledge (RICS 1991).

Although there are inevitably minor differences in the various descriptions, a degree of consensus is seen to emerge regarding the substantive areas of built environment knowledge. For the purpose of this paper, these are defined in terms of the following five subject disciplines: Management, Economics, Law, Technology and Design.

The predominantly applied nature of the field’s knowledge base can be illustrated by locating these areas of knowledge within the Biglan model (Figure 2). This exercise also highlights the enormous diversity of academic practices within the built environment which are seen to span almost the entire spectrum of the arts and sciences. This latter point raises questions as to whether it is appropriate to describe the field as an academic discipline at all, or whether it is simply an amalgamation of disciplines which collectively serve the fields of application identified above.

5 Academic Disciplines

The term “discipline” is often used loosely to describe the built environment field to reflect the fact that it has now acquired a distinct cultural identity in terms of its academic practices and modes of discourse. However, academic disciplines are not simply social, but also epistemic communities sharing a unified knowledge domain (Becher & Trowler 2001).

The built environment field is not therefore a discipline in the strict sense. However, a related question is whether it could instead be classified as *interdisciplinary* in character. Although frequently also described in this way the term once again tends to be used loosely, often simply to acknowledge that the field is too diverse to be described as an academic discipline in its own right.

![Figure 3: Taxonomy of Interdisciplinarity (Jantsch 1972)](image-url)
The term “interdisciplinarity” is notoriously misunderstood (Moran 2002). Nevertheless, there is now a significant body of scholarship within the subject area, including Jantsch’s (1972) frequently cited taxonomy of interdisciplinarity.

Jantsch draws a distinction between true interdisciplinarity and the lesser concepts of multidisciplinarity, pluridisciplinarity and crossdisciplinarity (Figure 3). Multidisciplinarity occurs where a variety of disciplines are encountered simultaneously in circumstances where the possible relationships between them are not made explicit. Klein (1990) notes that this is frequently associated “with undergraduate courses that present different specialists either in serial fashion or on different days”. In a research context multidisciplinarity may be encountered where scholars from different disciplines use the same library or laboratory facilities. The concept is therefore additive rather than integrative with any synthesis occurring as a matter of accident rather than design (Klein 1990).

The first step towards integration involves a state of pluridisciplinarity. This requires the deliberate juxtaposition of different disciplines so as to enhance the relationships between them. Communication between disciplines is encouraged but not coordinated and the nature of any integration is therefore, once again, largely a matter of chance. In contrast, crossdisciplinarity introduces an element of coordination into the relationship between disciplines. However this occurs where one discipline imposes its own disciplinary concepts and goals (referred to by Jantsch as axiomatics) on the others by force. Therefore, although coordination is present there is an absence of dialogue and the relationship is more about control then cooperation. Jantsch suggests that most claims to interdisciplinarity are at best pluri or cross-disciplinary in nature.

True interdisciplinarity only occurs where a number of separate disciplines surrender their own axiomatics and collectively define themselves by reference to a common strategic axiomatic. According to Jantsch this takes place where the traditional disciplines of knowledge are brought together in structures which reflect “basic themes of society or need areas” rather than their own disciplinary identities. The existence of a common axiomatic then facilitates epistemological integration as the disciplines collectively address the resolution of common problems. Where this occurs a new hybrid form of knowledge is created which is usually referred to as an interdiscipline (Klein 1990).

![Figure 4: The Built Environment Interdiscipline (after Jantsch 1972)](image-url)
If this taxonomy is applied to the built environment it can be seen how the field is, at least potentially, interdisciplinary in character. The extent to which it genuinely achieves this will depend on the degree to which it is able to define its (practical) field of application in terms of a (theoretical) common axiomatic. It will also depend on the extent to which its component disciplines are prepared to subjugate their own disciplinary axiomatics in favour of collective strategic goals, and to work with each other in achieving them.

Jantsh cites architecture and urban and regional planning as examples of fields that “have developed half way” towards genuine interdisciplinarity. The concept of a built environment interdiscipline (Figure 4) therefore appears to be a realistic aspiration for the field as a whole. It would also provide a framework around which the subject’s long-neglected theoretical base could be developed. By generating a better understanding of the relationship between the field’s common axiomatic and its individual subject areas it is suggested that decision makers would then be better able to address a range of issues that frequently arise within built environment education. Three of these are briefly described below.

6 Implications for Educators

6.1 Teaching

The first issue relates to the question of the design of the teaching curriculum. Because the field consists of a number of component disciplines the challenge is to ensure that these are sufficiently integrated and that students receive more than what Klein (1990) has described as a “cafeteria-style” educational experience. This integration is more likely to be achieved where the educational institution has a well developed understanding of the field’s common axiomatic, and where there is therefore genuine interdisciplinary working between academic staff with responsibility for the particular components of the programme.

Whilst this may be achieved in some institutions it seems likely that most students’ experiences are, at best, pluridisciplinary. This is illustrated by Hutchinson’s (2005) description of law provision within a number of UK built environment institutions. He describes a “traditional” pattern of subject content, teaching methods and assessment which appear to differ little from the treatment of law in any other subject context. No evidence of integration with other subjects was recorded and law subjects were described as being “very largely delivered in exclusively, wholly legal, modular boxes”.

The prevailing axiomatic was clearly that of the law discipline. Indeed, it is difficult to see how this could have been otherwise when a significant number of the law subjects were reported as being provided by service teaching by academics from law departments. Curriculum design may therefore be one area in which the field can benefit from the interdisciplinary model and the proper development of a common built environment axiomatic.

6.2 Research

The same process is also likely to improve the relevance of academic research within the built environment. This should ideally be capable of delivering solutions to
stakeholders within the field across the whole range of its sub-disciplines. A clear sense of its common axiomatic would assist the field in utilising all parts of its knowledge base towards this common end. Unfortunately the field’s academic research community is still not “sharing a common journey” with its stakeholders (Brandon 2002).

One aspect of this may be the process of “epistemic drift” (Elzinga 1985) which occurs where the availability of research funding encourages research in some areas to the detriment of that in others. There is evidence that this has occurred in the built environment with the growth of research in management subject areas at the expense of that in technology (Brandon 2002). Research in the law subject area has been similarly neglected, again to the detriment of stakeholders within the field (Chynoweth 2005).

In recent years the field has therefore seen the increasing dominance of the management discipline within built environment research and the development of a strong Management-led crossdisciplinarity. Despite the strength of the pressures which have contributed to this trend it is likely that a clearer sense of interdisciplinary identity could encourage a more evenly balanced approach to research in future years.

6.3 Relationship between Research and Teaching

The final issue concerns what has become known as the research-teaching nexus, or the extent to which a university’s research genuinely contributes to the effectiveness of its teaching activities. Griffiths (2004) has explained how this is particularly difficult to achieve in the built environment due to the differing expectations of the teaching and research components of the field.

He describes a professional “content coverage” mentality to curriculum design which reinforces Hutchinson’s (2005) findings about the nature of law provision. This does not fit easily with the wider, and more opportunistic, subject content of much built environment research in the management field. The result is an increasing gulf between the areas addressed by the field’s research and its teaching activities.

The problem arises from a conflict of axiomatics. To some extent the field’s teaching activities are still driven by the axiomatics of the professional disciplines from which it has emerged, or at least by the academic axiomatics of its various component disciplines. However, as discussed above, its research activities are dominated by an axiomatic that has more in common with the management discipline than with the built environment as a whole. It seems therefore that the evolution of an effective research-teaching nexus might also benefit from the development of a common built environment axiomatic.

7 Conclusions

This paper has noted the lack of a recognised theoretical disciplinary base for the built environment subject area. It has suggested how this might be addressed within the context of the historical and theoretical approaches to knowledge categorisation. It has explored a number of these approaches and identified the common themes on which they are based. It has described these in terms of the unity of disciplinary knowledge
and the twin distinctions between the pure and applied, and the artistic and scientific disciplines.

The paper has described the cognitive nature of the built environment knowledge base by reference to the Biglan model which incorporates each of these themes. It has demonstrated how this knowledge base incorporates a number of separate disciplines with diverse epistemologies from across the spectrum of the arts and sciences. It has concluded that the built environment field is not therefore a discipline in the true sense of the word but has explored the possibility that it might nevertheless constitute an interdiscipline.

Using Jantsch’s taxonomy the paper has concluded that the field does not presently satisfy the definition of interdisciplinarity. Whilst it is certainly multidisciplinary its teaching activities are more correctly described in terms of pluridisciplinarity whilst its research is indicative of Jantsch’s definition of crossdisciplinarity. Nevertheless, the paper has proposed the concept of a built environment interdiscipline is a realistic aspiration, and one which offers a starting point for the development of a theoretical base for the field as a whole.

It has been suggested that this would provide practical benefits for decision makers when dealing with a number of areas, including curriculum design, research strategy and the management of the research-teaching nexus. However, in accordance with Jantsch’s taxonomy, the essential prerequisite for all these changes is the development by the Built Environment academic community, of a common epistemological axiomatic.

8 References


