Evaluation of the Construction (Design and Management) Regulations (CDM) 1994

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The Construction (Design and Management) Regulations 1994 (CDM) came into effect on 31 March 1995. Concerns about the way in which some were implementing aspects of the CDM Regulations quickly emerged. In October 1995, HSE appointed an independent research organisation, the Consultancy Company, to carry out an interim evaluation of CDM. The aims were to examine the impact of the Regulations and how key aspects were being implemented; particular attention was paid to the role of planning supervisor and the levels of paperwork which are sometimes generated. The Consultancy Company carried out over 200 interviews with a cross-section of clients, designers, planning supervisors principal contractors and contractors.

Their principal conclusion is that it is too early to quantify the costs and benefits of implementing the Regulations. However, the results show the majority believe that:

- CDM has led to a greater awareness of health and safety issues right across the construction industry;
- in the longer term, CDM will yield business and efficiency benefits as well as improvements in health and safety;
- the health and safety plan is an important and useful document.

However, some concerns remain, in particular:

- the cost and role of the planning supervisor for some projects;
- the excess amount of paperwork sometimes created, particularly when assessing competence for health and safety.

This report and the work it describes were funded by the Health and Safety Executive. Its contents, including any opinions and/or conclusions expressed, are those of the authors alone and do not necessarily reflect HSE policy.
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</tr>
</tbody>
</table>
This report and the annexed case studies are the outcome of a project to evaluate the impact the Construction (Design and Management) Regulations 1994 (CDM) have had on the construction sector.

The project was conducted by way of interview with all duty holder groups within the construction sector. Additionally a number of key supporting professions to the construction sector were interviewed to ensure all facets of the impact and effect of the Regulations had been adequately covered.

Initially a pilot study was undertaken to set the basis for a more structured main body of research. In parallel with the main body of research six case studies were undertaken to explore in more depth some of the major issue identified in the pilot study.

The report and case studies show that some aspects of the Regulations have had a significant and positive impact on the construction sector both in terms of health and safety, and from a business standpoint. There are however, certain aspects of the Regulations which have increased costs for duty holders at time of implementation. There are also anticipated to be further ongoing costs for duty holders in maintaining compliance to the Regulations as well as project oncosts mainly attributable to specific requirements of the Regulations which were not included in the corresponding European Legislation - Council Directive 92/57/EEC.

The report concludes with a number of summary points in which specific aspects of the Regulations have been identified where further detailed investigation, beyond the scope of this project, should be undertaken before any amendments are made to the current Regulations.
1. INTRODUCTION

1.1 The Regulations

1.1.1 The Construction (Design and Management) Regulations 1994 (CDM) implemented the design and management aspects of the Temporary or Mobile Construction Sites Directive. The Regulations came into effect on 31 March 1995.

1.1.2 The CDM Regulations aim to reduce the unacceptably high rates of death, injury and ill health associated with construction work by ensuring that health and safety is planned and managed effectively throughout all stages of a construction project.

1.2 Survey Background

1.2.1 A Cost Benefit Assessment (CBA) carried out prior to the introduction of the Regulations identified a number of benefits and predicted a net quantifiable cost of approximately 0.7% of output.

1.2.2 Although new legislation is usually evaluated two to three years after it is introduced, the considerable interest generated by the Regulations both within the construction sector and wider arena was recognised by the Health and Safety Commission (HSC). As a result the HSC commissioned an interim evaluation with the aim to assess the costs and benefits associated with the implementation of the Regulations and the Approved Code of Practice.

1.2.3 The primary objectives in support of the aim of the study were:

i. to examine the impact that the regulations have had on the health and safety performance of the construction sector and their likely effect over the lifecycle of projects

ii. to examine the ways in which the regulations have been brought into practical effect with specific reference to;

a. the role of the planning supervisor
b. the requirement to assess competence
c. the requirement for a pre-tender health and safety plan

iii. to examine the one-off costs of implementing the Regulations

iv. to examine the costs of maintaining procedures for the continuing implementation of the Regulations once they are established

v. to examine the effects of the Regulations on those enterprises concerned with the fabrication and or assembly of off-shore installations.
1.4 It was acknowledged by the HSC that bringing forward the evaluation would reduce the likelihood of securing a view which will be valid in the longer term since the initial investment costs such as those associated with identifying and developing the necessary competencies and systems to implement the Regulations were likely to dominate.

1.5 Longer term benefits such as a reduction in accident and ill health incidence were not anticipated to have been fully realised nor their effect become fully evident. It was therefore expected that a further evaluation will be necessary when the Regulations have become more established.

1.6 The accelerated evaluation was initially required to be completed in the Spring of 1997.
2. THE METHODOLOGY

2. The following describes the methodology used for the survey. This methodology was specifically designed to achieve the requirements detailed in the research brief issued by the Health & Safety Executive (HSE). It must be noted that the requirement was for the survey to be conducted across the whole sector and that as such the methodology did not set out to yield a statistically valid sample for each individual duty holder group.

2.1 Initial Approach

2.1.1 The approach taken followed a best practice classical research methodology, rather than an ‘expert’ process. This ensured that any preconceptions borne from substantial industry knowledge did not impact the gathering of data or the subsequent analysis and consequently have produced a biased result.

2.1.2 The approach was pragmatic, controlled and staged to enable continuous validation of the objectives and the progress in meeting them.

2.1.3 On the commissioning of the study a detailed appraisal of the Construction (Design and Management) Regulations 1994 and Approved Code of Practice was made together with that of the structure of the industry to ensure a thorough and in-depth understanding was achieved of all potential issues that were likely to arise during the course of the study. A meeting was held with HSE on completion of the detailed appraisal to resolve specific issues that have been identified and to confirm the understanding that had been reached.

2.1.4 Following the detailed appraisal a pro-forma questionnaire was developed and devised to solicit responses to meet the objectives of the study but in particular to:

- identify the measurable costs and benefits arising from the Regulations
- determine the measurable costs and benefits the Regulations have brought and or may bring to the off-shore fabrication industry
- examine the interface between the Construction (Design and Management) Regulations 1994 and the Building Regulations in relation to the responsibilities of designers
- identify any costs and benefits not anticipated by the Cost Benefit Assessment carried out prior to the introduction of the Regulations.

The Pro-forma questionnaire is annexed as Appendix A.

2.1.5 Initial research was carried out to identify a number of suitable and key enterprises in the construction, engineering construction and civil engineering sectors to form the basis of a pilot study.
2. THE METHODOLOGY (Continued)

2.2 The Pilot Study

2.2.1 The pilot study comprised 24 face to face interviews based on an initial sample drawn from across the sectors and corresponding duty holder groups. This number of interviews allowed the project to commence with Ministerial approval based on an agreement in principle and without the need for the pro-forma questionnaire to be approved by the National Statistics Office.

2.2.2 The initial sample comprised of the following Duty Holders:

<table>
<thead>
<tr>
<th>Clients</th>
<th>Designers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning Supervisors</td>
<td>Principal Contractors</td>
</tr>
<tr>
<td>Contractors</td>
<td>Multiple Discipline Enterprises</td>
</tr>
</tbody>
</table>

Interviews were conducted with key senior representatives of both large and small to medium enterprises within these duty holder categories drawn from the three industry sectors (construction, engineering construction and civil engineering).

2.2.3 The findings of the face to face interviews were reviewed, analysed and consolidated to provide a ‘high level’ view of:

- the awareness of the Regulations
- the actual and further anticipated costs associated with the implementation of the Regulations
- the extent and magnitude of the benefits arising from improved standards, better integration of the design and construction processes, improved information flow and reduced life-cycle costs
- the extent of compliance with the Regulations.

2.2.4 The pilot study provided the foundation for the main body of the study and 6 case studies that were carried out as part of the project. The objectives and scope of the case studies are detailed at the beginning of each case study which are annexed to this report as Appendices C to H inclusive.

2.2.5 The findings of the pilot study and the corresponding analysis formed the basis of an interim summary report to the HSE. At this stage input was taken from the HSE to ensure that the subsequent main body of the study met any additional or modified objectives that had been determined as a result of the initial findings.
2. THE METHODOLOGY (Continued)

2.3 Interim Stage

2.3.1 From the findings of the initial interviews a structured questionnaire appropriate for both face to face and telephone interviews was developed and used in the main body of the study. A copy of the Structured Questionnaire approved by the Survey Control Unit of the National Statistics Office is annexed as Appendix B.

2.3.2 To manage the volume of data obtained from the interviews and to facilitate the corresponding analysis a multi-relational database was constructed using Borland Paradox version 5.0 software.

2.3.3 Further detailed research was carried out to determine the survey base for the main body of the study. An interim report was provided to the HSE at this stage.

2.4 Main Body Of Research

2.4.1 Using information obtained during the pilot study and employing the approved structured questionnaire a survey was conducted across all duty holder groups in the three industry sectors. This included Clients, Client Agents (including the voluntary sector), Design Authorities, Designers, Planning Supervisors, Principal Contractors and Contractors. Both the public and private sectors were included in the survey. A small sample was also drawn from the legal profession, the insurance sector, professional institutions, trades associations, and a trade union.

2.4.2 Based on 1995 data from the Central Statistics Office (CSO) giving the number of companies in the Construction sector of U.K. industry and CSO statistics on the size and activity of these companies, it was established that the Regulations would be applicable to 85 percent of companies. On this basis a minimum survey sample of 196 was determined to ensure a confidence level greater than 95 percent with a relative allowable error of less than 5 percent.

2.4.3 It was acknowledge by HSE that a higher confidence level and lower relative allowable error would have required a prohibitively large sample for the survey with the corresponding impact on both cost and time. Stratified weighted sampling was employed giving an improvement in confidence level and reduction in relative allowable error equivalent to an effective sample size of greater than 294. Purposive selection of samples within the strata improved the confidence level still further.

2.4.4 A total of 234 interviews, of which 98 were face to face and 136 via telephone, were conducted. A breakdown of the interviews by duty holder group and size of company is provided in Section 3 - The Survey Sample.
2. THE METHODOLOGY (Continued)

2.4.5 The volume and type of responses being received was continuously reviewed and input taken from the case studies being undertaken for validation purposes. Also, as interviews were completed the database was populated and periodic analysis performed.

2.4.6 This combination monitoring confirmed that both the survey methodology and structured questionnaires were appropriate and supported all the stated objectives of the project. It also confirmed that no increase in the size of the survey sample was necessary.

2.4.7 During this period regular interim progress meetings with the HSE were held at which times a top level analysis of the survey findings and the progress of the 6 case studies undertaken was presented.

2.5 Consolidation & Analysis of Data

2.5.1 The data from the completed survey was consolidated and a quantitative and qualitative analysis performed in line with the stated objectives of the project, the specific requirements of the HSE and with the clear objective of determining inter alia:

- the one-off costs associated with the initial implementation of the Regulations and the costs of maintaining the effectiveness of procedures that have already been, or will be, established

- the costs which are directly attributable to complying with the Regulations

- the costs which have been incurred by Duty Holders who have incorporated systems for complying with the Regulations into other business procedures

- the costs which have been incurred by Duty Holders because they have misunderstood the legislative requirements.

2.5.2 This summary report contains the results of the analysis together with a discussion on points of interest or uncertainty and substantive evidence in support of all relevant conclusions drawn from the aggregated data.

2.6 The Final Report

2.6.1 Guidance was taken from the HSE on the structure and content of this the final report.
3. THE SURVEY SAMPLE

3.1 The survey methodology required a minimum survey sample of 196 comprised solely of the duty holder groups from across the whole sector. It was not a requirement of the methodology for the number of enterprises in each individual duty holder group surveyed to be statistically valid.

3.2 A small number of enterprises drawn from the supporting infrastructure of the construction industry were additionally surveyed to ensure that all key aspects of the take up and implementation of the Regulations were identified.

3.3 The total actual survey sample comprised 234 enterprises. Of this total, 24 were included in the Pilot Phase of the project, 198 in the main body of the study and 12 are classified as ‘Other’ for the purposes of the survey.

3.4 The breakdown of the total survey sample by size of enterprise is shown in Table 1 below.

Table 1

<table>
<thead>
<tr>
<th>Size</th>
<th>Clients</th>
<th>Designers</th>
<th>Contractors</th>
<th>Planning Supervisors</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>V. Large</td>
<td>15</td>
<td>3</td>
<td>11</td>
<td>0</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td>Large</td>
<td>8</td>
<td>8</td>
<td>14</td>
<td>1</td>
<td>3</td>
<td>34</td>
</tr>
<tr>
<td>Medium</td>
<td>7</td>
<td>52</td>
<td>67</td>
<td>1</td>
<td>4</td>
<td>131</td>
</tr>
<tr>
<td>Small</td>
<td>3</td>
<td>14</td>
<td>17</td>
<td>1</td>
<td>2</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>59</td>
<td>109</td>
<td>3</td>
<td>12</td>
<td>234</td>
</tr>
</tbody>
</table>

Size classifications by turnover: V. Large $>500M
Large £50M–£500M
Medium £50K–£50M
Small <£50K

3.5 Those enterprises that comprise the survey sample have been categorised by their primary function which has been determined based on the greatest percentage each attributed to a specific duty holder activity. It must be understood that many of the duty holders are both multi-function and multi-discipline enterprises performing many, and in some cases all, of the specified duty holder functions. For example, many large contractors while undertaking the role of Principal Contractor for a major civil engineering or engineering construction project also have a design and build division, where they may also be their own client, and Planning Supervisor. Many also offer their services as Planning Supervisor on an independent commercial basis having established specialist divisions to do so. Furthermore, many Designers also undertake the role of Client Agent and Planning Supervisor.
3. THE SURVEY SAMPLE (Continued)

3.5 In isolation individual samples of duty holder by size classification may not be statistically robust. Nevertheless, the responses received suggest that most individual samples are representative due to the prevalence of multi-functionality.

3.6 The percentage split of duty holder activity and turnover attributable to;

<table>
<thead>
<tr>
<th>Design</th>
<th>Design and Build</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Construction</td>
<td>Construction</td>
</tr>
<tr>
<td>Demolition</td>
<td>Management</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

for each enterprise surveyed are detailed in the respective tables which comprise a part of the project database.

3.7 Detailed analysis of the split of turnover by activity would add another level of complexity to the project and while it would provide an insight into the structure of the construction industry is beyond the scope of this project. It is also felt that such an analysis would add no value to the evaluation of the take up and impact of the Regulations.

3.8 The breakdown by function, role or position of the interviewees that comprised the survey sample is shown in Table 2 below.

Table 2

<table>
<thead>
<tr>
<th>Interviewee Function Role or Position</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role or Position</td>
<td></td>
</tr>
<tr>
<td>Site Manager</td>
<td>15</td>
</tr>
<tr>
<td>Planning Supervisor</td>
<td>22</td>
</tr>
<tr>
<td>H&amp;S Manager</td>
<td>64</td>
</tr>
<tr>
<td>H&amp;S Director</td>
<td>20</td>
</tr>
<tr>
<td>Board Member</td>
<td>52</td>
</tr>
<tr>
<td>Managing Director</td>
<td>20</td>
</tr>
<tr>
<td>Partner in Design Practice</td>
<td>15</td>
</tr>
<tr>
<td>Professional Designer</td>
<td>15</td>
</tr>
<tr>
<td>Sole Trader / Contractor</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>234</strong></td>
</tr>
</tbody>
</table>
3.9 It must be stated that in general there was a great willingness to contribute to the project by those that were invited to do so, many spending a significant amount of time sharing both their experiences and opinions. A number of the face to face interviews that were conducted had more than one interviewee; the primary interviewee having invited colleagues with different roles and functional responsibilities to the interview.

3.10 It must be noted that some difficulty was experienced in securing the interest of small clients to participate in the survey. This difficulty is reflected in the correspondingly low number of small clients in the survey sample. Many either did not want to participate or stated they did not have the time. Others confirmed that they had appointed an agent who was dealing with all matters on their behalf including those relating to the CDM Regulations and provided the name of their agent by way of a referral. Those agents which agreed to participate are included in the sample. In these cases the agent has been a larger enterprise than the client and are therefore in a different size category.

Chart 1

The Survey Sample

Total Sample 234

- 31.9%
- 14.1%
- 5.1%
- 1.3%

Clients
Contractors
Designers
Planning Supervisors
Other
3.11 Representative Views

3.11.1 To understand whether an individual or corporate perspective of the Regulations had been given during the course of the interview a question asked of respondents was whether the views they had expressed in the answers given to the questions were a general reflection of the position/attitude of the Board of Directors of their Company. The response was:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>88.6 percent</td>
</tr>
<tr>
<td>No</td>
<td>3.0 percent</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>8.4 percent</td>
</tr>
</tbody>
</table>

3.11.2 It is felt therefore, that this response adds greatly to the robustness of the survey and this report by clearly indicating that the responses which have been given are representative of the views of the industry.
4. **CLIENTS**

4. As the heading implies this section of the report analyses the consolidated responses given by clients. Where appropriate anecdotal evidence is introduced to illustrate the statistical data.

4.1 **The Client Sample**

4.1.1 The total client sample of 33 comprises 4 interviews undertaken during the Pilot Study and 29 interviews in the main body of research. This means that the maximum number of possible responses to questions in the structured questionnaire is 29. It must be understood however, that not all clients responded to all questions during interview and therefore the actual number of responses to each question is less.

4.1.2 While there is a mix of size of enterprise within the sample, which is depicted in Table 1, there is also a spread across the different sectors of industry and commerce and this spread includes enterprises drawn from automotive, financial, pharmaceutical, marine, retail, shipbuilding, transportation and the utilities (electricity, gas and water).

4.1.3 The number of projects undertaken to the date of this survey by this client sample where the CDM Regulations have applied varies from 1 by a small enterprise to 16,000 by a utility. If the utilities are excluded because of the volume of work undertaken the average number of projects per client where the CDM Regulations have applied is 70.

4.1.4 The breakdown of the total sample of 33 by private, public and voluntary sector is shown in Table 3 below. The number in the shaded cells of the table indicate the number of enterprises that operate solely in that sector and no other.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Private</th>
<th>Public</th>
<th>Voluntary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>14</td>
<td>5</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>Public</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Voluntary</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>

4.1.5 Another aspect of the client sample, as is discussed in paragraph 3.9, is the inclusion of 2 client agents; 1 in the small size category operating solely in the private sector and the other in the medium size category operating in both the private and public sectors.
4.2 Health and Safety

4.2.1 The policy of respondent clients towards health and safety before the introduction of the CDM Regulations is depicted in Chart 2 below.

![Chart 2](image)

Chart 2

**Client Policy Towards Health & Safety**

<table>
<thead>
<tr>
<th>Number of Respondents</th>
<th>Fully Developed H&amp;S Policy</th>
<th>Good Progress</th>
<th>Absolute Minimum Necessary</th>
<th>Attempting To Comply</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

4.2.2 It can be seen from this chart that of the total of 21 respondents two thirds consider that prior to the introduction of the CDM Regulations they had a fully developed health and safety policy and systems integrating the management of all projects. It was commented by one very large enterprise that "the lack of action (by the HSE) brought about a form of self regulation". Another respondent stated "the fact that CDM was on its way made the industry look at its processes before they became legislation".

4.2.3 The respondent who indicated they were attempting to comply with the intent of health and safety legislation operates in the voluntary sector and it was further indicated by them that financial constraints created difficulties and stopped them from doing as much as they would like.

4.2.4 The respondent who indicated they did the absolute minimum necessary to comply with health and safety legislation did so on the basis of a business risk assessment and a supporting business justification.
4. CLIENTS (Continued)

4.2.5 There were no responses which indicate that clients did not think they had any duties to discharge.

4.2.6 The attitude of client respondents to health and safety legislation is depicted in Chart 3 below where there are also a total of 21 respondents.

**Chart 3**

**Client Attitude Towards Health & Safety**

<table>
<thead>
<tr>
<th>Welcome H&amp;S Legislation</th>
<th>Supportive of Objectives</th>
<th>Accepts Need To Comply</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2.7 As can be seen from this chart two thirds of respondents indicated they were supportive of the objectives of the health and safety legislation while 6 respondents indicated they welcomed health and safety legislation as underpinning the health and safety objectives of their company.

4.2.8 The respondent who indicated they ‘accept the need to comply with health and safety legislation’ rather than the other (more positive) options available to them qualified their position on the basis of the “need to strike a balance”, citing the nature of their business as being in conflict with health and safety legislation.

4.2.9 It is interesting to note that a very large client who operates in the public sector, rather than indicate what the policy and attitude of the company was to health and safety legislation prior to the introduction of the CDM Regulations stated they had to “completely rearrange all safety policies and procedures due to privatisation”.
4.3 Attitude and Response to the CDM Regulations

4.3.1 The actions taken by 22 respondent clients in response to the CDM Regulations are depicted in Chart 4.

Chart 4

Client Response To CDM Regulations

<table>
<thead>
<tr>
<th>Question 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Respondents</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>18</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Completely Revised All Systems | Amended Existing Systems | Modified Existing Systems | Found No Changes Necessary

4.3.2 With more than 90 percent of respondents clearly indicating that they found it necessary to revise, amend or modify existing health and safety procedures and systems since the introduction of the CDM Regulations, it is not unreasonable to consider that this situation is most likely indicative of the entire client population. For the 2 enterprises who indicated they found no changes to policies, procedures and systems were necessary, it is perhaps not surprising this was the case, since it is the nature of their respective businesses to ensure that they are always up to date with all aspects of health and safety.

4.3.3 There were no respondents who indicated they had considered the implications of the Regulations but done nothing, or who indicated they had not considered or dealt with the implications of the Regulations.

4.3.4 The affect of the introduction of the CDM Regulations on the overall position of respondents with respect to health and safety legislation is shown in Chart 5. It can be seen that the majority of respondents indicated that the main affect has been to reinforce and strengthen compliance to health and safety legislation.
4.3.5 The 2 enterprises who indicated that their overall position with respect to health and safety legislation had not been affected as a result of the introduction of the CDM Regulations operate in sectors of industry which demand the utmost attention to such matters. The response they have given therefore is perhaps to be expected.

4.3.6 Of the clients interviewed none felt that the introduction of the CDM Regulations had transformed the approach of their company to health and safety issues. Also, there were none who felt their introduction had created resistance to all health and safety legislation generally.

4.3.7 The comment from one client respondent was “the planning supervisor role is not helpful” and from another “there are problems with fast track projects and term contracts to get the CDM input in time, the difficulty is the small projects therefore we try to keep them out of CDM”. Both of these comments came from clients who had previously indicated that they welcomed health and safety legislation. Another respondent stated “we are still on a learning curve” while further indicating that there were problems with interpretation.
4.4 Interpretation / Understanding of the CDM Regulations
The Role of the Planning Supervisor

4.4.1 All interviewees were asked a series of questions relating to the role of the planning supervisor and to indicate what their interpretation / understanding of the role was and how this compared with their actual experience. The series of questions comprised both correct and incorrect functions of the planning supervisor. The responses from 22 clients are shown in Table 4 below.

Table 4

<table>
<thead>
<tr>
<th>Ref</th>
<th>Function</th>
<th>Interpretation # of resp.</th>
<th>Actual # of resp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Coordination of H&amp;S aspects of project design and planning</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>b</td>
<td>Collation of client information</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>c</td>
<td>Advising clients of investigative surveys considered necessary</td>
<td>17</td>
<td>14</td>
</tr>
<tr>
<td>d-1</td>
<td>Providing advice to clients</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>d-2</td>
<td>Providing advice to designers</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>d-3</td>
<td>Providing advice to contractors</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>e</td>
<td>Preparation of the project health and safety plan</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>f</td>
<td>Forwarding information to designers</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>g</td>
<td>Ensuring designers comply with their duties</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td>h</td>
<td>Understanding and being aware of risk management and design</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>j</td>
<td>Seeing the risk assessment for all stages of the construction</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>k</td>
<td>Auditing adherence to the H&amp;S plan during the construction phase</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>l</td>
<td>Monitoring on site standards</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>m</td>
<td>Managing the project on behalf of the client</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>n</td>
<td>Ensuring the H&amp;S file is prepared in accordance with the Regulations</td>
<td>21</td>
<td>15</td>
</tr>
<tr>
<td>p</td>
<td>Ensuring the H&amp;S file is delivered to the client</td>
<td>21</td>
<td>17</td>
</tr>
</tbody>
</table>
4.1 CLIENTS (Continued)

4.4.2 It is evident from Table 4 that for many of the roles of the planning supervisor required by the Regulations, the majority of client respondents have interpreted and appear to have understood the CDM Regulations correctly. There is also a high degree of correlation between their interpretation and actual experiences.

4.4.3 Of note however is that 6 client respondents, of which 3 are utility providers, do not see the role of the planning supervisor as providing advice to designers. Of further significance is that a different 7 respondents do not see the role of the planning supervisor as forwarding information to designers. It would therefore seem to be evident from this, that over half the client respondents do not have a clear understanding of the interface between the planning supervisor and the designer, and the corresponding duties under the CDM Regulations; yet 21 out of 22 client respondents agree that the role of the planning supervisor is to ensure that designers comply with their duties. Some of the comments from client respondents, which include "the planning supervisor is too much a generalist, we rely on the specialist" and "it is not necessary to give advice to designers", may suggest that some clients consider the designer is competent to deal with health and safety related issues in the context of the design and construction process.

4.4.4 Other comments which possibly support this view were those received from 3 very large clients in relation to ‘the collation of client information’ and ‘the giving of advice to clients’ by planning supervisors (ref: b, c, and d-1 in Table 4) which suggest that clients see these roles as those of the designer.

4.4.5 Evidence of misinterpretation, or misunderstanding of the role of the planning supervisor or, perhaps, a clear desire on the part of client respondents for the planning supervisor to take on additional duties and responsibilities beyond those required by the CDM Regulations, can be seen by the number of responses to the functions with the references of j, k, l, and m in Table 4. It should be stated that these are not a requirement of the CDM Regulations. With such a high number of responses it is not unreasonable to consider that this situation could be fairly prevalent among the total client population. Of significance is that for all 4 of these functions a greater number of client respondents indicated they had actually experienced, or seen, those functions being taken up by planning supervisors. One very large client undertaking many complex projects stated "we tell planning supervisors what process they will follow". This was a comment echoed by 2 other very large clients.

4.4.6 While 21 out of 22 client respondents clearly see a role of the planning supervisor is to ensure the health and safety file is prepared in accordance with the Regulations and to ensure it is delivered to the client, a relatively high number of these respondents have not actually experienced this happen. This situation would suggest that this could be a more widespread issue in the industry.
4.5 Impact of the CDM Regulations

4.5.1 Interviewees were asked to rate the impact to date and longer term on their respective companies arising from the key requirements of the CDM Regulations. The rating scale was:

No impact
Some impact
Much impact
Significant impact

with respondents making the corresponding judgement of the level of impact in the context of their business. The impact to date indicated by a total of 22 client respondents is depicted in Chart 6.

Chart 6

To Date Impact Of The CDM Regulations - Client View

Question 10

4.5.2 There were a total of 165 responses on the impact to date of the 8 key requirements of the CDM Regulations. Of these responses 98, which represent more than 59 percent, indicated there had been an impact. No single type or size of enterprise stands out by consistently indicating an impact from all 8 key requirements. The converse is also true of the 67 responses indicating no impact. However, there are some specific points of interest.
4.5.3 It is evident from Chart 6, that the requirement to assess the competence of the principal contractor has had the least impact of the eight requirements. However, 7 of the 22 respondents, of which 2 operate solely in the voluntary sector, 1 solely in the public sector and 2 in the marine sector, did indicate there had been an impact on their respective businesses as a result of this requirement.

4.5.4 It is also apparent from Chart 6 that the greater number of respondents, 18 out of 22, consider the requirement to appoint a planning supervisor as having had an impact on their respective businesses. Of the 4 respondents who indicated there had been no impact, 2 were client agents and the other 2 were very large enterprises who have undertaken many construction projects. Interestingly, all 4 also carry out the function of planning supervisor.

4.5.5 The requirement on clients to make all safety related information available was indicated by 7 of the 22 respondents as having had a significant impact. This was the highest number of responses for this category of impact. Of these 7 respondents, the only point of significance was that 4 of them were very large enterprises.

4.5.6 Through the use of the simple weighting factors shown in Table 5 a weighted mean score (WMS) for each requirement can be determined using the formula:

\[ \sum FS + \sum F = WMS \]

where

\[ F \text{ is the number of respondents per impact category} \]

and

\[ S \text{ is the respective weighting factor for each impact category} \]

This enables the relative impact of the 8 requirements on the client sample to be determined.

Table 5

<table>
<thead>
<tr>
<th>Impact Category</th>
<th>Weighting Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>No impact</td>
<td>1</td>
</tr>
<tr>
<td>Some Impact</td>
<td>2</td>
</tr>
<tr>
<td>Much Impact</td>
<td>3</td>
</tr>
<tr>
<td>Significant Impact</td>
<td>4</td>
</tr>
</tbody>
</table>

4.5.7 The weighted mean score for the impact to date of the 8 key requirements are depicted in Chart 7 and those for the future impact are shown in Chart 9.
4.5.8 It is very evident from this chart, which reinforces the previous analysis, that the total volume of response puts the requirement for a pre-tender health and safety plan, as having the second greatest impact, just marginally behind the requirement to appoint a planning supervisor. It also highlights the relative impact on the client sample of the requirement on them to make all safety related information available and the requirement on designers to design with safety in mind.

4.5.9 There were a total of 156 responses on the future impact of the CDM Regulations. Of these, 80 responses representing more than 51 percent indicated there would be an impact. No single type or size of enterprise, other than those in the voluntary sector, stands out by consistently indicating an expectation of an impact from all 8 key requirements. The converse is also true of the 76 responses anticipating no impact. However, there are some specific points of interest.

4.5.10 From the responses received the overall future impact of the 8 key requirements is anticipated to be less. This can be seen by comparing both Chart 6 and Chart 7 which depict the ‘to date’ impact with the ‘future’ impact depicted in Chart 8 and Chart 9 respectively.
4.5.11 It is interesting to note that the requirement to appoint a principal contractor is, in the future, anticipated to have the least impact on client respondents. The greatest future impact is still expected to come from the requirement to appoint a planning supervisor with a total of 6 respondents indicating that this requirement will have a significant impact. Of these, 3 respondents are very large enterprises, 1 of which is a utility provider, all undertaking multiple projects, 2 operate solely in the voluntary sector and the other in the marine sector. A voluntary sector client and a very large enterprise from this 6 had previously indicated they had experienced a significant impact to date from the requirement to appoint a planning supervisor.

4.5.12 A total of 13 of the 21 respondents anticipate that the requirement for a pre-tender health and safety plan will have the second greatest impact in the future. The 4 respondents who consider that the future impact will be significant are all very large enterprises carrying out multiple projects. Interestingly, 2 of the 3 utility providers in the sample indicated they did not expect any impact to come from this requirement possibly because of the nature of their business and the way they operate, being not only the client, but the designer, planning supervisor and principal contractor with very little work, if any, contracted externally. The third utility provider who operates in a very similar way, but does contract external work, anticipates some impact in the future.
Also, a total of 13 of the 19 respondents expect a future impact on them to ensue from the requirement on designers to perform risk assessments and design with safety in mind. Of these, 2 of the enterprises who operate solely in the voluntary sector indicated there would be some impact on them with a third indicating they expect much impact. No indication was given by the fourth voluntary sector enterprise.

It is particularly interesting to note that the respondents consider the requirement to perform a competence assessment on their appointees will potentially be less of an impact on them, also in the future, than the other requirements as evidenced in Chart 9. The most likely reason for this position would seem to be that the majority of respondents had existing systems in place, including those for supplier assessment, most because of their BS5750/ISO9000 procedures. It was stated by 7 interviewees that they had already modified or were in the process of modifying their procedures to include this requirement. The utility providers by the nature of their business and structure, have had internal health and safety assessment processes in place for some time. The only sector that would appear not to have had such formalised procedures in the past is the voluntary sector and it is from here that the indication of some impact has been consistent.
4.6 Beneficial Effect of the CDM Regulations

4.6.1 Interviewees were asked to rate in order the greatest beneficial effect to them, both to date and in the future, of the same 8 key requirements whose impact had previously been considered.

4.6.2 The beneficial effect to date indicated by a total of 17 respondents is depicted in Chart 10. A total of 5 interviewees indicated they had experienced no beneficial effect at all. Of these, 2 are utility providers both of whom previously indicated no or little impact on their respective businesses, 2 are very large enterprises in the retail sector and the fifth a voluntary sector enterprise.

Chart 10

To Date Beneficial Effect Of CDM Regulations For Clients

Question 10

4.6.3 Furthermore, 8 of the 17 respondents just rated the 1st, 2nd and 3rd greatest benefits rather than all 8 key requirements in order of benefit. The outcome is however, very interesting. By examination it can be seen that the profile of Chart 10 is very similar to that of Chart 7. The reason for this is the very high degree of correlation between magnitude of impact and beneficial effect. Respondents have indicated that the greatest beneficial effect to date has come from those requirements they previously indicated had produced the greatest impact on their business. This therefore would seem to qualify the type of impact as a positive impact producing a beneficial effect, rather than a negative impact.
4.6.4 Analysis of the data relating to future beneficial effect gives a very similar position. The non-respondents are the same as those in the ‘to date’ data set. Also, those respondents who indicated there was no beneficial effect to date also indicated they did not anticipate any future beneficial effect. The future beneficial effect as indicated by the 17 respondents is depicted in Chart 11.

Chart 11

Future Beneficial Effect Of CDM Regulations For Clients

<table>
<thead>
<tr>
<th>Number Of Respondents</th>
<th>Rated Beneficial Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Appointment Of PS</td>
</tr>
<tr>
<td>12</td>
<td>Competence Assessment Of PS</td>
</tr>
<tr>
<td>10</td>
<td>Competence Assessment Of Design</td>
</tr>
<tr>
<td>8</td>
<td>Requirement For Pre-tender H&amp;S Plan</td>
</tr>
<tr>
<td>6</td>
<td>Designers To Design With Safety In Mind</td>
</tr>
</tbody>
</table>

4.6.5 While there is still a high degree of correlation between future impact and future beneficial effect the relationship is not so strong possibly because it is not a reality but more of a desire / expectation. Nevertheless, the evidence is that degree of impact does translate to magnitude of positive benefit and, as can be seen from Chart 11, 14 of the 17 respondents anticipate a beneficial effect ensuing from the requirement for clients to make all safety related information available.

4.6.6 Of significance is the position of the very large retail enterprises in the sample who have indicated high levels of impact both ‘to date’ and ‘future’ for the 8 key requirements yet have stated in both cases “there is no beneficial effect to us” citing the negative effects of “a massive increase in paperwork, an increase in cost, no improvement in site coordination and no direct effect”.
4.7 Documentation

4.7.1 Interviewees were asked to indicate the volume of documentation attributable to specific requirements of the CDM Regulations and then to state whether they considered it excessive. The views of a total of 18 respondents are depicted in Chart 12 and Chart 13.

**Chart 12**

**Volume Of Documentation - Client View**

Question 11

<table>
<thead>
<tr>
<th>Number Of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

**Legend:**
- Pre-tender H&S Plan
- Pre-qualification Assessment
- Competence Assessments
- Project H&S Plan
- H&S File

4.7.2 Many clients interviewed did not have a view on the volume of documentation and neither did they have a perception on whether it could be considered excessive. Furthermore, not all respondents could give an indication for all 5 types of documentation as is evident in Chart 12.

4.7.3 One very large client in the private sector with multiple complex projects while not giving an indication of the volume of documentation stated “all documentation being generated as a result of the CDM Regulations is excessive” and went on to question in particular the value to their business of the health and safety file.

4.7.4 There is no clear indication from the data whether a specific volume of documentation, is either acceptable or unacceptable to any particular client group. It would seem from many of the additional comments received during interview that the acceptability of the volume of documentation is very much a function of the size and complexity of project.
4.7.5 While the majority of respondents consider the volume of documentation for the pre-tender health and safety plan is excessive more concern was expressed about the size of the health and safety file particularly by enterprises that carry out many projects each year.

4.7.6 In the retail sector where the number of superstores constructed or refurbished in 1997 is likely to be in excess of 1,000 the issues that have been voiced are, where and how are the health and safety files stored? and how are they kept current? One very large retail enterprise stated "we are going to have to build a purpose built building just to house the health and safety files". A very large automotive enterprise having just completed a £250 million project received the health and safety file in 250 lever arch files and expressed concern at the sheer volume of documentation and their ability to keep it up to date.

4.7.7 These issues and others surrounding the requirement for a health and safety file are explored in more depth in Case Study 2 - The Health and Safety File annexed to this report as Appendix D.
4.7.8 The views expressed by 15 client respondents to 6 possible reasons proposed for excessive levels of documentation are depicted in Chart 14. From the data it is not possible to discern any specific pattern or grouping of response relating to either size or operating sector of the respondent enterprises. It is appropriate however to consider a possible relationship between the views expressed under the headings of ‘a misunderstanding of the requirements’ and ‘the need to ensure and demonstrate compliance with the CDM Regulations and ACoP’.

4.7.9 Given that there is a level of misunderstanding of the requirements of the CDM Regulations by a relatively high percentage of the respondents, as evidenced in sub-section 4.4, it is not unreasonable to consider that their view of compliance with the CDM Regulations and ACoP will actually include expectations based on real misunderstandings. This would therefore suggest, based on the opinions depicted in Chart 14, that the major underlying reason for excessive documentation is ‘a misunderstanding of the requirements’ of the CDM Regulations.

4.7.10 Some of the additional comments received from client respondents given as possible reasons for excessive documentation included “an inability to differentiate significant risk and standard risks”, and “the client requirement to make the documentation of more practical value”.

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4.8 Health and Safety Benefits

4.8.1 Interviewees were asked to indicate which of 6 possible health and safety benefits they had actually experienced occurring on site which could be attributed to the introduction of the CDM Regulations. There were a total of 18 respondents, and the responses they gave are depicted in Chart 15.

Chart 15

Health & Safety Benefits - Client View

Question 13

<table>
<thead>
<tr>
<th>Actual On Site Health &amp; Safety Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Awareness</td>
</tr>
<tr>
<td>Behavioural Changes</td>
</tr>
<tr>
<td>Less Risk To Manage</td>
</tr>
</tbody>
</table>

4.8.2 Of particular interest are the 2 enterprises who have indicated ‘less incidents’ in that they operate in what could be considered particularly dangerous environments, 1 in the petro-chemical sector and the other in the marine sector. Both enterprises also indicated they have had accidents. It must be assumed therefore that their incident tracking processes and records allow them to differentiate between type of incident and its relationship to health and safety legislation and hence determine changes of this nature. This issue of differentiation is felt to be an obstacle in being able to attribute changes in incident rates to the introduction of specific health and safety legislation. More than half of the interviewees stated they did not track incidents.

4.8.3 Also worthy of note is, neither of the 3 utility providers nor the 2 very large enterprises that operate solely in the public sector, consider there have been any behavioural changes on site attributable to the CDM Regulations.
4.8.4 A general comment given with regard to ‘increased awareness of health and safety issues’, where it is clearly evident from Chart 15 that all but 1 of the respondents have indicated as actually occurring on site, was that it could not be solely attributed to the CDM Regulations but to the total volume of health and safety legislation introduced in recent years.

4.8.5 The responses given by interviewees to 7 proposed health and safety benefits in terms of improvement in quantity / quality to date and in the future are depicted in Chart 16 and Chart 17 respectively.

**Chart 16**

**To Date Health & Safety Benefits For Clients**

**Question 14 - Improvements**

<table>
<thead>
<tr>
<th>Number Of Respondents</th>
<th>No Benefit</th>
<th>Marginal Benefit</th>
<th>Some Benefit</th>
<th>Substantial Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced Accidents</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced Claims</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fewer Accidents During Maintenance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Safer Environment For Users</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced Sickness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced Damage To Long Term Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Illness Through Maintenance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.8.6 Of the total responses 75 percent indicate ‘no benefit’ and is probably highly indicative of the view of the whole client population. The comment most frequently received was “it is too early to tell”. However, 1 large enterprise operating in the marine sector and a medium size enterprise whose activities are predominantly research based indicated consistently as seeing benefits from all 7 aspects of health and safety. One other very large enterprise in the private sector did indicate ‘some benefit’ had ensued from ‘reduced accidents’ and ‘marginal benefit’ from ‘reduced accidents’ and ‘reduced damage to long term health’. A ‘marginal benefit’ from a ‘safer environment for users’ was indicated by a very large enterprise in the retail sector.
4.8.7 It is clear that the expectations of many respondents is for the health and safety benefits to materialise in the future. More than 68 percent of the total responses indicate future benefits and of those, more than 61 percent are for ‘some benefit’ to ensue.

Chart 17

Future Health & Safety Benefits For Clients

Question 14 - Improvements

![Chart showing future health & safety benefits for clients](chart.png)

4.8.8 Of note is 3 of the 4 respondents who have indicated ‘no benefit’ in the future from ‘reduced accidents’, went on to indicate they had had accidents on their sites. One of these, a very large enterprise in the pharmaceutical sector, has further indicated ‘no benefit’ in the future from the remaining 6 health and safety benefits under consideration. The respondent who indicated they have not had an accident on any of their sites, is a small client agent, and having previously indicate ‘no benefit’ to date for all health and safety benefits expressed the same view for the future.

4.8.9 The medium size client agent in the sample having previously indicated ‘no benefit’ to date for all health and safety benefits anticipates for the future a ‘marginal benefit’ to come from ‘reduced accidents’ and some benefit to come from ‘reduced damage to long term health’.
4.8.10 Overall the data suggests that client respondents consider the most health and safety benefit will, in the future, come from ‘fewer accidents during maintenance’, ‘reduced damage to long term health’ and ‘less illness through maintenance’ and in that order. This is clearly evidenced by the weighted mean scores determined as described in paragraph 4.5.6 and depicted in Chart 18.

Chart 18

**Health & Safety Benefits - Clients View**

*Question 14 - Improvements*

<table>
<thead>
<tr>
<th></th>
<th>To Date</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced Accidents</td>
<td>1.43</td>
<td>2.27</td>
</tr>
<tr>
<td>Reduced Claims</td>
<td>1.45</td>
<td>2.55</td>
</tr>
<tr>
<td>Fewer Accidents During Maintenance</td>
<td>1.4</td>
<td>2.6</td>
</tr>
<tr>
<td>A Safer Environment For Users</td>
<td>1.33</td>
<td>2.42</td>
</tr>
<tr>
<td></td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
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<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.21</td>
<td></td>
</tr>
</tbody>
</table>

4.8.11 The view of a total of 9 client respondents of the benefit ‘to date’ by way of reduced expenditure as a result of the 7 health and safety benefits under consideration are depicted in Chart 19.

4.8.12 Of significance is the magnitude of the non-response which can either be interpreted as ‘don’t know’ or ‘no benefit’. Based on the frequency of comments received, the most likely position in terms of a response is that the respondents don’t know because the systems they have in their respective companies do not provide differential data of this nature. The limited data does suggest that if the non-respondents did give an indication there is a high probability that it would be ‘no benefit’.
4. CLIENTS (Continued)

Chart 19

To Date Health & Safety Benefits For Clients

Question 14 - Reduction In Expenditure

4.8.13 The basis of this argument is that if 75 percent of the total responses to the question of improvements to date in quantity / quality arising from the health and safety benefits previously indicated there had been no benefit, primarily because it was too early to tell, this will reflect directly on any reduced expenditure which would in any case take longer to materialise. Even so, 3 enterprises did indicate they had a benefit of reduced expenditure arising from some of the health and safety benefits.

4.8.14 A total of 10 respondents gave their view of the reduction in expenditure they anticipate to ensue in the future from the health and safety benefits. These are depicted in Chart 20.

4.8.15 The high level of non-response again can only be considered as either ‘don’t know’ or ‘no benefit’. In this case however the view does not have to be supported by actual evidence so the probability of a non-response being a ‘no benefit’ is quite low. The non-response is most likely ‘don’t have a view’ rather than ‘don’t know’. The most frequent comment given was “it is still too early to tell since the CDM Regulations have not been in place long enough to even determine what the future benefits could be”.

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4.16 There are few points of significance in this data. One is the ‘substantial benefit’ from all health and safety benefits with the exception of ‘reduced sickness’ where ‘some benefit’ is expected by the large enterprise in the marine sector. Another is the ‘marginal benefit’ expected across all health and safety benefits by a large voluntary sector enterprise, while a small voluntary sector enterprise anticipates ‘no benefit’, which is most likely due to the different markets in which they operate.

4.17 Of course those enterprises who previously indicated ‘no benefit’ to the health and safety benefits have correspondingly indicated ‘no benefit’ in respect of reduction in expenditure; in particular the very large enterprise in the pharmaceutical sector and the small client agent.

4.18 Overall the data suggests that client respondents consider the most reduction in expenditure arising from the health and safety benefits will, in the future, come from ‘less illness through maintenance’ and ‘reduced damage to long term health’ in that order. This is clearly evidenced by the weighted mean scores determined as described in paragraph 4.5.6 and depicted in Chart 21.
4.8.19 Of some relevance to the analysis in this section is the accident level of the respondents and the number of CDM projects undertaken. Of a total of 19 responses 9 respondents indicated they had had accidents, 6 respondents indicated they didn't know and 4 respondents indicated they had not had any accidents. Of the 4 who indicated they had not had any accidents, 3 had undertaken just 1 project where the CDM Regulations had applied and the fourth a small enterprise in the voluntary sector just 3 projects. It is somewhat surprising therefore to have seen such a high 'no benefit' response in respect of reduced accidents. Either respondents genuinely consider there will be 'no benefit' or "it is too early to tell".

4.8.20 It must be stated that the small response sample has in many cases prevented any statistical significance to be determined for much of the corresponding data. Where it has been possible, a comment relating to the whole client population has been made particularly where anecdotal evidence has been available to support it.
4.9 Efficiency Benefits

4.9.1 Interviewees were asked to rate the magnitude of the benefit, now and in the future, which could be attributed to the CDM Regulations of 5 possible efficiency benefits to the design and construction process, in respect of both improvements to quantity / quality and reduction in expenditure. There were a total of 16 respondents and their views are depicted in Chart 22. Most of the non-respondents, particularly those who undertake few projects, stated they were not close enough to the processes to make a valued judgement.

Chart 22

Client View Of Efficiency Benefits - Now & In The Future

Question 15 - Improvements

4.9.2 As a general statement, the data indicates that with the exception of the utility providers, who have indicated 'no benefit' to all 5 efficiency improvements, it is only the larger client enterprises who undertake greater than 10 construction projects a year which are experiencing or expect to experience a benefit from these efficiency improvements. This is irrespective of industry or commercial classification or sector, whether public, private or voluntary.
4. CLIENTS (Continued)

4.9.3 The respondents view of the reduction in expenditure attributable to the 5 efficiency improvements is depicted in Chart 23.

Chart 23

Client View Of Efficiency Benefits - Now & In The Future

Question 15 - Reduction In Expenditure

<table>
<thead>
<tr>
<th>Number Of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>12</td>
</tr>
</tbody>
</table>

No Benefit | Marginal Benefit | Some Benefit | Substantial Benefit
Homogeneous Design Process | Improved Flow Of Information |
Ease Of Construction | Ease Of Maintenance |
Ease Of Adaption/Refurb./Demolition

4.9.4 Of the 13 respondents who indicated a benefit from improved efficiency, 8 are either already experiencing or expect to experience reduction in expenditure as a result.

4.9.5 It is evident from the data, as perhaps would be expected, that the greater the number of projects being undertaken the greater the magnitude of benefit. Of the 8 respondents who indicated a reduction in expenditure, 7 have already carried out greater than 200 construction projects where the CDM Regulations have been applicable. This number is an order of magnitude greater than that evident in respect of the benefit of improvements to quantity / quality.

4.9.6 This would suggest it is the combination of efficiency improvements and economies of scale that are likely to yield a corresponding reduction in expenditure and that there is a cutoff in terms of number of projects below which there will be no or very marginal reduction in expenditure.
4. CLIENTS (Continued)

4.9.7 Overall the data suggests that client respondents consider the most benefit both in terms of quantity / quality and reduction in expenditure arising from improvements in efficiency are coming or will, in the future, come primarily from 'ease of maintenance' and 'improved flow of information' in that order. This is clearly evidenced by the weighted mean scores determined as described in paragraph 4.5.6 and depicted in Chart 24.

Chart 24

Client View Of Efficiency Benefits - Now & In The Future

Question 15

<table>
<thead>
<tr>
<th>Improvements</th>
<th>Reduction In Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Homogeneous Design Process</td>
</tr>
<tr>
<td></td>
<td>Ease Of Construction</td>
</tr>
<tr>
<td></td>
<td>Ease Of Adoption/Refurb./Demolition</td>
</tr>
</tbody>
</table>

4.9.8 It is very evident from Chart 24 that the respondents do not consider the benefits from a 'homogeneous design process' are, or will be, as significant as those arising from the other efficiency improvements.

4.9.9 Tangible benefits that respondents anticipate will come from the efficiency benefits they indicated included:

An integrated deconstruction plan which allows the business of neighbouring operations to continue
Better documentation handling, maintenance and storage
A facility that better meets the operational requirements, less redesign and amendments, potential reduction in contract price and reduction in future costs of maintenance and modification to building
4. CLIENTS (Continued)

4.10 Business Effects

4.10.1 Interviewees were asked to indicate whether the introduction of the CDM Regulations had any adverse effect or positive effect on the business of their company and if it had to specify what the effect had been. There were a total of 17 respondents. Non-respondents are classified as ‘don’t know’.

4.10.2 Of the 17 respondents, 8 indicated their had been neither an adverse nor a positive effect on their respective businesses, 3 indicated there had been both an adverse and a positive effect, 4 indicated there had only been a positive effect and 2 indicated there had only been an adverse effect. The effects each respondent identified are shown in Table 6.

Table 6

<table>
<thead>
<tr>
<th>Adverse Effect</th>
<th>Positive Effect</th>
<th>Size</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>delays project from starting, lack of awareness creates friction between partners</td>
<td>brought about systematic mapping of processes</td>
<td>VL</td>
<td>Private</td>
</tr>
<tr>
<td>bureaucracy, paperwork and administration</td>
<td>consistency and structure</td>
<td>VL</td>
<td>Private</td>
</tr>
<tr>
<td>costs associated with requirements to appoint a planning supervisor and a principal contractor equates to being able to build less, increased timescale between tender letting and work starting</td>
<td>statutory requirement for health and safety file</td>
<td>VL</td>
<td>Public</td>
</tr>
<tr>
<td>unrecoverable costs</td>
<td></td>
<td>VL</td>
<td>Private</td>
</tr>
<tr>
<td>slowed process down initially</td>
<td>mouch increased awareness of safety</td>
<td>VL</td>
<td>Private</td>
</tr>
<tr>
<td></td>
<td>could demonstrate competence in CDM, thus gaining credibility and revenue</td>
<td>M</td>
<td>Private &amp; Public</td>
</tr>
<tr>
<td></td>
<td>safer construction process</td>
<td>M</td>
<td>Private &amp; Public</td>
</tr>
<tr>
<td></td>
<td>improved communications</td>
<td>VL</td>
<td>Private</td>
</tr>
</tbody>
</table>

4.10.3 Of the 8 respondents who indicated they had not experienced any business effect arising from the introduction of the CDM Regulations, 2 were client agents, 2 were utility providers, 2 operate in the marine sector, 1 in the petrochemical sector and 1 in the financial sector.
4.0 CLIENTS (Continued)

4.10.4 Seven possible business benefits were proposed to interviewees who were asked to indicate which of them they felt had already arisen and/or will arise in the longer term. The views of a total of 17 respondents are depicted in Chart 25.

Chart 25

Client View Of Business Effects - Now & Longer Term

Question 19

<table>
<thead>
<tr>
<th>Number Of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

Now

Longer Term

- Better Coordination Of Design & Construction
- A More Integrated Industry
- The Creation Of A 'Level Playing Field'
- The 'Cowboys' Going Out Of Business
- Better On Site Control By PC
- A More Competent Industry
- Improved Maintenance Of Finished Structure

4.10.5 The views expressed are very mixed. There are no patterns or groupings discernable in the data which suggest a particular size of enterprise or sector are experiencing now or expect to experience in the future a greater or lesser business benefit from the 7 that have been proposed.

4.10.6 An additional business benefit attributed to the introduction of the CDM Regulations being experienced by 1 large enterprise which operates solely in the voluntary sector is "a reduction in construction insurance costs".

4.10.7 Two comments received from 1 respondent with regard to the business benefit of 'many of the cowboys being forced, or going, out of business' in the context of 'longer term' was "The HSE need to enforce more." and "This requires the will of the client to pay for higher standards".
4. CLIENTS (Continued)

4.10.8 A number of tangible benefits likely to ensue from the proposed 7 business benefits were identified by 9 respondents. These included:

- Contractors more aware of health and safety issues.
- Reduced cost of maintenance of finished product. Reduced accidents.
- Realization that we now have a duty to discharge. Improvement in contractors competence. Health and Safety issues will be addressed.
- Easier to choose a contractor when they are all bidding for the same work to the same standard of safety. Improved maintenance will reduce building running costs. Better coordination of design and construction leads to improvement in adherence to project schedule.
- Good to have a history of the building through health and safety file.
- Control of sub-contractors now done by principal contractor. This made us look at principal contractors and develop an approved list.
- Because awareness raised we have more of an all round view of how it is supposed to be. Buildability considered at the design stage.
- A more competent industry, less cowboys and better site control.
- Improved maintenance, better coordination and better site control.

4.10.9 Interviewees were asked to state what they felt will be the most significant business effects that will arise from the requirement to produce a health and safety file. A total of 14 responded with comments, many of which were duplicated, including the following:

- Standardisation.
  As built record for adaption / refurbishment and demolition.
  Future users have better awareness of risks and it gives users more confidence in the project. Makes it safer to carry out work. Demolition is better in the long run.
  Fully comprehensive knowledge of the building. The as built record will be a hindrance to selling on.
  As built record and detailed maintenance documentation.
  The need to have a proper documentation register.
  Improved future management of the buildings through improved information on the structure and finishings / fixtures.
  Will contain information easy to find, available when needed. The difficulty will be when the file is not controlled i.e. not updated and therefore meaningless. It needs to be alive but treated like the deeds of the property. Will be easier to control if it is electronic.
  Will assist in the cost efficient maintenance of premises.
4.11 Cost of Implementation of CDM Regulations

4.11.1 Interviewees were asked to give an indication of the initial additional costs they incurred in implementing the CDM Regulation in respect of 4 potential cost areas, or any other they wished to specify, and to state whether those costs would have been incurred anyway. If no actual cost estimates were available the following magnitude scale was offered:

None
Little
Major
Substantial
Very significant

4.11.2 None of the interviewees were able to provide actual cost data for the potential cost areas proposed since it was stated by most that their accounting systems did not provide a detailed analysis of costs which would allow those related specifically to these aspects of the implementation of the CDM Regulations to be identified. Those that did respond, of which there were a total of 18, therefore used the magnitude scale described in paragraph 4.11.1. Their responses are detailed in Table 7.

Table 7

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Little</th>
<th>Major</th>
<th>Substantial</th>
<th>Very Significant</th>
<th>Total Resp.</th>
<th>Incurred anyway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change of procedures</td>
<td>6 (5)</td>
<td>10 (7)</td>
<td>2 (2)</td>
<td>0</td>
<td>0</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>Updating of management systems</td>
<td>6 (6)</td>
<td>9 (6)</td>
<td>2 (2)</td>
<td>1 (1)</td>
<td>0</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>Training</td>
<td>3 (3)</td>
<td>8 (7)</td>
<td>4 (3)</td>
<td>3 (3)</td>
<td>0</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>Increased staff</td>
<td>15 (15)</td>
<td>2 (1)</td>
<td>1 (1)</td>
<td>0</td>
<td>0</td>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>30 (29)</td>
<td>29 (21)</td>
<td>9 (8)</td>
<td>4 (4)</td>
<td>0</td>
<td>72</td>
<td>10</td>
</tr>
</tbody>
</table>

Note: The numbers in parenthesis are the responses where costs are solely attributable to the CDM Regulations and where those costs would not have been incurred anyway.

4.11.3 The 3 enterprises who indicated they had incurred ‘substantial’ costs relating to training are all privatised concerns operating in the public sector; 2 are very large companies and the third which is of medium size also indicated it had incurred the same level of costs in ‘updating management systems’.
4.11.4 Two utility providers indicated they had incurred ‘major’ costs in respect of ‘changes of procedures’. One of these further indicated, together with a very large enterprise operating solely in the public sector, the same level of costs having been incurred in relation to ‘updating of management systems’ and ‘training’.

4.11.5 Citing ‘major’ costs having been incurred through ‘training’ and ‘increased staff’ were a medium size client agent and a small size client agent respectively.

4.11.6 It is evident from the foregoing that, with the exception of 2 client agents, it is only very large enterprises who have indicated they incurred either ‘major’ or ‘substantial’ costs in the implementation of the CDM Regulations. Voluntary sector respondents indicated ‘none’ or ‘little’ costs having been incurred.

4.11.7 By calculating the weighted means score for each cost category as described in paragraph 4.5.6 it is possible to obtain an indication of where respondents have collectively incurred the greatest costs. These weighted mean scores are depicted in Chart 26.

Chart 26

Cost Of Implementation Of Regulations - Client View

Question 22

<table>
<thead>
<tr>
<th>Weighted Mean Score</th>
<th>Cost Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4</td>
<td>Change Of Procedures</td>
</tr>
<tr>
<td>2.2</td>
<td>Updating Of Management Systems</td>
</tr>
<tr>
<td>2.0</td>
<td>Training</td>
</tr>
<tr>
<td>1.8</td>
<td>Increased Staff</td>
</tr>
</tbody>
</table>

4.11.8 It is very evident from Chart 26 that for the respondents the greatest cost in implementing the CDM Regulations has, by quite a large margin, been incurred through ‘training’. Based on the total number of respondents, this has a high probability of being representative of the whole client population.
4. CLIENTS (Continued)

4.12 Cost of Maintaining Compliance to the CDM Regulations

4.12.1 After considering the costs of implementation of the Regulations interviewees were asked to indicate the additional costs per annum that were being, or were expected to be, incurred in maintaining compliance to the Regulations in respect of 4 potential cost areas or others they wished to specify. They were also asked to state whether those costs would have been incurred anyway.

4.12.2 With no actual cost data available interviewees used the magnitude scale described in paragraph 4.11.1. Their responses are detailed in Table 8.

Table 8

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Little</th>
<th>Major</th>
<th>Substantial</th>
<th>Very Significant</th>
<th>Total Resp.</th>
<th>Incurred anyway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintaining systems and procedures</td>
<td>9 (9)</td>
<td>8 (4)</td>
<td>1 (0)</td>
<td>0</td>
<td>0</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Competence assessment</td>
<td>10 (8)</td>
<td>7 (3)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>Training</td>
<td>10 (10)</td>
<td>6 (4)</td>
<td>1 (1)</td>
<td>1</td>
<td>0</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>Increased staff</td>
<td>17 (17)</td>
<td>0 (1)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>46 (44)</td>
<td>21 (11)</td>
<td>2 (1)</td>
<td>1</td>
<td>0</td>
<td>70 (57)</td>
<td>13</td>
</tr>
</tbody>
</table>

Note: The numbers in parenthesis are the responses where costs are solely attributable to the CDM Regulations and where those costs would not have been incurred anyway.

4.12.3 The only specific points of interest from this data are:
- none of the respondents have incurred or expect to incur ‘very significant’ costs
- none of the respondents have increased, or intend to increase staff
- training is the only category where ‘major’ and ‘substantial’ costs have been, or are expected to be, respectively incurred by a utility provider and very large privatised enterprise who previously indicated the same level of cost incurred on training in implementing the Regulations.

4.12.4 Some respondents specified other areas where there have been or they expect to there to be additional costs solely attributable to the CDM Regulations. The archiving of health and safety plans and files was cited by 4 respondents as potentially a substantial cost, 1 commenting “it’s going to be our biggest headache”.
4.12.5 By calculating the weighted means score for each cost category as described in paragraph 4.5.6 it is possible to obtain an indication of where respondents have collectively incurred, or anticipate to incur, the greatest costs in maintaining compliance to the CDM Regulations. From this a perspective of the whole client population may be drawn. These weighted mean scores are depicted in Chart 27.

Chart 27
Cost Of Maintaining Compliance With Regulations - Client View
Question 23

![Chart showing weighted mean scores for different cost activities](chart_image)

4.12.6 There were many further comments about the additional costs of administration but these were considered little in relation to the fees paid to planning supervisors. Here a number respondents were able to provide actual cost data.

4.12.7 The respondent for a very large pharmaceutical enterprise stated that for the 20 projects they had undertaken since the Regulations had been introduced the fees paid to planning supervisors had varied between 0.25 percent and 0.4 percent of construction costs. This particular enterprise previously and consistently indicated that no benefits had been received or were expected to be received as a result of the introduction of the CDM Regulations.

4.12.8 The respondent of a large enterprise operating solely in the voluntary sector stated that on the 25 projects completed since the introduction of the CDM Regulations the fees paid to planning supervisors had been approximately £22,000 which represented 0.73 percent of project cost, for few benefits.
4.12.9 A medium size enterprise operating in the private and voluntary sectors stated "fees paid to planning supervisors vary between 0.5 percent and 1.5 percent of the project cost, but some planning supervisors work at £450 per project for projects valued up to £100,000". A total of 12 respondents were able to provide actual planning supervisor fee data on a per project basis. This data is has been collated in Table 9.

Table 9

<table>
<thead>
<tr>
<th>Type of Project</th>
<th>Project Cost</th>
<th>Fee</th>
<th>Percent On Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaption</td>
<td>£104,693</td>
<td>£1,431</td>
<td>1.37</td>
</tr>
<tr>
<td>Refurbishment</td>
<td>£129,800</td>
<td>£1,980</td>
<td>1.52</td>
</tr>
<tr>
<td>New Build</td>
<td>£93,490</td>
<td>£220</td>
<td>0.23</td>
</tr>
<tr>
<td>New Build</td>
<td>£249,822</td>
<td>£1824</td>
<td>0.73</td>
</tr>
<tr>
<td>New Build</td>
<td>£67,110</td>
<td>£1,121</td>
<td>1.67</td>
</tr>
<tr>
<td>New Build</td>
<td>£106,525</td>
<td>£851</td>
<td>0.80</td>
</tr>
<tr>
<td>Refurbishment</td>
<td>£14,000</td>
<td>£1,117</td>
<td>7.98</td>
</tr>
<tr>
<td>New Build</td>
<td>£198,560</td>
<td>£408</td>
<td>0.21</td>
</tr>
<tr>
<td>New Build</td>
<td>£265,871</td>
<td>£1,613</td>
<td>0.61</td>
</tr>
<tr>
<td>New Build</td>
<td>£98,824</td>
<td>£1,115</td>
<td>1.13</td>
</tr>
<tr>
<td>New Build</td>
<td>£20,000,000</td>
<td>£226,000</td>
<td>1.13</td>
</tr>
<tr>
<td>New Build</td>
<td>£590,000</td>
<td>£5,300</td>
<td>0.90</td>
</tr>
<tr>
<td>New Build</td>
<td>£520,640</td>
<td>£3,040</td>
<td>0.58</td>
</tr>
<tr>
<td>Total</td>
<td>£22,439,335</td>
<td>£246,020</td>
<td>1.10</td>
</tr>
</tbody>
</table>

4.12.10 The data in Table 9 supports the comments made by respondents regarding the variability and range of fees paid to planning supervisors. While the complexity, size of project and services provided by the planning supervisor, which may include non-CDM activities, will undoubtedly have an influence on the magnitude of the fee the mean is in the region of 1.1 percent.
4.13 Compliance with the CDM Regulations

4.13.1 Interviewees were asked to state their perception on a percentage basis of compliance with the CDM Regulations by each of the duty holder groups for the following 4 categories of compliance:

- Do not comply
- Comply with the intent
- Comply fully
- Over comply

4.13.2 There was a total of 21 respondents and the mean of their percentage responses are depicted in Chart 28.

**Chart 28**

**Client View Of Compliance With The Regulations**

Question 24 - Average Level Of Compliance

<table>
<thead>
<tr>
<th>Percent</th>
<th>Client</th>
<th>Designer</th>
<th>Planning Supervisor</th>
<th>Principal Contractor</th>
<th>Other Contractors</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Over Comply**
- **Comply With Intent**
- **Comply Fully**
- **Do Not Comply**

4.13.3 It is evident from Chart 28 that the perception of the respondents is that more than half of their own dutyholder group, Clients, are in a state of full compliance with the CDM Regulations, as are planning supervisors and principal contractors. It is also their perception that marginally less than half, 49.9 percent, of designers and slightly more than one third, 34.6 percent, of other contractors are in the same state of full compliance.
4.13.4 It is also evident from Chart 28 that the respondents have the perception that fewer principal contractors, at 7.5 percent, than any other dutyholder group do not comply with the Regulations and that other contractors have the greatest percentage, 19.2 percent, that do not comply. Planning supervisor are perceived to have the second highest percentage, at 18.8 percent, that do not comply.

4.13.5 Analysis of the data does not give any indication of a grouping of perceptions by size, industrial classification or sector of the respondents.
4. CLIENTS (Continued)

4.14 Summary Points

4.14.1 Summary Points and other client issues fall broadly into two categories specifically those of clients and those which relate to the interface between the client and other duty holders.

4.14.2 The professionalism of a client seems to have an effect on how the requirements of the Regulations are interpreted and their subsequent implementation, as does knowledge of the construction industry. It was apparent from the survey that where a professional client has a knowledge of the construction industry the implementation of the requirements of the Regulations does not generally present a problem. Where the client has a different focus or has no knowledge of the construction industry, difficulties arise particularly if the client has an additional cost for no perceived additional benefit.

4.14.3 Coupled with the professionalism of a client is also an issue of the awareness of the client duties under the Regulations. While there is a general problem of awareness and interpretation of the Regulations with some clients, particularly the medium to small client who commission projects infrequently, there are those who either do not feel they have any duties to discharge or try to pass those duties to others by way of the contract of engagement.

4.14.4 Another related issue is client competence in the assessment of the competence of appointees. There is evidence to suggest that in many cases competence of appointees is assumed by the client rather than determined. It is only where the client has appointed an agent, and even here it would seem competence is assumed, are subsequent appointments subjected to an assessment process. It should be noted that a more in depth evaluation of the competence assessment process followed by duty holders is the subject of Case Study 3 which is annexed to this report as Appendix E.

4.14.5 Many of the clients interviewed stated they are having to contend with an array of health and safety legislation and with the exception of large concerns, who either employ or retain professional resource to deal with it, most see the CDM Regulations as an additional burden they could do without both in terms of additional bureaucracy and cost. There is resistance stemming from these issues particularly where there is poor recognition of the benefits.

4.14.6 While clients are being advised by their legal advisors to ensure that a health and safety file is received on practical completion of a project, in many cases clients irrespective of size are encountering difficulties of storage and maintenance of the health and safety file because of its sheer size. These issues are discussed in more depth in Case Study 2 which is annexed to this report as Appendix D.
5. **CONTRACTORS**

As the heading implies this section of the report analyses the consolidated responses given by contractors. Where appropriate anecdotal evidence is introduced to illustrate the statistical data.

5.1 **The Contractor Sample**

5.1.1 The total contractor sample of 109 comprises 13 interviews undertaken during the Pilot Study and 96 interviews in the main body of research. This means that the maximum number of possible responses to questions in the structured questionnaire is 96. It must be understood however, that not all contractors responded to all questions during interview and therefore the actual number of responses to each question is less.

5.1.2 While there is a mix of size of contractor within the sample, which is depicted in Table 1, there is also a spread across the different types of contractor which fall into the categories of Design & Build, Engineering Construction, Construction and Demolition.

5.1.3 The number of projects undertaken to the date of this survey by this contractor sample where the CDM Regulations have applied varies from 6 by a small contractor to 600 by a very large contractor. The average number of projects per contractor where the CDM Regulations have applied is 94.

5.1.4 The breakdown of the total sample of 109 by design & build, engineering construction, construction, and demolition is shown in Table 10 below. The number in the shaded cells of the table indicate the number of contractors that operate solely in that category and no other.

Table 10

<table>
<thead>
<tr>
<th>Type</th>
<th>Design &amp; Build</th>
<th>Eng. Construction</th>
<th>Construction</th>
<th>Demolition</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design &amp; Build</td>
<td>15</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>Eng. Construction</td>
<td>2</td>
<td>11</td>
<td>9</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>Construction</td>
<td>3</td>
<td>9</td>
<td>13</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td>Demolition</td>
<td>7</td>
<td>3</td>
<td>5</td>
<td>37</td>
<td>52</td>
</tr>
</tbody>
</table>
5.2 Health and Safety

5.2.1 The policy of respondent contractors towards health and safety before the introduction of the CDM Regulations is depicted in Chart 29 below.

Chart 29

Policy Towards Health & Safety

<table>
<thead>
<tr>
<th>Fully Developed H&amp;S Policy</th>
<th>Good Progress</th>
<th>Absolute Minimum Necessary</th>
</tr>
</thead>
<tbody>
<tr>
<td>53</td>
<td>24</td>
<td>1</td>
</tr>
</tbody>
</table>

5.2.2 It can be seen from this chart that of the total of 78 respondents more than two thirds consider that prior to the introduction of the CDM Regulations they had a fully developed health and safety policy and systems integrating the management of all projects.

5.2.3 The respondent who indicated they were doing the absolute minimum necessary to comply with health and safety legislation is a medium size contractor who operates solely as a sub-contractor.
5. CONTRACTORS (Continued)

5.2.4 There were no responses which indicate that contractors did not think they had any duties to discharge.

5.2.5 The attitude of contractor respondents to health and safety legislation is depicted in Chart 30 below where there are a total of 77 respondents.

**Chart 30**

**Attitude Towards Health & Safety**

<table>
<thead>
<tr>
<th>Number of Respondents</th>
<th>Welcome H&amp;S Legislation</th>
<th>Supportive of Objectives</th>
<th>Accepts Need to Comply</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td></td>
<td>36</td>
<td>7</td>
</tr>
</tbody>
</table>

5.2.6 Of the 7 contractors who indicated they accept the need to comply with health and safety legislation rather than the more positive options available, 2 were large contractors, 4 were medium size contractors and 1 a small contractor.

5.2.7 There were 2 comments received. A very large contractor who was a non-respondent to this question and who had previously indicated they had a fully developed health and safety policy and systems integrating the management of all projects stated “there is too much health and safety legislation especially the 6 pack”.

5.2.8 Another very large contractor who indicated they were supportive of the objectives of the health and safety legislation stated “there were problems caused by the speed of implementation of the legislation”.

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5.3 Attitude and Response to the CDM Regulations

5.3.1 The actions taken by 78 respondent contractors in response to the CDM Regulations are depicted in Chart 31.

Chart 31

Response To CDM Regulations

Question 7

More than 88 percent of respondents indicated they found it necessary to revise, amend or modify existing health and safety procedures and systems since the introduction of the CDM Regulations. It is not unreasonable therefore to consider that this situation is most likely indicative of the entire contractor population. Of the 5 respondents who indicated they had completely revised all safety policies, procedures and systems, 3 were demolition contractors.

5.3.3 Of the 6 enterprises who indicated they found no changes to policies, procedures and systems were necessary, 3 were medium size demolition contractors. The 1 respondent who indicated they had not considered or dealt with the implications of the Regulations was a medium size construction contractor who had previously indicated they had a fully developed health and safety policy and systems integrating the management of all projects.
5.3.4 The effect of the introduction of the CDM Regulations on the overall position of respondents with respect to health and safety legislation is shown in Chart 32.

**Chart 32**

**Response To CDM Regulations**

**Question 8**

It can be seen from Chart 31 that the majority of respondents indicated that the main effect has been to reinforce and strengthen compliance to health and safety legislation. The 2 enterprises who indicated that their overall position with respect to health and safety legislation had not been affected as a result of the introduction of the CDM Regulations are medium size contractors.

5.3.6 Of the 4 contractors who indicated that the introduction of the CDM Regulations had transformed the approach of their company to health and safety issues, 2 were medium size demolition contractors. There were none who felt the introduction of the Regulations had created resistance to all health and safety legislation.

5.3.7 The comment from one medium size contractor respondent was "the Regulations have had a negative effect in respect of the bureaucracy that is involved" and from a very large contractor "Most change followed the introduction of the 6 pack. CDM completed the health & safety regulations. We are bordering on rebellion because we are totally fed up with all the paperwork and unnecessary bureaucracy and incompetent planning supervisors".
5.4 Interpretation / Understanding of the CDM Regulations
The Role of the Planning Supervisor

5.4.1 All interviewees were asked a series of questions relating to the role of the planning supervisor and to indicate what their interpretation / understanding of the role was and how this compared with their actual experience. The series of questions comprised both correct and incorrect functions of the planning supervisor. The responses from a total of 75 contractors are shown in Table 11 below.

<table>
<thead>
<tr>
<th>Ref</th>
<th>Function</th>
<th>Interpretation # of resp.</th>
<th>Actual # of resp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Coordination of H&amp;S aspects of project design and planning</td>
<td>72</td>
<td>44</td>
</tr>
<tr>
<td>b</td>
<td>Collation of client information</td>
<td>70</td>
<td>40</td>
</tr>
<tr>
<td>c</td>
<td>Advising clients of investigative surveys considered necessary</td>
<td>67</td>
<td>37</td>
</tr>
<tr>
<td>d-1</td>
<td>Providing advice to clients</td>
<td>64</td>
<td>45</td>
</tr>
<tr>
<td>d-2</td>
<td>Providing advice to designers</td>
<td>52</td>
<td>33</td>
</tr>
<tr>
<td>d-3</td>
<td>Providing advice to contractors</td>
<td>50</td>
<td>35</td>
</tr>
<tr>
<td>e</td>
<td>Preparation of the project health and safety plan</td>
<td>62</td>
<td>50</td>
</tr>
<tr>
<td>f</td>
<td>Forwarding information to designers</td>
<td>43</td>
<td>25</td>
</tr>
<tr>
<td>g</td>
<td>Ensuring designers comply with their duties</td>
<td>53</td>
<td>27</td>
</tr>
<tr>
<td>h</td>
<td>Understanding and being aware of risk management and design</td>
<td>58</td>
<td>34</td>
</tr>
<tr>
<td>j</td>
<td>Seeing the risk assessment for all stages of the construction</td>
<td>38</td>
<td>29</td>
</tr>
<tr>
<td>k</td>
<td>Auditing adherence to the H&amp;S plan during the construction phase</td>
<td>28</td>
<td>24</td>
</tr>
<tr>
<td>l</td>
<td>Monitoring on site standards</td>
<td>36</td>
<td>28</td>
</tr>
<tr>
<td>m</td>
<td>Managing the project on behalf of the client</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>n</td>
<td>Ensuring the H&amp;S file is prepared in accordance with the Regulations</td>
<td>72</td>
<td>52</td>
</tr>
<tr>
<td>p</td>
<td>Ensuring the H&amp;S file is delivered to the client</td>
<td>69</td>
<td>50</td>
</tr>
</tbody>
</table>

5.4.2 It is evident from Table 11 that for many of the roles of the planning supervisor required by the Regulations, the majority of contractor respondents have interpreted and appear to have understood the CDM Regulations correctly.
5.4.3 However, with the exception of the functions which are not a requirement of the Regulations, there is a low degree of correlation between their interpretation and actual experiences.

5.4.4 Of note is that a third of contractor respondents do not see the role of the planning supervisor as providing advice to designers or contractors. Of further significance is that 57 percent of respondents do not see the role of the planning supervisor as forwarding information to designers and more than 29 percent do not see the role of the planning supervisor as ensuring that designers comply with their duties. It would therefore seem to be evident from this that over half the contractor respondents do not have a clear understanding of the interface between the planning supervisor and the designer, and between the planning supervisor and themselves. It is also evident from the responses that the contractor respondents see the role of the planning supervisor as very much a client facing activity with more than 89 percent seeing the role as advising clients of investigative surveys considered necessary and more than 85 percent as providing advice to clients. The data does not indicate any discernable difference in the views expressed by the different contractors which could be attributed to any specific factors.

5.4.5 Some of the more frequent comments from contractor respondents, included “the planning supervisor is appointed too late in the process to have an influence” and “planning supervisors don’t understand their role and are over zealous in assessing the competence of contractors”.

5.4.6 Evidence of misinterpretation, or misunderstanding of the role of the planning supervisor can be seen by the number of responses to the functions with the references of j, k, l, and m in Table 11. It should be stated that these are not a requirement of the CDM Regulations. With such a high number of responses it is not unreasonable to consider that this situation could be quite prevalent among the total contractor population. Of significance is that for all 4 of these functions there were a greater number of demolition contractor respondents than other contractors which suggests they have a different interpretation / understanding than the others. Interestingly, of those respondents who indicated they had actually experienced or seen those functions being taken up by planning supervisors there was a pro rata, with the sample, representation of contractors.

5.4.7 While 72 out of 75 contractor respondents clearly see a role of the planning supervisor is to ensure the health and safety file is prepared in accordance with the Regulations and 69 out of 75 see it as ensuring the health and safety file is delivered to the client, in both cases more than 27 percent have not actually experienced this happen. This would suggest that this could be a more widespread issue in the industry.
5.5 Impact of the CDM Regulations

5.5.1 Interviewees were asked to rate the impact to date and longer term on their respective companies arising from the key requirements of the CDM Regulations. The rating scale was:

- No impact
- Some impact
- Much impact
- Significant impact

with respondents making the corresponding judgement of the level of impact in the context of their business. The impact to date indicated by a total of 76 contractor respondents is depicted in Chart 33.

**Chart 33**

**To Date Impact Of The CDM Regulations On Contractors**

**Question 10**

5.5.2 There were a total of 479 responses on the impact to date of the 8 key requirements of the CDM Regulations. Of these responses 326, which represent more than 68 percent, indicated there had been an impact. No single type or size of contractor stands out by consistently indicating an impact from all 8 key requirements. The converse is also true of the 153 responses indicating no impact. However, there are some specific points of interest.
5. CONTRACTORS (Continued)

5.5.3 It is evident from Chart 33 that the requirement to assess the competence of the planning supervisor has had the least impact of the eight requirements. However, 22 of the 48 respondents to this category, 13 of which were demolition contractors, did indicate there had been an impact on their respective businesses as a result of this requirement.

5.5.4 It is also apparent from Chart 33 that the greater number of respondents, 61 out of 75, consider the requirement to appoint a planning supervisor as having had an impact on their respective businesses. Of the 14 respondents who indicated there had been no impact, there was an equal disposition between contractors.

5.5.5 The requirement for a pre-tender health and safety plan was indicated by 15 of the 75 respondents to this category as having had a significant impact. This was the highest number of responses for this category of impact.

5.5.6 It is interesting to note that the requirement to assess the competence of the designer received the lowest number of responses of all 8 categories. Of the total of 35 responses, 19 considered there had been no impact arising from this requirement and 1, a medium size contractor who has carried out more than 100 projects where the CDM Regulations had been applicable, indicated the impact had been significant.

5.5.7 Through the use of the simple weighting factors shown in Table 12 a weighted mean score (WMS) for each requirement can be determined using the formula:

\[
\frac{\sum FS}{\sum F} = \text{WMS}
\]

where \( F \) is the number of respondents per impact category and \( S \) is the respective weighting factor for each impact category

This enables the relative impact of the 8 requirements on the contractor sample to be determined.

Table 12

<table>
<thead>
<tr>
<th>Impact Category</th>
<th>Weighting Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>No impact</td>
<td>1</td>
</tr>
<tr>
<td>Some Impact</td>
<td>2</td>
</tr>
<tr>
<td>Much Impact</td>
<td>3</td>
</tr>
<tr>
<td>Significant Impact</td>
<td>4</td>
</tr>
</tbody>
</table>
5.8 The weighted mean score for the impact to date of the 8 key requirements are depicted in Chart 34 and those for the future impact are shown in Chart 36.

5.9 It is very evident from this chart, which reinforces the previous analysis, that the total volume of response places the requirement for a pre-tender health and safety plan, as having the greatest impact, just marginally greater than the requirement to assess the competence of the principal contractor. It also highlights the relative impact on the contractor sample of the requirement for the appointment of both a planning supervisor and principal contractor.

5.10 There were a total of 478 responses on the future impact of the CDM Regulations. Of these, 374 responses representing more than 78 percent indicated there would be an impact. No single type or size of contractor stands out by consistently indicating an expectation of an impact from all 8 key requirements. The converse is also true of the 104 responses anticipating no impact.

5.11 From the responses received the overall future impact of the 8 key requirements is anticipated to be much greater. This can be seen by comparing both Chart 33 and Chart 34 which depict the to date impact with the future impact depicted in Chart 35 and Chart 36 respectively.
5.12 It is interesting to note that the requirement to assess the competence of the designer is, in the future, anticipated to have the least impact on contractor respondents, while the greatest future impact is expected to come from the requirement to assess the competence of the principal contractor, with a total of 19 respondents indicating that this requirement will have a significant impact. Of these, 4 respondents were solely demolition contractors.

5.13 A total of 64 of the 76 respondents anticipate that the requirement for a pre-tender health and safety plan will have the second greatest impact in the future. Of the 27 respondents who consider that the future impact will be significant, 11 are solely demolition contractors.

5.14 Also a total of 64 of the 76 respondents expect a future impact on them to ensue from the requirement to appoint a planning supervisor. Of the 24 respondents who consider the impact will be significant, 16 are solely demolition contractors.
5.5.15 It is particularly interesting to note that the respondents consider the requirement to perform competence assessments, other than that on the principal contractor, will potentially be less of an impact on them, also in the future, than the other requirements as evidenced in Chart 36. The most likely reason for this position would seem to be that the majority of respondents do not see themselves undertaking these required assessments. The assessment that most contractors will be carrying out will be of other contractors.

5.5.16 Very few additional comments were received from the respondents on these issues. The comments that were made however, did relate to competence assessment and included “define competence” and “anyone can fill in a form”. The associated statements to these reflect a position whereby contractors appoint other contractors on the basis of past history and previous experience of working with them rather than on completion of a formal assessment. The whole subject of competence assessment has been explored in more depth in Case Study 3 and Case Study 4, which are annexed to this report as Appendix E and Appendix F respectively, and is discussed further in Section 7.
5.6 Beneficial Effect of the CDM Regulations

5.6.1 Interviewees were asked to rate in order the greatest beneficial effect to them, both to date and in the future, of the same 8 key requirements.

5.6.2 The beneficial effect to date indicated by a total of 70 respondents is depicted in Chart 37. A total of 11 interviewees indicated they had experienced no beneficial effect at all. Of these, 5 are demolition contractors.

Chart 37

To Date Beneficial Effect Of CDM Regulations For Contractors

Question 10

5.6.3 Of the 70 respondents, 44 only rated the 1st, 2nd and 3rd greatest benefits rather than all 8 key requirements in order of benefit. The outcome is however, very interesting. It can be seen that the profile of Chart 37 is similar to that of Chart 34. The reason for this is the high degree of correlation between magnitude of impact and beneficial effect. With the exception of the requirement to assess the competence of the principal contractor which for obvious reasons is not seen by some as a beneficial effect, respondents have indicated that the greatest beneficial effect to date has come from those requirements they previously indicated had produced the greatest impact on their business. This would therefore seem to qualify the type of impact as a positive impact producing a beneficial effect, rather than a negative impact producing an undesirable effect.
5.6.4 Analysis of the data relating to future beneficial effect gives a very similar position. The non-respondents are the same as those in the ‘to date’ data set. In additional to the 11 respondents who indicated there was no beneficial effect to date there were a further 6 respondents, bringing the total to 17, who indicated they did not anticipate any future beneficial effect. The future beneficial effect as indicated by the 64 respondents is depicted in Chart 38.

Chart 38

Future Beneficial Effect Of CDM Regulations For Contractors

Question 10

<table>
<thead>
<tr>
<th>Rated Beneficial Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointment Of PSS</td>
</tr>
<tr>
<td>Competence Assessment Of PSS</td>
</tr>
<tr>
<td>Competence Assessment Of PC</td>
</tr>
<tr>
<td>Client Information</td>
</tr>
<tr>
<td>Appointment Of PC</td>
</tr>
<tr>
<td>Competence Assessment Of Designer</td>
</tr>
<tr>
<td>Requirement For Pre-tender H&amp;S Plan</td>
</tr>
<tr>
<td>Designers To Design With Safety In Mind</td>
</tr>
</tbody>
</table>

5.6.5 With the exception of the competence assessment of the principal contractor requirement, there is still a high degree of correlation between future impact and future beneficial effect. The evidence is very strong that degree of impact does translate to magnitude of positive benefit and with the greatest positive beneficial effect for contractors coming to date and anticipated to come in the future from the requirement for a pre-tender health and safety plan. This is closely followed by the beneficial effect from the requirement on clients to make all safety related information available and the requirement to appoint a planning supervisor.

5.6.6 Of significance is the position of 7 very large contractors who consider they have all the necessary controls in place and who stated "in reality the Regulations have not done anything, only increased bureaucracy" and "the biggest impact will come in the maintenance of the building by way of the health and safety file".
5.7 Documentation

5.7.1 Interviewees were asked to indicate the volume of documentation attributable to specific requirements of the CDM Regulations and then to state whether they considered it excessive. The views of a total of 76 respondents are depicted in Chart 39 and Chart 40.

Chart 39

Volume Of Documentation - Contractor View

Question 11

<table>
<thead>
<tr>
<th>Number Of Respondents</th>
<th>Up To 12 Pages</th>
<th>12 To 24 Pages</th>
<th>25 To 49 Pages</th>
<th>Greater Than 50 Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-tender H&amp;S Plan</td>
<td>18</td>
<td>18</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>Pre-qualification Assessment</td>
<td>30</td>
<td>19</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>Competence Assessments</td>
<td>9</td>
<td>14</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>H&amp;S File</td>
<td>3</td>
<td>7</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Project H&amp;S Plan</td>
<td>47</td>
<td>47</td>
<td>7</td>
<td>30</td>
</tr>
</tbody>
</table>

5.7.2 Many contractors interviewed did not have a view on the volume of documentation and neither did they have a perception on whether it could be considered excessive. Furthermore, not all respondents could give an indication for all 5 types of documentation as is evident in Chart 39.

5.7.3 Echoing the views expressed by some contractors was one large contractor who stated "I spend 20 percent of my time filling in questionnaires. Do people read them? All the questionnaires are different. There is difficulty getting small subcontractors to fill in questionnaires".

5.7.4 There is no clear indication from the data whether a specific volume of documentation, for those type of documents under consideration, is either acceptable or unacceptable to any particular contractor group.
5.7.5 It would seem from many of the additional comments received during interview on this subject that the acceptability of the volume of documentation is very much a function of the size and complexity of project.

Chart 40

Excessive Documentation - Contractor View

<table>
<thead>
<tr>
<th>Number Of Responses</th>
<th>Type Of Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>Pre-tender H&amp;S Plan</td>
</tr>
<tr>
<td>35</td>
<td>Pre-qualification Assessment</td>
</tr>
<tr>
<td>30</td>
<td>Competence Assessment</td>
</tr>
<tr>
<td>25</td>
<td>Project H&amp;S Plan</td>
</tr>
<tr>
<td>20</td>
<td>Health &amp; Safety File</td>
</tr>
</tbody>
</table>

5.7.6 The majority of respondents consider the volume of documentation for the pre-tender health and safety plan and that for pre-qualification assessment is excessive supporting the views stated in paragraph 5.7.3. In addition to the responses concern was expressed by way of comment about the project health and safety plan and the size of the health and safety file particularly by the large contractors who carry out many projects each year. A comment from one very large contractor was “the volume of documentation for the project health and safety plan is getting worse and the excessive documentation in the health and safety file is to cover ones back”. Another contractor expressed the opinion that “method statements were an unnecessary duplication”.

5.7.7 The issues and others surrounding the requirement for a health and safety file are explored in more depth in Case Study 2 - The Health and Safety File annexed to this report as Appendix D.
5.7.8 The views expressed by 69 contractor respondents to 6 possible reasons proposed for excessive levels of documentation are depicted in Chart 41. From the data it is not possible to discern any specific pattern or grouping of response relating to either size or type of contractor. Although there is a greater number of responses attributing the excessive documentation to ‘to prevent the possibility of civil litigation’, it is appropriate to consider a possible relationship between the views expressed under the headings of ‘a misunderstanding of the requirements’ and ‘the need to ensure and demonstrate compliance with the Regulations’.

5.7.9 Given that there is a level of misunderstanding of the requirements of the CDM Regulations by a relatively high percentage of the respondents, as evidenced in sub-section 5.4, it is not unreasonable to consider that their view of compliance with the CDM Regulations and ACoP will actually include expectations based on real misunderstandings. This suggests, based on the opinions depicted in Chart 41, there is a strong possibility that the major underlying reason for excessive documentation is ‘a misunderstanding of the requirements’ of the Regulations.

5.7.10 Few additional comments were received from contractor respondents. Those that were given, such as “quality of work is related to quantity of paper”, reinforce the possibility of misunderstandings.
5.8 Health and Safety Benefits

5.8.1 Interviewees were asked to indicate which of 6 possible health and safety benefits they had actually experienced occurring on site which could be attributed to the introduction of the CDM Regulations. There were a total of 76 respondents, and the responses they gave are depicted in Chart 42.

Chart 42

Health & Safety Benefits - Contractor View

Question 13

5.8.2 Close examination of the data indicates there are no discernable trends or grouping of responses by size or type of contractor which would suggest there are any particular factors contributing to the responses that have been given. There is a pro rata, with the sample, distribution of responses by type and size of contractor.

5.8.3 A consistently repeated comment was "behavioural changes on site are not all attributable to the CDM Regulations and neither are the reduction in incidents". Further comments suggest that it is the total volume of health and safety legislation which has brought about the increased awareness which has resulted in "safer equipment and operation" and "the client being more willing to spend money on safety related items" which in turn has had an impact on the number of incidents.
5. CONTRACTORS (Continued)

5.8.4 It was however pointed out by 3 very large contractors that while they do collect incident data the methodology does not allow them to differentiate or relate an incident to a specific piece of health and safety legislation. Furthermore it was questioned whether 'near misses' were being captured adequately particularly where smaller contractors were involved. It was suggested here that smaller contractors would not report an incident or near miss fearing it would be a reflection on their competence which would consequently impact on their reputation, business retention and the securing of new business.

5.8.5 The responses given by interviewees to 7 proposed health and safety benefits in terms of improvement in quantity / quality to date and in the future are depicted in Chart 43 and Chart 44 respectively.

**Chart 43**

To Date Health & Safety Benefits For Contractors

**Question 14 - Improvements**

![Chart Image]

5.8.6 Of the total responses more than 44 percent indicate 'no benefit' which is probably highly indicative of the view of the whole contractor population. On a pro rata, with the sample, basis there were less demolition contractors, 41 percent, than other contractors indicating 'no benefit'. This is further reflected in the categories of benefit where a greater proportion of demolition contractors than other contractors have indicated benefits. The comment most frequently received however, was "it is too early to tell".
5. CONTRACTORS (Continued)

5.8.7 Substantial benefit was indicated only by demolition contractors where, 2 small and 1 medium size demolition contractors, indicated this in respect of reduced accidents. Furthermore, it was 2 demolition contractors who indicated substantial benefit from the creation of ‘a safer environment for users’ which in their context was interpreted as a safer environment for adaption, modification or demolition of a structure.

5.8.8 It is clear that the expectations of many respondents is for the health and safety benefits to materialise in the future. More than 83 percent of the total responses indicate future benefits and of those, more than 51 percent are for ‘some benefit’ to ensue and more than 23 percent are for ‘substantial benefit’ to ensue.

Chart 44

Future Health & Safety Benefits For Contractors
Question 14 - Improvements

5.8.9 Examination of the data indicates there is pro rata, with the sample, representation of all contractor types in these responses. Of note is 3 of the 8 respondents, 1 of which is a demolition contractor, indicated ‘no benefit’ in the future from reduced accidents and then went on to indicate they had had accidents on their sites.
5.8.10 Overall the data suggests that contractor respondents consider the most health and safety benefit will, in the future, come from ‘fewer accidents during maintenance’, ‘reduced claims’ and ‘a safer environment for users’ and in that order. This is clearly evidenced by the weighted mean scores determined as described in paragraph 5.5.7 and depicted in Chart 45.

Chart 45

Health & Safety Benefits - Contractors View

Question 14 - Improvements

<table>
<thead>
<tr>
<th></th>
<th>To Date</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced Accidents</td>
<td>2.05</td>
<td>2.82</td>
</tr>
<tr>
<td>Reduced Claims</td>
<td>1.51</td>
<td>2.61</td>
</tr>
<tr>
<td>Fewer Accidents During Maintenance</td>
<td>1.54</td>
<td>2.93</td>
</tr>
<tr>
<td>A Safer Environment For Users</td>
<td>1.68</td>
<td>2.77</td>
</tr>
<tr>
<td></td>
<td>1.68</td>
<td>2.07</td>
</tr>
<tr>
<td></td>
<td>2.14</td>
<td>2.86</td>
</tr>
</tbody>
</table>

5.8.11 The view of a total of 63 contractor respondents of the benefit ‘to date’ by way of reduced expenditure as a result of the 7 health and safety benefits under consideration are depicted in Chart 46.

5.8.12 Of significance is the magnitude of the non-response which can either be interpreted as ‘don’t know’ or ‘no benefit’. Based on the frequency of comments received, the most likely position in terms of a response is that the respondents don’t know because the systems they have in their respective companies do not provide differential data of this nature. The limited data does suggest that if the non-respondents did give an indication there is a high probability that it would be ‘no benefit’.
5.8.13 The basis of this argument is that if 44 percent of the total responses to the question of improvements to date in quantity/quality arising from the health and safety benefits previously indicated there had been no benefit, primarily because it was too early to tell, this should reflect directly on any reduced expenditure which will take longer to materialise. Even so, 28 contractors, of which 15 were demolition contractors, did indicate they had a benefit of reduced expenditure arising from some of the health and safety benefits.

5.8.14 A total of 64 respondents gave their view of the reduction in expenditure they anticipate to ensue in the future from the health and safety benefits. These are depicted in Chart 47.

5.8.15 The relatively high level of non-response again can only be considered as either ‘don’t know’ or ‘no benefit’. In this case, however, the view does not have to be supported by actual evidence so the probability of a non-response being a ‘no benefit’ is quite low. The non-response is most likely ‘don’t have a view’ rather than ‘don’t know’. The most frequent comment given was “it is too early to see any benefits coming from ease of adoption / refurbishment / demolition. There should be in the future”.
5.8.16 There are few points of significance in this data other than the relatively low level of responses for ‘substantial benefit’ where there were twice as many responses from demolition contractors than from other contractors. Another point of significance is the high response level for ‘reduced claims’ where ‘some benefit’ is expected by a total of 23 respondents of which 11 are demolition contractors.

5.8.17 Of course those contractors who previously indicated ‘no benefit’ to the health and safety benefits have correspondingly indicated ‘no benefit’ in respect of reduction in expenditure.

5.8.18 Overall the data suggests that contractor respondents consider the most reduction in expenditure arising from the health and safety benefits will, in the future, come from ‘fewer accidents during maintenance’ and ‘reduced damage to long term health’ jointly with ‘a safer environment for users’ in that order. This is clearly evidenced by the weighted mean scores determined as described in paragraph 5.5.7 and depicted in Chart 48.
5.8.19 Of some relevance to the analysis in this section is the accident level of the respondents and the number of CDM projects undertaken. Of a total of 90 respondents, 28 indicated they had had accidents of which 13 were demolition contractors, 26 indicated they didn’t know, of which 20 were other contractors and 36 respondents indicated they had not had any accidents of which 24 were demolition contractors. Of the 36 respondents who had not had any accidents the average number of projects undertaken per contractor where the CDM Regulations had applied was 31. Of the 28 respondents who indicated they had had accidents the average number of projects undertaken per contractor where the CDM Regulations had applied was 175. As perhaps would be expected this indicates the greater the level of construction activity the higher the potential for incidents to occur. Of the 26 respondents who didn’t know the average number of projects undertaken per contractor where the CDM Regulations had applied was 86. It is a high probability that more than half of these have had accidents. With the foregoing therefore it is somewhat surprising to have such a high ‘no benefit’ response in respect of reduced accidents. Either respondents genuinely consider there will be ‘no benefit’ or as has been stated “it is too early to tell”.
5.9 Efficiency Benefits

5.9.1 Interviewees were asked to rate the magnitude of the benefit, now and in the future, which could be attributed to the CDM Regulations of 5 possible efficiency benefits to the design and construction process, in respect of both improvements to quantity/quality and reduction in expenditure. There were a total of 73 respondents and their views are depicted in Chart 49. Most of the non-respondents, particularly those who undertake few projects, stated they were not close enough to the processes to make a valued judgement.

Chart 49

Contractor View Of Efficiency Benefits - Now & In The Future

Question 15 - Improvements

5.9.2 Of immediate significance is the high ‘no benefit’ response in respect of ‘ease of construction’ and the high benefit response for ‘improved flow of information’. This suggests quite strongly that contractor respondents while deriving benefit from the improved flow of information do not anticipate their task in construction being made any easier and with only marginal benefit arising from a ‘more homogeneous design process’.

5.9.3 Of particular note is the high level of ‘substantial benefit’ indicated by 18 respondents in respect of ‘ease of adaption/refurbishment/demolition’. This is not surprising since all 18 operate as demolition contractors.
5.9.4 The respondents view of the reduction in expenditure attributable to the 5 efficiency improvements is depicted in Chart 50.

**Chart 50**

*Contractor View Of Efficiency Benefits - Now & In The Future*

*Question 15 - Reduction In Expenditure*

5.9.5 Of the 65 respondents who indicated a benefit from improved efficiency, 37 are either already experiencing or expect to experience reduction in expenditure as a result. It is evident from the data, as perhaps would be expected, that the greater the number of projects being undertaken the greater the magnitude of benefit. Of the 37 respondents who indicated a reduction in expenditure the average number of projects that have been carried out where the CDM Regulations have been applied is 74. This number is significantly greater than that associated with the benefit of improvements to quantity / quality. A number of contractors have carried out greater than 200 projects and some more than 400 projects.

5.9.6 This would suggest it is the combination of efficiency improvements and economies of scale that are likely to yield a corresponding reduction in expenditure and that there is a cutoff in terms of number of projects below which there will be no or very marginal reduction in expenditure.

5.9.7 If a similar analysis is carried out for those respondents who have indicated 'no benefit' the average number of projects undertaken is 18.
Overall the data suggests that contractor respondents consider the most benefit in terms of quantity / quality is coming, or will come, from 'improved flow of information' and in terms of reduction in expenditure arising from improvements in efficiency is coming or will, in the future, come primarily from 'ease of adaption / refurbishment / demolition. This is clearly evidenced by the weighted mean scores determined as described in paragraph 5.5.7 and depicted in Chart 51.

**Chart 51**

**Contractor View Of Efficiency Benefits - Now & In The Future**

**Question 15**

It is very evident from Chart 51 that the respondents do not consider the benefits from 'ease of construction' are, or will be, as significant as those arising from the other efficiency improvements.

Tangible benefits that respondents anticipate will come from the efficiency benefits they indicated included:

- Money, if all parties managed safety properly, and a more harmonious relationship which is better business
- More involvement of whole team to pick off problems earlier
- Improved general efficiency and more uniform treatment of issues
- Future demolitions should be easier and safer
5.10 Business Effects

5.10.1 Interviewees were asked to indicate whether the introduction of the CDM Regulations had any adverse effect or positive effect on the business of their company and if it had, to specify what the effect had been. There were a total of 77 respondents. Non-respondents are classified as ‘don’t know’.

5.10.2 Of the 77 respondents, 19 indicated their had been neither an adverse nor a positive effect on their respective businesses, 17 indicated there had been both an adverse and a positive effect, 38 indicated there had only been a positive effect and 3 indicated there had only been an adverse effect. The more common effects respondents identified are shown in Table 13.

Table 13

<table>
<thead>
<tr>
<th>Adverse Effect</th>
<th>Positive Effect</th>
<th>Size</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>client misunderstanding</td>
<td>better and safer design</td>
<td>L</td>
<td>Con.</td>
</tr>
<tr>
<td>Increased cost for prospects of tendering</td>
<td>client appeal has improved because of capability to demonstrate that CDM is nothing to worry about</td>
<td>L</td>
<td>Con.</td>
</tr>
<tr>
<td>volume of paperwork and procedures (over the top information requested)</td>
<td>improvement in performance - better communications</td>
<td>VL</td>
<td>Con.</td>
</tr>
<tr>
<td>Prevented from building because of insufficient demonstration of competencies outside core business</td>
<td>guaranteed renewal of core business because of ability to demonstrate competence</td>
<td>M</td>
<td>Con.</td>
</tr>
<tr>
<td>cost of implementing on large number of smallish contracts. Loss of labour only contracts</td>
<td>professional approach due to compliance has given an advantage and short term gain with one major client</td>
<td>M</td>
<td>Con.</td>
</tr>
<tr>
<td>problem of external planning supervisor lacking competence</td>
<td>improved quality of information relating to the project and better documentation</td>
<td>L</td>
<td>Con.</td>
</tr>
<tr>
<td>involves more management time</td>
<td>makes everybody aware of safety</td>
<td>M</td>
<td>Dem.</td>
</tr>
<tr>
<td>costs more money to prepare tender</td>
<td>won jobs because of competency record</td>
<td>M</td>
<td>Dem.</td>
</tr>
<tr>
<td></td>
<td>more partnering and business</td>
<td>L</td>
<td>Con.</td>
</tr>
<tr>
<td></td>
<td>improved communications</td>
<td>SM</td>
<td>Con.</td>
</tr>
<tr>
<td></td>
<td>more work in company for less contracts</td>
<td>SM</td>
<td>Dem.</td>
</tr>
<tr>
<td></td>
<td>possible margin benefit from improved standards</td>
<td>M</td>
<td>Dem.</td>
</tr>
<tr>
<td>reduced profitability of jobs</td>
<td></td>
<td>SM</td>
<td>Con.</td>
</tr>
<tr>
<td>contracts lost to others not complying</td>
<td></td>
<td>M</td>
<td>Dem.</td>
</tr>
</tbody>
</table>
5. CONTRACTORS (Continued)

5.10.3 Of the 19 respondents who indicated they had not experienced any business effect arising from the introduction of the CDM Regulations, 8 were medium size demolition contractors. Of the other 11 contractors, 1 was a very large contractor and the others were all medium size companies. The very large contractor had previously indicated 'no benefit' to the health and safety benefits and efficiency benefits proposed and had indicated that all documentation was excessive.

5.10.4 Seven possible business benefits were proposed to interviewees who were asked to indicate which of them they felt had already arisen and / or will arise in the longer term. The views of a total of 70 respondents are depicted in Chart 52.

Chart 52

Contractor View Of Business Effects - Now & Longer Term

Question 19

5.10.5 The views expressed are very mixed. There are no patterns or groupings discernable in the data which suggest a particular size or type of contractor are experiencing now or expect to experience in the future a greater or lesser business benefit from the 7 that have been proposed.

5.10.6 An additional business benefit attributed to the introduction of the CDM Regulations perceived by 1 large contractor was "they are making the industry look at health and safety as an integrated part of the works".
5. CONTRACTORS (Continued)

5.10.7 Frequently repeated comments from all types of contractor were “more enforcement required” and “more inspectors and action is required”. An adverse comment from 1 large contractor was “good middle guys are going out of business, not just cowboys”.

5.10.8 A number of tangible benefits likely to ensue from the proposed 7 business benefits were identified by most respondents. The most common included:

- Client gets better value for money.
- Will increase the certainty of the outcome. More things will happen on a controlled basis.
- Greater client satisfaction.
- Elimination of undercutting by cowboys will tend towards better profits.
- A more efficient business. Less exposure to financial risk when bidding.
- Benefits relate to long term records and site description records therefore managing properly and methodically will give rise to wider benefits.
- Better able to price demolition projects properly because of information on risks and hazards.
- A more competent industry.
- Improved maintenance, better coordination and better site control.

5.10.9 Interviewees were asked to state what they felt will be the most significant business effects that will arise from the requirement to produce a health and safety file. A total of 66 responded with comments, many of which were duplicated, including the following:

- Buildings will be constructed more efficiently, cost less to maintain and last longer.
- As built record for adaption / refurbishment and demolition.
- Key people will now think more deeply about all aspects of the project.
- Demolition will be better in the long run if produced and maintained correctly.
- Fully comprehensive knowledge of the building.
- As built record and detailed maintenance documentation.
- Will provide future benefit by the weeding out of poor quality companies.
- Will assist the contractor to identify changes during the progress of the job and hence the identification of extras and claims.
- Reduce cost of survey prior to future work.
- Less accidents and hence claims leading to a reduction in insurance premiums.
- Will mean those involved will spend more time, thought and money on complying with the Regulations.
5. CONTRACTORS (Continued)

5.11 Cost of Implementation of CDM Regulations

5.11.1 Interviewees were asked to give an indication of the initial additional costs they incurred in implementing the CDM Regulation in respect of 4 potential cost areas, or any other they wished to specify, and to state whether those costs would have been incurred anyway. If no actual cost estimates were available the following magnitude scale was offered:

None
Little
Major
Substantial
Very significant

5.11.2 None of the interviewees were able to provide actual cost data for the potential cost areas proposed since it was stated by most that their accounting systems did not provide a detailed analysis of costs which would allow those related specifically to these aspects of the implementation of the CDM Regulations to be identified. Those that did respond, of which there were a total of 77, therefore used the magnitude scale described in paragraph 5.11.1. Their responses are detailed in Table 14.

Table 14

<table>
<thead>
<tr>
<th>Change of procedures</th>
<th>None</th>
<th>Little</th>
<th>Major</th>
<th>Substantial</th>
<th>Very Significant</th>
<th>Total Resp.</th>
<th>Incurred anyway</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>55</td>
<td>8</td>
<td>4</td>
<td>1</td>
<td>75</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>(4)</td>
<td>(24)</td>
<td>(6)</td>
<td>(3)</td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Updating of</td>
<td>15</td>
<td>49</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>76</td>
<td>36</td>
</tr>
<tr>
<td>management systems</td>
<td>(11)</td>
<td>(19)</td>
<td>(6)</td>
<td>(3)</td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td>8</td>
<td>49</td>
<td>11</td>
<td>4</td>
<td>4</td>
<td>76</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>(6)</td>
<td>(18)</td>
<td>(7)</td>
<td>(4)</td>
<td>(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased staff</td>
<td>47</td>
<td>14</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>69</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>(46)</td>
<td>(9)</td>
<td>(5)</td>
<td>(1)</td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>77</td>
<td>167</td>
<td>33</td>
<td>12</td>
<td>7</td>
<td>296</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>(67)</td>
<td>(70)</td>
<td>(24)</td>
<td>(11)</td>
<td>(5)</td>
<td>(177)</td>
<td></td>
</tr>
</tbody>
</table>

Note: The numbers in parenthesis are the responses where costs are solely attributable to the CDM Regulations and where those costs would not have been incurred anyway.

5.11.3 No demolition contractors indicated they had incurred ‘very significant’ costs. Just 3 indicated ‘substantial’ costs; 2 in respect of change of procedures 1 of which indicated the same for updating of management systems, and the third for both training and increased staff.
5. CONTRACTORS (Continued)

5.11.4 Of the 41 demolition contractors that responded, 32 indicated ‘little’ cost for change of procedures of which 23 further indicated they would have incurred the cost anyway; 31 indicated ‘little’ cost for the updating of management systems of which 23 also indicated the cost would have been incurred anyway; 27 indicated ‘little’ cost for training of which 19 indicated they would have incurred the cost anyway. As for increased staff, 11 demolition contractors indicated ‘little’ cost of which 5 indicated they would have incurred this cost anyway.

5.11.5 The data highlighted in paragraph 5.11.4 when considered in relation to that in Table 14 reveals that the other contractor categories which responded are indicating a higher level of cost with fewer of them incurring the cost anyway. The 4 respondents who indicated they had incurred ‘very significant’ costs in relation to training comprised 2 large contractors and 2 medium size contractors both of which then further indicated they would have incurred the costs anyway. Of the 2 large contractors, 1 also indicated ‘very significant’ costs for the other 3 cost categories. This particular contractor has carried out more than 400 projects where the CDM Regulations have applied, 80 percent of which as a subcontractor.

Chart 53

Cost Of Implementation Of Regulations - Contractor View

Question 22

<table>
<thead>
<tr>
<th>Cost Activity</th>
<th>Weighted Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Of Procedures</td>
<td>2.16</td>
</tr>
<tr>
<td>Training</td>
<td>2.23</td>
</tr>
<tr>
<td>Updating Of Management Systems</td>
<td>2.26</td>
</tr>
<tr>
<td>Increased Staff</td>
<td>1.48</td>
</tr>
</tbody>
</table>
5. CONTRACTORS (Continued)

5.11.6 By calculating the weighted means score for each cost category as described in paragraph 5.5.7 it is possible to obtain an indication of where respondents have collectively incurred the greatest costs. From this a perspective of the whole contractor population may be drawn. These weighted mean scores are depicted in Chart 53.

5.11.7 It is very evident from Chart 53 that for the respondents the greatest cost in implementing the CDM Regulations has been incurred through ‘updating of management systems’ closely followed by ‘training’ and then ‘change of procedures’. Based on the total number of respondents, this has a high probability of being representative of the whole contractor population.

5.12 Cost of Maintaining Compliance to the CDM Regulations

5.12.1 After considering the costs of implementation of the Regulations interviewees were asked to indicate the additional costs per annum that were being, or were expected to be, incurred in maintaining compliance to the Regulations in respect of 4 potential cost areas or others they wished to specify. They were also asked to state whether those costs would have been incurred anyway. As before if no actual cost data was available interviewees were offered the magnitude scale described in paragraph 5.11.1.

5.12.2 With no actual cost data available for the reason detailed in paragraph 5.11.2, the same 77 respondents used the magnitude scale. Their responses are detailed in Table 15.

Table 15

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Little</th>
<th>Major</th>
<th>Substantial</th>
<th>Very Significant</th>
<th>Total Resp.</th>
<th>Incurred anyway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintaining systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and procedures</td>
<td>14 (11)</td>
<td>53 (29)</td>
<td>7 (6)</td>
<td>0</td>
<td>1 (1)</td>
<td>75</td>
<td>28</td>
</tr>
<tr>
<td>Competence assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 (7)</td>
<td>50 (35)</td>
<td>10 (8)</td>
<td>1</td>
<td>1 (1)</td>
<td>72</td>
<td>20</td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 (8)</td>
<td>50 (25)</td>
<td>7 (6)</td>
<td>3</td>
<td>1 (1)</td>
<td>71</td>
<td>29</td>
</tr>
<tr>
<td>Increased staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>43 (42)</td>
<td>18 (14)</td>
<td>3 (2)</td>
<td>0</td>
<td>1 (1)</td>
<td>65</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>77 (68)</td>
<td>171 (103)</td>
<td>27 (22)</td>
<td>4</td>
<td>4 (4)</td>
<td>283 (200)</td>
<td>83</td>
</tr>
</tbody>
</table>

Note: The numbers in parenthesis are the responses where costs are solely attributable to the CDM Regulations and where those costs would not have been incurred anyway.
5.12.3 The only specific points of interest from this data are;
- having previously indicated the same level of cost in implementation of the CDM Regulations as discussed in paragraph 5.11.5 one respondent has incurred or expects to incur ‘very significant’ costs in maintaining compliance with the Regulations for all 4 cost categories.
- 17 of the respondents have incurred, or expect to incur costs through increased staff solely due to the CDM Regulations and hence would not have incurred those costs anyway
- competence assessment and training are the only category where ‘substantial’ costs have been, or are expected to be, incurred.
- pro rata with the sample, a greater proportion of demolition contractors than other contractors would have incurred or expect to incur the costs anyway.

5.12.4 By calculating the weighted means score for each cost category as described in paragraph 5.5.7 it is possible to obtain an indication of where respondents have collectively incurred, or anticipate to incur, the greatest costs in maintaining compliance to the CDM Regulations. From this a perspective of the whole contractor population may be drawn. These weighted mean scores are depicted in Chart 54.

5.12.5 There were few further comments. The common theme of these were in relation to the additional costs of administration but for those that commented these were considered to be little.

5.12.6 One very large contractor was able to provide, subsequent to the interview, some actual cost data. In 1996, they received a total of 5360 pre-qualification questionnaires across all of its businesses. On average it took 2 person days to prepare and respond to each questionnaire at a loaded personnel cost of £55 per day. The total annual cost was therefore £589,600. The same contractor also received 1802 sets of tender documentation to which it took on average 5 person days to prepare a health and safety response. At the same loaded personnel cost of £55 per day the total cost for the preparation of tender documentation was £495,550. The total annual cost of both activities was £1,085,150. It was stated that on average 10 percent of tender responses are successful. It was suggested therefore that there is a significant unrecoverable cost being incurred by contractors solely in supporting the pre-contract requirements of the Regulations.
5.13 Compliance with the CDM Regulations

5.13.1 Interviewees were asked to state their perception on a percentage basis of compliance with the CDM Regulations by each of the duty holder groups for the following 4 categories of compliance:

- Do not comply
- Comply with the intent
- Comply fully
- Over comply

5.13.2 There was a total of 67 respondents and the mean of their percentage responses are depicted in Chart 55.
5.13.3 It is evident from Chart 55 that it is the perception of the respondents that more than half, 56.0 percent, of principal contractors are in a state of full compliance with the CDM Regulations and is the only duty holder group to be so.

5.13.4 It is also their perception that more planning supervisors 'do not comply', at 20.7 percent, and 'over comply', at 17.5 percent, than any other duty holder group.

5.13.5 Their perception is also that compared to the other duty holder categories, less clients, at 42.4 percent, are in a state of full compliance, and fewer other contractors, at 6.2 percent, 'over comply'.

5.13.6 Analysis of the data does not give any indication of a grouping of perceptions by size or type of contractor respondent.
5.14 Summary Points

5.14.1 Summary points and other contractor issues fall broadly into two categories specifically those of contractors and those which relate to the interface between the contractor and other duty holders.

5.14.2 A substantial majority of contractors interviewed, particularly the national and large regional contractors, are very supportive of the intent of the Regulations and consider that they are good for the whole industry because they force a focus on health and safety at the onset of a project. These contractors, and the small minority who are not supportive of such legislation, stated that the Regulations have added structure and formalised a process which, as far as the requirements on them are concerned, they have always performed.

5.14.3 Although there are differences between national and regional contractors and types of contractor, (civil, demolition, engineering, general construction, specialists etc.), the very large, large and some medium sized contractors appear to have implemented a ‘corporate’ process integrating their management, quality, health and safety, and environmental procedures. This has enabled an effective and efficient approach not only towards the CDM Regulations but also to the diverse range of other health and safety and environmental legislation to which they are subject. Such a best practice approach would be beneficial to other contractors who have expressed difficulty in maintaining compliance with the Regulations.

5.14.4 Although contractors are mostly in favour of the Regulations they are not supportive of the added bureaucracy that has arisen particularly in respect of competence assessment; both of them and the requirement on them to assess the competence of their appointees. This issue is compounded by the lack of understanding of the competence assessment requirements by appointees especially where the appointee is a small and in some cases specialist contractor. In these situations the appointing contractor is finding it necessary to give assistance to the appointee by completing the ‘necessary’ documentation for them.

5.14.5 Many contractors while expressing concern about the competence of some planning supervisors also stated that there have been situations where it has been necessary to develop a health and safety plan in the absence of any information from the planning supervisor.

5.14.6 The utility providers consider themselves as combined duty holders. The utilities, i.e. electricity, gas and water, state that their interpretation of the Regulation is that they are the client, the designer, the principal contractor and contractor and they also fulfil the function of planning supervisor.
5. CONTRACTORS (Continued)

5.14.7 This, it is said by contractors, creates a conflict for the principal contractor when such utilities are brought onto a site since "they become a law unto themselves".

5.14.8 The evidence suggests that utility providers have adopted a very structured approach to the implementation of the Regulations in their respective businesses. They all have competence assessment processes that are applied to external contractors but not internally; competence being assumed and on the basis that if individuals were not competent they would not be employed.

5.14.9 A significant issue the utilities do have with the Regulations, particularly gas, is the requirement of the health and safety file. While they do not have a difficulty in satisfy this requirement for specific structures they do have a problem when it comes to the laying of pipes and cables under or over ground. They have stated that other legislation (PUSWA) in their opinion adequately covers the requirement to keep and maintain accurate records of such installations and if they were required to comply fully with the CDM Regulations in this regard would result in a significant oncost to consumers.

5.14.10 The fact that most if not all of the smaller contractors are regional does not help their integration into the team and often means they do not have an opportunity to input into the development of the health and safety plan. Some smaller contractors stated they had not seen the health and safety plan for the project on which they were working and did not know if one existed. There is evidence which supports mistaken interpretation and deliberate misinterpretation of the Regulations by small contractors particularly with regard to their applicability generally but more specifically to small demolition projects.

5.14.11 For smaller contractors the basic issue is lack of knowledge of the Regulations and their ability, generally administrative, to support the requirements particularly with regard to their competence assessment by others and their ability to assess the competence of their appointees. Larger contractors stated they were providing training to smaller contractors and helping them to put in place the capability to support the requirements on an ongoing basis.

5.14.12 Evidence was found of smaller contractors being absorbed by larger contractors as a result of their inability and sometimes unwillingness to deal with the administrative requirements of the Regulations. It has been indicated by some contractors that they expect this trend to continue driven both by the Regulations and the forthcoming changes in taxation. It is also felt that there will be other small and medium size contractors which will either work on non-CDM projects or go out of business.
6. DESIGNERS

As the heading implies this section of the report analyses the consolidated responses given by designers. Where appropriate anecdotal evidence is introduced to illustrate the statistical data.

6.1 The Designer Sample

6.1.1 The total designer sample of 59 comprises 3 interviews undertaken during the Pilot Study and 56 interviews in the main body of research. This means that the maximum number of possible responses to questions in the structured questionnaire is 56. It must be understood however, that not all designers responded to all questions during interview and therefore the actual number of responses to each question is less.

6.1.2 While there is a mix of size of designers within the sample, which is depicted in Table 1, there is also a categorisation between architects and design engineers.

6.1.3 The number of projects undertaken to the date of this survey by this designer sample where the CDM Regulations have applied varies from 5 by a small regional architect to 750 by a leading national firm of design engineers. The average number of projects per architect practice in the survey sample where the CDM Regulations have applied is 65, and per design engineering concern in the sample is 120. Overall the average for the designer sample is 103.

6.1.4 The breakdown of the total sample of 59 by architect and design engineer is shown in Table 16 below. The number in the shaded cells of the table indicate the number of enterprises that operate solely as that type of designer and no other.

<table>
<thead>
<tr>
<th>Designer</th>
<th>Architect</th>
<th>Design Engineer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architect</td>
<td>18</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Design Engineer</td>
<td>2</td>
<td>36</td>
<td>38</td>
</tr>
</tbody>
</table>
6. DESIGNERS (Continued)

6.2 Health and Safety

6.2.1 The policy of respondent designers towards health and safety before the introduction of the CDM Regulations is depicted in Chart 55 below.

Chart 56

Policy Towards Health & Safety

<table>
<thead>
<tr>
<th>Fully Developed H&amp;S Policy</th>
<th>Good Progress</th>
<th>Absolute Minimum Necessary</th>
<th>Attempt To Comply</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>17</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Design Engineers</td>
<td>Architects</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.2.2 It can be seen from this chart that of the total of 50 respondents that more than half consider that prior to the introduction of the CDM Regulations they had a fully developed health and safety policy and systems integrating the management of all projects. It was commented by one large design engineer that “company was up to date on Health and Safety at Work Act and responsive but the CDM Regulations required new policies”.

6.2.3 The 3 architect practices who indicated they did the absolute minimum necessary to comply with health and safety legislation comprise 1 medium size enterprise and 2 small enterprises, 1 of which commented “the health and safety officer is not appointed until planning approval has been given”. Each architect practice had carried out less than the average number of CDM projects for their category.
6. DESIGNERS (Continued)

6.2.4 No respondents indicated they were 'attempting to comply with the intent of health and safety legislation', or 'did not think they had any duties to discharge' or 'ignored health and safety legislation'.

6.2.5 The attitude of designer respondents to health and safety legislation is depicted in Chart 57 below where there are also a total of 21 respondents.

Chart 57

Attitude Towards Health & Safety

<table>
<thead>
<tr>
<th>Question 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome H&amp;S Legislation</td>
</tr>
<tr>
<td>Design Engineers</td>
</tr>
</tbody>
</table>

6.2.6 It can be seen from this chart that more design engineers than architects, pro rata with the sample, indicated they 'welcomed health and safety legislation' as underpinning the health and safety objectives of their company. A very similar position is also evident in respect of 'supportive of the objectives'.

6.2.7 The 4 architect respondents and 3 design engineering respondents who indicated they 'accept the need to comply with health and safety legislation' rather than the other (more positive) options available to them, comprised 3 small architect practices that had carried out a total of 109 projects between them where the CDM Regulations had been applicable, 1 medium size architect practice that had carried out more than 200 projects and 3 medium size design engineering firms which had a combined project total of 72.
6.3 Attitude and Response to the CDM Regulations

6.3.1 The actions taken by 53 respondent clients in response to the CDM Regulations are depicted in Chart 58.

Chart 58

Response To CDM Regulations

Question 7

<table>
<thead>
<tr>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
</tr>
<tr>
<td>25</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Amended Existing Systems  Modified Existing Systems  No Changes Necessary

- Design Engineers
- Architects

6.3.2 With more than 96 percent of respondents clearly indicating that they found it necessary to revise, amend or modify existing health and safety procedures and systems since the introduction of the CDM Regulations it is not unreasonable to consider that this situation is most likely indicative of the entire designer population. For the 2 enterprises who indicated they found no changes to policies, procedures and systems were necessary, the architect was a small practice having undertaken more than 50 projects were the CDM Regulations were applicable and the design engineer a medium size firm having undertaken 15 projects.

6.3.3 There were no respondents who indicated they had considered the implications of the Regulations but done nothing, or who indicated they had not considered or dealt with the implications of the Regulations.
6. DESIGNERS (Continued)

6.3.4 The affect of the introduction of the CDM Regulations on the overall position of respondents with respect to health and safety legislation is shown in Chart 59. It can be seen that the majority of respondents indicated that the main affect has been to reinforce and strengthen compliance to health and safety legislation.

Chart 59

Response To CDM Regulations

Question 8

<table>
<thead>
<tr>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>25</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transformed Approach</th>
<th>Reinforced Compliance to H&amp;S</th>
<th>Small Positive Effect</th>
<th>No Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Engineers</td>
<td>Architects</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.3.5 The 4 designers who indicated that their overall position with respect to health and safety legislation had not been affected as a result of the introduction of the CDM Regulations comprise 1 small architect practice who had undertaken more than 50 projects where the Regulations had been applicable, and 3 design engineering practices, 2 of medium size and 1 small, with a combined project total of 27.

6.3.6 Of the 4 designers interviewed who felt that the introduction of the CDM Regulations had transformed the approach of their company to health and safety issues, the 3 design engineers comprised 2 large enterprises and 1 small with a combined project total of 224 and the architect was a small practice having undertaken 67 projects where the CDM Regulations had applied.

6.3.7 There were no respondents who felt the introduction of the CDM Regulations had created resistance to all health and safety legislation. A comment from a large design engineering firm was "it has helped get a unified affect across the company".
6. DESIGNERS (Continued)

6.4 Interpretation / Understanding of the CDM Regulations
The Role of the Planning Supervisor

6.4.1 All interviewees were asked a series of questions relating to the role of the planning supervisor and to indicate what their interpretation / understanding of the role was and how this compared with their actual experience. The series of questions comprised both correct and incorrect functions of the planning supervisor. The responses from 53 designers are shown in Table 17 below.

Table 17

<table>
<thead>
<tr>
<th>Ref</th>
<th>Function</th>
<th>Interpretation</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td># of resp.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arc.</td>
<td>DE</td>
</tr>
<tr>
<td>a</td>
<td>Coordination of H&amp;S aspects of project design and planning</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td>b</td>
<td>Collation of client information</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>c</td>
<td>Advising clients of investigative surveys considered necessary</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>d-1</td>
<td>Providing advice to clients</td>
<td>14</td>
<td>32</td>
</tr>
<tr>
<td>d-2</td>
<td>Providing advice to designers</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>d-3</td>
<td>Providing advice to contractors</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>e</td>
<td>Preparation of the project health and safety plan</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>f</td>
<td>Forwarding information to designers</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>g</td>
<td>Ensuring designers comply with their duties</td>
<td>14</td>
<td>32</td>
</tr>
<tr>
<td>h</td>
<td>Understanding and being aware of risk management and design</td>
<td>17</td>
<td>30</td>
</tr>
<tr>
<td>j</td>
<td>Seeing the risk assessment for all stages of the construction</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>k</td>
<td>Auditing adherence to the H&amp;S plan during the construction phase</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>l</td>
<td>Monitoring on site standards</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>m</td>
<td>Managing the project on behalf of the client</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>n</td>
<td>Ensuring the H&amp;S file is prepared in accordance with the Regulations</td>
<td>16</td>
<td>33</td>
</tr>
<tr>
<td>p</td>
<td>Ensuring the H&amp;S file is delivered to the client</td>
<td>17</td>
<td>33</td>
</tr>
</tbody>
</table>

Arc. = Architect

DE = Design Engineer
6. DESIGNERS (Continued)

6.4.2 It is evident from Table 17 that for many of the roles of the planning supervisor required by the Regulations, the majority of respondents have interpreted and appear to have understood the CDM Regulations correctly. There is also a high degree of correlation between their interpretation and actual experiences.

6.4.3 Of note however is the low response by architect respondents to the planning supervisor roles of ‘providing advice to designers’ and ‘providing advice to contractors’. The view expressed by 2 architects is “the planning supervisor is too much a generalist therefore how can they give us advice”. Other architects believe it is their role, since they are the specialists, to give advice to contractors and indeed to clients.

6.4.4 Other comments from architects which possibly support these views were “there is a need to clarify the role of the planning supervisor especially between the planning supervisor and the contractor” and “the planning supervisor should point the designer in the right direction. Clients have misconceptions on the extent of the role of the planning supervisor on site”.

6.4.5 Evidence of misinterpretation, or misunderstanding of the role of the planning supervisor in respect of duties and responsibilities beyond those required by the CDM Regulations can be seen by the number of responses to the functions with the references of j, k, l, and m in Table 17. It should be stated that these are not a requirement of the CDM Regulations. Pro rata with the sample, there are proportionately more architects than design engineers who have misinterpreted or misunderstood the role of the planning supervisor. However, there is reasonable correlation with the actual experience of respondents. With such a small number of respondents on these particular issues it is not appropriate to attach any statistical significance in relation to the total population of architects and design engineers.

6.4.6 One issue for the architect respondents which was identified during the course of interviews was that some clients expect the architect to take on the role of planning supervisor within the design brief and for no additional fee. Comments received were “the fee structure of architects inhibits the take up of the role of planning supervisor and therefore it can’t be supported” and “it depends on clients attitude to CDM whether they are prepared to accept or fund the costs of the planning supervisor. Clients are often surprised at their obligations and responsibilities”.

6.4.7 Another comment frequently received from both architects and design engineers was “the planning supervisor is appointed too late to have any effect”. The whole subject of the role of the planning supervisor is discussed further in Section 9 and Case Study 1 which is annexed to this report as Appendix C.
6.5 Impact of the CDM Regulations

6.5.1 Interviewees were asked to rate the impact to date and longer term on their respective companies arising from the key requirements of the CDM Regulations. The rating scale was:

- No impact
- Some impact
- Much impact
- Significant impact

with respondents making the corresponding judgement of the level of impact in the context of their business. The impact to date indicated by a total of 52 designer respondents is depicted in Chart 60.

![Chart 60](image)

To Date Impact Of The CDM Regulations On Designers

Question 10

6.5.2 There were a total of 345 responses on the impact to date of the 8 key requirements of the CDM Regulations. Of these responses 253, which represent more than 73 percent, indicated there had been an impact. No single type or size of designer stands out by consistently indicating an impact from all 8 key requirements. The converse is also true of the 92 responses indicating no impact. There are some specific points of interest.
6. DESIGNERS (Continued)

6.5.3 It is evident from Chart 60 that the appointment of the principal contractor has had the least impact of the eight requirements. However, 8 architects and 18 design engineers did indicate there had been an impact, predominantly of ‘some impact’ on their respective businesses as a result of this requirement.

6.5.4 It is also apparent from Chart 60 that the greater number of respondents, 49 out of 52, consider the requirement to appoint a planning supervisor as having had an impact on their respective businesses. Of the 3 respondents who indicated there had been no impact, 2 were architect respondents and 1 was a design engineering respondent. Neither of the 3 carry out the function of planning supervisor.

6.5.5 The requirement on clients for a pre-tender health and safety plan was indicated by 17 of the 52 respondents as having had a significant impact. This was the highest number of responses for this category of impact. Of these 17 respondents, 10 were design engineering concerns and 7 were architect practices.

6.5.6 Through the use of the simple weighting factors shown in Table 18 a weighted mean score (WMS) for each requirement can be determined using the formula:

\[
\sum FS + \sum F = WMS
\]

where

\[
F \text{ is the number of respondents per impact category}
\]

and

\[
S \text{ is the respective weighting factor for each impact category}
\]

This enables the relative impact of the 8 requirements on the designer sample to be determined.

<table>
<thead>
<tr>
<th>Impact Category</th>
<th>Weighting Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>No impact</td>
<td>1</td>
</tr>
<tr>
<td>Some Impact</td>
<td>2</td>
</tr>
<tr>
<td>Much Impact</td>
<td>3</td>
</tr>
<tr>
<td>Significant Impact</td>
<td>4</td>
</tr>
</tbody>
</table>

6.5.7 The weighted mean score for the impact to date of the 8 key requirements are depicted in Chart 61 and those for the future impact are shown in Chart 63.
6. DESIGNERS (Continued)

Chart 61

To Date Impact Of The CDM Regulations On Designers

Question 10

6.5.8  It is very evident from this chart, which reinforces the previous analysis, that the total volume of response puts the requirement for a pre-tender health and safety plan, as having the second greatest impact, just marginally behind the requirement to appointment a planning supervisor. It also highlights the relative impact on the designer sample of the requirement on them to design with safety in mind.

6.5.9  There were a total of 393 responses on the future impact of the CDM Regulations. Of these, 282 responses representing more than 711 percent indicated there would be an impact. No single type or size of enterprise stands out by consistently indicating an expectation of an impact from all 8 key requirements. The converse is also true of the 111 responses anticipating no impact. However, there are some specific points of interest.

6.5.10  From the responses received the overall future impact of the 8 key requirements is anticipated to be less. This can be seen by comparing both Chart 60 and Chart 61 which depict the to date impact with the future impact depicted in Chart 62 and Chart 63 respectively.
6.5.11 It is interesting to note that the requirement to appoint a principal contractor is, in the future, anticipated to have the least impact on designer respondents. The greatest future impact, as would perhaps be expected, is anticipated to come from the requirement on designers to design with safety in mind. Of the 5 respondents indicating ‘no impact’ from this requirement, 4 were design engineers all of whom do not see any impact in the future arising from any of the 8 requirements, and 1 was an architect.

6.5.12 A total of 44 of the 52 respondents anticipate that the requirement for a pre-tender health and safety plan will have the second greatest impact in the future. The 14 respondents who consider that the future impact will be significant comprise 3 architects and 11 design engineers 2 of which are large concerns.

6.5.13 There is no pattern or grouping by size or type of designer discernable from the data other than a higher proportion of design engineers, pro rata with the sample, indicating a future impact for most of the 8 requirements.
6. DESIGNERS (Continued)

Chart 63

Future Impact Of The CDM Regulations On Designers

Question 10

<table>
<thead>
<tr>
<th>Weighted Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.82</td>
</tr>
<tr>
<td>2.69</td>
</tr>
<tr>
<td>2.78</td>
</tr>
<tr>
<td>2.47</td>
</tr>
<tr>
<td>2.04</td>
</tr>
<tr>
<td>1.85</td>
</tr>
<tr>
<td>1.78</td>
</tr>
<tr>
<td>1.84</td>
</tr>
</tbody>
</table>

Weighted Impact

- Appointment Of PS
- Competence Assessment Of PS
- Competence Assessment Of PC
- Client Information
- Appointment Of PC
- Competence Assessment Of Designer
- Requirement For Pre-tender H&S Plan
- Designers To Design With Safety In Mind

6.5.14 It is particularly interesting to note that the requirement for competence assessments of the planning supervisor, designer and principal contractor are not, in relation to the other requirements, anticipated to be of such great impact in the future. No additional comments were made which would give an insight into why this is considered to be the likely scenario.

6.5.15 The most likely reason for this position would seem to be that the majority of design engineering respondents had existing systems in place, including those for supplier assessment, most because of their BS5750 / ISO9000 procedures and in addition to the guidelines laid down by the Institute of Design Engineers. Similarly, the Royal Institute of British Architects have published guidelines which have been specifically amended to take account of the requirements of the CDM Regulations.
6.6 Beneficial Effect of the CDM Regulations

6.6.1 Interviewees were asked to rate in order the greatest beneficial effect to them, both to date and in the future, of the same 8 key requirements whose impact had previously been considered.

6.6.2 The beneficial effect to date indicated by a total of 47 respondents is depicted in Chart 64. A total of 3 architects and 2 design engineering interviewees indicated they had experienced no beneficial effect at all.

Chart 64

To Date Beneficial Effect Of CDM Regulations For Designers

Question 10

Furthermore, not all respondents rated beyond the 1st, 2nd and 3rd greatest benefits. The outcome is however, very interesting. By examination it can be seen that the profile of Chart 64 is very similar to that of Chart 61. The reason for this is the high degree of correlation between magnitude of impact and beneficial effect. Respondents have indicated that the greatest beneficial effect to date has come from those requirements they previously indicated had produced the greatest impact on their business. This therefore would seem to qualify the type of impact as a positive impact producing a beneficial effect, rather than a negative impact.
6.4 Analysis of the data relating to future beneficial effect gives a very similar position. There were 11 non-respondents including the same as those in the ‘to date’ data set but with an additional 6 design engineering firms. Also, those respondents who indicated there was no beneficial effect to date also indicated they did not anticipate any future beneficial effect. The future beneficial effect as indicated by 41 respondents is depicted in Chart 65.

Chart 65

Future Beneficial Effect Of CDM Regulations For Designers

Question 10

<table>
<thead>
<tr>
<th>Rated Beneficial Effect</th>
<th>Appointment Of PS</th>
<th>Appointment Of PC</th>
<th>Competence Assessment Of PS</th>
<th>Competence Assessment Of Designer</th>
<th>Requirement For Pre-tender H&amp;S Plan</th>
<th>Designers To Design With Safety In Mind</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Respondents</td>
<td>33</td>
<td>37</td>
<td>24</td>
<td>22</td>
<td>23</td>
<td>25</td>
</tr>
<tr>
<td>Number Of Respondents</td>
<td>35</td>
<td>35</td>
<td>30</td>
<td>30</td>
<td>25</td>
<td>35</td>
</tr>
</tbody>
</table>

6.5 It can be seen there is a high degree of correlation between future impact and future beneficial effect providing the evidence that degree of impact does translate to magnitude of positive benefit and, as can be seen from Chart 65, 37 of the 41 respondents anticipate a beneficial effect ensuing from the requirement for a pre-tender health and safety plan.

6.6 Of significance from the data is the much greater indication from the design engineering respondents of the future beneficial effect ensuing from the appointment of the planning supervisor. This position can perhaps be understood in the light of the fact that of the 28 design engineering respondents 19 offer their services on a commercial basis as planning supervisors.
6.7 Documentation

6.7.1 Interviewees were asked to indicate the volume of documentation attributable to specific requirements of the CDM Regulations and then to state whether they considered it excessive. The views of a total of 53 respondents are depicted in Chart 66 and Chart 67.

Chart 66

Volume Of Documentation - Designer View

Question 11

<table>
<thead>
<tr>
<th>Number Of Respondents</th>
<th>Pre-tender H&amp;S Plan</th>
<th>Pre-qualification Assessment</th>
<th>Project H&amp;S Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up To 12 Pages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 To 24 Pages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 To 49 Pages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater Than 50 Pages</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.7.2 Many designers interviewed did not have a view on the volume of documentation and neither did they have a perception on whether it could be considered excessive. Furthermore, not all respondents could give an indication for all 5 types of documentation as is evident in Chart 66.

6.7.3 There is no clear indication from the data whether a specific volume of documentation, for those type of documents under consideration, is acceptable or unacceptable to either architects or design engineers. It would seem from many of the additional comments received during interview on this subject that the acceptability of the volume of documentation is very much a function of the size and complexity of project.
6.7.4 What is evident from the data however, is that pro rata with the sample, the architect respondents perceive a higher volume of documentation for all document types under consideration, than the design engineer respondents.

Chart 67

Excessive Documentation - Designers View

Question 11

<table>
<thead>
<tr>
<th>Type Of Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-tender H&amp;S Plan</td>
</tr>
<tr>
<td>Pre-qualification Assessment</td>
</tr>
<tr>
<td>Competence Assessment</td>
</tr>
<tr>
<td>Project H&amp;S Plan</td>
</tr>
<tr>
<td>Health &amp; Safety File</td>
</tr>
</tbody>
</table>

6.7.5 While a greater number of the combined total designer respondents consider the volume of documentation for the project health and safety plan is excessive more concern was expressed by architect respondents about the size of the health and safety file. On the other hand the greatest number of design engineer respondents were concern about the volume of documentation associated with the pre-tender health and safety plan.

6.7.6 A medium size architect respondent attributed the excessive documentation to “a lack of definition of the requirements”. Another architect respondent commented “it is difficult to be sure what the health and safety file should contain”, while another architect respondent commented “no excessive paper from designers, it is the contractors who supply too much”. It is interesting that the following comment from a contractor respondent tends to support this view “to cover our own backs and insufficient knowledge. Unsure people will put in irrelevant information”.

Evaluation of CDM Regulations - Final Report  Page 109  The Consultancy Company
6.7.7 The view of some design engineer respondents for the excessive level of documentation is expressed in the following comments “there is a lack of understanding of the process. Often an over supply of irrelevant information due to a lack of knowledge of health and safety application”. And “There is a total misunderstanding of the requirements of the Regulations”.

6.7.8 The issues surrounding the requirement for a health and safety file are explored in more depth in Case Study 2 - The Health and Safety File annexed to this report as Appendix D.

Chart 68

Excessive Documentation - Designers View

Question 12

![Chart of excessive documentation reasons]

6.7.9 The views expressed by 47 designer respondents to 6 possible reasons proposed for excessive levels of documentation are depicted in Chart 68. From the individual data it is evident that the architect respondents attribute the excessive documentation primarily to ‘the need to ensure and demonstrate compliance with the CDM Regulations and ACoP” and ‘to prevent the possibility of civil litigation’. Design engineer respondents however attribute the excessive documentation to ‘a misunderstanding of the requirements’.
6.7.10 It is therefore appropriate to consider a possible relationship between these views. Given that there is a level of misunderstanding of the requirements of the CDM Regulations by a relatively high percentage of architect respondents, as evidenced in sub-section 6.4, it is not unreasonable to consider that their view of compliance with the CDM Regulations and ACoP will actually include expectations based on real misunderstandings. This would therefore suggest based on the opinions depicted in Chart 68, that the major underlying reason for excessive documentation is 'a misunderstanding of the requirements' of the Regulations.

6.8 Health and Safety Benefits

6.8.1 Interviewees were asked to indicate which of 6 possible health and safety benefits they had actually experienced occurring on site which could be attributed to the introduction of the CDM Regulations. There were a total of 48 respondents, and the responses they gave are depicted in Chart 69.

Chart 69

Health & Safety Benefits - Designers View

Question 13

<table>
<thead>
<tr>
<th>Number Of Respondents</th>
<th>Increased Awareness</th>
<th>Behavioural Changes</th>
<th>Better Planning &amp; Coordination</th>
<th>H&amp;S Plan On Site</th>
<th>Less Incidents</th>
<th>Less Risk To Manage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.8.2 Of particular interest are the 8 designers, 6 design engineer respondents and 2 architect respondents, who have indicated 'less incidents'. These respondents have all carried out a low number of projects where the Regulations have applied and are possibly more able to differentiate between before and after their introduction.
6. DESIGNERS (Continued)

6.8.3 Of the 8 respondents, 2 also indicated they had had accidents on their sites. Of the other respondents it is assumed that their incident tracking processes and records do not allow them to differentiate between type of incident and its relationship to health and safety legislation and hence determine changes of this nature. This issue of differentiation is an obstacle in being able to attribute changes in incident rates to the introduction of specific health and safety legislation. It should be understood however, it is not general practice within the design community to track on-site accidents. That it is felt, is the responsibility of the principal contractor.

6.8.4 A general comment given with regard to 'increased awareness of health and safety issues', where it is clearly evident from Chart 69 that all but 8 of the respondents have indicated as actually occurring on site, was that it could not be solely attributed to the CDM Regulations but to the total volume of health and safety legislation introduced in recent years.

6.8.5 The responses given by interviewees to 7 proposed health and safety benefits in terms of improvement in quantity / quality to date and in the future are depicted in Chart 70 and Chart 71 respectively.

Chart 70

To Date Health & Safety Benefits - Designers View

Question 14 - Improvements

- Reduced Accidents
- Reduced Claims
- Fewer Accidents During Maintenance
- A Safer Environment For Users

- Reduced Sickness
- Reduced Damage To Long Term Health
- Less Illness Through Maintenance
6. DESIGNERS (Continued)

6.8.6 Of the total responses more than 44 percent indicate ‘no benefit’. Of those that did indicated a benefit 70 percent perceived it as a ‘marginal benefit’. This is probably indicative of the view of the whole designer population. The comment most frequently received was “it is too early to tell”. Of significance is that all but 1 respondent consider the greatest benefit ‘to date’ to be the creation of ‘a safer environment for users’ which in their context is the enterprise responsible for maintaining the structure.

6.8.7 There is no discernable difference between the views of the architect and design engineer respondents.

6.8.8 It is clear that the expectations of many respondents is for the health and safety benefits to materialise in the future. More than 82 percent of the total responses indicate future benefits and of those, more than 64 percent are for ‘some benefit’ to ensue.

Chart 71

**Future Health & Safety Benefits - Designers View**

*Question 14 - Improvements*

![Chart showing responses to future health and safety benefits]

6.8.9 Of note is 2 of the 3 respondents who have indicated ‘no benefit’ in the future from reduced accidents, went on to indicate they had had accidents on their sites. Both of these were architect respondents who have carried out more than 40 projects each where the CDM Regulations have been applied.
6.8.10 It is worth noting that of the total of architect responses more than 54 percent were for ‘no benefit’ in the future for all 7 of the benefits in question. Of the design engineer responses a little less than 10 percent indicated the same position.

6.8.11 Overall the data suggests that designer respondents consider the most health and safety benefit will, in the future, come from ‘reduced accidents during construction’, ‘fewer accidents during maintenance’ and ‘a safer environment for users’ and in that order. This is clearly evidenced by the weighted mean scores determined as described in paragraph 6.5.6 and depicted in Chart 72.

Chart 72

Health & Safety Benefits - Designers View

Question 14 - Improvements

6.8.12 The view of a total of 22 designer respondents, 18 design engineers and 4 architects, of the benefit ‘to date’ by way of reduced expenditure as a result of the 7 health and safety benefits under consideration are depicted in Chart 73.

6.8.13 Of significance is the magnitude of the non-response which can either be interpreted as ‘don’t know’ or ‘no benefit’. Based on the frequency of comments received, the most likely position in terms of a response is that the respondents don’t know because the systems they have in their respective companies do not provide differential data of this nature.
6.14 The limited data does suggest that if the non-respondents did give an indication there is a high probability, particularly with architects, that it would be ‘no benefit’.

6.15 The basis of this argument is that if nearly 45 percent of the total responses to the question of improvements to date in quantity/quality arising from the health and safety benefits previously indicated there had been ‘no benefit’, primarily because it was too early to tell, this will reflect directly on any reduced expenditure which would in any case take longer to materialise. Even so, a number of designers did indicate they had a benefit of reduced expenditure arising from some of the health and safety benefits. This was predominantly a ‘marginal benefit’ and seen almost solely by design engineer respondents. Just 2 architect respondents indicated a benefit in contrast to 13 design engineer respondents.

6.16 A total of 23 designer respondents, 18 design engineers and 5 architects, gave their view of the reduction in expenditure they anticipate to ensue in the future from the health and safety benefits. These are depicted in Chart 74.
6.8.17 There are few points of significance in this data other than nearly half of the 'no benefit' response is coming from architect respondents. Of course those enterprises who previously indicated 'no benefit' in the future to the health and safety benefits have correspondingly indicated 'no benefit' in respect of reduction in expenditure. This leaves the benefit responses shown to be predominantly those of design engineer respondents.

6.8.18 Overall the data suggests that architects see 'no benefit' or for very few 'marginal benefit' in terms of reduction in expenditure ensuing from the health and safety benefits, while design engineer respondents consider the most reduction in expenditure arising from the health and safety benefits will, in the future, come from 'reduced accidents' and 'reduced damage to long term health' in that order. This is clearly evidenced by the weighted mean scores determined as described in paragraph 6.5.6 and depicted in Chart 75.
6.8.19 Of some relevance to the analysis in this section is the level of accidents on the sites with which respondents have been associated, and the number of CDM projects undertaken. Of a total of 34 responses, 12 respondents comprising 6 design engineers and 6 architects indicated they had been associated with sites where there had been accidents, 10 design engineer respondents indicated they didn’t know and 12 respondents comprising 10 design engineers and 2 architects indicated they had been associated with sites where there had not been any accidents. Of the 12 who had been associated with a site where there had not been any accidents the average number of projects undertaken where the CDM Regulations had applied per respondent was 36. It is somewhat surprising therefore to have seen such a high ‘no benefit’ in the future response in respect of reduced accidents. Either respondents genuinely consider there will be ‘no benefit’ or “there is no evidence to support a view”.

6.8.20 Of the 12 respondents who had been associated with sites where there had been accidents the average number of projects undertaken where the CDM Regulations had applied per respondent was 111.
6. DESIGNERS (Continued)

6.8.21 It must be stated that the small response sample has in many cases prevented any statistical significance to be determined for much of the corresponding data. Where it has been possible a comment relating to the whole designer population has been made particularly where anecdotal evidence has been available to support it.

6.9 Efficiency Benefits

6.9.1 Interviewees were asked to rate the magnitude of the benefit, now and in the future, which could be attributed to the CDM Regulations of 5 possible efficiency benefits to the design and construction process, in respect of both improvements to quantity / quality and reduction in expenditure. There were a total of 50 respondents and their views are depicted in Chart 76. Most of the non-respondents, particularly those who have undertaken few projects, stated they were not close enough to the processes to make a valued judgement.

Chart 76

Designers View Of Efficiency Benefits - Now & In The Future

Question 15 - Improvements

![Bar Chart]

6.9.2 As a general statement the data indicates that for the designer respondents there is no relationship between the number of projects undertaken and the benefits associated with these efficiency improvements. This is irrespective of whether a design engineer or architect, or the size of enterprise. Pro rata with the sample, there are more architect than design engineer responses indicating 'no benefit'.
6. DESIGNERS (Continued)

6.9.3 Furthermore, the responses indicate that design engineer respondents are experiencing or anticipate to experience a greater magnitude benefit than architect respondents almost by a factor of 2:1.

6.9.4 The respondents view of the reduction in expenditure attributable to the 5 efficiency improvements is depicted in Chart 77.

Chart 77

Designers View Of Efficiency Benefits - Now & In The Future

Question 15 - Reduction In Expenditure

6.9.5 Of the 50 respondents who indicated a benefit from improved efficiency, 39 are either already experiencing or expect to experience reduction in expenditure as a result.

6.9.6 For designers there is no evidence from the data, irrespective of whether an architect or design engineer, which would suggest that the greater the number of projects being undertaken the greater the magnitude of benefit as is the case with the other duty holder respondents. It does not appear to be the case therefore, that a combination of efficiency improvements and economies of scale are likely to yield a corresponding reduction in expenditure for designers.
6.9.7 Just 12 designer respondents, of which 5 are architects, are already experiencing or anticipate a reduction in expenditure to arise from a 'homogeneous design process' and 18 designer respondents, of which 4 are architects, associate any cost reduction with 'improved flow of information'.

6.9.8 It is clearly the perception of the majority of designers who have indicated a benefit in terms of reduced expenditure that the benefit will not be theirs.

6.9.9 Overall the data suggests that designer respondents consider the most benefit in terms of quantity/quality and reduced expenditure arising from improvements in efficiency are coming or will, in the future, come primarily from 'ease of maintenance' and 'ease of adaption/refurbishment/demolition'. This is clearly evidenced by the weighted mean scores determined as described in paragraph 6.5.6 and depicted in Chart 78.

Chart 78

Designers View Of Efficiency Benefits - Now & In The Future

Question 15

6.9.10 It is very evident from Chart 78 that the respondents do not consider the benefits from a 'homogeneous design process' are, or will be, as significant as those arising from the other efficiency improvements. This reinforces the point made in paragraph 6.9.7.
6. DESIGNERS (Continued)

6.9.11 Tangible benefits that respondents anticipate will come from the efficiency benefits they indicated included:

Reduction in the use of hazardous materials, better cleaning and better access. Competent contractors will have better information for maintenance. Getting the designer to think more than about what the structure will look like and to consider the rest of the team in its construction and maintenance. More thought given to the practicality of the design. Improved communications between designers and others involved in the project.
6.10 Business Effects

6.10.1 Interviewees were asked to indicate whether the introduction of the CDM Regulations had any adverse effect or positive effect on the business of their company and if it had to specify what the effect had been. There were a total of 49 respondents, of which 14 were architects. Non-respondents are classified as ‘don’t know’.

6.10.2 Of the 14 architect respondents, 4 indicated their had been neither an adverse nor a positive effect on their respective businesses, 3 indicated there had been both an adverse and a positive effect, 6 indicated there had only been a positive effect and 1 indicated there had only been an adverse effect. Of the 35 design engineer respondents, 9 indicated there had been neither an adverse nor a positive effect, none indicated there had been both an adverse and a positive effect, 23 indicated there had only been a positive effect and 3 indicated there had only been an adverse effect. The most common effects identified by respondents are shown in Table 19.

<table>
<thead>
<tr>
<th>Adverse Effect</th>
<th>Positive Effect</th>
<th>Size</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>spending more money training people</td>
<td>designers more focused</td>
<td>M</td>
<td>Architect</td>
</tr>
<tr>
<td>less profitable because of fee</td>
<td>concentrated the mind on health &amp; safety</td>
<td>M</td>
<td>Architect</td>
</tr>
<tr>
<td>created time delays and significant costs</td>
<td>provide planning supervisor role</td>
<td>M</td>
<td>Architect</td>
</tr>
<tr>
<td>have to accommodate planning supervisor role within existing fee scale</td>
<td>-</td>
<td>M</td>
<td>DE</td>
</tr>
<tr>
<td>no planning supervisor experience requiring more up front experience</td>
<td>-</td>
<td>M</td>
<td>DE</td>
</tr>
<tr>
<td>excessive bureaucracy because client or client adviser misunderstands the CDM Regulations</td>
<td>-</td>
<td>M</td>
<td>DE</td>
</tr>
<tr>
<td>-</td>
<td>slightly more responsible clients</td>
<td>M</td>
<td>DE</td>
</tr>
<tr>
<td>-</td>
<td>additional work as planning supervisor</td>
<td>M</td>
<td>DE</td>
</tr>
<tr>
<td>-</td>
<td>marginal increase in client base</td>
<td>SM</td>
<td>Architect</td>
</tr>
<tr>
<td>-</td>
<td>expanded workload for technical unit and main architects</td>
<td>M</td>
<td>Architect</td>
</tr>
</tbody>
</table>

6.10.3 Of the 23 design engineer respondents who indicated they had only experienced a positive effect, 11 stated that the effect was additional business as planning supervisor. Just 1 architect indicated such a positive effect.
6. DESIGNERS (Continued)

6.10.4 Seven possible business benefits were proposed to interviewees who were asked to indicate which of them they felt had already arisen and / or will arise in the longer term. The views of a total of 47 respondents are depicted in Chart 79.

Chart 79

Designers View Of Business Effects - Now & Longer Term
Question 19

6.10.5 The views expressed are very mixed. There are no patterns or groupings discernable in the data which suggest a particular type of designer or size of enterprise are experiencing now or expect to experience in the future a greater or lesser business benefit from the 7 that have been proposed.

6.10.6 Overall the designers view of the business effects now and longer term are very much in line with their previous indications of benefits particularly with regard to ‘improved maintenance of the finished structure’ and ‘better coordination of design and construction’. It is interesting to see from their responses how they believe over time the industry will become more integrated and more competent as a result of the introduction of the CDM Regulations and the impact they will have on forcing ‘the cowboys out of business’.
6.10.7 A number of tangible benefits likely to ensue from the proposed 7 business benefits were identified by 50 respondents of which 14 were architects. These included:

*Maintenance staff aware of changes, limitation of structure and equipment.*
*Commercial opportunity of planning supervisor and the opportunity to become more expert than competitors.*
*General improvement in communication.*
*Better coordination and better on site control.*
*Raising of standards, more efficient practice and less claims to be judged.*
*Better coordination and understanding of roles, especially of design engineers.*
*A more competent industry, less cowboys and better site control.*
*Difficult to assess at this stage.*
*None to practice.*
*Long term maintenance costs will be reduced.*
*Joint role of architect and planning supervisor. Rounded professionals offering fuller service to clients.*

610.8 Interviewees were asked to state what they felt will be the most significant business effects that will arise from the requirement to produce a health and safety file. A total of 49 responded with comments, of which 14 were architects. Many of the comments were duplicated and including the following:

*Easier Maintenance.*
*As built record for adaption / refurbishment and demolition.*
*Whilst benefits are clear significant business effects are hard to quantify.*
*None for us the designers. May benefit contractors and others.*
*As built record and detailed maintenance documentation.*
*More design input for future projects.*
*More confidence in abilities and information on building but only if kept up to date.*
*For structures such as bridges etc., the file will be a good resource but needs updating regularly.*
*Financial benefit to client, none for us.*
*Possible involvement in future phases of projects and other projects.*
*Little initially with possibility of follow on work.*

6.10.9 The most consistent comment in respect of any business benefit and effect on the designers themselves was "none".
6.11 Cost of Implementation of CDM Regulations

6.11.1 Interviewees were asked to give an indication of the initial additional costs they incurred in implementing the CDM Regulation in respect of 4 potential cost areas, or any other they wished to specify, and to state whether those costs would have been incurred anyway. If no actual cost estimates were available the following magnitude scale was offered:

None
Little
Major
Substantial
Very significant

6.11.2 None of the interviewees were able to provide actual cost data for the potential cost areas proposed since it was stated by most that their accounting systems did not provide a detailed analysis of costs which would allow those related specifically to these aspects of the implementation of the CDM Regulations to be identified. Those that did respond, of which there were a total of 49, comprising 14 architects and 35 design engineers, therefore used the magnitude scale described in paragraph 6.11.1. The responses of the architects are detailed in Table 20, and those of the design engineers in Table 21.

Table 20

<table>
<thead>
<tr>
<th>ARCHITECTS</th>
<th>None</th>
<th>Little</th>
<th>Major</th>
<th>Substantial</th>
<th>Very Significant</th>
<th>Total Resp.</th>
<th>Incurred anyway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change of procedures</td>
<td>2 (1)</td>
<td>10 (8)</td>
<td>0</td>
<td>2 (1)</td>
<td></td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Updating of management systems</td>
<td>1 (1)</td>
<td>11 (8)</td>
<td>1 (1)</td>
<td>1 (1)</td>
<td></td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Training</td>
<td>0</td>
<td>5 (3)</td>
<td>5 (4)</td>
<td>4 (4)</td>
<td></td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Increased staff</td>
<td>10 (10)</td>
<td>3 (2)</td>
<td>0</td>
<td>0</td>
<td></td>
<td>13</td>
<td>1</td>
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<td>13 (12)</td>
<td>29 (21)</td>
<td>6 (5)</td>
<td>7 (6)</td>
<td></td>
<td>55</td>
<td>11</td>
</tr>
</tbody>
</table>

Note: The numbers in parenthesis are the responses where costs are solely attributable to the CDM Regulations and where those costs would not have been incurred anyway.
6. DESIGNERS (Continued)

6.11.3 Of the 4 architects, 2 medium size practices and 2 small practices, who indicated they had incurred ‘substantial’ costs relating to training, 2 further indicated they had incurred the same level of costs in ‘change of procedures’, and of them 1 also indicated ‘substantial’ costs for ‘updating of management systems’.

Table 21

<table>
<thead>
<tr>
<th>DESIGN ENGINEERS</th>
<th>None</th>
<th>Little</th>
<th>Major</th>
<th>Substantial</th>
<th>Very Significant</th>
<th>Total Resp.</th>
<th>Incurred anyway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change of procedures</td>
<td>0</td>
<td>30 (26)</td>
<td>3</td>
<td>2 (2)</td>
<td>0</td>
<td>35</td>
<td>4</td>
</tr>
<tr>
<td>Updating of management systems</td>
<td>2 (2)</td>
<td>30 (17)</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>35</td>
<td>15</td>
</tr>
<tr>
<td>Training</td>
<td>0</td>
<td>18 (14)</td>
<td>15</td>
<td>2 (1)</td>
<td>0</td>
<td>35</td>
<td>8</td>
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<tr>
<td>Increased staff</td>
<td>23 (23)</td>
<td>8 (8)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>31</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>25 (25)</td>
<td>86 (65)</td>
<td>21</td>
<td>4 (3)</td>
<td>0</td>
<td>136</td>
<td>27</td>
</tr>
</tbody>
</table>

Note: The numbers in parenthesis are the responses where costs are solely attributable to the CDM Regulations and where those costs would not have been incurred anyway.

6.11.4 Of the 2 design engineers who indicated they had incurred ‘major’ costs in respect of ‘changes of procedures’ both were medium size concerns who had carried out more than 250 projects where the CDM Regulations had been applied. Neither indicated that they would have ‘incurred the costs anyway’.

6.11.5 Of the 2 design engineers who indicated they had incurred ‘major’ costs through ‘training’, 1 was a large national design engineering practice who had carried out more than 500 projects where the Regulations had been applied. The other was a medium size concern who further indicated the costs would have been ‘incurred anyway’.

6.11.6 It is interesting to note that neither the architect nor the design engineer respondents indicated they had incurred anything but ‘little’ costs in respect of increased staff. Many of those interviewed pointed out that the commercial difficulties of the industry had in fact forced them to reduce staff rather than increase them and that this had meant they were doing more with less staff.

6.11.7 It is evident that for both the architect and design engineer respondents, the costs associated with the implementation of the CDM Regulations have predominantly been ‘little’ in respect of ‘change of procedures’ and ‘updating of management systems’, but for some ‘training’ has been at a higher level.
6.11.8 By calculating the weighted means score for each cost category as described in paragraph 6.5.6 it is possible to obtain an indication of where respondents have collectively incurred the greatest costs. From this a perspective of the whole designer population may be drawn. These weighted mean scores are depicted in Chart 80.

Chart 80

Cost Of Implementation Of Regulations - Designers View

Question 22

Weighted Mean Score

<table>
<thead>
<tr>
<th>Cost Activity</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td>2.06</td>
</tr>
<tr>
<td>Updating Of Management Systems</td>
<td>2.65</td>
</tr>
<tr>
<td>Change Of Procedures</td>
<td>2.18</td>
</tr>
</tbody>
</table>

6.11.9 It is very evident from Chart 80 that for the designer respondents the greatest cost in implementing the CDM Regulations has been incurred through 'training'. Based on the total number of respondents, this has a high probability of being representative of the whole client population.
6. DESIGNERS (Continued)

6.12 Cost of Maintaining Compliance to the CDM Regulations

6.12.1 After considering the costs of implementation of the Regulations interviewees were asked to indicate the additional costs per annum that were being, or were expected to be, incurred in maintaining compliance to the Regulations in respect of 4 potential cost areas or others they wished to specify. They were also asked to state whether those costs would have been incurred anyway. As before if no actual cost data was available interviewees were offered the magnitude scale described in paragraph 6.11.1.

6.12.2 With no actual cost data available for the reason detailed in paragraph 6.11.2, the same 49 respondents used the magnitude scale. The responses of the architect respondents are detailed in Table 22, and those of the design engineer respondents in Table 23.

Table 22

<table>
<thead>
<tr>
<th>ARCHITECTS</th>
<th>None</th>
<th>Little</th>
<th>Major</th>
<th>Substantial</th>
<th>Very Significant</th>
<th>Total Resp.</th>
<th>Incurred anyway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintaining systems and procedures</td>
<td>1 (1)</td>
<td>11 (8)</td>
<td>1 (1)</td>
<td>1 (1)</td>
<td>0</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Competence assessment</td>
<td>2 (2)</td>
<td>9 (7)</td>
<td>3 (3)</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Training</td>
<td>0</td>
<td>10 (6)</td>
<td>4 (3)</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Increased staff</td>
<td>10 (10)</td>
<td>3 (3)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13 (13)</td>
<td>33 (24)</td>
<td>8 (7)</td>
<td>1 (1)</td>
<td>0</td>
<td>55 (45)</td>
<td>10</td>
</tr>
</tbody>
</table>

Note: The numbers in parenthesis are the responses where costs are solely attributable to the CDM Regulations and where those costs would not have been incurred anyway.

6.12.3 The only specific points of interest from this data are;
- none of the respondents have incurred or expect to incur ‘very significant’ costs
- just 3 respondents have increased, or intend to increase staff with ‘little’ cost
- training is the only category where all respondents have incurred or are expecting to incur costs and for some ‘major’ costs
- 10 respondents are incurring costs or anticipate they will incur costs in ‘maintaining systems and procedures’ and for 1 respondent, a small size practice, those costs are considered to be substantial
6. DESIGNERS (Continued)

6.12.4 Some respondents specified other areas where there have been or they expect there to be additional costs solely attributable to the CDM Regulations. The "significant additional paperwork" was cited by 1 as incurring 'substantial' costs.

Table 23

<table>
<thead>
<tr>
<th>DESIGN ENGINEERS</th>
<th>None</th>
<th>Little</th>
<th>Major</th>
<th>Substantial</th>
<th>Very Significant</th>
<th>Total Resp.</th>
<th>Incurred anyway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintaining systems and procedures</td>
<td>2 (2)</td>
<td>33 (21)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>35</td>
<td>12</td>
</tr>
<tr>
<td>Competence assessment</td>
<td>1 (1)</td>
<td>28 (19)</td>
<td>4 (2)</td>
<td>0</td>
<td>0</td>
<td>33</td>
<td>11</td>
</tr>
<tr>
<td>Training</td>
<td>0</td>
<td>34 (18)</td>
<td>1 (0)</td>
<td>0</td>
<td>0</td>
<td>35</td>
<td>17</td>
</tr>
<tr>
<td>Increased staff</td>
<td>22 (22)</td>
<td>9 (8)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>31</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>25 (25)</td>
<td>74 (36)</td>
<td>5 (2)</td>
<td>0</td>
<td>0</td>
<td>104 (63)</td>
<td>41</td>
</tr>
</tbody>
</table>

Note: The numbers in parenthesis are the responses where costs are solely attributable to the CDM Regulations and where those costs would not have been incurred anyway.

6.12.5 The specific points of interest from this data are:
- none of the respondents have incurred or expect to incur 'substantial' or 'very significant' costs
- 2 respondents have incurred or expect to incur 'major' costs in performing competence assessments of their appointees and a further 19 'little' costs in doing the same, all of which would not have 'incurred anyway' this cost
- 8 respondents have increased, or intend to increase staff with 'little' cost
- training is the only category where almost half of all respondents have incurred or anticipate to 'incure the costs anyway' with most citing professional development as the justification
- 21 respondents are incurring 'little' costs or anticipate they will incur costs in 'maintaining systems and procedures' which they would not have 'incurred anyway'

6.12.6 By calculating the weighted means score for each cost category as described in paragraph 6.5.6 it is possible to obtain an indication of where respondents have collectively incurred, or anticipate to incur, the greatest costs in maintaining compliance to the CDM Regulations. From this a perspective of the whole client population may be drawn. These weighted mean scores are depicted in Chart 81.
6.12.7 There were many further comments about the ongoing additional costs of administration with the comment from 1 architect that "these will be gradually incorporated into scale fees".

6.12.8 The respondent for a large architect practice stated that their biggest cost specifically related to the CDM Regulations was that for training where almost every partner, architect and architectural technician had attended or would attend a training course. The example was given by this practice that if 40 person days of training, (i.e. 20 staff for 2 days) was undertaken, at the average loaded personnel cost of £250 per day the total personnel cost is £10,000. A further average cost of £150 per person per day is also incurred for the external training. It was stated that no grants were available to designers as had been, and are, to contractors via the Construction Industry Training Board (CITB). Therefore the total average cost of training for 20 staff in the design practice is £16,000. This is considered as totally unrecoverable by the design practice who estimate the total cost over time will be 4 times this amount, excluding lost design time.
6.13 Compliance with the CDM Regulations

6.13.1 Interviewees were asked to state their perception on a percentage basis of compliance with the CDM Regulations by each of the duty holder groups for the following 4 categories of compliance:

- Do not comply
- Comply with the intent
- Comply fully
- Over comply

6.13.2 There was a total of 47 respondents, 14 architects and 33 design engineers, and the mean of their percentage responses are depicted in Chart 82.

Chart 82

Designers View Of Compliance With The Regulations

Question 24 - Average Level Of Compliance

6.13.3 It is evident from Chart 82 that the perception of the respondents is that more than half, at 54.8 percent, of their own dutyholder group, Designer, are in a state of full compliance with the CDM Regulations, as are planning supervisors, at 65.7 percent, and principal contractors, at 59.4 percent. It is also their perception that marginally less than half of clients, at 49.6 percent, and other contractors, at 44.6 percent, are in the same state of full compliance.
6. DESIGNERS (Continued)

6.13.4 It is also evident from the Chart that the respondents have the perception that fewer planning supervisors, at 9.2 percent, than any other dutyholder group do not comply with the Regulations and that more planning supervisors, at 19.2 percent, than any other dutyholder over comply. While it is also their perception that other contractors have the greatest percentage, at 19.9 percent, that do not comply, clients are perceived to have the second highest percentage, at 13.1 percent, that do not comply.

6.13.5 Analysis of the data does not give any indication of a grouping of perceptions by type or size of designer and there is only very marginal difference, less than 0.3 percent in all cases, between the calculated means of the percentages indicated by the groups of architect and design engineer respondents.
6.14 Summary Points

6.14.1 Summary points and other designer issues fall broadly into two categories; those which relate to design engineers and those which relate to architects.

6.14.2 Design engineers would appear to have a more structured approach to design supported by the extensive use of Computer Aided Design (CAD) techniques. There is however, some evidence to suggest that over reliance on CAD by designers may not allow all health and safety aspects of the design to be considered during the design process.

6.14.3 The design engineering profession appears to be a more homogeneous profession than that of architects which is very non-homogeneous. This difference seems to have resulted in design engineers being more familiar with health and safety issues and how to deal with them; the corollary of which is a higher level of competence in the identification and elimination of risk and hazards. This higher level of competence, especially that of specialist design engineers, has resulted in difficulties in the relationship with independent planning supervisors, particularly where the competence of the planning supervisor is questionable.

6.14.4 There is however, mixed evidence to suggest that health and safety and the elimination of risks and hazards related to the maintenance of the structure and the maintenance of plant and equipment receives the same attention as the construction of the structure.

6.14.5 The greater presence on site of both design engineers and architects during the construction phase, a time when the planning supervisor has very little if any involvement, does provide for feedback on all design matters including health and safety from the principal contractor to the designer on construction related issues.

6.14.6 The structure of the architect profession does not help its homogeneity and hence its ability to respond effectively and as a whole to the issues of health and safety during design. The initial resistance to the Regulations and the stance of the Royal Institute of British Architects is still impacting their acceptance by many architects from sole practitioners to those in large practices. There is also a significant element of professional rivalry and pride in respect of the requirements of the Regulations with many architects considering that "we do it anyway, and have always done so".
6. DESIGNERS (Continued)

6.14.7 Much concern was expressed by architects at their inability, due to the resistance of clients, to recover additional costs incurred in complying with the requirements of the Regulations. There were also comments relating to abuse by clients of conditions of engagement and the corresponding impact on fee recovery.

6.14.8 While pragmatism is beginning to show through and break down these issues concerns are now surfacing about professional indemnity and potential criminal liability fuelled by the attitude to the Regulations adopted by the insurance and legal institutions. It is felt by the profession that these concerns could bring about another wave of resistance to the Regulations from architects.

6.14.9 Discussions with students and 3 lecturers from two of the main schools of architecture suggests that many schools of architecture do not include in their curriculum much consideration, if any, of health and safety in the design process. Reliance being placed very much on the design approach taken as to whether health and safety is considered at the onset of the design or is an afterthought. The attitude of some professional designers is that health and safety is "someone else's problem".

6.14.10 Many architects openly admit they are constrained by their lack of knowledge of construction materials, the construction process and the use of specialist construction techniques. They further admit that their competence is therefore not as great as perhaps it should be in being able to identify and eliminate risks and hazards in their designs. This issue is compounded by the design process followed in many medium and large architect practices and in some smaller ones, where extensive use is made of architectural technicians to complete the detailed design of many aspects of a project initially conceived and 'outlined' by a fully qualified architect.

6.14.11 The survey sample and discussions with its professional body revealed that many architects have a misunderstanding of the requirements of the Regulations and others have a limited knowledge of the duties placed on them by the Regulations.

6.14.12 Some of the foregoing designer related issues are examined in more depth in Case Study 5 - Designing With Safety In Mind which is annexed to this report as Appendix G.
7. COMPETENCE ASSESSMENT

7.1 Introduction

7.1.1 This section analyses the response of all respondents to the principal issues concerning competence assessment. It includes a statistical analysis of the replies received and reports on the comments made by the respondents in the course of the survey. Reference is also made to the two case studies on Competence Assessment of Duty Holders and Competence Assessment of the Sub-Contracting Chain, both of which are annexed to this report as Appendix E and Appendix F respectively.

7.1.2 Formal competence assessment of contractors has long been a feature of the construction industry. The CDM Regulations introduced a new legal requirement that anyone appointing a contractor must be satisfied that they are competent to manage and carry out the work and that they will allocate sufficient resources. It also introduced the requirement that a client appointing a designer or planning supervisor must similarly satisfy themselves as to their competence and resources (ACoP Regulations 8 and 9). Duty holders have usually sought to meet these requirements by the introduction of questionnaires which those seeking appointment or contract are asked to complete. The questionnaires are often supplemented by interviews. The case studies give some specific examples of the process used. This aspect of the Regulations was the subject of considerable comment.

7.2 Response To CDM Regulations

7.2.1 All respondents were asked whether they had to revise procedures and systems in response to the introduction of the Regulations. It would perhaps be expected that the requirement for competence assessment would affect clients and to a lesser extent designers more than contractors. The responses are shown in Table 24.

Table 24

<table>
<thead>
<tr>
<th>Response</th>
<th>Clients</th>
<th>Designers</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely Revised All Systems</td>
<td>5</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Amended Systems</td>
<td>41</td>
<td>30</td>
<td>19</td>
</tr>
<tr>
<td>Modified Existing Systems</td>
<td>45</td>
<td>55</td>
<td>65</td>
</tr>
<tr>
<td>Found No Changes Necessary</td>
<td>9</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Not Considered</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
7.2.2 Clearly clients and designers have had to change their systems more than contractors. It is not possible from the replies to assess how much of this is due to these requirements. No respondents specifically commented on this aspect in response to the question asked.

7.3 The Impact Of The Introduction Of The Competence Assessment Requirements

7.3.1 Respondents were asked to give their view on the impact of the introduction of the competence assessment requirements together with their view of the impact of 5 other requirements. (See sections 4.5, 5.5, and 6.5 which give the views of the separate duty holders). They were asked to give their opinion of the impact to date and what they expected the impact to be in the future. Their responses are summarised in Table 25.

Table 25

<table>
<thead>
<tr>
<th>The Impact Of The Introduction Of The Competence Assessment Requirements</th>
<th>Question 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulation Requirement</td>
<td>No Impact</td>
</tr>
<tr>
<td>To Date</td>
<td>%</td>
</tr>
<tr>
<td>Competence Assessment Of Planning Supervisor</td>
<td>46</td>
</tr>
<tr>
<td>Competence Assessment Of Designer</td>
<td>40</td>
</tr>
<tr>
<td>Competence Assessment Of Principal Contractor</td>
<td>29</td>
</tr>
<tr>
<td>Future</td>
<td>%</td>
</tr>
<tr>
<td>Competence Assessment Of Planning Supervisor</td>
<td>41</td>
</tr>
<tr>
<td>Competence Assessment Of Designer</td>
<td>38</td>
</tr>
<tr>
<td>Competence Assessment Of Principal Contractor</td>
<td>31</td>
</tr>
</tbody>
</table>

7.3.2 It is clear that the majority of respondents do not believe these requirements have had a major impact to date nor do they expect there to be a major impact in the future. The element judged to have had the greatest impact to date and anticipated for the future is the competence assessment of the principal contractor even though the assessment required by the Regulations appears to be quite similar to the pre-tender assessments which had become routine in much of the industry.
7.3.3 This analysis reflects the complaints which respondent contractors frequently made during the survey about assessment questionnaires that they were asked to complete.

7.3.4 As previously explained in Section 4 paragraph 4.5.6 simple weighting factors can be applied to these responses which enable the perceived level of impact of all 8 requirements to be compared. The other requirements are Appointment Of a planning Supervisor, Appointment Of Principal Contractor, Pre-Tender Health & Safety Plan, Client Information, and Designing With Safety In Mind. This analysis shows that the respondents believe that to date, the requirement to carry out assessments rated the 3 lowest. Respondents did not expect this ranking to change in the future. These results are similar if the views of the different duty holders are considered separately (See Sections 4.5, 5.5, and 6.5).

7.4 Beneficial Effect Of The Competence Assessment Requirements

Chart 83

To Date Rated Beneficial Effect

Question 10

<table>
<thead>
<tr>
<th>Appoint Plan. Sup</th>
<th>Competence Plan. Sup</th>
<th>Competence Designer</th>
<th>Pre Tender H&amp;S Plan</th>
<th>Client Information</th>
<th>Safety in Mind</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractors</td>
<td>Designers</td>
<td>Clients</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Bar chart depicting rated values for different requirements]
7.4.1 Interviewees were asked to rank in order the benefit resulting from the requirements to undertake competence assessment and the other 5 requirements of the Regulations detailed in paragraph 7.3.4. A point to note here is that the question asked for a ranking rather than an assessment of the level of benefit that would flow. Again these rank lowest in perceived benefit both when experience to date is considered and the future is anticipated. The conclusions are the same for all the duty holder groups. The ‘to date’ rated values are depicted in Chart 83, and ‘future’ rated values in Chart 84.

**Chart 84**

**Future Rated Beneficial Effect**

**Question 10**

7.5 **Volume Of Documentation**

7.5.1 Interviewees were asked to give their estimate of the volume of pre-qualification assessment documents and competence assessment papers. Their responses are shown in Table 26.
7. COMPETENCE ASSESSMENT (Continued)

Table 26

<table>
<thead>
<tr>
<th>Volume Of Documentation Question 11 (Percentage Of Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Of Pages</td>
</tr>
<tr>
<td>Pre-qualification Assessments</td>
</tr>
<tr>
<td>Competence Assessments</td>
</tr>
</tbody>
</table>

7.5.2 Respondents were also asked if they considered the level of documentation excessive. Their responses are shown in Table 27.

Table 27

<table>
<thead>
<tr>
<th>Respondents Believing Level Of Documentation Excessive Question 11 (Percentage Of Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duty Holder</td>
</tr>
<tr>
<td>Client</td>
</tr>
<tr>
<td>Designer</td>
</tr>
<tr>
<td>Contractors</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

7.5.3 It should be noted that a third of the total respondents, but more than 40 percent of contractors, felt that the pre-qualification assessment documentation was excessive.

7.5.4 This statistic reflects a number of comments that were made about pre-qualification questionnaires. In addition to the excessive volume of documentation other criticisms made were in relation to:

- the relevance of the questions asked
- the practice of requesting the submission of substantial amounts of paperwork in the form of policies, procedures and method statements
- the time taken to fill in forms
- the lack of standardisation so that every form had to be filled individually
- the practice of requiring a new form each time the contractor was considered for a project
7.6 Costs Of Competence Assessment Procedures

7.6.1 Interviewees were asked questions about the additional cost they had incurred in preparing to comply with the Regulations and with maintaining the necessary systems. Headings such 'change of procedures' and 'training' were offered as prompts (See questions 22 and 23 in the Structured Questionnaire which is annexed to this report as Appendix B). Although these questions were not targeted at competence assessment, 3 contractors drew specific attention to these costs. Another 3 contractors, in the Pilot Study responding to some more open questions that were asked, complained of the costs of coping with competence assessment paperwork. No respondent was able to offer a detailed costing of this aspect, but there were several instances where contractors reported that a significant proportion of the time of their safety departments had been diverted to filling forms. This, they considered, was at the expense of more valuable safety activities.

7.7 Business Effects

7.7.1 Interviewees were asked to report if they had suffered any adverse business effect due to the introduction of the Regulations. Of 198 interviewees, 36 were able to cite specific negative effects. Competence assessment was specifically mentioned by 2 contractors as having an adverse effect and a further 7 contractors complained about the additional "paperwork", "administration" or "bureaucracy".

7.7.2 Interviewees were also asked about positive business effects. Over half reported a positive benefit. Answers were given by 6 respondents which suggested their ability to demonstrate competence gave them a competitive advantage.

7.8 General Issues

7.8.1 In addition to the responses to the specific questions, interviewees expressed a wide range of views on competence assessment.

7.8.2 Although there is clearly an extensive use of questionnaires to assess competencies there is a wide variety in the ways they are used and the extent to which they are supplemented by other measures. This is illustrated in the case studies and during the course of a the interviews a large variety of practices were seen.
7.3 The care taken to undertake assessments also varies considerably. In some cases they were believed to be carried out only for the purpose of being able to demonstrate compliance. This was evidenced in interviews and is illustrated in the case studies.

7.4 Questionnaires, especially those that do not appear to be well focused, are a cause of considerable irritation to contractors. This is evidenced in both the results of the main survey and the case studies. It is thought that there are ways this burden could be reduced.

7.5 A key feature of the competence assessment requirement is that this should be done with regard to the particular requirement of the project. There is some evidence from Case Study 4- Competence Assessment Of The Sub-Contracting Chain that the selection of contractors may more often be dependent on price and reputation rather than on a specific assessment of their ability to deal with the risks identified in the Health and Safety Plan.

7.6 The concerns about competence assessment appear greatest to those subject to selection by competitive tender because of the way this inevitably increases the amount of abortive work undertaken.

7.7 It was pointed out that the European Legislation (Council Directive 92/57/EEC) does not require specific formal competence assessment. Some believe that this has led to unnecessary paperwork and increased costs with no evidence of direct Health and Safety benefit.
8. PRE-TENDER HEALTH & SAFETY PLAN

8.1 Section Introduction

8.1.1. This section analyses the response of all respondents to the requirement to prepare a Pre-Tender Health and Safety Plan. It includes a statistical analysis of the replies received and reports on the comments made by the respondents in the course of the survey.

8.1.2. The CDM regulations introduced a new legal requirement in that a pre-tender Health and Safety Plan should be prepared for every project and made available to the contractor before arrangements are made to carry out the work (ACoP Regulation 15). In carrying out the survey it was found found that this requirement was accepted and welcomed by most respondents.

8.2. Response to CDM regulations

All respondents were asked to what extent they had revised, amended or updated procedures and systems in response to the Regulations. It may have been expected that the requirement to produce a Pre-tender Health and Safety plan would impact designers more than the other duty holders. The responses are shown in Table 28.

Table 28

<table>
<thead>
<tr>
<th>Response</th>
<th>Clients %</th>
<th>Designers %</th>
<th>Contractor %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely Revised All Systems</td>
<td>5</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Amended Systems</td>
<td>41</td>
<td>30</td>
<td>19</td>
</tr>
<tr>
<td>Modified Existing Systems</td>
<td>45</td>
<td>55</td>
<td>65</td>
</tr>
<tr>
<td>Found No Changes Necessary</td>
<td>9</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Not Considered</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

8.2.2 Clearly designers have had to change their systems more than contractors but it is not possible from the replies to assess how much of this is due to this particular requirement. No respondents specifically commented on this aspect in response to this question.
8.3 The Impact Of The Introduction Of
The Competence Assessment Requirements

8.3.1. Respondents were asked to give their view on the impact of the introduction of the requirement to produce a Pre tender Health and Safety plan together with their view of the impact of seven other requirements. (See sections 4.5, 5.5, and 6.5 which also give the views of the separate duty holders). They were asked to give their opinion of the impact to date and what they expected the impact to be in the future. Their responses are summarised in Table 29.

Table 29

<table>
<thead>
<tr>
<th>Regulation Requirement</th>
<th>No Impact</th>
<th>Some Impact</th>
<th>Much Impact</th>
<th>Significant Impact</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Date</td>
<td>28</td>
<td>50</td>
<td>46</td>
<td>44</td>
<td>168</td>
</tr>
<tr>
<td>Future</td>
<td>30</td>
<td>49</td>
<td>40</td>
<td>50</td>
<td>169</td>
</tr>
</tbody>
</table>

8.3.2. It is clear that a majority of respondents believe that this requirement has had ‘much’ or ‘significant impact’ to date and they expect this to continue in the future.

8.3.3. As previously explained in paragraph 4.5.6 a simple weighting factor can be applied to these responses which enable the perceived level of impact of all 8 requirements to be compared. The other requirements are Appointment of Principal Contractor, Competence Assessments of Planning Supervisor, Designer and Principal Contractor, Pre-tender H&S Plan, Client Information, and Designing with Safety in Mind. This analysis shows that the respondents believed that to date the requirement to produce a Pre-Tender Health and Safety plan had the greatest impact. This conclusion was shared by all duty holders as Chart 85 illustrates.
8.3.4. The same analysis of the respondents' view of the future gives a similar picture except that in this instance the requirement to appoint a Planning Supervisor rates marginally higher than the Pre-Tender Health and Safety plan. It is felt this is because in the future the clients see the impact of the Planning Supervisor appointment as having greater impact than the Plan.
8.4. Beneficial Effect Of The Pre-Tender Health & Safety Plan

8.4.1. Interviewees were also asked to rank, in order, the benefit resulting from the requirement to produce a pre-tender Health and Safety plan against the other seven requirements of the regulations. A point to note here is that the question asked for a ranking rather than an assessment of the level of benefit that would flow. When all the rankings are consolidated the perceived benefits of the pre-tender Health and Safety Plan rank highest both for all respondents together and for each duty holder taken separately. This requirement was also most frequently ranked in first position by each of the duty holder groups.
8.4.2 The same picture generally holds true for the future benefits except that in this instance the clients show a higher consolidated ranking for the requirements for the client to supply all relevant information and for designing with safety in mind. It was also most frequently ranked in first or equal first position by all of the duty holder groups.
8.5 Volume Of Documentation

8.5.1. Interviewees were asked to give their estimate of the length of pre-tender Health and Safety plans. Their responses are shown in Table 30.

Table 30

<table>
<thead>
<tr>
<th>Volume Of Documentation Question 11</th>
<th>(Percentage Of Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Of Pages</td>
<td>&lt;12</td>
</tr>
<tr>
<td>Pre-qualification Assessments</td>
<td>55.6</td>
</tr>
<tr>
<td>Competence Assessments</td>
<td>70.5</td>
</tr>
</tbody>
</table>
8.5.2. Respondents were also asked if they considered the level of documentation excessive. Their replies are shown in Table 31.

Table 31

<table>
<thead>
<tr>
<th>Respondents Believing</th>
<th>Level Of Documentation Excessive</th>
<th>Question 11</th>
<th>(Percentage Of Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duty Holder</td>
<td>Pre-Tender Health &amp; Safety Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designer</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contractors</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.5.3. It will be seen that the size of the Pre-Tender Health and Safety Plan varied and this could to some extent be due to the size and complexities of the projects undertaken by respondents. There was a widespread belief that they were excessive in length with over a third of total respondents and nearly half the contractors holding this view.

8.5.4. Respondents were very concerned about the format of the pre-tender Health and Safety Plan. Comments were made that the information included was not always relevant to the health and safety risks and that there was a tendency to be over-inclusive to ensure that backs were covered. The Pre-tender Health and Safety Plan was however criticised less in this respect than other documentation including questionnaires, the project Health and Safety Plan and the Health and Safety file.
9. ROLE OF PLANNING SUPERVISOR

9.1 Section Introduction

9.1.1. This section analyses the response of all respondents to the principal issues concerning the role of Planning Supervisor. It includes a statistical analysis of the replies received and reports on the comments made by the respondents in the course of the survey. Reference is also made to the Case Study on this subject which is annexed to this report as Appendix C.

9.1.2. The role of Planning Supervisor was a new function introduced by the CDM regulations. Examining the way in which the role of Planning Supervisor had been bought into effect was one of the specific objectives of the survey and was a matter of considerable comment from the 24 respondents interviewed in the pilot study. The main survey questionnaire included a specific question (question 9) on the role of Planning Supervisor.

9.2 Experience Of Planning Supervisor Work By Respondents

9.2.1 Although 3 enterprises in the survey sample have Planning Supervision as their sole activity (see Section 3, Table 1), a considerable number carried out some Planning Supervisor duties. In fact 52 of the remaining 195 enterprises performed the function of Planning Supervisor. The amount of this work varied widely from 1% to 30% of their total activity.

9.2.2 Planning Supervisor duties were combined with design, both architectural and engineering, and contracting, especially as principal contractor. In addition to contributing to their "own" projects the function was often marketed independently to others. There were also a number of clients, amongst those who were commissioning a significant volume of construction work, who employed their own staff to act as Planning Supervisors.

9.2.3 Of the individuals interviewed for the survey almost 10% (22 out of 234) gave their role or function as Planning Supervisor.

9.3. Interpretation / Understanding Of The Role Of Planning Supervisor

9.3.1 Interviewees were asked to give their interpretation of the role of the Planning Supervisor in respect of 16 specific activities and to indicate how this compared with their actual experiences. Their responses are indicated in Table 32.
### Table 32

**The Role Of The Planning Supervisor**

**Question 9**

<table>
<thead>
<tr>
<th>Ref</th>
<th>Function</th>
<th>Interpretation % Resp.</th>
<th>Actual % Resp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Coordination of H&amp;S aspects of project design and planning</td>
<td>92.7</td>
<td>69.1</td>
</tr>
<tr>
<td>b</td>
<td>Collation of client information</td>
<td>82.6</td>
<td>62.4</td>
</tr>
<tr>
<td>c</td>
<td>Advising clients if investigative surveys considered necessary</td>
<td>80.9</td>
<td>58.4</td>
</tr>
<tr>
<td>d-1</td>
<td>Providing advice to clients</td>
<td>83.1</td>
<td>71.3</td>
</tr>
<tr>
<td>d-2</td>
<td>Providing advice to designers</td>
<td>68.0</td>
<td>54.5</td>
</tr>
<tr>
<td>d-3</td>
<td>Providing advice to contractors</td>
<td>62.9</td>
<td>51.0</td>
</tr>
<tr>
<td>e</td>
<td>Preparation of the project health and safety plan</td>
<td>71.3</td>
<td>63.5</td>
</tr>
<tr>
<td>f</td>
<td>Forwarding information to designers</td>
<td>60.1</td>
<td>47.8</td>
</tr>
<tr>
<td>g</td>
<td>Ensuring designers comply with their duties</td>
<td>78.7</td>
<td>56.2</td>
</tr>
<tr>
<td>h</td>
<td>Understanding and being aware of risk management and design</td>
<td>81.5</td>
<td>60.1</td>
</tr>
<tr>
<td>j</td>
<td>Securing the risk assessment for all stages of the construction</td>
<td>49.4</td>
<td>42.7</td>
</tr>
<tr>
<td>k</td>
<td>Auditing adherence to the H&amp;S plan during the construction phase</td>
<td>38.2</td>
<td>32.0</td>
</tr>
<tr>
<td>l</td>
<td>Monitoring on site standards</td>
<td>35.4</td>
<td>28.7</td>
</tr>
<tr>
<td>m</td>
<td>Managing the project on behalf of the client</td>
<td>19.7</td>
<td>16.3</td>
</tr>
<tr>
<td>n</td>
<td>Ensuring the H&amp;S file is prepared in accordance with the Regulations</td>
<td>91.6</td>
<td>71.9</td>
</tr>
<tr>
<td>p</td>
<td>Ensuring the H&amp;S file is delivered to the client</td>
<td>89.8</td>
<td>70.8</td>
</tr>
</tbody>
</table>

#### 9.3.2

The major disparity between the "interpretation" and "actual" points to a widespread belief that Planning Supervisors were not actually carrying out the functions required of them under the Regulations.

#### 9.3.3

Of much greater significance is the number of respondents who believe that the Regulations require the Planning Supervisor to see the risk assessment for all stages of the project, audit adherence to the Health and Safety Plan during the construction phase, monitor on site standards and manage the project on behalf of the client (Items j, k, l, and m in the table). These are not specified as Planning Supervisor functions in the Regulations.
9.3.4 It is interesting to note that the experience of a significant number of respondents was that these functions were actually being carried out. A number of contractors reported separately that attempts were made by some Planning Supervisors to monitor site standards which was resisted by the principal contractors concerned.

9.3.5 A number of respondents stated that the "role of the Planning Supervisor should be clarified". This particularly related to the construction stage of the project and in respect of design changes and temporary works.

9.3.6 The more detailed views of each of the duty holder groups on this matter are reported in Sections 4.4 Clients, 5.4 Contractors and 6.4 Designers.

9.4. The Impact Of The Appointment Of A Planning Supervisor

9.4.1 Respondents were asked to give their view on the impact of the requirement to appoint a Planning Supervisor together with their view of the impact of seven other requirements of the Regulations. (See Sections 4.5, 5.5, and 6.5 which give the views of the separate duty holders). They were asked to give their opinion of the impact to date and what they expected the impact to be in the future. Their responses are summarised in Table 33.

### Table 33

<table>
<thead>
<tr>
<th>Regulation Requirement</th>
<th>No Impact</th>
<th>Some Impact</th>
<th>Much Impact</th>
<th>Significant Impact</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience to date</td>
<td>25</td>
<td>74</td>
<td>35</td>
<td>37</td>
<td>171</td>
</tr>
<tr>
<td>Anticipated future</td>
<td>29</td>
<td>57</td>
<td>38</td>
<td>48</td>
<td>172</td>
</tr>
</tbody>
</table>

9.4.2 The majority of respondents believe that the requirement to appoint a Planning Supervisor has had 'no impact' or only 'some impact' to date (99 out of 171). There is however a belief that the impact will increase in the future as the number of respondents believing it will have 'much' or 'significant impact' increases from a minority of 72 to one half of the replies at 86.
9. ROLE OF PLANNING SUPERVISOR (Continued)

9.4.3 As previously explained in paragraph 4.5.6 a simple weighting factor can be applied to these responses which enable the perceived level of impact of all 8 requirements to be compared. The other requirements are Appointment of Principal Contractor, Competence Assessments of Planning Supervisor, Designer and Principal Contractor, Pre-tender Health & Safety Plan, Client Information, and Designing with Safety in Mind. This analysis shows that the respondents believe that, to date, the requirement to appoint a Planning Supervisor has had the second greatest impact, only very slightly less than the Pre-tender Health & Safety Plan which was rated first. Clients rated the requirement to appoint a Planning Supervisor as having the greatest impact.

9.4.4 Looking to the future the interviewees saw the appointment of the Planning Supervisor as rating highest in impact but by a very small margin. All three duty holder groups rated the Planning Supervisor and the Pre-tender Health & Safety Plan almost equal first in impact.

9.5. Beneficial Effect Of The Requirement To Appoint A Planning Supervisor

9.5.1 Interviewees were also asked to rank, in order, the benefit resulting from the requirement to appoint a Planning Supervisor against the same other seven requirements of the regulations. A point to note here is that the question asked for a ranking rather than an assessment of the level of benefit that would flow. The significant finding is therefore, that, in considering the beneficial effect to date, this requirement was ranked a close second to the requirement for a Pre-Tender Health & Safety Plan.

9.5.2 This finding holds true when the responses of designers and contractors are considered separately. Client respondents, however, rate this requirement fourth after, Pre-tender Health & Safety Plan, Client Information, and Designing with Safety in Mind. The contrast between this finding and the high ranking of the impact of Planning Supervisor appointments by clients implies that clients are much less certain about the benefit of these than the impact. This is not surprising perhaps when you take into account some of the comments about the costs of Planning Supervisors which are documented in this report.
9.5.3 When considering the future beneficial effect the appointment of the Planning Supervisor is still placed second but the requirement on a client to provide information is ranked equal. For clients it is again rated fourth as before.
9.6. Costs Of Planning Supervisor Appointments

9.6.1 Interviewees were asked questions about the additional cost they had incurred in preparing to comply with the regulations and with maintaining the necessary systems. Headings, such as ‘change of procedures’ and ‘training’ were offered as prompts (see questions 22 and 23 on the Structured Questionnaire). Although these questions were not targeted on the fees for the Planning Supervisor a significant proportion of respondents mentioned them. Interviewees also used other opportunities to comment about the level of fees that were being charged.
9. ROLE OF PLANNING SUPERVISOR (Continued)

9.6.2 As previously explained the questionnaire was not designed to carry out a systematic survey of the level of Planning Supervisor fees but information was offered which suggested wide variation from 0.2% of contract value to 2.0% or more. Much of the variation appeared to be related to the size of the project and the complexities involved but often the level of fee seemed more related to the knowledge of the market by the clients and their willingness to investigate alternatives. This topic is explored in more detail in Section 4 paragraph 4.12.9 and Table 9.

9.6.3 A number of clients reported difficulty in funding these costs and both designers and contractors reported that some clients were unreasonably insisting that they absorb the cost of this work within the normal design fee or contract value.

9.7 Business effects

9.7.1 Interviewees were asked to report if they had suffered any adverse business effect due to the introduction of the regulations. Of 198 interviewees, 36 were able to cite specific negative effects. Six mentioned planning supervision;

Two clients complained of "unrecoverable costs"

A designer cited the problem of having to accommodate the Planning Supervisor service within his practice

A research and design organisation stated it had "no Planning Supervisor experience and had incurred additional up front costs"

One contractor specifically cited "Planning Supervisor problems" and another complained of "lack of competence by an external Planning Supervisor"

9.7.2 Interviewees were also asked about positive business effects and nine respondents, designers and contractors, identified the opportunity for earning fees as Planning Supervisors. A number of design practices interviewed had established separate businesses specifically to undertake Planning Supervisor work either exclusively or in conjunction with other related functions. A client reported serious doubts about the quality of work from such enterprises because he felt that this function was not likely to attract the most dynamic or talented designers. The safety departments of some large contractors had similarly set themselves up to undertake Planning Supervisor responsibilities for their own projects and also to offer the service to others.
9.8 Levels Of Compliance With The Regulations

9.8.1 Those responding to the questionnaire were asked to give their perceptions of how the different duty holders were complying with the Regulations. The results specifically in respect of the compliance by Planning Supervisors are shown in Table 34.

Table 34

<p>| All Respondents View Of The Level Of Compliance To The CDM Regulations By Planning Supervisors Question 24 |
|-------------------------------------------------|-------------------------------------------------|</p>
<table>
<thead>
<tr>
<th>Level Of Compliance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not comply</td>
<td>16.7</td>
</tr>
<tr>
<td>Comply with Intent</td>
<td>24.8</td>
</tr>
<tr>
<td>Comply fully</td>
<td>42.2</td>
</tr>
<tr>
<td>Over comply</td>
<td>16.3</td>
</tr>
</tbody>
</table>

9.8.2 A majority believe that Planning Supervisors comply with the regulations or comply with the intent. Of the balance there is a tendency for clients and contractors to complain of non-compliance and for designers of over compliance. Complaints of over compliance mentioned most often Planning Supervisors unnecessarily insisting on receiving risk assessments and method statements which they were not competent to evaluate.

9.9 General Issues

9.9.1 In addition to the responses to the specific questions the interviewees expressed a wide range of views on the Planning Supervisor function which are reported here. Reference should also be made to Case Study 1 - The Role Of The Planning Supervisor annexed to this report as Appendix C, which also illustrates a number of these issues.
9. ROLE OF PLANNING SUPERVISOR (Continued)

9.9.2 It is first worth noting that there appeared to be a very wide variation in the way in which Planning Supervisor appointments are made. These range from clients employing their own staff in house to do this work, to clients or their agents or advisors carefully selecting the appropriately skilled Planning Supervisor for the specific contract, to incorporating the role in the design team or as part of the role of principal contractor. Normally, Planning Supervisor appointments seem to be made for the duration of the contract but it can be transferred in the course of a project. Several instances were highlighted where the role transferred from the design team to the principal contractor at the time the contract was let.

9.9.3 Some seem to be interpreting the regulations as if they require a named individual to be appointed. This error may be compounded as there is evidence of some legal advisers drafting contracts of engagement in which the appointee is required to give the name of the specific individual who will act as Planning Supervisor.

9.9.4 Opinions appear to vary on the need for the Planning Supervisor to be independent of the other duty holders. Some design practices when undertaking the Planning Supervisor function for schemes they are designing ensure that there is a degree of independence within the design office. The view of a body representing Planning Supervisors is that independence is of the essence and "We do not see how you can stand outside yourself and give impartial advice" is not one that would be shared throughout the industry. Many favour the close integration of the Planning Supervisor function with other roles.

9.9.5 Concern was expressed by a number of respondents about the timing of Planning Supervisor appointments which were often felt to be too late. Some of this is undoubtedly due to the reluctance of clients to make a commitment of fees early enough. This also relates to the problem encountered by clients and designers of clearly identifying the start of a project or even being clear about the definition of a project which is not specified in the ACoP. Late appointment does not allow the full potential benefit of Planning Supervisor involvement in the design stage to be realised. This and other problems of late appointment are clearly illustrated in the Case Study 1.
It was established that the Planning Supervisor function is being carried out by people with a wide range of professional backgrounds or none. There is substantial evidence in support of the claim that "anyone can become a Planning Supervisor in three days". There were claims by the other duty holders that many Planning Supervisors without any practical professional construction qualification have a poor understanding of the issues which has led to an over bureaucratic implementation of the regulations. It was also claimed that this lack of professional background could create unproductive tensions with the other duty holders. Certainly strong opinions were held about the competence of Planning Supervisors reflected in the following comments;

"Some treat [the] job as a checklist job only"

and

"I am totally fed up with ....incompetent Planning Supervisors"

In general however it would be true to say that opinion about the value of the Planning Supervisor role varied widely as the following comments show;

"The Planning Supervisor role is not helpful"

"The Planning Supervisor has focused attention on Health & Safety Issues"

"The Planning Supervisor role is helpful if operated sensibly"

A number of respondents have emphasised the fact that the European Legislation (Council Directive 92/57/EEC) does not require a separate function of Planning Supervisor. They feel this unnecessarily complicates the issues identified here and believe that it should be possible to achieve more direct health and safety benefits if the requirements on Planning Supervisors were placed on other duty holders instead, particularly the leader of the design team and the principal contractor.
10. SUMMARY POINTS

10.0 Statement Of Purpose
The purpose of this section is to highlight particular issues identified during the course of the survey and the subsequent data analysis which by nature of their importance and effect warrant further consideration. To draw conclusions or to make specific recommendations is beyond the scope of the project brief.

10.1 Analysis / Interpretation Of The Data
10.1.1 The data derived from the interviewee responses clearly indicate that there are perceived to be actual health and safety benefits. The data places these perceived actual benefits in the following order of decreasing benefit:

- Increased awareness
- Having the health and safety plan on site
- Better planning and coordination
- Behavioural changes on site
- Less risk to manage on site
- Less incidents

10.2.2 The data also indicates that the perception of the majority of interviewees is that to date there are little or no actual on site health and safety benefits. Of those interviewees who do perceive there to be actual on site benefits to date, the data places them in the following order of decreasing magnitude of benefit:

- A safer environment for users
- Reduced accidents during construction
- Reduced damage to long term health
- Reduced absence / sickness during construction
- Reduction in claims for industrial injury
- Fewer accidents during maintenance
- Less illness caused by maintenance activities

10.2.3 The data is also very clear that the perception of the great majority of interviewees is that there is little benefit to date by way of reduced expenditure ensuing from any health and safety benefits.
10.2 Nothing Substantive

10.2.1 There was not a single duty holder interviewed who could produce substantive evidence of improved health and safety arising from the introduction of the CDM Regulations. The overwhelming comment was that "it was too early to tell".

10.2.2 Virtually all interviewees stated that there is a much greater awareness of health and safety at all levels in the construction industry and that minds were now focused on health and safety at the onset of a project. It was further stated that this increased awareness was beginning to have an effect on the behaviour of individuals and on the way they thought about health and safety issues.

10.2.3 The plethora of health and safety legislation since 1990 has made it impossible to attribute any of the increase in awareness and behavioural changes to a specific set of regulations.

10.2.4 The expectations for health and safety benefits are substantial but it would seem to be only at the senior / executive management level of enterprises that there is a real perception of what those benefits will be and the likely impact they will have.

10.2.5 At the time of the survey there was no firm evidence to link improvements in methodologies that have occurred, be they management, design, construction or maintenance methodologies, to specific improvements in health and safety. There was a strong feeling from interviewees that improved methodologies have impacted health and safety but, again, there is no substantive comparative data available to support this view.

10.2.6 Contractors have stated that the requirement on clients to make all safety related information available is having, and is expected to continue to have, a major impact on site health and safety. It is further anticipated that as the effect of properly maintained health and safety files begin to filter through in respect of adaption, refurbishment and demolition the impact on health and safety will be even greater. Demolition contractors in particular therefore feel it is going to be some time before they see one of the real effects of the CDM Regulations.
10. SUMMARY POINTS (Continued)

10.2.7 While interviewees suggest that better and clearer risk and hazard identification must be having an impact on health and safety they acknowledge the impact can only be measured in reduced incidents, less illness and reduced damage to long term health. There is, however, no meaningful data which show changes that can be attributed to the CDM Regulations in isolation.

10.2.8 It would seem that the method of collecting on site incident data, the categorisation of the data and the subsequent collation of the corresponding statistics does not lend itself to establishing whether any reduction in a particular category or type of incident can be attributed to the introduction of specific health and safety legislation.

10.2.9 Most contractors keep detailed incident records, they are required to do so and to satisfy their insurance company, but the nature of the industry and its culture means that only the very major incidents tend to be recorded and so the near misses, serious occurrences and lesser incidents are not captured. Since they are not captured there is no feedback to assist in the continuing process of risk and hazard identification and elimination, and to ensure that lesser incidents do not become major accidents.

10.2.10 A number of contractors stated that efforts were under way to agree an improved methodology for the collection of incident data but further stated that its success would very much be dependant upon the adoption of an appropriate reporting regime by individuals on site. This was recognised to be a problem area particularly for small contractors some of whom it is felt would be concerned about reporting an incident for fear of it reflecting on their competence, subsequent reputation and ability to retain the existing business and secure new business in the future.

10.2.11 Increasing the awareness of health and safety in individuals is seen as key to changing attitudes and is considered as a very real benefit. It is felt by interviewees that this will bring about a change in culture. There are only opinions, perceptions and feelings which suggest such a change is underway. There is no substantive evidence.
10.3 Other Health and Safety Benefits

10.3.1 Of the many comments received from interviewees, it is worth noting some specific benefits that were stated. Inter alia these included:

"Formalisation of sub-contractors assessment and management process and better communication of risk assessment statements to workforce"

"Better coordination of contractors on site"

"Health and safety is now a standard agenda item"

10.4 Business Effects

The effects of the Regulations have been widespread. This section looks at some additional direct business effects on the construction industry identified during the course of the survey and at other business effects on the construction industry brought about by the reaction of enterprises that comprise the supporting infrastructure for the industry such as the assurance and legal institutions.

10.4.1 Direct Business Effects

10.4.1.1 The data does demonstrate that the Regulations have had an effect on the business of each of the constituent parts of the construction industry. The data also indicates that for the specific effects itemised in the survey the expectation is for an even greater effect longer term particularly in respect of:

A more competent industry
Better coordination of design and construction
Better on site control by the principal contractor
Improved maintenance of the finished structure

10.4.1.2 A number of interviewees, both designers and contractors, stated that an additional major business effect is that the Regulations have created teams where previously they never existed. It was also commented that the Regulations have improved and enhanced team working where previously difficulties existed.
10.4.1.3 Many contractors indicated that the Regulations had resulted in an industry structure which not only allowed them to demonstrate competence but had required clients to look more closely at that competence and as a result gave a business advantage over other 'less competent' contractors.

10.4.1.4 A number of contractors and some designers indicated that for more complex schemes there appeared to be a shift towards two stage tendering believing that the Regulations had to some extent influenced this. The effect of this is to involve the principal contractor much earlier in the project and to bring the whole team together, effectively integrating it, significantly in advance of start on site. This it is felt has commercial and health and safety benefits for all parties.

10.4.1.5 A majority of contractors and many clients considered that the requirement for a health and safety file was having an effect on their businesses and that in the longer term, once the issues of format and content had stabilised, would result in improved efficiency and reduced costs derived from easier and better adaption, refurbishment and demolition, better knowledge on how to maintain the structure and ultimately a more saleable property.

10.4.1.6 A significant business effect has resulted from the requirement to appoint a planning supervisor. This requirement, while creating a whole new profession, has resulted in a major new revenue stream for those providing the function; to some purely as commercial activity rather than as complementary offering to a core industry related activity such as design or construction. It has resulted in new entrants to the industry mainly from the insurance sector. The net effect of this requirement has been an oncst to the total cost of a project.

10.4.2 Indirect Business Effects

10.4.2.1 The indirect business effects are arising primarily from the perceived liability by the insurance and legal institutions. There is evidence to suggest that the insurance companies are indirectly controlling the degree of implementation of the Regulations by specific duty holders, mainly designers, through the terms under which professional indemnity insurance is offered. Insurance companies are now carrying out a more detailed risk and competence assessment of their insured than they did prior to the introduction of the Regulations and are determining different levels of professional indemnity cover, and in some cases withdrawing it, dependant on the type of work undertaken.
10.4.2.2 It must be pointed out that under ‘normal’ situations most insurance concerns have extended professional indemnity cover to include providing the function of planning supervisor at no extra premium. However, where a designer becomes a named individual to carry out the function of planning supervisor in a contract of engagement for the design of a structure, because of the potential criminal liability on that individual an assurance company may not be prepared to underwrite the risk. It was confirmed that in some cases this has not stopped a design practice from accepting the contract and fulfilling its requirements but it is giving rise to much concern.

10.4.2.3 The legal institutions are having their own indirect impact on this situation by advising their clients to over specify in contracts of engagement, particularly by requiring the naming of individuals who will be carrying out the specific duties and requirements detailed in the Regulations. The impact of this also extends to the generation of the health and safety file where clients are also being advised to ensure that multiple copies of the health and safety file are produced and that at least one copy resides with the title deeds to the property. The ongoing impact of this is the increased burden, cost and time, on clients and others in not only generating the health and safety file but in maintaining its currency.

10.5 Cost Categories And Absolute Cost Versus Perceived Cost

There are two types of cost, non-recurring costs arising from the introduction of the Regulations and recurring costs in respect of their ongoing implementation. Virtually all interviewees were unable to provide absolute cost data for either of these cost categories. Unless specified the following cost data are estimates and perceived costs provided by interviewees at time of interview.

10.5.1 Non-recurring Costs

10.5.1.1 Those costs considered to be non-recurring are:

- Changes to systems and procedures
- Training
- Increased Staff
10. SUMMARY POINTS (Continued)

10.5.1.2 As can be seen from the data where costs had been incurred the majority of interviewees considered those costs to be 'Little' and for some would have been incurred anyway. Many interviewees considered the cost of training to be more than the cost of changing systems and procedures. Increased staff costs was not an issue for the vast majority of respondents.

10.5.1.3 Many interviewees were able to recall the number of days spent on training specifically attributable to the introduction of the CDM Regulations. The data indicates that the most training was undertaken by contractors and some by designers. On average the duration of the training was two days. The number of staff who undertook training varied dependant upon the size of the company. In some design practices external training was only undertaken by the partners and associates.

10.5.1.4 Some contractors extended training to all key personnel which for the large and very large contractors ran into hundreds of person days. For these enterprises and others the actual cost of the training was not considered to be the main cost. Most contractors were able to secure a grant to cover the cost of the training from the Construction Industry Training Board (CITB) at the rate of £35 per day per person. Therefore the cost of lost project time, which was even less quantifiable, was considered to be the main cost of the training undertaken.

10.5.1.5 To help put the issue in perspective, if a hundred person days of training, (i.e. 50 staff for 2 days), was undertaken by a contractor at the industry average personnel loaded rate of £55 per day the total personnel cost was £5,500. In most cases the cost of the internal training course was recoverable by way of a CITB grant. The total average cost of training was therefore £5,500.

10.5.1.6 Other duty holders were not able to secure training grants from the CITB or other similar bodies.

10.6 Key Issues

10.6.1 There is insufficient substantive evidence available to carry out a comparison with the Cost Benefit Analysis (CBA) performed prior to the introduction of the CDM Regulations. To attempt to do so in the absence of hard data would be meaningless and another purely statistically based exercise. The evidence strongly indicates however that the cost as a percentage of output determined in the CBA at 0.7 percent is low and that a more realistic figure could be greater than 1.2 percent.
10.6.2 The main areas of oncost to the industry arise from the requirement to appoint a planning supervisor, which is a direct oncost for the client at the onset of a project, and that related to the increased volume of documentation in respect of prequalification assessment (competence assessment) and tender submission which is a direct oncost, much of it unrecoverable, for the contractor. Both the planning supervisor and competence assessment requirements of the Regulations are at variance to the European Directive. Both requirements therefore warrant re-evaluation in the light of this and the identified cost impact.

10.6.3 The evidence also strongly indicates that the anticipated health and safety benefits have only just begun to filter through and that there is no perceivable improvement in accident rates on construction sites or during maintenance activities which any of the survey sample were prepared to specifically attribute to the introduction of the Regulations. Until a sound basis for the collection of incident data (accident, near miss, serious occurrence) across the industry is established, a method for differential association of incidents to specific health and safety legislation is determined and accurate data collected over a defined time period it will not be possible to meaningfully attribute changes in incidents to specific legislation.

10.6.4 Irrespective of the comment in paragraph 10.6.2, the function of the planning supervisor as an independent duty holder is creating certain difficulties for the other duty holders. The interpretation by some of the planning supervisor as a single individual together with the emergence of the role as a profession has resulted in further complications which have done little to bring about an integrated team. An evaluation of the benefits that could arise from integrating the function of planning supervisor with that of other duty holders is warranted.

10.7 Major Issues

10.7.1 Both the assurance and legal institutions need to have a common understanding of the goal setting intent of the Regulations and the intent of the HSE in their enforcement. A better dialogue with both institutions may modify their approach to the Regulations and help improve matters with regard to the issues of professional indemnity and individual criminal liability.

10.7.2 There is much concern about the volume of documentation in circulation and the corresponding cost. Since proportionality is the key to solving this issue more specific guidance and interpretation is warranted.
10.7.3 Much difficulty in the early stages of a project arises from the inability to distinguish between the importance and effectiveness of identifying all risk and hazards versus significant risks and hazards. This is proportionality again. The industry would benefit from the determination and common agreement on categories of ‘standard risks and hazards’.

10.8 Other Issues

10.8.1 There is evidence of best practice across the industry. The sharing, development, and benchmarking of best practice in an independent forum would benefit the whole industry particularly with regard to how the volume of general and specific health and safety legislation such as the CDM Regulations is managed.

10.8.2 Many duty holders do not know where they can get competent advice. The merits of establishing a confidential ‘help desk’ for duty holders aimed at improving the level of implementation of the Regulations through better interpretation warrants investigation.

10.8.3 Better and more guidance may resolve the proportionality issues by improving the level of understanding and reducing the opportunity for misunderstanding and misinterpretation.
Construction (Design and Management) Regulations 1994 (CDM)

Cost Benefits Analysis

Pro-Forma Questionnaire

Name:  
Position:  
Company:  

Impact of The Regulations

1) What has been the impact of the Regulations on the health and safety performance in your company?

2) What specifically has been the impact of the Regulations on the projects you are involved with?

3) What do you consider will be the likely effect of the Regulations during the life cycle of those projects?

4) What has been the effect of the requirement to appoint a planning supervisor?

5) How has the role of the planning supervisor improved your quality management processes?

6) What are your expectations for productivity gains arising from the requirement to appointment both a planning supervisor and a principal contractor?

7) What practical difficulties have been encountered with the requirement to assess the relevant competence of designers, planning supervisors and contractors? How has the requirement for a pre-tender health and safety plan been implemented?
9) How have the Regulations affected the integration of the design and construction processes?

Regulation Compliance

10) What do you feel is the current level of compliance with the Regulations and what do you expect to be the trend in compliance over the next 2 to 3 years?

11) Has your compliance with the Regulations improved your level of compliance with other health and safety legislation?

Cost of Compliance

12) What has been the additional cost burden for the generation of the pre-tender health and safety plan?

13) What has been the additional cost burden to meet the competence assessment requirement?

14) What one-off costs have you incurred in implementing the Regulations particularly in respect of:
   - initial training?
   - the establishment of systems?
   - the integration of the requirements into existing management systems?
15) What have been the costs for the maintenance of procedures for the implementation of the Regulations?

16) How do you see the costs changing, in the short to medium term, in respect of the maintenance of the necessary procedures to ensure the continuing compliance to the Regulations?

17) What are your long term expectations in respect of the costs to maintain the necessary procedures?

**Benefits of Compliance**

18) What benefits are you currently enjoying which can be directly attribute to the implementation of the Regulations?

19) What further benefits do you feel will materialise, over time, from the continuing implementation of the Regulations?

20) By how much in real terms do you estimate that the benefits arising from the implementation of the Regulations effectively reduce costs?

21) What reduction in the incidence of accidents have you experienced on the construction sites you are associated with?

22) What reduction in the incidence of ill health have you experienced on the construction sites you are associated with?

23) What specific aspect of the Regulations do you consider will yield the greatest benefit?
24) How will the greatest benefit arising from the implementation of the Regulations manifest itself?

25) What will be the magnitude of the greatest benefit?

26) How has the flow of information between the parties involved in projects improved?

Cost Benefits

27) What have been the cost savings arising from the integration of the design and construction processes?

28) What cost improvements have you experienced as a result of an improved flow of information between the parties involved in projects?

29) What do you consider will be the trend in cost improvements arising from the continuing improvement in information flow?

30) What cost improvements have you experienced as a result of improved levels of compliance with other health and safety legislation as a result of your compliance with the CDM Regulations?
Other Issues

31) What is your assessment of the advice given by consultants and others in respect of the implementation of the Regulations?

32) If you have taken external advice on the implementation of the Regulations how has this advice affected your costs of compliance?

33) Any other comments?
Construction (Design and Management) Regulations 1994 (CDM)  
Cost Benefit Analysis - Structured Questionnaire

Name:   Company:   Date:

Company Data

1. What is the nature of the business of the Company and the percentage attributable to each activity?  
   (Please tick all that apply and indicate the percentage)
   
   Client .............................................................. □  □
   Designer .............................................................. □  □
   Developer .............................................................. □  □
   Contractor .............................................................. □  □
   Sub - contractor ...................................................... □  □
   Planning Supervisor ............................................... □  □
   Other (please specify) .............................................. □  □

   For clients, please indicate in which of the following sectors the Company operates:
   Private □       Public □       Voluntary □

2. What is the annual turnover of the Company?
   
   Very Large (> £500 M) .............................................. □
   Large (£50 M <= £499 M) .......................................... □
   Medium (£500 K <= £49 M) ...................................... □
   Small (< £500 K) ................................................... □

3. On how many projects have you worked on which the CDM Regulations have been applicable?
   □ □
What is the percentage split of the Company turnover by activity?

<table>
<thead>
<tr>
<th>Activity</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td></td>
</tr>
<tr>
<td>Design and Build</td>
<td></td>
</tr>
<tr>
<td>Engineering Construction</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
</tr>
<tr>
<td>Demolition</td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
</tr>
</tbody>
</table>

Of the above turnover what percentage relates to Private Finance Initiative projects.

General Positioning of Company Regarding Health & Safety

What was the policy of the Company towards health and safety before the introduction of the CDM Regulations? (Please tick ONE only)

- Had a fully developed health and safety policy and systems integrating the management of all projects.
- Had made good progress in the development of a health and safety policy and the corresponding systems.
- Did the absolute minimum necessary to comply with health and safety legislation.
- Attempting to comply with the intent of health and safety legislation.
- Did not think that it had any duties to discharge.
- Ignored health and safety legislation.
- Other (please specify)
6. What is the attitude of the Company to health and safety legislation?

(Please tick ONE only)

- Welcomed as underpinning the Company's health & safety objectives.
- Supportive of the objectives of the health & safety legislation.
- Accepts the need to comply with health and safety legislation.
- Considers the need to comply with only the absolute minimum of health & safety legislation.
- Tries to ignore the regulations.
- Other (please specify)

7. What has the Company done in response to the CDM Regulations?

(Please tick ONE only)

- Has it:
  - Completely revised all safety policies, procedures and systems.
  - Significantly amended and updated existing procedures and systems.
  - Modified existing procedures and systems.
  - Found that no changes to policies, procedures and systems were necessary.
  - Considered the implications of the Regulations, but not done anything.
  - Not considered or dealt with the implications of the Regulations.

8. How has the introduction of the CDM Regulations affected the overall position of the Company with respect to health and safety legislation?

(Please tick ONE only)

- Have they:
  - Transformed the approach of the Company to health & safety issues
  - Reinforced and strengthened compliance to health and safety legislation.
  - Had a small positive effect.
  - Had no effect.
  - Created resistance to all health and safety legislation generally.
- Other (please specify)
9. What is your interpretation / understanding of the role of the Planning Supervisor and how does this compare with your actual experience? (Please tick all that apply)

<table>
<thead>
<tr>
<th></th>
<th>Interpretation</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Co-ordination of the health and safety aspects of project design and planning.</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>Collation of client information</td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>Advising clients of any investigative surveys considered necessary.</td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>Providing advice to the following duty holders to enable them to comply with the Regulations: clients</td>
<td></td>
</tr>
<tr>
<td></td>
<td>designers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>contractors</td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>Preparation of the project health and safety plan.</td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>Forwarding information to designers.</td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>Ensuring designers comply with their duties.</td>
<td></td>
</tr>
<tr>
<td>h.</td>
<td>Understanding and being aware of risk management and design.</td>
<td></td>
</tr>
<tr>
<td>j.</td>
<td>Seeing the risk assessment for all stages of the construction.</td>
<td></td>
</tr>
<tr>
<td>k.</td>
<td>Auditing the adherence to the health and safety plan during the construction phase of the project.</td>
<td></td>
</tr>
<tr>
<td>l.</td>
<td>Monitoring on site standards.</td>
<td></td>
</tr>
<tr>
<td>m.</td>
<td>Managing the project on behalf of the client.</td>
<td></td>
</tr>
<tr>
<td>n.</td>
<td>Ensuring the health and safety file is prepared in accordance with the Regulations.</td>
<td></td>
</tr>
<tr>
<td>p.</td>
<td>Ensuring the health and safety file is delivered to the client.</td>
<td></td>
</tr>
<tr>
<td>r.</td>
<td>Other (please specify)</td>
<td></td>
</tr>
</tbody>
</table>

Where your interpretation/understanding is not the same as your actual experience please state below why you believe this difference exists referencing the specific question above.
Impact of the CDM Regulations

10. Using the scale shown, please rate the impact on the Company of each of the following:
Scale: 1 = minimal or no impact, 2 = some impact, 3 = much impact, 4 = significant impact.
Also please rate these requirements, using the following scale, in order of greatest beneficial effect.
Scale: a = greatest beneficial effect, b = second greatest beneficial effect, c = third greatest beneficial effect etc...

<table>
<thead>
<tr>
<th>Impact To Date</th>
<th>Impact Longer Term</th>
<th>Beneficial Effect To Date</th>
<th>Beneficial Effect Longer Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>The appointment of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Planning Supervisor</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The Principal Contractor</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Where they appoint, or where relevant, the requirement on a Client or the Client’s Agent to assess the competence of:

<table>
<thead>
<tr>
<th>Impact To Date</th>
<th>Impact Longer Term</th>
<th>Beneficial Effect To Date</th>
<th>Beneficial Effect Longer Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Planning Supervisor</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The Designer</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The Principal Contractor</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

The requirement for a pre-tender health and safety plan.
The requirement on a client to ensure all safety related information is made available.
The requirement on design teams to perform risk assessments and design with safety in mind.

11. Using the scale shown, indicate what has been the increase in the volume of documentation being generated which can be attributed to the CDM Regulations in support of the following requirements:
1 = Up to 12 pages, 2 = 12 to 24 pages, 3 = 25 to 49 pages, 4 = greater than 50 pages
Also please indicate whether you consider the volume of documentation you have indicated is excessive by ticking the relevant boxes.

<table>
<thead>
<tr>
<th>Volume of Documentation</th>
<th>Excessive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-tender health and safety plan</td>
<td>☐</td>
</tr>
<tr>
<td>Pre-qualification assessment</td>
<td>☐</td>
</tr>
<tr>
<td>Project health and safety plan</td>
<td>☐</td>
</tr>
<tr>
<td>Competence assessments</td>
<td>☐</td>
</tr>
<tr>
<td>Health and safety file</td>
<td>☐</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>☐</td>
</tr>
</tbody>
</table>
12. What do you feel any excessive amount of documentation in respect of the requirements in question 11 above can be attributed to: (Please tick all that apply)

- A genuine desire to ensure no information is omitted.
- A misunderstanding of the requirements.
- The need to ensure and demonstrate compliance with the CDM Regulations and Approved Code of Practice.
- A desire to provide value for money.
- To prevent the possibility of civil litigation.
- Seen as a marketing opportunity.
- Other (please specify)

13. What have been the actual on site health and safety benefits arising from the introduction of the CDM Regulations? (Please tick all that apply)

- Increased awareness of health and safety issues
- Better planning and coordination
- Behavioural changes on site
- Health and safety plan on site
- Less risk to manage on the construction site
- Less incidents (accidents and near misses)
- Others (please specify)
14. Using the scale shown rate the following health and safety benefits which have arisen to date as a result of the introduction of the CDM Regulations. Also using the same scale indicate what you expect the future benefits will be.

Scale: 1 = No Benefit, 2 = Marginal Benefit, 3 = Some Benefit, 4 = Substantial Benefit

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Improvements to Quantity/Quality</th>
<th>Reduction in Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced accidents during construction</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>Reduced absence/sickness</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>during construction</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>Reduction in claims for industrial injury</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>Reduced damage to long term health.</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>Fewer accidents during maintenance</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>Less illness caused by maintenance activities</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>A safer environment for users</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>To Date</td>
<td>Future</td>
</tr>
</tbody>
</table>

Note: For those enterprises that indicate that they do not expect to see any reduction in accidents the following question is to be asked:

Have you had any accidents?  
Yes  No  Don’t Know

Efficiency Benefits

15. Using the scale shown rate the following efficiency benefits to the design and construction processes in terms of the magnitude of the actual or anticipated benefit:

Scale: 1 = No Benefit, 2 = Marginal Benefit, 3 = Some Benefit, 4 = Substantial Benefit

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Improvements to Quantity/Quality</th>
<th>Reduction in Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homogeneous design process</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>Improved flow of information</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>Ease of construction</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>Ease of maintenance</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>Ease of adaption/refurbishment/demolition</td>
<td>To Date</td>
<td>Future</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>To Date</td>
<td>Future</td>
</tr>
</tbody>
</table>
16. Please state 3 tangible benefits that will come from the efficiency benefits you have indicated in question 15 above.

   a. ............................................................................................................

   b. ............................................................................................................

   c. ............................................................................................................

Business Effects

17. Has the introduction of the CDM Regulations had any adverse effect on the business enjoyed by your Company?  Yes  No

   If Yes please specify ................................................................................

18. Has the introduction of the CDM Regulations had any positive effect on the business level of your Company?  Yes  No

   If Yes please specify ................................................................................

19. Which of the following business benefits do you feel have already arisen, or you feel will arise in the longer term, from the introduction of the CDM Regulations?

   (Please tick all that apply)

<table>
<thead>
<tr>
<th>Better coordination of the design and construction process.</th>
<th>Now</th>
<th>Longer Term</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Better on site control by the Principal Contractor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A more integrated industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A more competent industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The creation of a ‘level playing field’.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved maintenance of the finished structure.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Many of the ‘cowboys’ being forced, or going, out of business.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   ✔  ✔
20. Please state 3 tangible benefits that will come from the business benefits you have indicated in question 19 above.

a. ........................................................................................................................................

b. ........................................................................................................................................

c. ........................................................................................................................................

21. Please state what you feel will be the most significant business effects that will arise from the requirement to produce a Health & Safety File.

........................................................................................................................................

........................................................................................................................................

........................................................................................................................................

........................................................................................................................................

Cost of implementation of Regulations

22. What initial additional costs were incurred in implementing the Regulations for each of the following? (If no actual cost estimates are available, please state whether “none”, “little”, “major”, “substantial” or “very significant”.)

Also indicate which of these cost would have been incurred anyway.

<table>
<thead>
<tr>
<th>Additional costs</th>
<th>Incurred Anyway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change of procedures</td>
<td></td>
</tr>
<tr>
<td>Updating of management systems</td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
</tr>
<tr>
<td>Increased staff</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
</tr>
</tbody>
</table>
Cost of maintaining compliance with the Regulations

23. What additional costs per annum are being, or are expected to be, incurred in maintaining compliance with the Regulations for each of the following? (If no actual cost estimates are available or can be quantified, please state whether "none", "little", "major", "substantial" or "very significant"). Also indicate which of these cost would have been incurred anyway.

<table>
<thead>
<tr>
<th>Additional costs</th>
<th>Incurred Anyway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintaining systems and procedures</td>
<td></td>
</tr>
<tr>
<td>Competence assessment</td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
</tr>
<tr>
<td>Increased staff</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
</tr>
</tbody>
</table>

Compliance with the Regulations

24. Using percentages please state what you perceive to be the percentage level of compliance with the Regulations by each of the duty holder groups in respect of the 3 categories of compliance shown.

<table>
<thead>
<tr>
<th></th>
<th>Do Not Comply %</th>
<th>Comply With the Intent %</th>
<th>Comply Fully %</th>
<th>Over Comply %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning Supervisor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal Contractor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Contractors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

25. Do you feel there is any conflict or overlap between the CDM Regulations and the Building Regulations? (Please tick the relevant box)

<table>
<thead>
<tr>
<th>Conflict</th>
<th>Yes</th>
<th>No</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overlap</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

If Yes please specify

........................................................................................................

........................................................................................................

........................................................................................................

........................................................................................................

........................................................................................................

........................................................................................................

........................................................................................................

........................................................................................................
## Interviewee Data

26. What is your role or position in the Company?

<table>
<thead>
<tr>
<th>Role</th>
<th>Yes</th>
<th>No</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health &amp; Safety Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board Member/Director</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner in Design Practice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sole trader/contractor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specialist Planning Supervisor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health &amp; Safety Director</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managing Director</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed Professional Designer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (Please specify below)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

27. Are the views that are expressed in the answers given here, a general reflection of the position / attitude of the Board of Directors of the Company?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Interviewers Name** ............................................................

The Consultancy Company
THE ROLE OF THE PLANNING SUPERVISOR

1. OBJECTIVE

1.1 The objective of this Study is to examine in some detail the role of the planning supervisor, in order to assess the effectiveness of the function, as a catalyst to identify safety issues, and as facilitator of the flow of information on safety between the other duty holders.

1.2 The study explores the function of the planning supervisor in regard to information flow, and checks how well excessive information is filtered out. It examines the degree to which the role assists in identifying risks, and how the design process is affected. It also looks into the question of whether planning supervisors step outside their defined role, and what effect that might have in terms of costs, delay, and team working.

2. METHODOLOGY

2.1 The study is based primarily on investigation into the issues as they emerge on one particular project - construction of the Milton Keynes theatre. Each of the main duty holders involved in this project was interviewed against the objectives and scope set out above.

2.2 All the interviews were face to face, and in some depth, and interviewees were free to give opinions or facts both concerning the role of the planning supervisor and on wider issues concerning the regulations. Where these opinions and facts are significant, they are included in the study.

2.3 Clearly the number of interviewees does not constitute a significant sample, but the nature of the process enabled more finely graded opinions to be gathered.

2.4 Where relevant to the objective of the study, input from interviewees outside the theatre project has been taken and where this is so, it is stated in the study.
THE ROLE OF THE PLANNING SUPERVISOR

3. BACKGROUND - THE MILTON KEYNES THEATRE PROJECT

3.1 The Milton Keynes theatre is being planned and executed by the Commission for the New Towns (CNT) on land owned by the Commission. It is being funded by the Lottery's Arts Council Fund (70%) with matching funding from CNT and the private sector. Although CNT will continue to project-manage the scheme, they will license the site to the Borough of Milton Keynes at start on site, and then convey the freehold to the Borough on practical completion. Thus the Borough will be the employer under the contract, but for the purposes of CDM regulations they have passed the responsibility as client to CNT. The appropriate notice was served informing HSE of this in accordance with Reg 4 (2) to (5).

3.2 The design of the project was awarded in 1994 by public competition to Blonski and Heard architects, who had previous experience in theatre design, notably at Plymouth. After some delays and difficulties the previous quantity surveyors were removed from the project and Gardiner and Theobald were appointed in November 1995. Gardiner and Theobald have created their own practice to provide planning supervisor services, Gardiner and Theobald Planning Supervisors (GTPS), and this firm were appointed as planning supervisors in December 1995. The late appointment created initial difficulties for GTPS, in that it was difficult to advise the client on the competence of designers when these designers had already been on board for some time.

3.3 The method of procurement used was that of a two-stage tender, whereby John Laing Construction were appointed principal contractors in October 1996, and sub-contracting packages are currently being tendered. It was originally intended to use a design and build method, but this was ruled out by the Arts Council who believe that such a method would have seriously compromised quality. The two-stage method is designed to ensure that all the resources and expertise of the main contractor are brought into the team at an earlier stage. Each member of the team believed that such a method assisted good safety planning for the same reason. Work is due to start on site in summer 1997, with commissioning and then opening in autumn 1999. The total contract sum is in the region of £20 million.

3.4 Theatre projects are by their nature full of safety risks, at construction, maintenance and demolition stages. This project is "state of the art", and includes a number of innovative features such as a moving ceiling over the auditorium, to enable the capacity to change from 1400 seats to a more intimate space with 700 seats. Banks of seats may also be moved back and forth and stored in the basement. There are large void areas - for instance above the moving ceiling - which have to be managed safely.
3.5 The main team members involved in the project are as follows:

<table>
<thead>
<tr>
<th>Member</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milton Keynes Borough Council</td>
<td>Employer under the contract</td>
</tr>
<tr>
<td>CNT</td>
<td>Current landowner: client under CDM</td>
</tr>
<tr>
<td>Coopers and Lybrand</td>
<td>Project managers for CNT</td>
</tr>
<tr>
<td>Blonski and Heard</td>
<td>Architects: designers under CDM</td>
</tr>
<tr>
<td>Whitby and Bird</td>
<td>Engineers: designers</td>
</tr>
<tr>
<td>Arup Acoustic</td>
<td>Acoustic consultants: designers</td>
</tr>
<tr>
<td>Carr and Angier</td>
<td>Theatre management consultants: designers</td>
</tr>
<tr>
<td>John Laing Construction Ltd.</td>
<td>Principal contractor</td>
</tr>
<tr>
<td>GTPS</td>
<td>Planning supervisor</td>
</tr>
<tr>
<td>Gleeds quantity surveyors</td>
<td>Arts Council monitors</td>
</tr>
</tbody>
</table>

4. THE ROLE OF THE PLANNING SUPERVISOR WITHIN THE DESIGN PROCESS

4.1 The planning supervisor’s performance:

4.1.1 GTPS were appointed late to the project (in their view, and in the view of the Gleeds, who also act as planning supervisor on other projects, the planning supervisor is appointed late in 90% of cases). There was therefore a steep learning curve and some friction between team members, caused by the fact that in practice their first action was to carry out competence assessments on existing team members.

4.1.2 It was the view of most team members that this competence assessment process was not in itself appropriate. It was based too much on form filling, not face to face interviews. Team members objected to the format of the forms. Blonski and Heard produced a simpler version which was accepted by GTPS.
4.1.3 GTPS attend every design team meeting. After some initial reluctance (due only to their late appointment) they are now well accepted by the team. But there is some difference between the way GTPS see their role, and the way it is perceived by other team members. Bionski and Heard themselves as the leading designers co-ordinate their own safety information which relates to their own design input, collate risk assessment sheets and pass them to GTPS “for approval”. Other designers do the same. GTPS held an initial CDM brainstorming meeting, and have CDM review meetings every two months, at which all new risk assessment sheets are considered.

4.1.4 Nevertheless it remains true that GTPS were seen by almost all team members as a catalyst to promote thinking about design risks.

4.1.5 There was variance between the interviewees as to whether GTPS made a contribution to the solution of specific safety problems. Three specific design issues were mentioned; the architects and GTPS believed that the risk was identified and the solution reached, partly because of the role played by GTPS. Other consultants took the view that “it would have happened anyway”. Our own assessment would be that the Planning Supervisor took an intelligent part in the discussion over these safety issues, and ensured that they were properly addressed; but, quite properly, he did not make any technical contribution to the solutions eventually reached.

4.1.6 One design duty holder (talking generally, not specifically about this project) said the enquiries from the planning supervisor were excessive and unnecessary; they were seen as an obstruction, causing delay and cost, which could not be passed on to the client. But he was not able to give any hard evidence for this view.

4.1.7 In contrast to this, the same designer said that on another theatre project, the existence of CDM enables them to insist on a safe solution to a problem which the client would not otherwise have accepted. But the planning supervisor did not especially contribute to this.

4.1.8 GTPS see it as part of their function to ensure that a proper system of information flow is in place. They find that some design consultants have highly developed systems already. Others required some assistance, and the whole team requires some co-ordination on this. GTPS have a proforma on risk notification which comes to them immediately, and by their regular CDM reviews they filter all safety information. They also search out information, for example by having meetings with specialist contractors and others.
4.2 THE APPROPRIATE ROLE

4.2.1 GTPS obtained the relevant information from designers, the client and others, and prepared the health and safety plan. They filtered out irrelevant information by the meetings process described above.

4.2.2 GTPS advised the client on the competency of the principal contractor, by a process of questionnaires followed by interviews, followed by a written competency report to the client.

4.2.3 GTPS were involved in the preparation of the construction phase plan: they had several meetings with the principal contractor to discuss its content and format in advance, and then commented on the draft. Finally they had a meeting with the client to advise him that the plan was sufficiently developed.

4.2.4 GTPS are to be planning supervisors throughout the project. The principal contractor prepare the file, with continuing monitoring from GTPS. GTPS are advising on the health and safety agenda, and continuing to have regular CDM reviews.

4.2.5 There was a variance in views as to whether the planning supervisor should ideally be an expert on safety matters or not. More than one designer took the view that it would be extremely beneficial, in a project of this size and complexity, to have access to an expert opinion. Others believed that this would take away from individual involvement and responsibility for safety.

4.2.6 One view (not that of the principal contractor) was that the planning supervisor role should pass to the principal contractor at start on site. It was generally agreed that his role after start on site is awkward, and it is hard to see how it contributes to safe construction practice.

4.2.7 There was a separate view that, to reduce costs, clients would in future increasingly appoint an existing team member as planning supervisor.

4.2.8 GTPS said they took the role of a catalyst: although they did not see it strictly as their task to prompt other team members on safety matters and on the identification of risks, they nevertheless do so, while making an effort not to be condescending.
THE ROLE OF THE PLANNING SUPERVISOR

42.9 The inference could be drawn from the above that it is sensible to see the work of a planning supervisor as a task or function which has to be carried out by somebody, rather than as a distinct role to be filled throughout the life of a project.

4.2.10 GTPS do see it as their role as to stimulate debate on safety issues during the design phase. Examples were given where a better solution was reached as a result of this debate. (For example, a risk was identified in the construction and future maintenance of the large void space between the roof and the moveable ceiling above the auditorium; the solution arrived at by the design team was to stretch a high tension grid across this space which would give safe access to all parts of the void). The architect concurred that the planning supervisor contributed to this solution, whilst other designers in the team said the same solution would have come up without CDM. The principal contractor fully supported CDM, while being ambivalent as to whether a distinct planning supervisor role was necessary.

4.3 QUALITY AND EFFECTIVENESS

4.3.1 Almost all respondents said there was a wide difference in the quality and style of operation of planning supervisors. Some are “hands-on”, and will take part in discussions over safety matters and contribute towards a solution. Others will merely require the information for them to complete their own responsibilities. Some may be bureaucratic, others much more liberal in the way they interpret the regulations. One designer said, “they were terrible, now they are getting better”.

4.3.2 A particular problem (not on the Milton Keynes project) is what was termed over-zealouess - a lack of proportionality to the size of the project - going beyond the requirements of the regulations, in an attempt to protect against criminal liability. There are issues of professional indemnity.

4.3.3 Clearly what contributes to this is the variety of professional backgrounds of planning supervisors, the variety of training standards, and the variety of processes which are used on different projects and in different firms. Some interviewees believe that there is a need for much more guidance on this from HSE. One firm of quantity surveyors has trained up about sixty planning supervisors, on the basis of a minimum of two days training.

4.3.4 Most respondents said it was important that the planning supervisor should have a thorough understanding (and preferably direct experience) of construction processes, as well as health and safety matters.
4.3.5 In defence of planning supervisors it should be pointed out that in the majority of cases they have been appointed late, and this has made it more difficult for them to perform effectively as part of the team from the time of the appointment.

4.3.6 Interviewees said that in reality a new quasi-profession is being formed, in response to the need in the market generated by CDM.

5.0 SUMMARY POINTS

5.1 There is some evidence from this survey that the planning supervisor has a beneficial influence in integrating the design team. CDM definitely causes the architect to think even more seriously about safety issues; but if the regulations had not given importance to the separate role of planning supervisor, they would not necessarily have been less effective.

5.2 In the case study the planning supervisor certainly ensured that the Health and Safety Plan was prepared; but it was the architect who collated the necessary information, and passed it on to the planning supervisor. In this particular project, the planning supervisor has indeed effectively filtered out surplus information, but there are other cases which have come to our notice where the Health and Safety File has become excessively large.

5.3 Designers are most appreciative where the planning supervisor can make an informed contribution to the debate because he is experienced on safety matters, and where the designer may be less experienced. It is appreciated that this may require the planning supervisor to step outside the role as defined in the regulations.

5.4 Several interviewees took the view that the role would increasingly in future be taken by another team member, to reduce costs, and to improve team working.

5.5 There was support for the view that the role of planning supervisor after start on site needs clarifying. The word “planning” in the title gives credence to this. The principal contractor emphasized that GTPS would be very welcome on site. They were slightly less clear as to what would be the most appropriate reporting lines to make their role effective and proportionate.

5.6 The wide variety in standards of training and performance by planning supervisors is clear.
THE HEALTH AND SAFETY FILE

1. OBJECTIVE

1.1 The objective of this Study is to:

"Establish whether the nature, format and content of the Health and Safety File is meeting the needs of the industry and in particular those of the client".

1.2 This case study examines the response of a number of clients to the requirements in the Regulations for a Health and Safety File to be provided to them at the completion of each project and to be retained by them. The implications for the owners or managers of buildings that have had a continuous long term use are paid particular attention.

1.3 The issues surrounding Health and Safety Files are very varied reflecting the very varied nature of different types of construction work and structures.

1.4 This report describes the study methodology and then sets out a number of general issues that are particularly significant. More specifically it examines in separate sections experiences concerning File content, how complex situations affect the File and issues about the care, maintenance and updating of files. A number of particular examples are then given of how clients in complex situations are managing the requirement. Finally, general summary and lessons are drawn.

2. METHODOLOGY

2.1 As part of the pilot study and structured questionnaires a much information about the experiences of all duty holders was gathered. This information has been augmented by further questioning. In particular additional clients have been interviewed where their experiences of Health and Safety Files appeared to be particularly pertinent.
3. GENERAL COMMENTS

3.1 The concept of a Health and Safety File was found to be well understood across the wide range of our respondents. The requirement was welcomed by the greatest majority of those we interviewed, although there were a number of concerns about its practical application. Its potential for supporting a safer environment for future adoptions and demolitions was emphasised probably more than the potential benefit of safer maintenance. Apart from Health and Safety considerations there has clearly been a considerable amount of frustration about the availability of basic information especially “as fitted drawings”. Many see the Health and Safety File as a way of ensuring these were delivered.

3.2 There is widespread belief that the files will provide long term benefits and it has been particularly welcomed by demolition contractors for whom most benefits would seem to be a long way off.

3.3 It is of course still far too early to assess whether these expectations will be met. There will have been only a few instances where a Health and Safety File can yet have been of value in informing adaptation work. It could well be that a number of the issues that are noted below will in fact make it much more difficult for benefits to actually be realised than many now envisage.

3.4 The potential benefits are however already proving to be of commercial value as there is some evidence of the Health and Safety File being a factor being taken into account when buildings are valued.

3.5 It would appear that there is a high level of compliance with the requirement that a file should be produced and delivered to the client.

3.6 One particular issue has been the trouble that clients have found in deciding whether the File should be seen as a day to day reference document or an important legal document analogous to some extent to the deeds. The guidance on these issues does seem to expect the file to perform both functions and some clients have responded to this difficulty by asking for two copies of the file. This addresses this issue but gives rise to other problems, particularly with regard to keeping the file(s) updated.

3.7 A number of interviewees stated that they would like more guidance on file content to be available.
3.8 In specifying this case study it was envisaged that the age of a building would pose particular issues in respect of the Health and Safety File and our attention was particularly drawn to ancient buildings. We have found the total age of the building not to be an important consideration in regard to the Health and Safety File. In face many of the more ancient buildings have a simple form and often have a single use. A much more important influence on the file is the nature and complexity of the building complex, the variety of activity, users that occupy it, and the frequency of partial adaptation.

3.9 The response of designers, contractors and clients has varied very much according to their particular circumstance. Those concerned with projects that comprise a single new structure on an empty site which will be owned and operated by one user will not have faced many of the complexities that can arise. Similar clients faced with similar problems will adopt very different approaches. As more experience is gained and a knowledge of good practice spreads, there could be a more uniform response but our view is one of a complex response to what can be quite complex and difficult issues.

4. CONTENTS OF THE FILE

4.1 This variety of response in general is reflected in the file contents. The amount of thought that has been applied to this issue has varied greatly in the files seen. There is a danger here, which is evident elsewhere in response to the regulations, of a tendency to resort to an all inclusive generic approach rather than a selective and specific one. This approach is sometimes pushed to ludicrous extremes with, for example, full maintenance instructions for a hot water system being included in the file for a covered tennis court with no services.

4.2 It is not possible to generalise about the size of files. Most of those interviewed expected the average file to amount to more than 50 pages, and for many large schemes they would have to be much thicker than that. Most respondents did not consider their size excessive although there are some enormous multi volume examples.

4.3 It is clear that the question of relevance for the future is often not addressed in drawing up the File. It is quite common to find method statements for building processes which are only relevant to actual construction included in Files. Examples are statements for the removal of trees and a COSHH statement for wet concrete.
THE HEALTH AND SAFETY FILE

4.4 There is a strong preference among those interviewed for the use of drawing ro provide a record not only of build structures but also of potential risks and cautions. Some were concerned about ensuring the accuracy of record drawings and were insisting on signed, dated, hard copies of all drawings being included in the file.

4.5 Some organisations have adopted a very structured requirement on the contents of Files which form part of their tender requirements. The Highways Agency is an example of this approach.

4.6 Most Files appear to concentrate on providing a record rather than focussing on safety issues, although these are included in the main body of the File. One particular example of good practice included a summary of the key Health and Safety risks at the front of the file for ease of reference.

4.7 One firm of engineers and planning supervisors has adopted the practice of the Health and Safety File being as a short summary document and index to the information held elsewhere.

4.8 Some of the water companies have very developed computer based information systems which provide a complete CAD based record of companies’ installations. Such systems enable the H&S File to take the form of a computer based index which will point an enquirer to appropriate place in the system for the information needed on any project or installation. Because the IT system runs across a network information from a number of recently located data bases can be accessed in this way.

5. COMPLEX SITUATIONS

5.1 Some of the complexity that occurs in handling Health and Safety Files occur because the file is created through a construction project whereas the clients tend to manage their businesses on the basis of sites which are often comprised of several different buildings or structures. The advice that a separate file should be created for each structure is helpful. It is not uncommon for one project to affect services in a number of different buildings.
5.2 This complexity is further complicated by questions of ownership and tenancy. Several examples of building sites with a very complex mix of owners and tenants have been excellent. Each of these parties may be part of a larger organisation whose headquarters are elsewhere. In these circumstances it is difficult to meet the needs of all the different parties to have information available locally and kept as an important part of the building records.

5.3 Owners of very large estates also have particular problems. The advice that a separate file is created for each house in a development appears impractical to a housing authority embarking on an upgrading of thousands of houses.

6. CARE, MAINTENANCE AND UPDATING THE FILE

6.1 Knowing how to make best use of the file is complicated by the following factors:

6.1.1 The dual function of the file as a working manual and permanent records.

6.1.2 A lot of the projects under CDM will only affect a small part of a building or one service throughout the building.

6.1.3 Other building work which can affect the maintenance of the building or affect the safety of future work on the building will not be subject to CDM regulations.

6.1.4 The use of a building can create future safety problems for future adaptation of the building and this information would be best linked with the Health and Safety File.

6.2 There is no agreed way in which files can be kept up to date. Some see this being achieved by the amending or replacing of documents while others see the solution lying in a meticulous indexing of file contents so that a complete historical record is maintained. The use of electronic data systems are seen by some as the solution to these problems while others fear the loss of hard copy record whose authorship can be assured and which can be signed off as a correct record.
6.3 These dilemmas might appear to arise as a consequence of the CDM Regulations but in reality they just focus immediate attention on the problems that the managers of large building complexes or estates have in keeping records. Some are using this new requirement as a spur to a radical examination of the information systems that they need in any case.

7. ILLUSTRATIONS

7.1 A London Borough

7.1.1 This borough manages a large number of buildings ranging from thousands of individual houses, a large number of schools, hostels and training centres, residential homes, libraries, leisure centres, roads, bridges, and administrative buildings. Some of these sites contain a number of buildings. The borough class each site as an “asset”. The assets are each managed by the appropriate functional department in the borough (i.e., education, social services, etc.). In order to manage the CDM regulations the borough have appointed a CDM officer who works in the Borough Engineers department. This officer ensures compliance and for a minority of schemes acts as the Planning Supervisor. He is responsible for maintaining the Health and Safety Files.

7.1.2 The approach the borough have adopted is to rely heavily on a well-developed indexing system developed using a standard database on a PC. This enables the Health and Safety File for each project to be located either through the project reference or through the asset. The files themselves are physically filed in the Borough’s archive and additional space is having to be found for them. A ROM system has recently been purchased to safeguard the contents of the files rather than replace the hard copies. Eventually it may be possible to make the files available on the IT network which would greatly simplify access for maintenance, adaptation, etc. Documents needed on a day to day basis for maintenance are now copied so that the information is available on site. The borough is just about to embark on a major programme of upgrading some 20,000 houses using six or more contractors. This project appears likely to stretch the capacity of the indexing system. This type of system clearly has the potential to be of wider use in improving the management of the Borough’s estate.
7.2 Shopping Centre

7.2.1 The shopping centre visited is a large complex housing some 50 individual retain outlets ranging in size from a department store to a kiosk. The complex is owned by an insurance company and managed by a property management company. Building work within the complex may be commissioned by the owner, the manager of the centre for more minor works, or by the individual retain companies. All tenants in the building have to agree specified details of building work with the owners where these could affect the integrity of the whole building or its safety and security system.

7.2.2 When work subject to CDM is carried out each individual company commissioning work acts as client as far as the Health and Safety File is concerned. All Health and Safety Files as far as could be ascertained were filed at the headquarters of the individual companies so that there was no cross referencing and updating between files.

7.3 University

7.3.1 The University in question manages through its surveyors department and is a large complex of ancient and modern buildings located throughout the University town. The surveyors also provide services to individual colleges whose buildings are owned by the college foundations. As well as exclusive sites the University has a complex series of agreements with health trusts and voluntary organisations on hospital sites. The individual academic and administrative departments of the University act as clients for new building and upgrading work often funded by grants from a variety of bodies. The main problems arise not as one might expect in the older medieval buildings, but in the huge complex of laboratories which are frequently adapted as research grants are received. Only some of this adaptation work will come under CDM.
7.3.2 The surveyors department were already facing serious problems of keeping records about the their building before CDM regulations were introduced. A major concern for them is environmental hazards as a result of radiation of biological experimentation. The regulations have initiated a major review of the information strategy and a full time member of staff has been taken on to develop an appropriate database which it is intended will provide a constantly updated record for each space or void within the University and which will draw on the Health and Safety Files amongst sources for its information.

7.4 RNLI

7.4.1 The RNLI has some 200 lifeboat situations and other buildings, often located in remote places all round the coast. Although comparatively small buildings, many of them have complex engineering structures because of the extremes of sea and weather that they face. All building work is controlled centrally and a standard content for Health and Safety Files is now being issued as a standard requirement which is easier to achieve now that they use on Planning Supervisor for all works.

7.4.2 The Health and Safety File for each project is retained centrally with copies of key sections or documents being copied and kept locally. They too are considering the use of a CD ROM storage system.
8. SUMMARY AND LESSONS

8.1 The key issues which emerge would appear to be:

8.1.1 The particular circumstance in which Health and Safety Files need to be used and kept vary so considerably that it is very unlikely that a standardised approach is possible.

8.1.2 There are however examples of good practice which could be of value if publicised.

8.1.3 There is a clear need for clients to think very carefully about the way they intend to manage and update the file and they should be prepared to specify their requirements at an early stage.

8.1.4 Many clients might need to consider how the Health and Safety Files will integrate with other information they need to hold about the property they manage.
COMPETENCE ASSESSMENT OF DUTY HOLDERS

1. OBJECTIVE AND SCOPE

1.1 Objective

The objective of the Case Study is to establish the effectiveness of the processes used by duty holders in determining the competence of appointees.

1.2 Scope

1.2.1 The Case Study sets out to examine the process by which each duty holder determines the key competences required for a specific project. It then looks at how the assessment of prospective appointees is carried out in relation to those competences and its effectiveness in determining whether the prospective appointee really does have the competences required or what needs to be done to acquire them. It examines whether business/commercial factors are included in the competence assessment and on what basis the final decision to appoint is made.

1.2.2 The additional cost burden to the project and to prospective appointees is discussed together with the effect, if any, on and arising from the volume of documentation circulating in the industry.

2.1 The methodology adopted for conducting the Case Study was based on structured discussions with the following duty holders:

- Clients
- Planning Supervisors
- Architects
- Designers
- Principal Contractors

2.2 An outline set of questions was developed prior to the first discussion and refined subsequent to it. A copy of the questionnaire is appended as Appendix “A”.

2.3 Subsequent meetings and telephone conversations used the questionnaire as a basis for discussion.
COMPETENCE ASSESSMENT OF DUTY HOLDERS

2.4 Both face to face and telephone interviews were conducted. On commencement of and during the interviews, reference was made to the main body of research to review relevant comments from companies contacted.

2.5 The questionnaire solicited the views of each duty holder both regarding those assessments that he undertook, and those he underwent.

3. THE SAMPLE

3.1 The duty holders selected for interview were predominantly from companies that had participated in the main body of research. However, a number of new companies were contacted in addition.

3.2 In total, eighteen companies were interviewed. The companies interviewed represented a broad range of type and size of company covering each of the duty holder groups as follows:

<table>
<thead>
<tr>
<th>Duty Holder</th>
<th>Size of Company</th>
<th>No. of Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client (Expert)</td>
<td>Very Large</td>
<td>1</td>
</tr>
<tr>
<td>Client (Expert)</td>
<td>Large</td>
<td>6</td>
</tr>
<tr>
<td>Client (Non-expert)</td>
<td>Medium</td>
<td>1</td>
</tr>
<tr>
<td>Client (Non-expert)</td>
<td>Small</td>
<td>1</td>
</tr>
<tr>
<td>Planning Supervisor</td>
<td>Large</td>
<td>2</td>
</tr>
<tr>
<td>Planning Supervisor</td>
<td>Medium</td>
<td>1</td>
</tr>
<tr>
<td>Architect</td>
<td>Large</td>
<td>1</td>
</tr>
<tr>
<td>Architect</td>
<td>Medium</td>
<td>1</td>
</tr>
<tr>
<td>Architect</td>
<td>Small</td>
<td>1</td>
</tr>
<tr>
<td>Designer</td>
<td>Large</td>
<td>1</td>
</tr>
<tr>
<td>Principal Contractor</td>
<td>Large</td>
<td>1</td>
</tr>
<tr>
<td>Principal</td>
<td>Medium</td>
<td>1</td>
</tr>
</tbody>
</table>

3.4 No contractors (sub-contractors) were interviewed as this was considered outside the scope of this Case Study, but within the scope of Case Study 4.
4. DEGREE OF ASSESSMENT

4.1 The degree of competence assessment varied between duty holders, and this variance is noted below.

4.2 Degree of Assessment by the Client

4.2.1 The client generally falls into one of two categories:

4.2.2.1 The “expert” client - who is frequently involved in construction work and has a good knowledge of the construction process and its requirements.

4.2.2.2 The “non-expert” client - who is infrequently involved in construction work, has little or no knowledge of construction and who is interested primarily in the end result of construction.

4.2.2 The Expert Client

Assessment by the expert client is generally undertaken on the basis of a more formal process, though the actual processes and level of assessment differ. (See Section 5. for details)

4.2.3 The Non-Expert Client

4.2.3.1 The non-expert client performs very little in the way of formal assessment. Reliance is often placed on the expertise of the initial architect or designer to carry out any competence assessment of other construction professionals, including the Planning Supervisor. His assessment of the competence of the initial architect or designer is based usually based on recommendation or previous good track record.

4.2.3.2 Comments from a few contractors indicated that some clients were not aware of their responsibilities under CDM, even though they had appointed architects or designers. The inference of this being that the architects and designers were also not aware of their responsibilities either.
4.2.3.3 The non-expert client regards the responsibility of adhering to the necessary regulations to lie with the professionals, and believes that he has passed on his responsibility to them.

4.2.3.4 There was no indication that size of the company changed the attitude of the non-expert client - some contractors noted that large non-expert clients behaved in the same way as small non-expert clients.

4.3 Assessment by the Other Duty Holders

All duty holders other than non-expert clients carry out assessments of competence.

5. PROCESS OF ASSESSMENT

5.1 Assessment of Competences Required

5.1.1 Other than “non-expert” clients all duty holders perform a formal assessment of the competences required.

5.1.2 This assessment is based equally on either a “generic” set of competences developed from:
   a. their own professional knowledge and experience
   b. a specific review of the job
   c. both.

5.1.3 Non-expert clients relied on advice from the professionals (mostly the architects and designers, but occasionally contractors) to determine what competences were required.

5.1.4 Only one duty holder (Planning Supervisor) interviewed stated that any assessment they carried out was based specifically on the guidance given in Paragraphs 33 to 46 of the ACoP.
5.2 Method of Assessment

5.2.1 The methods by which each group of duty holders were assessed were broadly similar, but the proportions in which each method is used is markedly different for each group (refer to Section 5.3).

5.2.2 Overall, the methods of assessment identified were:
- Informal discussion (3%)
- Recommendation from others (7%)
- Previous good track record (29%)
- Internal recommendation (e.g. architect, designer or contractor recommending their own Planning Supervisor) (7%)
- Interview (20%)
- Questionnaire (34%)

5.3 Methods of Assessment for each Duty Holder

5.3.1 Planning Supervisor

Assessment of Planning Supervisors competences was based on an assessment of the company’s competence as a whole. The highest proportion of Planning Supervisors were assessed either by means of a previous good track record (which for the most part was more a reflection on their parent company - i.e. architect or design practice - than their work as Planning Supervisors) or by means of a questionnaire. The detailed breakdown methods of assessment are as follows:

- Informal discussion - 11%
- Recommendation from others - 0%
- Previous good track record - 33%
- Internal recommendation (e.g. architect, designer or contractor recommending their own Planning Supervisor) - 17%
- Interview - 11%
- Questionnaire - 28%
COMPETENCE ASSESSMENT OF DUTY HOLDERS

5.3.2 Architects and Designers

Architects and designers were equally most assessed by formal interview or on their previous good track record. Details are as shown below:

- Informal discussion - 0%
- Recommendation from others - 14%
- Previous good track record - 33%
- Internal recommendation - 0%
- Interview - 33%
- Questionnaire - 20%

5.3.3 Principal Contractor

5.3.3.1 By far the most common means of assessing the Principal Contractor was by questionnaire. Much less (by far), and more or less equally, were assessment by interview (excluding presentations regarding tenders which concentrate on all matters of contract execution of which safety was only a part) and previous track record. However, the two Principal Contractors stated that the incidence of contractors working often for the same client having to complete a questionnaire for each job is beginning to subside.

5.3.3.2 The nature of the questionnaires was stated to vary considerably, between those that were limited to around eight or ten pertinent, open questions and others being long with a large number of "Yes/No" questions.

5.3.3.3 Details of the breakdown of methods of assessment are shown below:

- Informal discussion - 0%
- Recommendation from others - 10%
- Previous good track record - 15%
- Internal recommendation - 0%
- Interview - 15%
- Questionnaire - 60%
COMPETENCE ASSESSMENT OF DUTY HOLDERS

5.4 Determination of Adequate Resources

Of those interviewed stated specifically that they carried out a formal assessment of the resources needed to carry out the safety requirements of the project and compared these to the resources being made available by the prospective appointee, to ensure they were adequate, these were:

a. All expert clients;
b. Two architects;
c. One Designer;
d. Two Planning Supervisors

The other duty holders did not state that they specifically reviewed resources for carrying out safety requirements - but did review resources for carrying out the work as a whole. Both Principal Contractors stated that they were assessed for adequate resources, but on a complete job basis.

5.5 Consideration of Business or Commercial Factors

5.5.1 In all cases where competence was assessed, this was the first part of a two stage process which enabled duty holders to assemble the bid list. The second stage was a commercial evaluation, which would include tender price, fee basis and on occasions a financial status check.

5.5.2 Ten duty holders stated commercial considerations were considered in the first part of the process. These were:

a. Two architects
b. One designer
c. Two Planning Supervisors
d. Five Clients (all “Expert”)

The commercial considerations were associated with financial stability, price or a mix of both.

5.5.3 All duty holders stated that final appointment was based on consideration of both competence and price. No appointments were made by considering competence alone.
COMPETENCE ASSESSMENT OF DUTY HOLDERS

5.6 Effectiveness of Assessment

All duty holders interviewed stated that no organisations had been appointed that did not meet the competence requirements where they had been assessed. Further, none had subsequently demonstrated that the assessed competences were not adequate.

5.7 Cost Burden of the Assessment Process

5.7.1 Only two duty holders (expert Clients) stated that the assessment process had represented a significant cost burden to them. However, both stated that this had been due an extensive assessment programme to arrive at an approved suppliers list for ongoing projects. With this assessment programme now completed, the cost burden no longer exists.

5.7.2 The two Principal Contractors interviewed stated that there had been an initial cost burden due to “overzealous” questionnaires, but that this was now no longer significant.

5.8 Increase in Documentation

None of those interviewed considered that there was an unacceptable increase in documentation related to the competence assessment process, although the Principal Contractors stated that there had been an initial “surge” of requirements in the early days of CDM.
6. SUMMARY

6.1 Non-expert clients carry out little formal competence assessment on their architects, designers, or Planning Supervisors.

6.2 Non-expert clients rely on the expertise of their construction industry professionals to advise on competence assessments.

6.3 Competence assessment of architects, designers, or Planning Supervisors is more likely to be carried out by formal interview or previous good track record.

6.4 There was little overt evidence to suggest that competence assessments took specific cognisance of the guidance notes given in the ACoPs.

6.5 Competence assessment of Principal Contractors is more likely to be carried out by a formal questionnaire.

6.6 The competence assessment process is effective.

6.7 There is no significant cost burden imposed by the competence assessment process.

6.8 Any increase in documentation as a result of the competence assessment process is not unacceptable.
COMPETENCE ASSESSMENT OF THE SUB-CONTRACTING CHAIN

1. OBJECTIVE

1.1 The objective of this case study is:

"To determine the effectiveness of the mechanisms used by contractors, commencing with the principal contractor, in establishing the competence of all contractors in the contracting chain down to the smallest contractor"

1.2 In this case study the term “principal contractor” is used to denote both the main and principal contractor and “sub-contractor” all other contractors employed either by the principal contractor or by another sub-contractor.

2. METHODOLOGY AND SURVEY SAMPLE

2.1 This study was carried out by examining the processes used by one major national principal contractor who was identified, in the main study, as apparently having a well structured and systematic approach to assessing the competence of their sub-contractors.

2.2 Contractors who were identified as frequently working as sub-contractor were interviewed to establish their perceptions of the competence assessment process. In turn the methods of competence assessment of these contractors were examined including the methods used to ensure the competence of labour only sub-contractors.

2.3 The principal contractor, the subject of this case study, is engaged on a wide variety of building projects throughout the country. These range from the construction of new offices, factories and leisure centres to the renovation of historic buildings. They have a centralised Health and Safety Department which also provides planning supervisor functions if required. They find that 60% of their sub-contractors work regularly for them; the balance being regional contractors operating in the locality of particular projects or providing very specialist services.

2.4 The Principal Contractor had well established Health and Safety Policies in place before the introduction of CDM which meant that only quite minor amendments to the processes used were introduced to comply with the regulations.
COMPETENCE ASSESSMENT OF THE SUB-CONTRACTING CHAIN

2.4 The major contribution of the principal contractor is the management of the project and the sites. All construction work is effectively carried out by sub-contractors.

2.5 This contractor does not use an approved list of sub-contractors except for asbestos removal. The competence assessment process therefore is repeated for each contract.

2.6 The principal and all sub-contractors used a formal process for assessment of their sub-contractors although this differed in the case of labour only sub-contractors as explained in section 7.

3. THE PROCESS OF ASSESSMENT
BY THE PRINCIPAL CONTRACTOR

3.1 In devising a scheme to provide the basis for a tender the Principal Contractor’s planner/estimators define what sub-contracting will be required. The initial Health and Safety plan will usually be available at this stage but the main emphasis focuses on building methods and cost. Potential sub-contractors may be identified at this stage and asked for a cost estimate.

3.2 Once a tender for a project has been accepted, management of the scheme passes into the hands of a project team led by a project surveyor. A safety officer will be a member of the project team. The project team will review the scheme and reach a final decision about how the work is to be sub-contracted. This is obviously the key stage in defining the competencies required of the sub-contractors.

3.3 A tender list for each sub-contract is drawn up by the project surveyor. The safety officer has the opportunity to comment so that the selection can take the safety performance into account those sub-contractors. Often the choice of possible sub-contractor is limited because of the specialist nature of the work.
3.4 The process of assessing the suitability and competence of sub-contractors then becomes a shared one between the project surveyor and the Health and Safety department with the issue of the potential sub-contractor’s competence to manage safety issues being mainly a matter for the Health and Safety department. The key factor in selection is almost invariably previous knowledge of the sub-contractor’s work and their general reputation within the industry. Safety considerations play a minor part in this selection.

3.5 The process follows the following pattern which is illustrated in Appendix A to this case study.

3.5.1 The tender documents for a sub-contractor will include:

- A standard pre-qualification Health and Safety questionnaire
- The contractors specific requirements for High Risk activities
- The Planning supervisor’s Health and Safety
- The Principal Contractor’s own risk assessment if it is available.

3.5.2 The Questionnaire is generic and short - 8 questions - covering:

- Ability to produce Risk Assessment / Method Statements
- Current Health and Safety Policy
- Details of Safety Adviser
- Safety training of employees
- Prosecutions and enforcement notices
- Health and Safety statistics of reported incidents and diseases
- Management Structure
- Sub-contractor design elements

3.5.3 The replies to the questionnaire enable the Health and Safety department to carry out an initial assessment of the sub-contractor’s Health and Safety competence in parallel with the surveyors assessment of suitability and price. This enables a preferred contractor to be chosen.
3.5.4 Before an order is placed, the preferred sub-contractor is interviewed and a specific section of that interview is devoted to Health and Safety performance. This follows a standard format which ensures that information is obtained from the sub-contractor and that he is given necessary information including that required under CDM Regulation 19. The interview will also include a section where the methods and risks associated with the work will be discussed.

3.5.5 The sub-contractor must submit his risk assessments and method statements to the principal contractor one week before he starts on site.

3.5.6 Before the sub-contractor is allowed to start work on site a final check is made that all the necessary risk assessments and method statements have been received and checked by the principal contractor.

4. THE EFFECTIVENESS OF THE PRINCIPAL CONTRACTOR’S ASSESSMENT PROCESS

4.1 The process is systematically structured and it is staged in such a way that the sub-contractors are not overburdened with providing too much detail at too early a stage.

4.2 This process could be simplified for most contractors if the principal contractor arranged for say an annual review of their regular sub-contractors rather than administering the pre qualification questionnaire for each contract. A way would have then to be devised to address the project specific health and safety issues.

4.3 The process allows the competence assessment requirements of the ACoPs to be met except the point noted in 4.4

4.4 There is no specific part of the process which links the assessment to the health and safety plan as suggested in paragraph 45(b) of the ACoPs. Although such a link is implied, the ability of the subcontractor to conform to the Health and Safety Plan is not tested explicitly.

4.5 This process does not include a check on the competence of the sub-contractor to assess the competence of their own sub-contractors.
COMPETENCE ASSESSMENT OF THE SUB-CONTRACTING CHAIN

4.6 The principal contractor is satisfied that the process he uses is an effective way of his assuring the competence of potential subcontractors.

4.7 The principal contractor was not able to identify separately the separate cost of assessing the competence of subcontractors in general or the cost of the health and safety assessment.

5. EXPERIENCE OF SUB-CONTRACTORS

5.1 On interview the subcontractors found it difficult to distinguish in their memory their experience of the selected Principal Contractor from other Principal Contractors. The following comments therefore report their views on their experience of a number of Principal Contractors.

5.2 The sub-contractors experience is that the selection is dominated by previous knowledge of the sub-contractor's work and overall price considerations and that issues of health and safety competence have a very small affect on the choice by the Principal Contractor. This was only different when the client was one who insisted on very high Health and Safety standards. The sub-contractor experiences did not usually reflect the systematic ordered process as noted above.

5.3 The subcontractors reported that they found the process of completing questionnaires especially repeated questionnaires from same firm irksome and an apparent waste of time. Some questionnaires they considered unreasonably long and some of the questions appeared irrelevant to them.

5.4 The questionnaires they received are generic rather than specific and the sub contractor is thus not able to demonstrate the special expertise they may have in dealing with the risk.

5.5 Sub-contractors do not always get risk assessments or Health and Safety plan from the principal contractor when tendering. One subcontractor stated that he rarely received these.

5.6 In some instances questionnaires are meticulously followed up even if some of the questions appear irrelevant. In other cases, even if they are sent back blank this does not appear to affect the ability to secure work.
COMPETENCE ASSESSMENT OF THE SUB-CONTRACTING CHAIN

5.7 Sub-contractors would prefer the principal contractor to use an approved list of contractors. This they believe saves unnecessary paperwork.

5.8 Among sub-contractors there appears to be an acceptance that an assessment of their safety management systems and performance is necessary. However there is a general feeling that the whole assessment process is too mechanistic and does not focus on the substantive health and safety issues. In their experience this could approach the stage that there was a separate paperwork system, serving only to show nominal compliance with the regulations, running in parallel with but not linked to actual work.

6. THE ASSESSMENT PROCESS FOR SUB-CONTRACTORS ASSESSING THEIR OWN SUB-CONTRACTORS

6.1 Competence assessments of their sub-contractors, by those interviewed, follow a similar pattern to those used from principal contractor to sub-contractor. The main role in identifying competencies required being that of the buyer, engineer, or surveyor and in parallel with a safety competence check.

6.2 The subcontractors interviewed preferred to use their own list of preferred contractors which was reviewed annually.

6.3 The pre-qualification assessment for inclusion in the list or on an ad hoc basis was almost invariably to be done by the use of questionnaire.

6.4 We found that the selection of the successful contractor from amongst those who were pre-qualified was made on the basis of the appointing sub-contractor's knowledge of their ability to undertake the work and on price. Sometimes special considerations applied. For example some planning permissions include requirement to use at least 50% local labour which is often less formally qualified or experienced than those more normally employed. The selection was not influenced by an assessment of the competence of the potential contractor to meet the specific needs of the project in question as set out in the Health and Safety Plan. These issues were dealt with subsequently in the development of the Health and Safety Plan.
6.5 As in the instance demonstrated above the Principal Contractor usually requires his subcontractors to submit to him method statements and risk assessments before commencing work. The Principal Contractor will then use these submissions in his development of the Health and Safety plan. In a similar way subcontractors will sometimes require their sub contractors to let them have this information for incorporation in their submissions. For the less specialised work the sub-contractor is often able to describe his own sub-contractors methods in his own submission without referring directly to them. In these cases he will then take on the responsibility for ensuring that the work on site is done by his sub-contractors in the way he has set out. In this way the Health and Safety plan can be built back up the chain from the submissions of all the contractors in turn. One potential problem in this process is that it may not take into account the effect on each sub-contractor of other sub-contractors working in close proximity to (sometimes above or below) them. Principal contractors need to ensure that these considerations are included as they put together the different elements of the plan.

6.6 Because of this co-operative way of developing the Health and Safety Plan, the sub-contractors interviewed were not following the advice in ACoPs (para 45(b) refers) that the plan should be “a key document in making the [competence] checks”. Their pragmatic approach appears to be sensible but as its adoption would require a change in ACOPS a more widely based study of this particular aspect may be required.

6.7 Some sub-contractors include in their own assessment questions on the competence of their sub-contractors to assess the competence of their sub-contractors in turn.

6.8 There was some evidence in the interviews of differences of priorities between health and safety officers and operational managers in ensuring the proper completion of paperwork. One Health and Safety manager was concerned that he was not always able to ensure that work did not start until all the questionnaires, risk assessments and method statements had been received and checked.
6.9 One sub-contractor reported how he operated his own approved list of sub-contractors which was required by his ISO 9002 quality assurance system.

6.10 Sub-contractors were ambivalent about the benefits of the processes adopted to meet the requirements of the regulations. Not surprisingly they felt that their own processes were reasonably effective but those of others with whom they contracted often over bureaucratic and failed to focus on key safety issues. They were not able to identify separately the costs of Health and Safety assessments.

6.11 All sub-contractors find it necessary on occasion to help smaller, normally specialist sub-contractors demonstrate their competence to deal with Health and Safety issues. This help can take the form of helping them draft a Health and Safety policy or method statement and risk assessment. In the main study we also found that Principal Contractors and some clients had adopted similar strategies.

7. LABOUR ONLY SUB-CONTRACTORS

7.1 It was found that labour only sub-contractors fall into quite a different category from risk bearing sub-contractors. Such staff are acquired through an agency and cannot practically be assessed in the same way as more established enterprises. The strategy adopted by most sub-contractors is to treat these contractors as if they were employees and make them comply with their normal induction, training and disciplinary procedures.

7.2 This is not an entirely satisfactory procedure because such staff are not subject to the same interview and reference taking selection procedures as normally employed staff.

7.3 One sub-contractor explained that he was developing the use of the “Construction School Certification Scheme” to help him, in the future, to ensure competence of individual craftsmen and labourers employed in this way.

7.4 Another sub-contractor adopts a practice of using a simplified health and safety questionnaire for labour only sub-contractors. This is followed up by a simple written test which must be passed before the work can start.

7.5 There is a belief, among the subcontractors interviewed, that changes in tax laws scheduled for introduction in April 1997 will tend to bring more of these workers onto the payroll.
COMPETENCE ASSESSMENT OF THE SUB-CONTRACTING CHAIN

8. FEEDBACK FROM SUBCONTRACTORS FOR THE HEALTH AND SAFETY FILE

8.1 The flow of information back up the sub-contracting chain for inclusion in the Health and Safety File, according to the principal contractor interviewed has not worked smoothly. The main reason reported for this failure is the failure of Planning Supervisors to be clear about their requirements.

8.2 The principal contractor in this study has instituted a system that places clear responsibility on sub-contractors to supply the necessary as fitted drawings, method statement, operations manuals, and risks identification required for the file. It is too early to assess how well these new requirement are being met.

9. SUMMARY POINTS

9.1 Competence assessment was frequently referred by contractors, in the main survey, as a source of considerable initiation. This was due mainly to the use, as they saw it, of over long, ill focused questionnaires being administered mechanistically at pre-tender stage. This case study demonstrates that they are ways of simplifying this process. These are:

a. Using short focused questionnaires for preliminary assessment followed by interviews for successful or short listed tenders. (5.1 refers)

b. Increased use of schemes of approved lists of contractors. (5.1 and 6.7 refers)

9.2 The use of approved lists of contractors, which we found are used by a substantial number of clients and contractors, have considerable advantages because as well as reducing repetitious paperwork they can allow for systems of continuous assessment, feedback and review of contractors performance.

9.3 The key factors at all levels in selecting sub-contractors was familiarity with their work and price with health and safety considerations playing only a minor part. (5.2 and 6.4 refer).

9.4 The thoroughness with which the competence assessment of contractors right down the sub-contracting chain is undertaken varies considerably from contractor to contractor and can be influenced substantially by the policy that the client takes to Health and Safety issues. (5.2 and 5.6 refer)
The assessment processes and questionnaires examined in the course of this study were focused primarily on generic health and safety knowledge and competencies rather than on the specific risks for the particular project as identified in the Health and Safety plan. (4.3 and 6.4 refer).

There is evidence at all levels that contractors have not found it practical to use the Health and Safety file as a key document in making competence checks. (4.3 and 6.4 refer).

The construction Health and Safety file is often developed following a bottom up approach. This carries a danger that it may not adequately take into account the effect one sub-contractors operations may have on another. (6.5 and 6.6 refer).

Labour only sub-contracting raises a wide range of issues outside the scope of this case study.
Appendix A

Appointing a Sub-Contractor

- Tender invite and Health and Safety Questionnaire
- Structured interview with selected sub-contractor
- Patient care submits Ras and MSs
- Pre S.O.S. check of risk assessments and method statements
- Induction training
- Sub-Contractor S.O.S.

Developing the H & S Plan

- Planning Supervisor's Health and Safety plan
- Principal Contractors risk assessment
- Add Principal contractors generic H&S Plan contents e.g. (COSSH welfare etc.)
- Site Health and Safety plan

= information links
1. **OBJECTIVE**

1.1 The objective of this Study is to identify the practices used by designers to determine and assess risks, and how they are integrated into the design process.

1.2 The Study sets out to establish actual practices used by designers rather than best practice.

1.3 The approach taken by designers in identifying and determining potential risk at all stages of the design process from the conceptual stage through to completion of the structure has been explored.

1.4 How risk is dealt with once identified has been examined particularly with regard to whether it is just catalogued or a serious attempt made at either eliminating or reducing the magnitude of the risk through a design change. Specific processes that are followed to accomplish this together with relevant criteria that are invoked have been investigated.

1.5 The case study identifies how knowledge of the construction process (or the lack of it) helps or inhibits designers in dealing with risk reduction.

2. **METHODOLOGY**

2.1 The case study was carried out by way of face to face interviews with key individuals of the following enterprises:

   A large design practice with an international client base
   A medium size design practice with a small European client base
   Two small design practices one of which concentrates on specialist commissions
   The Royal Institute of British Architects

2.2 Telephone discussions were also undertaken with the design divisions of two firms of consulting engineers.

2.3 Comparisons were made of the design processes adopted by each enterprise and the mechanisms each had adopted for the identification and elimination of risk and hazard.
DESIGNING WITH SAFETY IN MIND

2.4 No attempt has been made to establish best practice or to benchmark the effectiveness of those practices identified since this is beyond the scope of this study.

2.5 The process by which those risks and hazards identified but not eliminated are embedded into the project health and safety plan are discussed.

3. THE DESIGN PROCESS

3.1 The difference between the design process followed by design engineers and architects is quite marked, primarily because of the nature of the type and form of the design.

3.2 To draw a very simple distinction between the two types of design process, most design engineers are very much focused on the physical strength of form and structure whereas most architects are focused on form, fit and function.

3.3 Traditionally the education and training of design engineers and architects has followed different paths and consequently focused on different facets of what might be considered as safe design.

3.4 Engineering design is based on a structured scientific / mathematic approach to ensure the fundamental structural integrity not only of the finished structure but also of that structure during construction. This requires design engineers to have an extensive knowledge of the fabrication and construction processes and a different view and knowledge of the properties of materials than that of architects.

3.5 These differences mean that design engineers, by nature of the design process they follow, are inherently better equipped to identify and deal with the risks and hazards of their design.

3.6 The key attributes of the professional architect are creativity and innovation in design both of which are individual traits. The structure of the architect profession is therefore based very much on individualism rather than collectives which is the case with design engineers. These differences in the homogeneity of the two professions translate directly into the design process that each follow with a compartmentalised approach by architects and an integrated approach by design engineers.
3.7 These fundamental differences between design engineers and architects in their approach to design and the type of design significantly affect the process of risk and hazard identification and elimination.

4. THE PROCESS OF RISK AND HAZARD IDENTIFICATION

4.1 Design Engineers

4.1.1 It was evident that design engineers have a well structured approach to evaluating risk and hazard during the design of a structure. Their whole design methodology is theoretically based and used by the profession as a whole. Thus the knowledge base is widespread throughout the profession and the same ‘language’ is used in communication.

4.1.2 The fact that the design methodology is scientifically and mathematically based has meant that the design process lends itself to the extensive use of computer technology. In many cases a complete structure can now be designed once certain design criteria have been established and inputted to the Computer Aided Design (CAD) equipment. The design rules on which the CAD programme is based while alerting the designer to design conflict warnings inherently include risk / hazard identification in the design. Some advanced CAD software will automatically correct the design to eliminate conflicts, risks and hazards.

4.1.3 The use of CAD also means that everything is documented and logged automatically. The danger is however, that there is the possibility of over reliance on CAD. To prevent this most design practices have a formal design review process at regular time intervals and critical stages of the design to ensure that all issues are identified and dealt with. The further advantage of CAD is that to further eliminate risk and hazard partial and complete re-design is more readily accomplished if necessary. It is also possible to create “what if” scenarios to test the integrity of the design or explore alternative approaches.

4.1.4 Of importance is that the risk assessment criteria and process together with the design methodology are available to the planning supervisor for validation if necessary. But, of even greater importance is the availability of documented risk and hazard for inclusion in the health and safety plan.
4.1.5 While the foregoing demonstrates a clear and sound approach to the design of a structure there is evidence to suggest that the process does not always result in the same level of attention being paid to the buildability and maintenance aspects of the design. This is where the design review meetings are felt to have an important role to play together with the greater knowledge of the construction process and materials.

4.2 Architects

4.2.1 The compartmentalised approach to design that is evident with architects inhibits the process for the identification of risk and hazard. The design process that is prevalent in large, medium and small design practices is for the professional architect to create the overall design concept and outline, and then for the detailed design to be undertaken by either less experienced architects and / or architectural technicians. This invariably means that the significant risks and hazards of the whole design are not identified until it is complete. It also means that risks and hazards of individual parts of the design are potentially not identified due to lack of experience of health and safety in relation to construction and maintenance.

4.2.3 It is evident that regular design reviews take place but because of the compartmentalised approach not all risk and hazard issues are captured at this time. The corollary of this is the design team arrives at a completed design and is then faced with risks and hazards which have only become evident at that time with very little time, due to commercial pressures, to do very much more than catalogue them.

4.2.4 One of the major issues affecting the implementation of a more structured approach to the identification and elimination of risk and hazard is the professional arrogance of many architects. This is reflected in statements of “we do it anyway and have always done it, why is it necessary to document it in that way?”.

4.2.5 There is evidence mainly with the smaller and medium size design practices of an informal but apparently effective approach to documenting and dealing with risk and hazard through the use of ‘job book’. The practice that has been adopted is one of documenting every risk and hazard as they are identified during the design process even if they have been eliminated or reduced. Regular design reviews are the time when further efforts are made to eliminate outstanding risks and hazards.
4.2.6 The outcome of the 'job book' approach at the end of the design cycle is a fully documented account of all identified risks and hazards, what has been done to eliminate or reduce them and which are outstanding. In short a complete record available to the planning supervisor and others.

4.2.7 In larger design practices the approach is becoming more structured driven primarily by the desire to provide planning supervisor services and thereby an increased knowledge of risk assessment and the requirements of the CDM Regulations. While there is evidence of well defined structured processes the biggest difficulty reported is getting architects to follow them and document matters accordingly.

4.2.8 The approach taken by one large design practice has been to produce a 'Designers Handbook' for its architects as a guide to dealing with the requirements of the CDM Regulations. Modelled on publications from RIBA and the Construction Industry Advisory Committee it takes the designer through the various stages of the design process in the context of the Regulations in a very structured manner under the following headings:

- CDM Overview
- Responsibilities Of Designers
- Designing For Health And Safety
- Design Risk Assessment
- Managing CDM In The Design Process
- Recording Of Information
- Checklists And Standard Forms

It was stated that this type of document is not uncommon in the larger practices and in fact within the various fora are shared documents.

4.2.9 It was stated during interview that a further problem is surfacing in respect of the approach to documentation as a result of advice given by legal advisors not to annotate risks and hazards to drawings and to consider very carefully where and how such matters are documented.
4.2.10 Many architects openly admit they lack knowledge of construction materials and processes which inhibits their ability to competently identify potential risks and hazards and subsequently deal with them. Some forward thinking practices based on an initiative of the Royal Institute of British Architects are inviting construction professionals to share their knowledge and experiences in a bid to acquire a greater understanding of how their designs are translated into the finished structure. Others are evaluating the properties of new materials and construction techniques.

5. SUMMARY POINTS

5.1 Although there is some evidence of over reliance on computer aided design by design engineers they are generally better equipped than architects to deal with the identification and elimination of risks and hazards as is discussed in Section 4.1.

5.2 While it has been identified in the main body of research that there is a general need across the whole construction industry for better guidance. It is evident from this case study that architects in particular would benefit from better guidance particularly for risk identification and analysis.

5.3 There is evidence of good practice being used by architects as discussed in Section 4.2. The widespread adoption and further development of these practices is however, being hampered by attitudes and inappropriate advice from supporting professions.
1. OBJECTIVE AND SCOPE

1.1 OBJECTIVE

The objective of this Case Study is to determine the costs and benefits in applying the Regulations to the Offshore Sector.

1.2 Scope

1.2.1 Through discussion with the key Offshore Industry bodies and institutions, the Offshore Industry’s view on the applicability of the CDM Regulations to their industry sector has been solicited.

1.2.2 Any costs and benefits that would arise from applying the Regulations to the on-shore dismantling of installations are discussed.

1.2.3 Through discussion with contractors responsible for the design and construction of the Chevron Conoco Britannia Field platform, the client, and others, a measure of the difference in the actual or projected costs of applying and not applying the Regulations to on-shore assembly and offshore fabrication of structures has been determined.

1.2.4 Any synergy or overlap between the Regulations and other sector initiatives such as CRINE (Cost Reduction in the New Era) has been established.

2. METHODOLOGY

2.1 The methodology adopted for conducting the Case Study was by means of structured discussions with the specific companies in the Offshore Sector.

2.2 An outline set of points for discussion was developed prior to the first meeting and refined subsequent to it.

2.3 Subsequent meetings and telephone conversations used these as the basis for discussion. Both face to face and telephone interviews were conducted.
APPLICATION OF THE CDM REGULATIONS
TO THE OFFSHORE SECTOR

3. THE SAMPLE

3.1 The sample of companies used to conduct the interviews comprises three main
groups: Industry Bodies, Clients and Contractors. Client in this instance is taken
to mean the ultimate user or “Operator” of the oil installation. In reality this is
often one Oil Company or Contractor operating the installation on behalf of a
Partnership.

3.2 Of those interviewed there were:

Five Industry Bodies
Four Clients
Eight Contractors

3.3 Extensive discussions were held with the Britannia Project Team. Their views
and experience regarding the application of the Regulations to on-shore assembly
of offshore structures is reflected in the views of the others interviewed, and so no
specific reference is made to their comments.

4. APPLICATION OF CDM

4.1 Regulations

The ACoP does not clearly set out how the Regulations apply to construction
work carried out within the Offshore Sector. Those interviewed believe the
Regulations apply as follows:

- Offshore construction and assembly: CDM does not apply
- Offshore de-commissioning: CDM does not apply
- Inshore construction and assembly: CDM does apply
- Onshore fabrications for Offshore installation: CDM does not apply
- Onshore construction and assembly (including process plant and pipelines): CDM does apply
- Onshore dismantling of Offshore installations: CDM does apply

With the exception of Offshore construction, assembly and de-commissioning -
where CDM specifically does not apply and Inshore construction and assembly -
where there is currently no activity, each of these are discussed here.
APPLICATION OF THE CDM REGULATIONS TO THE OFFSHORE SECTOR

4.2 Onshore Fabrication for Offshore Installation

4.2.1 Although CDM does not apply, the clients and construction contractors interviewed considered that by the way in which onshore construction and fabrication is managed, the “spirit” of the Regulations is complied with. Although no specific evidence was provided to support the view, they further felt that there could be a marginal cost impact (increase) and no benefit, were CDM to be applied, but that its application would be present no real difficulties. None of those interviewed commented on which aspects would attract these costs, although “increased bureaucracy” was alluded to. No-one interviewed was able to quantify the costs. The only real concern expressed was that any minor overlaps either in the Regulations or their enforcement should be addressed and clarified.

The foundation upon which these comments are based is given below.

4.2.2 As a result of The Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996 (DCR) and The Offshore Installations (Safety Case) Regulations 1992 (SCR) duty holders (and in particular the Oil Companies as clients) have been required to pay considerable attention to management systems. The systems have been focused towards operation of the installations after construction (and subsequent de-commissioning and dismantling on abandonment), but in order to ensure continuity, similar systems have been adopted for work (including construction and fabrication) prior to operation.

4.2.3 As a result of this all contractors involved in construction and fabrication have been required by the clients to demonstrate that their systems match those being adopted by the clients.

4.2.4 One important aspect of the development of the robust management systems is the need to ensure that health and safety is considered at early stage - both in terms of final operation, and in terms of the methods of construction and fabrication. Instances were quoted where on-site construction safety was measured by the contractors, was reviewed jointly by the contractor and the client, found to be unacceptable and dealt with by additional safety training - paid for by the client. In the particular instances cited the additional training had not long been undertaken, and so its effectiveness was still being reviewed.
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4.2.5 Clients have a good detailed understanding of the construction process, and are willing to reward adherence to good safety practice by the payment of bonuses based on achievement of specific safety targets.

4.2.6 In contrast to the previous confrontational contractual relationship, Partnering has facilitated the bringing together of the client and contractor with the common purpose of reducing construction costs, of which costs arising from poor safety practices were part. There has, therefore, been a joint advantage in rigorously pursuing high safety standards during the construction phase, which has not been driven by the requirement to adhere to CDM.

4.2.7 Whilst it was accepted that CDM did not apply to the fabrication work, the contractors were, nonetheless very familiar with CDM, since any civil engineering work that was carried out at the fabrication yard (e.g. modifications to buildings, jetties etc.) was carried out in accordance with CDM. It was stated that the same basic company procedures were adopted for these projects, and that no difficulties had been encountered.

4.2.8 A comparison of how the fabrication process used compares with the requirements of CDM is given below.

4.2.9 Appointment of Planning Supervisor

The contractors' view on the Planning Supervisor's role was that it is a 'function', and not the role of an individual. The function of the Planning Supervisor was felt to be fulfilled by the project team as a whole, ultimately coordinated by the Project Manager.
4.2.10 Designing for Safe Construction, Operation and Abandonment

Designing for safe operation is mandatory under SCR, and Schedule 5 of DCR requires designers to consider the safety of those involved in abandonment. The SCR safety case, based on the designs, is reviewed by the HSE prior to acceptance. Designing for safe construction was considered by those interviewed to be a natural follow on from this. Instances were cited where the construction contractor had an input to the pre-construction design to enhance safety during construction. Where the contractor was a partner in the project, he was always involved at an early stage in the design process, and instances were highlighted where the contractor was able to identify significant areas of construction risk during the design phase, as a result of which significant changes in design were made in order to eliminate them. The one specific example quoted in detail was the building of modules at ground level before integrating to avoid working at heights.

4.2.11 Health and Safety Plan

4.2.11.1 Although often not produced as a stand alone document, the project construction plan will have a safety plan as an inherent part of it. Risks are identified and either designed out, or methodologies developed and adopted to minimise these risks.

4.2.11.2 All construction contractors have a well developed corporate health and safety policy, under which all work is carried out, and upon which the project specific plan is based - incorporating any special job specific requirements.

4.2.12 Assessment of Competence

The methods of assessment of competence were not discussed in any depth, thus it is not possible to make any realistic comparisons with their practice and requirements of CDM. However, in the main the clients place a considerable level of confidence in the fact that all of their designers and contractors will be certified to ISO9000. ISO9000 does not address competence evaluation in exactly the same way as CDM, but does place a duty on the holder to have suitably qualified and trained personnel to carry out the work.
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4.2.13 Principal Contractor

All on-shore fabrication is carried out at the construction contractor's yard. Whilst he may employ other contractors on site, the yard remains under his control, and he naturally assumes the management role, co-ordinating these - and effectively acting as Principal Contractor.

4.2.14 Health and Safety File

Detailed Operating Manuals are prepared for the installations as a matter of course. These include all as-built drawings, design calculations, operating instructions etc. In addition hazard sheets are produced to identify all hazards considered likely to be encountered during operation or that may have significance during any potential modifications. No details of the hazard sheets were given, but those interviewed were of the opinion that these, along with the Operating Manuals, would provide all the details normally incorporated into the CDM Health and Safety File.

4.3 Onshore Fabrication Construction and Assembly

4.3.1 Onshore Process Plant

Review of the application of CDM to onshore process plant was not part of the Case Study brief, so a detailed assessment was not carried out, but a number of the contractors involved in onshore fabrication for offshore installations also carry out work for clients involved in onshore process plant. Their comments centred around minor difficulties (mainly administrative and workers not being sure when CDM did or did not apply) that were encountered in carrying out broadly similar work to where CDM applied to one set of work and not to the other. They had no real difficulty in complying with CDM as their systems and procedures prior to the introduction of the CDM Regulations fulfilled the major requirements of them, but the criticisms were focused on the small amount of additional administration that CDM imposed on them.
4.3.2 Pipelines

4.3.2.1 The Britannia Project and one contractor contacted had recently constructed pipelines, and because it was required both had applied CDM to the onshore part. (Their view was that it was not required for the offshore part). No significant difficulties were encountered by these contractors in applying CDM.

4.3.2.2 It was felt that the production of the pre-tender Health and Safety Plan whilst being somewhat of a small additional cost burden was nonetheless valuable in forcing the identification of potential hazards up front and ensuring the contractors considered the specific methods of tackling these prior to starting the work. This additional burden was felt to be offset by the benefits.

4.3.2.3 There was not thought to have been any significant cost effects (either positive or negative) because most of the CDM process would have been gone through anyway.

4.4 Onshore Dismantling of Offshore Installations

4.4.1 To date, there has been only very little de-commissioning of installations and dismantling onshore. Of that work, around 80% of the total work (and almost 100% that has come to the UK) from the UKCS over the last five years has gone to one contractor - Able UK Ltd. Identifying the future potential for dismantling of Offshore installations, Able has invested in providing a facility that they believe will be capable of handling all the dismantling work from Offshore sector for the next thirty years.
4.4.2 This contractor carries out a significant amount of general demolition work all of which is in accordance with CDM. The introduction of CDM did not have any significant effects on the company, since most of the requirements of CDM were already addressed through the existing procedures. This was stated to be due more to the fact that they were a “best-practice” contractor rather than the fact that CDM offers no benefits. It was stated that the only benefit to them brought about by CDM was that of focusing attention on safety at an early stage - especially the requirement for the client to provide sufficient information at the pre-tender stage.

4.4.3 The company has no difficulty in carrying out dismantling of Offshore installations to CDM. It was stated that because of the considerable amount of detailed information available on Offshore installations, the work of dismantling is considerably easier than that of onshore rigs.

4.4.4 The view of the industry generally is that CDM will apply to all onshore dismantling. It does not feel that there are any significant effects as a result of this.

4.4.5 It was noted that the Offshore industry needs to be aware of the clients responsibility to furnish all information relevant to safe dismantling, in order to facilitate the pre-tender health and safety plan.

5. CRINE

5.1 The fall in oil prices during the late eighties gave rise to initiatives to cut costs - the most notable initiative is CRINE (Cost Reduction in the New Era). CRINE for the most part has concentrated on reviewing equipment in an effort to reduce the number of “specials” and to increase the amount of standard equipment used. In parallel with CRINE, but also with the view of reducing costs by eliminating non value adding processes, the Industry has moved towards “Partnering” with each of the partners sharing in both the costs of construction and operation, and the revenue generated from oil produced.
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5.2 None of those interviewed felt that there was any synergy or overlap between CDM and CRINE.

5.3 Some felt that CRINE produced some safety benefits in addition to its cost reduction benefits. These benefits would be realised because with standardised equipment operatives would have a higher degree of familiarity with the equipment which would be less likely to be subject to individual clients special requirements.

6. SUMMARY

The views of those interviewed can be summarised:

6.1 The construction and fabrication contractors carrying out onshore fabrications for Offshore installations believe that they currently operate to a regime that meets or exceeds the requirements of CDM.

6.2 The industry believes there would be no difficulty in applying CDM to onshore fabrication for Offshore installations but that there would be a marginal cost increase with no benefits.

6.3 Where CDM has been applied to the onshore section of offshore pipeline projects, no difficulties have been encountered in applying it; there have been only minor cost implications and there have been only marginal benefits.

6.4 The industry assumes that CDM will apply to onshore dismantling, and feels that this will cause no difficulty, will have no significant cost implications, but will have no significant benefits.

6.5 There is no synergy or overlap between CDM and CRINE.
1. **Section Introduction**
   The penultimate question of the survey was aimed at establishing whether there was considered to be any conflict or overlap between the CDM Regulations and the Building Control Regulations.

2. **The Findings**

2.1 There was a high response to both aspects of the question and these are depicted in Chart 91.

2.2 It can be seen from Chart 91, that while there is a relatively high percentage of respondents who did not know if there was a conflict there is a majority of respondents who clearly indicated that they do not think there is.

**Chart 91**

**Relationship Between CDM & Building Regulations**

*Question 25 - Percent Of Total Responses*

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<tr>
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<td>56.6%</td>
<td>43.5%</td>
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2.3 There were 11 respondents who indicated that they felt there is a conflict. These comprised 7 contractors, 3 of which are solely demolition contractors, 2 clients, 1 design engineer and 1 planning supervisor. There does not appear to be a significant common theme in the comments put forward by these respondents to support their view. It was argued by some that the conflict arises from duplication and the difference in the level of prescription between the Regulations.
2.4 There was also the comment from some that the conflict is generally on safety matters and arises from an overlap in procedures.

2.5 It can further be seen from Chart 91, that there is a greater number of respondents who consider there is overlap, as opposed to conflict, between the Regulations. There was a total of 29 respondents who consider there is an overlap. These comprised 17 contractors, of which 8 are demolition contractors, 4 clients, 4 architects, 3 design engineers and 1 planning supervisor. As with the subject of conflict between the Regulations, there is no significant common theme in the additional comments given by the respondents to support their view.

2.6 There were three comments that specifically refer to an overlap in respect of design safety and a number of other comments that can only really be interpreted as design related issues. Some comments acknowledge that although there are overlaps they do not present a problem.

3. Summary

3.1 The diversity of comment and the relatively small number of respondents make it difficult to draw any firm conclusion on either subject of conflict or overlap between the two sets of Regulations. It would seem however, that there is not a major issue.
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