



**The Construction (Design and Management) Regulations  
(Northern Ireland) 2007 – S.R. 2007 No. 291**

**Regulatory Impact Assessment**

A Regulatory Impact Assessment (RIA) is a tool, which informs policy decisions. All NI Government Departments must comply with the regulatory impact assessment process when considering any new, or amendments to, existing policy proposals. Where regulations or alternative measures are introduced an RIA should be used to make informed decisions. The RIA is an assessment of the impact of policy options in terms of the costs, benefits and risks of the proposal. New regulations should only be introduced when other alternatives have first been considered and rejected and where the benefits justify the costs.

The RIA process is not specific to the UK Civil Service or the NI Civil Service – many countries use a similar analysis to assess their proposed regulations and large organisations appraise their investment decisions in similar ways too.

Attached please find the final RIA in respect of the Construction (Design and Management) Regulations (Northern Ireland) 2007.

Contact: Michael Topping  
HSENI Legislation Unit  
83 Ladas Drive  
Belfast, BT6 9FR

Email: [michael.topping@detini.gov.uk](mailto:michael.topping@detini.gov.uk)

**THE CONSTRUCTION (DESIGN AND MANAGEMENT)  
REGULATIONS (NORTHERN IRELAND) 2007**

**DECLARATION ON COSTS AND BENEFITS**

1. I declare that:
  - (a) the purpose of the Construction (Design and Management) Regulations (Northern Ireland) 2007 (“the Northern Ireland Regulations”) is to introduce, for Northern Ireland, similar provisions to those contained in the Great Britain Construction (Design and Management) Regulations 2007 (S.I. 2007/320) (“the Great Britain Regulations”); and
  - (b) I am satisfied that the costs and benefits associated with the Great Britain Regulations may be applied, with modifications to the Northern Ireland Regulations.
2. An estimate of the costs and benefits associated with the Great Britain Regulations, together with the effect on the Northern Ireland costs and benefits is appended to this Note.

M. Bohill  
Department of Enterprise, Trade and Investment

31 May 2007

# **PART I**

## **GREAT BRITAIN REGULATORY IMPACT ASSESSMENT (FINAL)**

(Prepared by the Health and Safety Executive)

### **Construction (Design and Management) Regulations 2007 (S.I. 2007/320)**

#### **Regulatory Impact Assessment (Full)**

## **1. Purpose and Intended Effect**

### **1.1. Issue**

1. The Construction (Design and Management) Regulations 1994 (CDM 94) address the health and safety aspects of the way construction work is planned, organised and managed. CDM 94 implements requirements of Council Directive 92/57/EEC (the Temporary or Mobile Construction Sites (TMCS) Directive). Following implementation in 1995, concerns were raised that CDM 94's complexity, coupled with the bureaucratic approach adopted by many duty holders, obscured the underlying objectives. These views were supported by an industry-wide consultation in September 2002 and have resulted in the decision to revise the Regulations.
2. The Construction (Health, Safety and Welfare) Regulations 1996 (CHSW) also implement requirements of the TMCS Directive, namely, those relating to specific health and safety precautions and welfare provision on sites. CHSW was amended by the Work at Height Regulations 2005, and the opportunity has been taken during the revision of CDM 94 to consolidate it and CHSW into a single new set of Regulations – the Construction (Design and Management) Regulations 2007 (CDM 2007). The incorporation of the CHSW requirements into CDM 2007 has been done without essential change to them, and so it has been assumed that no additional costs or benefits arise. Consequently this assessment confines itself to the changes made to CDM 94.

### **1.2. Objectives**

3. CDM 2007, together with the supporting Approved Code of Practice (ACoP), have been developed in line with Better Regulation principles and aim to reduce construction accidents and ill health by:
  - being flexible and accommodating the wide range of contractual arrangements to be found in the construction industry;

- emphasising the need to plan and manage work rather than the bureaucracy associated with it;
  - emphasising the communication and co-ordination advantages of duty holders working in integrated teams; and
  - simplifying the way duty holders assess competence.
4. In seeking to achieve the above objectives, account has been taken throughout development of the proposals of the differing needs and experience levels of all those involved in the construction industry. The regulatory package as a whole has been designed to reduce the overall burden of bureaucracy. The intention is that, ultimately, compliance will not only increase (because people find it easier to understand what they (and others) need to do) – but also that this will be achieved with more focus and less wasted effort – resulting in business, as well as health and safety, benefits.
5. The main changes which have been incorporated into the revised Regulations and ACoP are:
- an enhanced duty on clients to better reflect the influence which client's have on health and safety standards on sites.
  - the removal of the facility for the client to transfer their criminal liabilities under CDM 94 to a 'client's agent';
  - a new duty holder (the co-ordinator) to replace the existing planning supervisor. Their key new role will be to assist the client in meeting their duties under the Regulations. co-ordinators also retain the existing main duties of Planning Supervisors carried over from the CDM 94 Regulations, and
  - much improved guidance for those who must assess competence of persons/organisations before appointing them.
6. The enhanced client duties are the key policy innovation of the revised Regulations. They make existing duties in the Health and Safety at Work etc. Act 1974 (HSWA) and the Management of Health and Safety at Work Regulations 1999 (MHSWR) more explicit, and place a duty on the client to take reasonable steps to ensure that there are, and continue to be, suitable management arrangements to ensure health, safety and welfare on site, and that the design of any structure intended for use as a workplace complies with the Workplace (Health, Safety and Welfare) Regulations.
7. Clients are not required to manage the work themselves, but they are required to make sure that others have arrangements in place that will control risks associated with the construction work. We believe this motivates them to use their substantial leverage with the other project participants to ensure that these things are done properly. It also addresses a need, identified by the industry itself, to empower the co-ordinator – responding to criticism that the previous role (the Planning Supervisor) had not worked as well as we would wish. (See paragraph 10 below).

The costs and benefits of these changes are considered in the body of this Regulatory Impact Assessment (see section 6 for benefits and section 7 for costs).

8. The existing CDM provision for appointment of a client's agent has been removed from the revised Regulations. The primary purpose of this provision was to allow clients to contract with another party (the 'client's agent') to deliver the client's duties on their behalf, and at the same time, it allowed the client to transfer their legal liabilities under the Regulations to the client's agent. Under the new Regulations, clients will still be able to take on the services of a third party to deliver their duties under the Regulations, but they will not be able to transfer their criminal liabilities. This change was made for two main reasons:
  - The provision caused confusion. Even though it allowed the transfer of client's legal liabilities under the CDM 94 Regulations, it did not transfer other duties placed on clients by other health and safety legislation. In particular, it did not transfer duties held by the client under Sections 3 and 4 of the Health and Safety at Work etc. Act 1974, or under the Management of Health and Safety at Work Regulations 1999. Most clients thought that if they appointed a client's agent, this absolved them of all of their criminal liabilities under health and safety legislation. Taking out this provision removes this confusion.
  - It allowed some clients to 'turn their backs' on the project with impunity, leaving the other dutyholders to deal with the consequences which could include a lack of sufficient resource, unrealistic timescales or a lack of crucial health and safety information.
9. Since clients will still be able to retain the services of a third party to deliver the client's duties, it is not expected that this will change current practice and therefore no cost has been attributed to the loss of the client's agent provision.
10. The proposals eliminate the current Planning Supervisor (PS) role (which has not worked as well as we would like) and introduce "the co-ordinator". The main role of the co-ordinator is to advise and assist the client to comply with their duties under the regulations. In particular, they are required to:
  - assist the client with the appointment of competent contractors and designers;
  - advise on the adequacy of other duty holders' arrangements for controlling risk arising from the project;
  - co-ordinate design work, planning and other preparation for construction;
  - liaise with the Principal Contractor about design changes during construction;
  - notify HSE about the project;
  - produce or update the health and safety file.
11. Under the CDM 94 Regulations, the Planning Supervisor role was criticised because the PS had little power to insist that deficiencies in arrangements for health and safety were rectified. As mentioned above, the new Regulations place stronger duties on the client to make sure that the arrangements made by other members of the project team are adequate. If the co-ordinator has

concerns about any aspect of these arrangements, he can now advise the client of these deficiencies, and the client has both the power and motivation to make sure that the deficiencies are addressed. This has the effect of ‘empowering’ the co-ordinator, and this should address the industry concerns about the ineffectiveness of the Planning Supervisor under the old regulations, help raise standards and enhance the co-ordinator’s credibility. In this way, it is anticipated that new duty holder will be better placed to realise the benefits which were originally anticipated for the planning supervisor role.

12. An issue of particular importance for the revised ACoP is guidance on assessment of individual and corporate competence for people engaged or appointed as CDM duty holders. The improved guidance will assist, through clarification and simplification of the process, all those who appoint co-ordinators, designers, Principal Contractors, contractors and site workers, as well as those groups themselves when tendering for contracts or offering their services. It should be particularly helpful to small and occasional clients. We anticipate that the ACoP material will lead to significant reductions in bureaucracy and resource devoted to competence assessment, and this is reflected in the RIA. (See section 7.3.2.)
13. Finally, by changing the Regulations to meet the objectives set out in paragraph 3, the new regulations are easier to understand and more focussed on improved management of risk rather than the associated paperwork. The launch of the Regulations provides an opportunity to emphasise the benefits of this approach and achieve better standards of compliance with the Regulations as a whole. We anticipate that there will be an increased level of compliance with the Regulations overall, and this has been reflected in the overall costs and benefits presented in this Regulatory Impact Assessment. (See part 7.2.2.2.)

### **1.3. Risk assessment**

14. In order to put the costs and benefits into context, it is useful to review the accident record of the industry and its associated cost to society. For consistency with the rest of this RIA, we examine the previous 10 years of accident data.
15. The UK construction industry has no entry threshold, is highly fragmented, itinerant and casualised. The industry employs 7% of the working population, but accounts for 25% of fatal injuries and 16% of the major accidents. It accounts for 8% of UK GDP.<sup>1</sup>
16. Construction work is inherently hazardous and the risks associated with these hazards are difficult to manage due to the constantly changing nature of the working environment. The following tables 1 to 3 show accident statistics that illustrate the degree of risk faced by all those who come into contact with construction activity:

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<sup>1</sup> Source: Department of Trade and Industry. “Construction” is taken to include the construction contracting, products and services sectors.

**Table 1: Number of fatal injuries to workers and members of the public 1996/97 to 2004/05p<sup>2</sup>**

	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05p
Employees	66	58	47	61	73	60	56	52	56
Self-employed	24	22	18	20	32	20	14	19	15
Members of the public	3	6	3	6	8	5	5	4	8
<b>Total fatal injuries</b>	<b>93</b>	<b>86</b>	<b>68</b>	<b>87</b>	<b>113</b>	<b>85</b>	<b>75</b>	<b>75</b>	<b>79</b>

**Table 2: Number of major injuries to workers and non-fatal injuries to members of the public 1996/97 to 2004/05p<sup>3</sup>**

	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05p
Employees	3 227	3 860	4 289	4 386	4 303	4 055	4 031	3 978	3 760
Self-employed	827	466	367	363	405	540	690	750	726
<b>Total major injuries to workers</b>	<b>4 054</b>	<b>4 326</b>	<b>4 656</b>	<b>4 749</b>	<b>4 708</b>	<b>4 595</b>	<b>4 721</b>	<b>4 728</b>	<b>4 486</b>
Members of the public	405	339	378	403	316	381	263	180	201
<b>Total major injuries</b>	<b>4 459</b>	<b>4 665</b>	<b>5 034</b>	<b>5 152</b>	<b>5 024</b>	<b>4 976</b>	<b>4 984</b>	<b>4 908</b>	<b>4 687</b>

**Table 3: Number of over 3-day injuries to workers 1996/97 to 2004/05p**

	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05p
Employees	8 637	9 756	9 195	10 159	9 367	9 100	8 949	8 256	7 509
Self-employed	1 029	509	381	345	429	595	629	739	741
<b>Total over-3-day injuries to workers</b>	<b>9 666</b>	<b>10 265</b>	<b>9 576</b>	<b>10 504</b>	<b>9 796</b>	<b>9 695</b>	<b>9 578</b>	<b>8 995</b>	<b>8 250</b>

17. Tables 4 to 6 show the proportion of accidents, of various degrees, broken down by kind of accident to workers and employees. These tables give an indication of the main reasons for accidents in the workplace.

<sup>2</sup> Reported to all enforcing authorities. Figures for 2004/05 are provisional. These figures do not account for the known under-reporting of incidents to HSE.

<sup>3</sup> Non-fatal injury statistics before 1996/97 cannot be directly compared with earlier years because the system of reporting injuries changed in 1996 (RIDDOR 1995)

**Table 4: Percentage of fatal injuries to workers by kind of accident 1996/97 to 2004/05p**

	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05p
Falls from a height <sup>4</sup>	56%	58%	60%	52%	44%	46%	47%	55%	39%
Struck by moving vehicle	11%	6%	12%	6%	16%	14%	7%	14%	7%
Struck by moving/falling object	12%	15%	12%	21%	10%	16%	16%	10%	18%
Trapped by collapsing/overturning	7%	5%	5%	2%	17%	5%	7%	4%	18%
Other	14%	16%	11%	19%	12%	19%	23%	17%	17%
<b>Total fatal injuries to workers</b>	<b>90</b>	<b>80</b>	<b>65</b>	<b>81</b>	<b>105</b>	<b>80</b>	<b>70</b>	<b>71</b>	<b>71</b>

**Table 5: Percentage of major injuries to employees by kind of accident 1996/97 to 2004/05p**

	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05p
Falls from a height <sup>4</sup>	35%	37%	37%	36%	37%	30%	30%	28%	28%
Slips, trips or falls, same level	19%	19%	20%	21%	21%	26%	26%	27%	25%
Struck by moving vehicle	3%	2%	3%	2%	2%	2%	2%	2%	2%
Struck by moving/falling object	21%	20%	18%	18%	18%	18%	17%	16%	16%
Injured handling/lifting/carrying	8%	9%	9%	10%	8%	10%	11%	14%	15%
Other	14%	13%	13%	13%	14%	14%	14%	14%	13%
<b>Total major injuries to employees</b>	<b>3 227</b>	<b>3 860</b>	<b>4 289</b>	<b>4 386</b>	<b>4 303</b>	<b>4 055</b>	<b>4 031</b>	<b>3 978</b>	<b>3 760</b>

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<sup>4</sup> Falls from a height include falls from up to and including 2 metres, over 2 metres and height not known.



**Table 6: Percentage of over-3-day injuries to employees by kind of accident 1996/97 to 2004/05p**

	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05p
Falls from a height <sup>4</sup>	12%	12%	14%	14%	14%	11%	9%	10%	9%
Slips, trips or falls, same level	17%	17%	17%	18%	19%	22%	23%	22%	22%
Struck by moving vehicle	1%	1%	1%	2%	1%	1%	1%	1%	1%
Struck by moving/falling object	19%	18%	18%	19%	18%	16%	15%	15%	16%
Injured handling/lifting/carrying	36%	36%	35%	34%	33%	35%	36%	37%	38%
Other	15%	16%	15%	13%	14%	15%	16%	15%	14%
<b>Total over-3-day injuries to employees</b>	<b>8 637</b>	<b>9 756</b>	<b>9 195</b>	<b>10 159</b>	<b>9 367</b>	<b>9 100</b>	<b>8 949</b>	<b>8 256</b>	<b>7 509</b>

### 1.3.1. Total Cost of Injuries and Ill-Health In The Construction Sector

18. This RIA estimates the costs and benefits to society from the proposed changes over an appraisal period of ten years from the date of the introduction of the changes. To estimate the costs to society from the accidents outlined in the preceding tables, the average number of accidents in each year has been projected forward over the appraisal period and the cost has been estimated by multiplying the number of injuries by the appropriate unit cost.<sup>5</sup> The number of non-fatal injuries reported for workers under RIDDOR has been adjusted for under reporting using a reporting rate of 48%, estimated using the Labour Force Survey (LFS).
19. Non-fatal injuries to members of the public are not separated into the categories of major and over three day, so a range has been estimated. The upper bound assumes that all injuries to members of the public are major injuries and the lower bound assumes that all injuries to members of the public are over three day injuries. It has also been assumed that the reporting rate for injuries to members of the public is the same as for employees.
20. The present value of reportable injuries in the construction industry is between £7.8 billion and £7.9 billion, over the appraisal period.<sup>6</sup>

<sup>5</sup> HSE publishes monetary appraisal values for use when evaluating policies. These are available from <http://www.hse.gov.uk/economics/>. The values used in this document are: fatal injuries £1,399,252, major injuries £37,175, over three day injuries £5,288, minor injuries £321 and incidences of ill-health, £7,372. Unit costs are in 2004/05 prices.

<sup>6</sup> By discounting costs and benefits which occur at different times over the appraisal period, we are able to present the total impact over the course of the ten years as a single, "present", value. This present value gives a representation of all the relevant future changes as a single number, expressed in present-day prices.

21. Most minor (under three day) injuries and non-injury accidents are not reportable under RIDDOR, but they impose costs upon society and the proposed Regulations will have an impact on their frequency. To estimate the cost of these health and safety failures, the number of each type has been multiplied by the appropriate unit cost (£321).
22. To estimate the number of minor injuries each year, the average number of minor injuries reported under the LFS over the previous three years has been calculated and it is assumed that this level of minor injuries would continue over the ten-year appraisal period. This is estimated at 72,000 incidents per year.
23. Taking these estimates together, the cost of minor injuries in the construction sector is £216 million over the 10 year appraisal period.
24. In 2004/05 29,000 cases of ill health were caused, or made worse by, work in the construction sector.<sup>7</sup> Multiplying this number by the appropriate appraisal value and evaluating it over the 10 year appraisal period, gives the total present cost of illness in the construction sector as approximately £2 billion.
25. Using the methodology outlined above, the present value cost of all injuries and ill-health in the construction industry is between £10.0 billion and £10.2 billion over the 10 year appraisal period.
26. In addition to incidents which result in injuries and ill-health, health and safety failures also lead to non-injury incidents. The number of these incidents is not known, but it has been estimated to be a multiple of the total number of injury incidents. For this document, that multiple is assumed to be between 20 and 40. The cost of each non-injury incident is assumed to be approximately £180. Multiplying the total number of injuries (corrected for under-reporting) by the injury/non-injury ratio and the unit cost of non-injury accidents indicates that the annual cost of non-injury accidents is between £405.8 million and £811.5 million. The present value of this cost, over the appraisal period, is between £3.8 billion and £7.6 billion.
27. The total present value cost of injuries and ill-health, including minor and non-injury accidents in the construction sector is estimated at £13.8 billion to £17.7 billion over the 10 year appraisal period.

## **2. Options**

### **2.1. Option 1: Do Nothing**

28. Following their introduction, a number of early problems with the understanding and application of CDM 94 emerged and it was clear that the Regulations were not being as effective as intended, and that these issues needed to be resolved.

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<sup>7</sup> <http://www.hse.gov.uk/statistics/industry/construction.htm>

29. The number of accidents in the construction industry remained disproportionately high, as did the associated costs, considering the proportion of work force employed, as outlined in the Risk Assessment section.
30. In 2001 concern about the high accident rate lead the HSE to call a high-level Summit involving some of the key stakeholders in the industry. The industry acknowledged that its health and safety performance was neither morally acceptable nor economically viable. It took ownership of the problem and provided leadership by setting challenging targets for improvement. HSE agreed to play its part in that process by examining the legislation and its approach to regulation to make sure that they supported the initiative.
31. To encourage discussion of possible ways of radically improving health and safety a Discussion Document (DD) was published in September 2002. In part this asked industry for its views about the Regulations and their future. The conclusions drawn from the industry's responses on these issues were that:
  - earlier initiatives had not achieved the desired change in the industry's approach;
  - the CDM principles were generally supported, but the paperwork burden needed to be reduced as a lot of *compliance* effort was being wasted; and
  - there was a desire for a set of clear, simple, unambiguous and practical legislation (and supporting guidance) for the industry, which should remain focused on the underlying objective of saving life, avoiding injuries and maintaining health.
32. These factors point to the conclusion that the 'Do Nothing' option is not a viable option in terms of improving health and safety standards, and neither is it economically viable.

## **2.2. Option 2: Revised Set Of Regulations Supported By A New Approved Code of Practice (ACoP) or Guidance**

33. In considering how to address industry concerns over the CDM Regulations, and encourage productive compliance, HSE has considered (and subsequently tried) several alternative and non-regulatory means of remedying the situation. The first of these was early informal guidance from the Chief Inspector of Construction (the Natrass Letter). Despite this intervention, problems remained and this led, as a next step, to an early review of the Regulations followed by consultation on, and revision of, the CDM ACoP in 2001. Although the revised ACoP was favourably received by the industry, it did not have the desired level of impact.
34. Subsequently, and as mentioned in paragraph 31, a Discussion Document was published the results from which argued strongly for clearer regulation and guidance which would facilitate the industry's health and safety objectives while reducing the burden of paperwork.
35. The Health and Safety Commission (HSC) and its Construction Industry Advisory Committee (CONIAC) concluded that the best way to deliver this change would be to revise the Regulations and

supporting ACoP. Consequently, HSC and CONIAC agreed that the regulatory package should be revised in order to improve the management of risk by:

- simplifying the Regulations to improve clarity – so making it easier for duty holders to know what is expected of them;
  - maximising their flexibility – to fit with the vast range of contractual arrangements;
  - making their focus planning and management, rather than the plan and other paperwork – to emphasise active management and minimise bureaucracy;
  - strengthening the requirements regarding co-ordination and co-operation, particularly between designers and contractors – to encourage more integration; and
  - simplifying the assessment of competence (both for organisations and individuals) to help raise standards and reduce bureaucracy.
36. This view reflects the experience gained from the previous remedial actions, draws on the successful aspects of those measures and is regarded by industry as the only option that will satisfactorily address the issues raised while retaining the generally accepted CDM principles, implementing the provisions of the TMCS Directive and incorporating Better Regulation considerations.
37. Finally, and with a view to further improvement, CONIAC agreed to take the opportunity to incorporate the requirements of the Construction (Health, Safety and Welfare) Regulations 1996 into the new Regulations. This would bring all the key construction-specific provisions together in a single instrument.

### **2.3. Option 3: Retain the CDM 94 Regulations and produce a revised Approved Code of Practice (ACoP) to further clarify the Regulations.**

38. As stated above, CDM 94 proved to be less effective than anticipated. The CDM ACoP was revised in 2001 and, while addressing the problems that had arisen, this did not fundamentally change the industry's perception that these were Regulations about '*paperwork*' rather than good project management. As the key messages (active management, co-operation, communication within the design and construction teams and minimising bureaucracy) have not changed since then, a second revised ACoP alone is unlikely to be substantially more effective. Consequently, more fundamental changes are thought necessary, and because Option 3 is unlikely to achieve the required effects it is not recommended.
39. The costs and benefits of this option are intertwined with those for the CDM Regulations 1994. The benefits resulting from improved guidance alone have already, in the most part, been realised, with the revision of the ACoP in 2001. Therefore we would estimate this option would only produce benefits of around 5 to 10% of the benefit of Option 2. As few changes would be required to be made by industry, the costs of this option would also be lower than the costs of Option 2. However, there would still be significant familiarisation costs and there would be a need to increase current low levels of

compliance. We estimate that these costs would amount to 40% of the costs of Option 2. A summary of the costs and benefits of Option 3, in contrast to Option 2, can be seen in the table below:

**Table 7: Summary of costs and benefits of option 3**

	Option 2		Option 3		Ratio of Option 3 to Option 2 (as percentage)
	Present Value Over the 10 Year Appraisal Period	Annualised	Present Value Over the 10 Year Appraisal Period	Annualised	
<b>Benefits (millions)</b>	£535.7 to £1,848.9	£62.2 to £214.8	£26.8 to £92.4	£3.1 to £10.7	5%
<b>Costs (millions)<sup>8</sup></b>	£505.0 to £3,187.2	£58.7 to £370.3	£202.0 to £1,274.9	£23.5 to £148.1	40%

40. This table shows that the costs of Option 3 are estimated to far outweigh the small benefits over the appraisal period. For that reason Option 3 does not play a part in the remainder of the RIA.

### 3. Information Sources and Background Assumptions

41. Information used to estimate the costs and benefits of the CDM Regulations has been obtained from industry sources, representative organisations, the Department for Trade and Industry, '*Improving health and safety in construction*<sup>9</sup>', Experian/CITB research, the Department for Transport's Highways Economic Note no. 1 2004<sup>10</sup>, '*The costs to Britain of workplace accidents and work-related ill health*<sup>11</sup>', and other sources within HSE.
42. Costs and non health and safety benefits have been discounted using the Treasury recommended rate of 3.5% per year. Health and safety benefits have been uprated by 2% to account for increases in GDP and discounted at 3.5% producing an effective discount rate of 1.5% per year.
43. Costs and benefits have been calculated over a ten-year appraisal period from 2007 to 2016 and are given in 2004/05 prices.
44. Some costs are opportunity costs reflected by lost output as a result of performing new duties. It has been assumed that the value of lost output is equal to the time spent carrying out the new duty multiplied by the average wage of the worker (adding 30% for non-wage labour costs including superannuation and employers' National Insurance contributions). Hourly wage rates have been taken

<sup>8</sup> The net costs for option 3 are assumed to exclude the cost savings outlined under option 2 as it is not thought that these are likely to materialise under option 3. However, if these cost savings are included, the average costs are still estimated to outweigh the average benefits.

<sup>9</sup> BOMEL Limited, 2004, '*Improving health and safety in construction, Phase 2-Depth and breadth, Volume 6*'. <http://www.hse.gov.uk/research/rrhtm/rr235.htm>

<sup>10</sup> [http://www.dft.gov.uk/stellent/groups/dft\\_rdsafety/documents/page/dft\\_rdsafety\\_610642.hcsp](http://www.dft.gov.uk/stellent/groups/dft_rdsafety/documents/page/dft_rdsafety_610642.hcsp)

<sup>11</sup> HSE 1999, '*The costs to Britain of workplace accidents and work-related ill health*', ISBN 0-7176-1709-2.

from the Annual Survey of Hours and Earnings. The wage rates used are £22.52 for contractors, £24.78 for clients, and £23.73 for designers.<sup>12</sup> The wage for co-ordinators is taken to be the same as for designers.

45. Costs and benefits have been estimated using current compliance with duties set out in the proposed Regulations as the baseline and using the expected level of compliance estimated by HSE inspectors and staff. In the uncertainties section, costs and benefits are estimated assuming that there will be 100% compliance with the proposed Regulations.
46. The definition of notifiable projects will remain unchanged (those lasting more than 30 days or involving more than 500 days of construction work) and this will become the single threshold for appointments and plans required under the proposed Regulations. It is not clear exactly how many projects will fall within the definition of a notifiable project. For the purpose of estimation, we have considered two scenarios: (1) assumes only projects with a value of £50,000 and over are notifiable; and (2) assumes only projects with a value of £200,000 or over are notifiable.

#### **4. Equity And Fairness**

47. The ethnic and gender mix of the construction industry is generally accepted as being dominated by white males, with women and ethnic minorities being under-represented. Migrants and other socially and economically disadvantaged workers are likely to work in construction. Vulnerable groups have been specifically identified in HSE's Construction Priority Programme, but HSE does not differentiate by migrant status and considers it counter productive to do so.
48. The proposed Regulations will apply equally to all ethnic groups, vulnerable groups, and to men and women alike. The proposed Regulations are unlikely to have a greater impact on any particular age group, on people with disabilities or on any particular area/region. Consequently, there is no evidence to suggest that the proposed Regulations will lead to inequity or unfairness when they are complied with.

#### **5. Atypical workers**

49. Many workers in the construction industry are self-employed and there are many who obtain their work through employment agencies. Although counter-intuitive, the available evidence (RIDDOR and LFS) indicates that injury rates to the self-employed are lower than those to employed workers.
50. Many people incorrectly think that health and safety law does not cover self-employed workers. People may be self-employed, but if they work under the control of others, they are usually treated as employees under health and safety law. The CDM Regulations are deliberately drafted to address this

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<sup>12</sup> Contractors: SIC code 1122 (Managers in Construction); Designers: average of SIC codes 2431 and 2126 (Architects, Design and Development engineers); Clients: average of SIC codes 112 and 1121 (Production Managers, Production, works and maintenance managers). These wages are increase by 30% to account for non-wage labour costs.

issue and place responsibilities on everyone controlling workers to ensure the health and safety of those workers irrespective of their employment status. The proposed Regulations will not change this.

## 6. Benefits

### 6.1. Health And Safety Benefits

#### 6.1.1. Option 1: Do Nothing

51. There are no additional benefits from this option.

#### 6.1.2. Option 2: Revised Set Of Regulations Supported By A New ACoP or Guidance

##### 6.1.2.1. Health and Safety Benefits To Construction Workers

52. Two strategies have been used to estimate the safety benefits of the proposed Regulations: (1) a comparison of the injury statistics of the Engineering Construction Industry Association (ECIA) and the construction sector as a whole, and (2) an Influence Network approach. The approaches are explained in more detail below.

##### *Comparison with the Engineering Construction Industry Association's Injury Rates*

53. The ECIA is known to follow best practice and has injury rates lower than the construction sector as a whole. Because its client base is in the main dominated by large companies from the petrochemical and pharmaceutical industries, its projects tend to show a higher level of compliance and a sensible risk-based application of the Regulations. A high degree of client commitment is a particular driver for this improved performance, and in this respect it could be argued that these client's are already acting in a way that would meet the enhanced duty placed on clients by the revised regulations. In contrast, in the rest of the industry, the effect of less resource, a lower level of client commitment and the lack of clarity of the Regulations presents a real barrier which leads to a focus on bureaucracy rather than risk control. It is hoped that adding clarity to the Regulations and strengthening client commitment will help this end of the market to achieve standards that are closer to those achieved by the better performing section of the industry. Hence one way of estimating the safety benefit of the proposed Regulations is to estimate the value of accidents that would be prevented if the construction sector's injury rate falls to the same level as ECIA's injury rate. It is assumed the same reduction would occur for work-related ill-health.

54. Using data on all injuries reported under RIDDOR, the injury rate of the construction sector as a whole was 2.16 times worse than ECIA projects in 2003 and 2.20 times worse in 2004.<sup>13</sup> Hence, if the

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<sup>13</sup> RIDDOR Injuries and Injury Rates for ECIA

Year	Number of Employees	RIDDOR Injuries	RIDDOR rate per 100000
2003	35 649	184	516.1

construction sector injury rate falls to the same level as the ECIA injury rate (a fall of between 54% and 55%), the present value of health and safety benefits resulting from the proposed Regulations is £5.4 billion to £5.5 billion (reportable injuries and ill-health only) over the appraisal period. If non-injury accidents are included, the present value benefit is £7.4 billion to £9.7 billion over the 10 year appraisal period.

55. The estimates above have been calculated on the basis of 100% compliance. Estimated compliance levels with some elements of the existing Regulations are disappointingly low, and clearer Regulations and guidance should lead to increased compliance. The launch of the new regulatory package will also create an opportunity to target low compliance areas, and this is a key element of the 'benefits realisation' plan which has been put in place for the launch of the package. To account for expected levels of compliance it has been assumed that overall compliance with the old regulations is between 45% and 50% and that overall compliance with the new regulations will be between 55% and 60%. Taking a range of these figures gives a possible increase in compliance of between 10% and 33%. Assuming that this represents an increase in overall safety and multiplying these figures by the total benefits calculated above, gives the range of benefits as between £0.5 billion and £1.8 billion (injuries and ill-health only) or between £0.7 billion and £3.2 billion (injuries, ill-health and non-injury accidents).
56. If clients are more accountable for the decisions which they are taking in respect of projects, they are more likely to employ reputable companies who are able to demonstrate competence. This should put more pressure on the less reputable part of the industry (often referred to as 'cowboy contractors') and will help force them to either improve their health and safety performance, or leave the industry all together. It has been impossible to estimate the size of this benefit, but the effect is likely to be significant.
57. There will also be business benefits to smaller clients from achieving better management control during construction work, but these are not health and safety benefits, and therefore they are covered under 'cost savings' in section 7.3.

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2004	30 268	134	442.7
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RIDDOR Injuries and Injury Rates for the Construction Sector excluding ECIA.

Year	Number of Employees	RIDDOR Injuries	RIDDOR rate per 100000
2003	1 089 800	12 150	1 114.9
2004	1 146 732	11 191	975.9

Estimated benefits have been calculated as follows: the total cost of injuries in the construction (excluding ECIA) sector has been multiplied by one minus the ratio between the ECIA injury rate and the whole sector (excluding ECIA) injury rate. One minus the ratio between the ECIA injury rate and the whole sector (excluding ECIA) injury rate is the expected reduction in cost of injuries in the construction sector if the injury rate of the whole sector falls to the ECIA injury rate.



58. The following caveats should be placed on these estimated benefits: (1) ECIA projects are not a representative sample of all construction projects<sup>14</sup>, so if the type of project is a factor influencing the injury rate this may bias the estimated benefits (benefits could be over or under estimated); (2) it has been assumed that the distribution of injury types is the same for ECIA as for the whole sector; (3) reporting rates are expected to be higher for ECIA projects than non-ECIA projects, so estimated benefits will be biased and underestimated; and (4) the employment figures used to calculate injury rates are less reliable for the ECIA rates than for the sector as a whole.

*Influence Network Approach*

59. The second approach used is the Influence Network<sup>15</sup> approach. This provides a framework in which to consider the wide variety of factors influencing health and safety performance. It should be noted that the influence network only provides a framework for discussion, so any output is based on the perceptions of those attending the forum and not quantitative data.
60. A forum was held within HSE to consider the impact of the proposed Regulations on health and safety performance (assuming 100% compliance). The baseline for the discussion was a forum held previously within HSE on the current health and safety performance of the construction sector<sup>16</sup>.
61. Using the relationship between the risk index and the level of risk set out in '*Improving health and safety in construction, Phase 2, Volume 6*', the reduction of risk in the construction sector as a result of the proposed Regulations is estimated at 34%. Assuming that risk is directly related to the total cost of injuries (i.e. a 10% reduction in risk leads to a 10% reduction in the cost of injuries and accidents in the construction sector), the health and safety benefits of the proposed Regulations have been estimated at approximately £3.4 billion (reportable injuries and ill-health only) or £4.6 billion (including minor injuries and non-injury accidents) over the appraisal period.
62. The estimates above have been calculated on the basis of 100% compliance. To account for expected levels of compliance it has been assumed that overall compliance with the old regulations is between 45% and 50% and that overall compliance with the new regulations will be between 55% and 60%. Taking a range of these figures gives a possible increase in compliance of between 10% and 33%. Assuming that this represents an increase in overall safety, and multiplying these figures by the total benefits calculated above, gives the range of benefits as between £0.3 billion and £1.1 billion (injuries and ill-health only) or between £0.5 billion and £2.0 billion (injuries, ill-health and non-injury accidents).

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<sup>14</sup> There are almost no self employed ECIA members, ECIA projects include power stations and other large construction projects, and there are higher levels of unionisation among ECIA members than non-ECIA members.

<sup>15</sup> For further information see: <http://www.hse.gov.uk/research/rrhtm/rr235.htm>

<sup>16</sup> For further information see: <http://www.hse.gov.uk/research/rrhtm/rr231.htm> Page 46.

**6.1.2.2. Health And Safety Benefits From Designers Considering The Risk With The Intended Use Of Buildings Designed As Places Of Work**

63. Health and safety benefits are expected to flow from explicitly requiring designers to consider the risks associated with structures intended as a place of work. In some cases, building design is a factor contributing to injuries. For instance, the position of lighting can affect the use of ladders in a building and therefore the risks posed to workers maintaining a building. It has not been possible to quantify the health and safety benefits flowing from this requirement because it is not possible to identify the number of injuries (outside of construction personnel) in which building design is a contributory factor.

**6.2. Other (non-health and safety) Benefits**

**6.2.1. Option 1: Do Nothing**

64. There are no additional benefits from this option.

**6.2.2. Option 2: Revised Set Of Regulations Supported By A New ACoP or Guidance**

**6.2.2.1. Incorporation of the requirements of the Construction (Health, Safety and Welfare) Regulations 1996 and amendment to the Management of Health and Safety at Work Regulations 1999**

65. The requirements of the Construction (Health, Safety and Welfare) Regulations 1996 have been incorporated into Part 4 of the Regulations essentially without change and, consequently, no additional health and safety benefits are expected. However, there may be other benefits associated with this change. By combining the regulations, new entrants into the construction sector may need to take less time familiarising themselves with relevant duties. Any such decline in barriers to entry in the construction industry may be reflected in increased competition. These possible benefits have not been quantified.

**6.3. Total Benefits**

**6.3.1. Option 1: Do Nothing**

66. No benefits are expected for option 1.

### 6.3.2. Option 2: Revised Set Of Regulations Supported By A New ACoP or Guidance

**Table 8: Benefits Of Option 2 (This table collates the estimates in section 6.1)**

<b>Safety Benefits</b>	<b>Present Value of Benefits Over the 10 Year Appraisal Period (millions)</b>	<b>Annualised Benefits (millions)</b>
<i><b>Influence Network Approach</b></i>	£337 to £1,142	£39 to £133
<i><b>ECIA Approach excluding non-injury accidents</b></i>	£536 to £1,849	£62 to £215
<i><b>ECIA Approach, including non-injury accidents</b></i>	£740 to £3,232	£86 to £376

67. The Influence Network Approach produces the lowest estimated range of benefits, but it is important to note that this approach takes no account of the benefits that would accrue from a reduction in non-injury accidents. The approach also assumes an overall improvement in compliance rate of only 5%. If improvements in compliance of more than 5% were achieved, the benefits would be significantly greater.
68. As with the Influence network approach, the lower range of benefits calculated using the ECIA approach do not account for the benefits that would accrue from a reduction in non-injury accidents. The potential significance of this omission is shown by the second set of figures where an attempt has been made to include an allowance for these benefits.
69. The figures given in Table 8 are restricted to the possible health and safety benefits of the proposed changes. The potential for improvements in business performance are explored in section 7.3.

## 7. Costs

### 7.1. Business Sectors Affected

70. The British Construction industry is extremely diverse. There are around 168,000 contractors, ranging from the self employed to multi-national companies. 95% of contractors are thought to be small/micro sized companies. There are 18,000 design firms, and an unknown (but large) number of clients. It is not possible to characterise clients because everyone in Britain is potentially a construction client, and they could be an individual or organisation from any business sector (this includes local authorities, school governors, insurance companies and project originators on Private Finance Initiative projects). It follows that all business sectors are likely to be affected, at some stage, by the proposed Regulations, as they are by the current Regulations.

## 7.2. Total Compliance Costs To Business

### 7.2.1. Option 1: Do Nothing

71. There are no additional costs from this option.

### 7.2.2. Option 2: Revised Set Of Regulations Supported By A New ACoP or Guidance

72. This document presents the costs from the proposed regulation in two sections. (1) the costs associated with compliance with the changed duties under CDM 2007; and (2) the costs of improved compliance with existing duties under CDM 94, which have been carried forward into the new Regulations.

#### 7.2.2.1. Costs Associated with Changed Duties

73. There are essentially two sets of costs associated with compliance with changed duties. Firstly, there will be a cost associated with familiarisation with the changed duties. Secondly, there will be costs associated with the carrying out of the changed duties.

##### *Familiarisation costs<sup>17</sup>*

74. There are four main groups that will be required to familiarise themselves with the proposed Regulations: contractors, designers, co-ordinators and clients.
75. Familiarisation costs for contractors have been estimated on the following basis: (1) there are 168,000 contractors; (2) it has been assumed that because the duties on contractors have changed the least, familiarisation will take an estimated 8 hours per contractor; (3) between 60% and 70% of existing contractors familiarise themselves with the new Regulations<sup>18</sup>; (4) those familiarising themselves receive the contractor wage; (5) 19,000 new contractors enter the market each year<sup>19</sup>; and (6) there is between a 5% and 10% increase in new firms familiarising themselves with the regulations. (The majority of new firms would have familiarised themselves with CDM 94, even if the proposed regulations were not introduced, so the net change in familiarisation for new firms is small.) The present value cost of familiarisation for contractors is estimated at £19.5 million to £23.8 million over the appraisal period.

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<sup>17</sup> Familiarisation costs have been estimated by multiplying the number of firms by the length of time required for familiarisation, the average wage (adding 30% for non-wage labour costs) and the expected level of compliance.

Added to this is the cost of familiarisation for new firms: the expected number of new firms per year multiplied by the length of time required for familiarisation, the average wage (adding 30% for non-wage labour costs) and the expected increase in the level of compliance (note, some new firms are expected to be compliant i.e. they will face no additional costs for familiarisation because they would familiarise themselves with CDM 94 if the proposed regulations are not implemented).

<sup>18</sup> The current compliance level is a best-estimate based on HSE Inspectors' experiences and industry sources.

<sup>19</sup> Source: DTI/ Small Business Service. Estimate for 2002.

76. Familiarisation costs for designers have been estimated with the following information: (1) there are 225,000 designers; (2) it has been assumed that designers will only need to familiarise themselves with those duties which affect them, and therefore familiarisation will take 6 hours for each designer who (3) receives the average designer wage; (4) it has been estimated that the turnover of designers is 5% per year; (5) between 60% and 70% of existing designers familiarise themselves with the new Regulations; and (6) there is between a 5% and 10% increase in the overall level of familiarisation amongst new designers. (Many new designers would have familiarised themselves with CDM 94, even if the new Regulations were not introduced.) The present value cost of familiarisation for designers is estimated at between £16.6 million and £17.2 million over the appraisal period.
77. It is assumed that there are 10,000 co-ordinators and that between 60% and 70% of them take 8 hours to familiarise themselves with the changes to the CDM Regulations. It is assumed that the turnover of co-ordinators is 5% per year and that there is between a 5% and 10% increase in the overall level of familiarisation amongst new co-ordinators (many would have familiarised themselves with CDM 94, irrespective of the introduction of CDM 2007). The total present value of the costs to co-ordinators for familiarisation is between £0.6 million and £0.8 million.
78. It is not known exactly how many clients will be required to familiarise themselves with CDM 2007. However, it is known that between 65% and 87%<sup>20</sup> of clients are repeat clients in each year. Combining this information with an estimate of the total number of construction projects (500,000) and the assumption that, on average, repeat clients handle 5 contracts each year, we can estimate the number of clients (between 152,000 and 240,000). It is assumed that (1) between 60% and 70% of existing clients familiarise themselves with the new Regulations; (2) that familiarisation takes 8 hours; (3) that clients receive the average client wage; (4) that between 13% and 35% of clients are new each year; and (5) that there is an overall 5% to 10% increase in the level of familiarisation amongst new clients (as many new clients would have familiarised themselves with CDM 94 regardless of the new regulations). The total present value of the costs of familiarisation for clients is between £16.6 million and £38.8 million.
79. Table 9 gives a summary of the familiarisation costs outlined above.

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<sup>20</sup> From BOMEL RIDDOR Research Report RR139.

**Table 9: Summary of Familiarisation Costs<sup>21</sup>**

	Present Value of Costs Over the 10 Year Appraisal Period (millions)		Annualised Costs (millions)	
	Minimum	Maximum	Minimum	Maximum
Contractors	£19.5	£23.8	£2.26	£2.76
Designers	£16.6	£17.2	£1.93	£2.00
Co-ordinators	£0.6	£0.8	£0.07	£0.09
Clients	£16.6	£38.8	£1.92	£4.51
<b>Total</b>	<b>£53.2</b>	<b>£80.6</b>	<b>£6.2</b>	<b>£9.4</b>

*Costs Arising From Changed Duties:*

80. The duty holders who will have to change what they do in order to comply with the changed duties are clients and co-ordinators. This section estimates the cost associated with these changes in practice.
81. In respect of clients, HSE commissioned research to identify the likely costs to business which would accrue as a result of the introduction of new duties under CDM 2007. This research sought to determine the likely extra costs to stakeholders. The unit cost data from this research have been combined with data on the distribution of construction projects by value band. This distribution is based on data from the "Construction Statistics Annual 2005", published by DTI, together with an estimate of the total number of projects made by HSE (500,000). This distribution also takes into account projects which fall into the "less than £25,000" band, which are not counted in the DTI data. The following table gives the costs which accrue from clients being required to ensure the adequacy of health and safety management arrangements during a construction project, assuming 100% compliance.<sup>22</sup>

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<sup>21</sup> Note that ranges are quoted in this document, often referred to as "minimum" and "maximum". These ranges are generated by taking the combination of assumptions which gives the lowest and highest numerical values. Where these ranges are cumulated, the calculation is again done such that the lowest and highest numerical values are presented. The ranges, therefore, represent the widest possible range of outcomes, given the assumptions made in the document.

<sup>22</sup> Certain value bands in these tables have been grouped together as the HSE research and DTI statistics do not use the same value ranges.

**Table 10: Annual Cost (assuming 100% compliance) of Changed Duties to Clients (regulation 9).**

Value Band (thousands)	Proportion of projects in band	Unit Cost	Number of projects in band	Total annual Cost (millions)
<£200	62%	£170	310000	£52.7
£200 - £500	17%	£190	83000	£15.6
£500 - £750	6%	£500	28000	£13.8
£750 - £1000	4%	£670	18000	£11.8
>£1000	12%	£1,870	62000	£115.4

(The unit cost estimates in this table are taken from research, undertaken for HSE, by BOMEL Ltd<sup>23</sup>)

82. The total of these costs comes to £209.3 million per year, given 100% compliance. However, we know that likely levels of compliance will not reach this level. In order to take account of this, we present a range of options where the compliance level varies between 45% and 55%. It was also identified in the research undertaken to inform Table 10 that some costs may be over-estimated where respondents incorporated duties which are part of regulations other than CDM 2007. To account for this the totals have been reduced by between 10% and 20%. Accounting for these corrections, a range of possible costs are given in Table 11 as present values over the ten-year appraisal period, and as annualised figures.

**Table 11: Total Present Cost of Changed Duties to Clients (Corrected for likely compliance rate and misrepresentation by firms in survey).<sup>21</sup>**

Assumptions	Present Value Over Ten Year Appraisal Period (millions)	Annualised (millions)
Minimum	£648.4	£75.3
Maximum	£891.6	£103.6

*Co-ordinator training costs*

83. In addition to the costs to clients outlined above, it is assumed that existing Planning Supervisors will have to undergo some training in order to be capable of carrying out the duties of a co-ordinator as required of them under CDM 2007 (for an explanation of the changes see paragraphs 5, 10 and 11). We assume that there are 10,000 Planning Supervisors and that 50% of them attend a training course which takes between 10 and 20 hours and costs between £200 and £400.

<sup>23</sup> The research report has not yet been published.

84. In addition to the general costs to co-ordinators, it is assumed that 4,000 members of the Association of Project Safety (APS) will undergo an APS re-assessment process which will entail two hours of preparation and examination and a £50 fee. The total present value of these costs is between £2.6 million and £4.8 million.
85. It is assumed that there are no additional training costs after the first year, as any new co-ordinators would have already undertaken an equivalent amount of training to become competent with the existing regulatory regime. It is also assumed that once the training has been given, the total time and resource devoted to co-ordination will not significantly differ from that which was devoted to planning supervision under the existing Regulations, so there will be no on-going additional costs.

#### **7.2.2.2. Cost of Improved Compliance with Existing Duties under CDM 94**

86. In theory, if compliance with current duties is 100%, there should be no additional costs for complying with the duties in CDM 94 which have been carried forward into CDM 2007. In reality, the levels of compliance are known to be much lower, and it is expected that the new Regulations will improve this level of compliance. It is therefore necessary to include the cost of this improved level of compliance with existing duties in this regulatory impact assessment.

#### *Designer training costs<sup>24</sup>*

87. The cost of designers receiving training has been estimated using the following information: (1) there are 225,000 designers<sup>25</sup>; (2) it has been estimated that 40% of designers have received CDM 94 training and that an additional 5% to 10% will receive training as a result of the proposed Regulations; (3) it has been estimated that the turnover of designers is 5% per year; (4) it has been assumed that 40% of new designers will receive training without the implementation of the proposed Regulations; (5) the cost of training is between £50<sup>26</sup> and £230<sup>27</sup> for a one day training course; and (6) designers receive the average designer wage which reflects the lost output of the designer whilst on the training

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<sup>24</sup> The cost of CDM training is formed of two components: the one off cost of training current designers and the on going cost of training new designers.

The one off cost has been calculated as follows: the number of designers has been multiplied by the proportion of designers not trained but are expected to be trained following implementation of the proposed regulations, and the sum of the lost output from receiving the training and the cost of the training.

The cost of training new designers has been calculated as follows: the number of designers has been multiplied by the annual turnover of designers, the proportion of designers who would not have received CDM training prior to the implementation of the proposed regulations but will as a result of the proposed regulations, and by the sum of the lost output from receiving the training (reflected in the wage of the designers, with additional non-wage labour costs) and the cost of the training.

<sup>25</sup> Source: Experian/CITB research.

<sup>26</sup> Source: BPS Consulting Website.

<sup>27</sup> Source: SERCO Website.



course. The present value cost of CDM training for designers is estimated at £3.7 million to £13.0 million over the appraisal period.

*Planning Supervision/Co-ordination costs<sup>28</sup>*

88. The co-ordinator is the successor to the Planning Supervisor, and the Regulations require their appointment for notifiable projects. Planning Supervision was estimated to cost 1.1% of project costs in the Evaluation of the Construction (Design and Management) Regulations 1994.<sup>29</sup> In addition, the following information has been used to estimate costs: (1) it has been estimated that there is currently between 50% and 55% compliance with CDM 94 and that this will increase to between 60% and 65%; (2) it has been estimated that clients take 2.5 hours to appoint a Planning Supervisor. The present value cost of Planning Supervisors, if we assume the notifiable project cut-off point is at £50,000, is between £340.5 million and £1,021.6 million. If we assume the cut-off point is at £200,000, the present value is between £258.0 million and £774.1 million.

*Cost to Client of competence checks<sup>30</sup>*

89. The cost to clients of checking the competence of co-ordinators, designers and contractors has been estimated using the following information (1) it has been estimated that there is 20% to 30% compliance with this requirement increasing to between 40% and 50%; and (2) it has been estimated that it takes 4 hours for clients to perform this task. The present value cost of clients checking competence is estimated at £29.3 million to £88.0 million over the 10 year appraisal period if we assume the notifiable project cut-off point is at £50,000 and £16.2 million to £48.7 million if we assume £200,000.

*Cost to client to ensure information is available<sup>31</sup>*

90. Under the existing Regulations, clients need to make health and safety information available to other project team members. The cost to clients of ensuring information is available has been estimated using the following information: (1) it has been estimated that there is 15% to 25% compliance with this requirement (increasing to between 35% and 45%); and (2) it has been estimated that it takes 18 hours for clients to perform this task. The present value cost over the 10 year appraisal period is

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<sup>28</sup> This cost has been calculated by adding the following: (1) Appoint co-ordinator: the number of projects multiplied by the number of hours expected for a co-ordinator to be appointed, the client wage (adding 30% for non-wage labour costs) and the expected increase in the level compliance with this duty, and, (2) co-ordinator: the value of construction work multiplied by the cost of co-ordinators as a proportion of project costs and the expected increase in the level compliance with this duty.

<sup>29</sup> [http://www.hse.gov.uk/research/crr\\_hm/1997/crr97158.htm](http://www.hse.gov.uk/research/crr_hm/1997/crr97158.htm)

<sup>30</sup> This cost has been calculated as follows: the number of projects has been multiplied by the number of hours expected for this duty to be performed, the client wage (adding 30% for non-wage labour costs) and the expected increase in the level compliance with this duty.

<sup>31</sup> This cost has been calculated as follows: the number of projects has been multiplied by the number of hours expected for this duty to be performed, the client wage (adding 30% for non-wage labour costs) and the expected increase in the level compliance with this duty.

estimated at £132.0 to £396.0 million over the appraisal period, if the notifiable cut-off point is at £50,000 and between £73.0 million and £219.0 million if the cut-off point is at £200,000.

*Cost to contractors of providing information and training<sup>32</sup>*

91. The cost to contractors of providing information and training has been estimated using the following information: (1) it has been estimated that there is 20% to 25% compliance with this requirement (increasing to between 30% to 35%); (2) it has been estimated that it takes 12 hours for contractors to perform this task; and (3) it has been estimated that 20% of notifiable projects require information and training. The present value cost to contractors of information and training is estimated at between £11.6 million and £34.9 million over the 10 year appraisal period.

*Cost to Principal Contractor of consulting the work force<sup>33</sup>*

92. Under this duty, Principal Contractors are required to consult with the workforce and their representatives in relation to their health, safety and welfare. The cost to Principal Contractors of this duty has been estimated using the following information: (1) it has been estimated that there is 15% to 20% compliance with this duty on notifiable projects (increasing to between 25% to 30%) and (2) it has been estimated that it takes 8 hours to perform this task. The present value cost to Principal Contractors over the 10 year appraisal period is estimated at £26.7 million to £80.0 million if we assume the cut-off point for a notifiable project is £50,000 and between £14.7 million and £44.2 million if we assume the cut-off is at £200,000.

*Other Duties*

93. No additional costs are expected for appointing a Principal Contractor because compliance is estimated at 100%. No other additional costs are considered significant enough for inclusion in this section.

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<sup>32</sup> This cost has been calculated as follows: the number of projects has been multiplied by the proportion of projects where specific hazards require information and training, the number of hours expected for this duty to be performed, the contractor wage (adding 30% for non-wage labour costs) and the expected increase in the level of compliance with this duty.

<sup>33</sup> This cost has been calculated as follows: the number of projects has been multiplied by the number of hours expected for this duty to be performed, the contractor wage (adding 30% for non-wage labour costs) and the expected increase in the level of compliance with this duty.

### 7.3. Cost Savings

#### 7.3.1. Savings due to Productivity Improvements<sup>34</sup>

94. The focus of the proposed Regulations aligns closely with other initiatives to improve project management and team working in construction. One element of this has been Constructing Excellence that has tested out the effect of the practical application of these principles on demonstration projects<sup>35</sup>. They wanted to measure the practical benefits of the application of:
- client leadership
  - innovative ways of delivering projects, processes and products;
  - Respect for People;
  - sustainable development;
  - measurement of improvements based on clear benchmarks; and
  - involving the whole supply chain in the whole process at the earliest possible stage, preferably design.
95. The data from the demonstration projects has shown that, compared with the rest of the industry, demonstration projects:
- are more predictable in terms of cost and time;
  - are more productive than the industry average;
  - are safer;
  - have less impact on the environment; and
  - achieve higher customer satisfaction.
96. If the whole industry (including non-notifiable projects) achieved the same results as the 'Demonstrations' then project costs could potentially fall by 6%. Improved client leadership, respect for people, measurement and monitoring of performance and greater supply chain integration are all key themes of the revised CDM 2007 package, and it is therefore likely that some of the productivity gains shown on the demonstration projects would be expected to accrue from the proposed changes in the Regulations. There is not an exact match between the changes in the Regulations and those trialled at the demonstration projects, and therefore it is not appropriate to assume that the full 6% productivity gains would flow from the changes. If it is assumed that implementation of the proposed Regulations leads to a 3% reduction in project costs for projects where there is currently insufficient

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<sup>34</sup> The cost saving from reduced project cost has been calculated as follows: the value of the construction sector has been multiplied by the expected reduction in project costs and the expected increase in the level of compliance. This is estimated as moving from an existing rate of between 50% and 55% to a new compliance rate of between 60% and 65%.

<sup>35</sup> Constructing Excellence's demonstration programme aims to capture and disseminate best practical knowledge in the built environment sector. Demonstration projects are live construction projects that are innovating or applying an element of best practice that it is hoped will lead to a step-change in performance for the participants. The most recent figures indicate that there have been 512 projects, involving over 1,300 organisations UK-wide, with a total value of £8 billion.  
See: <http://www.constructingexcellence.org.uk/resources/demonstrationprojects/default.jsp>.

attention by clients, designers and contractors to planning, managing and monitoring - then the present value cost saving from reduced project costs for all projects over the 10 year appraisal period is between £1.0 billion and £2.9 billion over the 10 year appraisal period.

### 7.3.2. Savings due to improved guidance on Checking and Demonstrating Competence<sup>36</sup>

97. HSE commissioned research to develop guidelines for the selection of competent co-ordinators, designers and contractors.<sup>37</sup> The research took account of current good practice and existing schemes for assessing competency and ability to allocate adequate resource. HSE has drawn on the findings of the research to develop detailed guidance for clients and others on how to assess the competence and adequacy of resource of those they propose to appoint or engage. This new guidance has been included in the new CDM Approved Code of Practice and will appear on HSE's web site. In addition, the core criteria for competence are likely to be reproduced in industry-produced guidance. It is hoped that it will be helpful to all duty holders and particularly to one-off or occasional clients and SMEs (Small and Medium-sized Enterprises).
98. As a result of this new guidance the cost to clients of ensuring designer and contractor competence is expected to fall. Designers and contractors should already be competent to fulfil the functions for which they are seeking appointment. Information provided to clients should be simpler and based on designer/contractor accreditation (thereby minimising the number of inappropriate applications and enabling easier weeding out by clients). The new guidelines place the onus on the potential appointee to gather and provide supporting evidence for the client, and the standardisation of this evidence should reap dividends for both parties in reduced paperwork and costs.
99. The cost benefit analysis for CDM 94 estimated that checking competence would take clients 8 hours. It has been estimated that under the proposed Regulations this should fall by half for both types of project. With compliance estimated at 20% to 30%<sup>38</sup>, the present value cost saving for clients over the 10 year appraisal period is estimated at between £85.3 million and £128.0 million.
100. By simplifying the arrangements for demonstrating competence, it is assumed that this process will be simpler and quicker for contractors and designers when tendering for projects. We assume that for each construction project there are, on average, between two and six tenders from designers and contractors. It is assumed that the time taken to prepare the competence demonstration (for both designers and contractors) falls from two hours to five minutes per tender and that compliance with the requirement is between 20% and 30%.

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<sup>36</sup> This cost has been calculated as follows: the number of projects has been multiplied by the reduction in the number of hours expected for this duty to be performed, the client wage (adding 30% for non-wage labour costs) and the level of compliance with this duty.

<sup>37</sup> "Developing guidelines for the selection of designers and contractors under the Construction (Design and Management) Regulations 1994", Research Report 422, available from the HSE website at: <http://www.hse.gov.uk/research/rrhtm/rr422.htm>

<sup>38</sup> The current compliance level is a best-estimate based on HSE Inspectors' experiences.

101. The present value of the cost saving to designers over the 10 year appraisal period is between £78.3 million and £352.3 million.
102. The present value cost saving to contractors over the 10 year appraisal period is between £74.3 million and £334.3 million.

### **7.3.3. Reduction in number of projects subject to requirements for appointments and preparation of a Health and Safety Plan**

103. A number of the requirements of the existing CDM Regulations (e.g. to make appointments and to draw up a Health and Safety Plan) are disapplied if a construction project has always fewer than 5 workers on site and is not notifiable. Under the proposed Regulations the under 5 worker condition will be removed and consequently fewer projects will be subject to the requirements for appointments and preparation of a health and safety plan. However, the number will be small (estimated to be about 10,000) and we have discounted it for the purposes of this assessment.

## **7.4. Costs to HSE**

### **7.4.1. Option 1: Do Nothing**

104. There are no additional costs from this option.

### **7.4.2. Option 2: Revised Set Of Regulations Supported By A New ACoP or Guidance**

#### *Inspector Training*<sup>39</sup>

105. All 150 construction inspectors will undertake training to familiarise themselves with the proposed Regulations. The cost of training has been estimated under the following assumptions: (1) training lasts 8 hours; (2) the only cost of the training is lost output; and (3) the average inspector's salary is equivalent to a Band 3 inspector's salary. The present value cost of inspector training has been estimated at £63,000.

## **7.5. Total Costs To Society**

### **7.5.1. Option 1: Do Nothing**

106. There are no additional costs from this option.

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<sup>39</sup> The cost of training HSE's inspectors has been calculated as follows: the number of inspectors has been multiplied by the number of hours of training expected and the typical inspector wage (adding 30% for non-wage labour costs).

## 7.5.2. Option 2: Revised Set Of Regulations Supported By A New ACoP or Guidance

Table 12: Total Costs Of Option 2<sup>21</sup>

	Present Value, over the 10 year Appraisal Period (millions)		Annualised (millions)	
	Minimum	Maximum	Minimum	Maximum
<i>Costs of changed duties</i>				
Familiarisation costs (paras 74-79)	£53.2	£80.6	£6.2	£9.4
Changed client duty costs (paras 81-82)	£648.4	£891.6	£75.3	£103.6
Co-ordinator training costs (paras 83-85)	£2.6	£4.8	£0.3	£0.6
<i>Costs of increased compliance with existing duties under CDM 94</i>				
Designer training costs (para 87)	£3.7	£13.0	£0.4	£1.5
Planning supervision/co-ordination costs (para 88)	£258.0	£1,021.6	£30.0	£118.7
Cost to client of competence checks (para 89)	£16.2	£88.0	£1.9	£10.2
Cost to client to ensure information is available (para 90)	£73.0	£396.0	£8.5	£46.0
Cost to contractors of providing information and training (para 91)	£11.6	£34.9	£1.4	£4.1
Cost to Principal Contractor of consulting the workforce (para 92)	£14.7	£80.0	£1.7	£9.3
<i>Cost Savings</i>				
Savings due to productivity improvements (paras 94-96)	-£2,937.9	-£979.3	-£341.3	-£113.8
Savings due to improved guidance on checking and demonstrating competence (paras 97-102)	-£814.6	-£237.9	-£94.6	-£27.6
<i>Costs to HSE</i>	£0.1	£0.1	£0.01	£0.01
<b>Total</b>	-£2,670.8	£1,393.4	-£310.3	£161.9

Note: Negative values indicate cost savings; figures may not add up due to rounding.

## 7.6. Compliance Costs For A 'Typical' Business

### 7.6.1. Option 1: Do Nothing

107. No additional costs are expected from this option.

### 7.6.2. Option 2: Revised Set Of Regulations Supported By A New ACoP or Guidance

108. It is difficult to estimate the cost of the proposed changes to the Regulations for a typical business because the businesses affected by the proposed Regulations are so diverse. For illustrative purposes, the costs of a notifiable project have been presented for a project valued under £100,000. Nearly fifty percent of all projects fall into this category.

109. Costs have also been separated into business specific costs and project specific costs, because business specific costs are one off costs that are difficult to allocate on a project basis.

### 7.6.3. Business Specific Costs

#### 7.6.3.1. Clients

110. Clients will face a familiarisation cost, estimated at £198<sup>40</sup>, from the introduction of the Regulations. They will also face increased costs from complying with the new enhanced duty. These are outlined below under 7.6.4 (Project Specific Costs).

#### 7.6.3.2. Contractors

111. Contractors are least affected by changes to the Regulations, and their main costs will come from the need for familiarisation with the new Regulations.

112. The present value cost of familiarisation has been estimated at £180.

#### 7.6.3.3. Designers

113. Designers will face two main costs as a result of the proposed Regulations: familiarisation costs, and training costs.

114. The present value cost of familiarisation has been estimated at £142.

115. The present value of the training cost to a designer is estimated to be between £240 and £420. This is made up of the time spent on a training course and the cost of the course itself.<sup>41</sup>

#### 7.6.3.4. Co-ordinators

116. Co-ordinators will face a familiarisation cost resulting from the new regulations. This is estimated to cost each co-ordinator £142.<sup>42</sup>

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<sup>40</sup> This has been calculated by multiplying the wage of a client (adding 30% for non-wage labour costs) by the number of hours familiarisation is expected to take.

<sup>41</sup> We assume a training course takes eight hours and the training course costs between £50 and £230.

117. Co-ordinators will also face training costs in order for them to meet the new competence standards. This is estimated to cost between £437 and £875.<sup>43</sup>
118. Members of APS are expected to undertake a re-assessment procedure which is estimated to cost approximately £97 per person. (This is made up of two hours of staff time and a £50 fee.)

#### **7.6.4. Project Specific Costs**

##### ***7.6.4.1. Project Currently Following Best Practice***

119. A project where client, contractors and designers are already following best practice will have no additional per project costs imposed on it by the proposed Regulations. There will be per project cost savings for clients from the adoption by them of an industry-wide approach to checking the competence of contractors and designers. (see paragraph 98) This cost saving is estimated at £99.
120. There will also be a cost saving for designers and contractors as producing the demonstration of competence will take significantly less of their time (see paragraph 100). We assume that, on average, designers and contractors have to submit between two and six tenders before successfully being engaged on a project. The cost saving from the streamlined tendering process are estimated at between £91 and £273 for designers and between £86 and £259 for contractors.

##### ***7.6.4.2. Project Compliant With CDM 94 But Not With CDM 2007***

121. For a project compliant with CDM 94 but not compliant with CDM 2007, clients will be required to ensure that there are suitable arrangements in place to manage health and safety. (see paragraphs 6 and 7). The cost of this requirement has been estimated in research commissioned by HSE to be, on average, £170 where the project is under £200,000.<sup>44</sup>
122. There will also be cost savings from a simplified procedure for clients to check the competence of co-ordinators, contractors and designers, for contractors and designers to demonstrate competence (see paragraphs 98-100). The competence-check cost savings are estimated at £99 for clients, and at between £91 and £273 for designers and between £86 and £259 for contractors.
123. If construction projects experience a 3% increase in productivity due to the factors outlined in paragraph 96 (including greater effectiveness of the co-ordinator and increased client involvement) then for a project valued at £75,000 the cost savings are £2,250.

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<sup>42</sup> This has been calculated by multiplying the wage of a co-ordinator (adding 30% for non-wage labour costs) by the number of hours familiarisation is expected to take.

<sup>43</sup> This is based on the assumption that a training course takes between ten and twenty hours and costs between £200 and £400.

<sup>44</sup> See Table 10 for details of estimated costs for projects of all sizes.



### **7.6.4.3. Project not Compliant With CDM 94 or CDM 2007**

124. HSE commissioned research to identify the total current costs of CDM 94. This research estimated that the total cost to clients for a project of value between £50,000 and £100,000 are £1,540. For designers, the costs are estimated at £1,040 and for contractors, £2,290. In addition to these costs are the costs, and cost savings, outlined above for a project currently only compliant with CDM 94.

## **8. Small Firms' Impact Test**

### **8.1. Option 1: Do Nothing**

125. No additional impacts are expected from this option.

### **8.2. Option 2: Revised Set Of Regulations Supported By A New ACoP or Guidance**

126. According to figures compiled by the DTI, smaller construction firms constitute 93% of the total number of firms in the industry, carry out 20% of the work done measured in terms of output and employ 36% of the workforce<sup>45</sup>. However, HSE statistics show that construction firms employing fewer than 15 persons account for 67% of all workers killed on building sites across the country<sup>46</sup>. They are therefore responsible for a disproportionately large number of fatal injuries. HSE does not collect data on major injuries according to the size of company or project, but there is usually a close correlation between the number of fatal and major injury accidents. The situation is very different for the largest firms. A press release issued by the Construction Confederation in September 2006 on accident incidence at Major Contractors Group (MCG)<sup>47</sup> sites stated "There were no fatalities reported on any project where an MCG company was working during the 12 months leading to March 2006."
127. The importance of small firms to the construction industry was recognised at the outset of the revision process, and representatives from Industry Associations with large numbers of small business members were included on the CONIAC CDM working group. These included the Federation of Master Builders (FMB), the Electrical Contractors Association (ECA) and the Construction Confederation representing contractors, the Construction Industry Council and the Royal Institution of British Architects representing planning supervisors and designers. Each of these organisations have expressed support for the revised Regulations, and have confirmed to HSE that they do not think that the revisions create any new or unnecessary burdens on their small business members. Several have commented that they expect their smaller business members to benefit because the Regulations are simpler and clearer, and because the ACoP contains clearer guidance on competence assessment. The effect on small firms will be a particular focus of the eventual evaluation of the Regulations (see paragraph 149).

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<sup>45</sup> <http://www.dti.gov.uk/sectors/construction/ConstructionStatistics/page16429.html>

<sup>46</sup> HSE Construction Sector's Fatal Database

<sup>47</sup> The MCG represents 14 of the UK's largest construction companies (<http://www.mcg.org.uk/>).

128. Construction clients were represented on the working group by the Construction Clients Group (CCG). CDM 2007 strengthens the role of the client in ensuring that suitable health and safety management arrangements remain in place throughout the life of the project. These changes make existing duties in the Health and Safety at Work etc. Act 1974 (HSWA) and the Management of Health and Safety at Work Regulations 1999 more explicit in that they put a duty on the client to take reasonable steps to ensure that there are, and continue to be suitable management arrangements to ensure health, safety and welfare on site, and that the design of any structure intended for use as a workplace complies with the Workplace (Health, Safety and Welfare) Regulations 1992.
129. The majority of respondents to the consultation felt the clients' duties generally were reasonable and appropriate, and the support was largely consistent, irrespective of the size or type of respondent. There was also majority support for the specific duties relating to management arrangements, allocation of sufficient time and resources, and a belief that the proposed role of the co-ordinator would provide the support needed by clients. However, concerns were raised about co-ordinator competence and how inexperienced clients would know (or be able to ensure) that the arrangements made by others were adequate. These concerns focussed in particular on non-notifiable projects, where a co-ordinator was not formally required.
130. Smaller clients whose work is not primarily focussed on the construction industry were not well represented in the formal consultation responses. In January, HSE decided to appoint an industry secondee to further explore the concerns of this group. Tim Kind, who works for the Forum for Private Business and sits on the HSC's Small Business Trade Association Forum was appointed to carry out this study. His report was delivered in April, and there were four main findings:
- There is a lack of integration between the planning, building control and CDM regimes and this creates unacceptable burdens on SMEs;
  - Smaller clients understand the planning and building control regimes, but are largely unaware of what is required of them by CDM;
  - Small client were concerned about what was perceived as a 'new' duty on clients, and about their ability to comply with it and the burden that this would place on them;
  - Smaller clients believed that the construction industry should take responsibility for 'putting its own house in order' rather than placing new duties on clients.
131. In response to these concerns, HSE has:
- Modified the duty which appeared in the consultation draft to make it less onerous, clearer and easier to understand;
  - Modified the Approved code of practice so that the client chapter gives clearer guidance on what is expected of smaller and one-off clients;
  - Begun work with the Department for Communities and Local Government to look for ways to achieve better integration of the planning, building control and CDM regulatory regimes, with a view

to bringing forward a simplification proposal should discussions identify changes which would reduce the burdens on small businesses;

- Continued its work with the Construction Clients Group (CCG) to assist with the production of simple industry guidance for small and one-off clients;
  - Begun work with its Local Authority partners to explore ways in which the CCG's industry guidance can be distributed by Planning and Building Control departments whenever planning permission or Building Regulations Approvals are sought.
132. The findings of Tim Kind's report and HSE's response have been fed back into the HSC's Small Business Trade Association Forum, and the CCG. Members of the SBTAF re-iterated the need for more joined up working between HSE and the Department for Communities and Local Government in order to achieve better integration between the CDM, Planning and Building Control regimes. Some members expressed concern that some small and one off clients may not have the competence to discharge the strengthened duty. Others supported the revision and felt that the main intention was to improve standards on smaller projects and reduce the amount of bureaucracy associated with the Regulations. There was general agreement amongst members that there is a lack of understanding within small businesses regarding client responsibilities and that it is important that communications are improved and attempts are made to increase awareness levels of this issue within small businesses.
133. The Construction Clients Group remains concerned about the ability of small and one off clients to meet the new duty, and in light of this is committed to working with HSE both in the development of industry guidance targeting this group, and to helping HSE to raise client awareness during the launch and benefits realisation programme associated with the Regulations.

## 9. Competition Assessment

### 9.1. Option 1: Do Nothing

134. No additional impacts are expected from this option.

### 9.2. Option 2: Revised Set Of Regulations Supported By A New ACoP or Guidance

135. The construction industry is characterised by having a small number of very large firms while the vast majority of firms are in the small and medium sized category. No firm has a market share greater than ten per cent and the three largest firms together account for less than thirty per cent of the total market.
136. Revising existing Regulations will not alter the competitive make up of the construction industry, either in terms of benefiting some firms more than others, or firms of a particular size over those of a different size. Nor will the revised Regulations affect access to the market by increasing set up or ongoing costs unevenly.

137. While the industry is experiencing rapid technological change, the Regulations will not affect the ability of firms (ie clients, contractors, designers and co-ordinators) to compete in taking advantage of these changes or to compete in other areas such as price, quality, range or location.

## 10. Balance Of Costs And Benefits

### 10.1. Option 1: Do Nothing

138. There are no costs or benefits expected from this option.

### 10.2. Option 2: Revised Set Of Regulations Supported By A New ACoP or Guidance

139. Table 13 gives a summary of the estimated costs and benefits associated with option 2.

**Table 13: Summary of Costs and Benefits for Option 2<sup>21</sup>**

	Present Value, over 10 year Appraisal Period (millions)		Annualised Values (millions)	
	Minimum	Maximum	Minimum	Maximum
Total benefits of option 2 (Influence Network Approach)	£337	£1,142	£39	£133
Total benefits of option 2 (ECIA approach)	£536	£1,849	£62	£215
Total benefits of option 2 (ECIA approach, including non-injury accidents)	£740	£3,232	£86	£376
Total net costs of option 2	-£2,671	£1,393	-£310	£162

Note: Negative values indicate cost savings

## 11. Uncertainties

### *100% Compliance With Proposed Regulations<sup>48</sup>*

140. The costs above have been estimated under the assumption that there will be the expected level of compliance estimated by HSE inspectors and staff. If this assumption is dropped and 100% compliance with the proposed Regulations is assumed then the costs and benefits of the proposed Regulations will both increase.

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<sup>48</sup> The costs of the proposed Regulations have been estimated using the same methodology as set out for each of the costs above. The difference is that the expected increase in the level of compliance is the level that will raise compliance to 100%.

141. The costs and benefits of the proposed Regulations under 100% compliance are set out in the tables below.

**Table 14: Benefits Of Option 2 Assuming 100% Compliance**

<b>Safety Benefits</b>	<b>Present Value of Benefits Over 10 year Appraisal Period (millions)</b>	<b>Annualised Benefits (millions)</b>
<i>Influence Network Approach</i>	£3,367 to £3,427	£391 to £398
<i>ECIA Approach</i>	£5,357 to £5,547	£622 to £644
<i>ECIA Approach, including non-injury accidents</i>	£7,397 to £9,697	£859 to £1,127

Table 15: Costs Of Option 2 Assuming 100% Compliance<sup>21</sup>

	Present Value, over 10 year Appraisal Period (millions)		Annualised (millions)	
	Minimum	Maximum	Minimum	Maximum
<i>Costs of changed duties</i>				
Familiarisation costs	£114.4	£177.5	£13.3	£20.6
Changed client duty costs	£1,441.0	£1,621.1	£167.4	£188.3
Co-ordinator training costs	£4.8	£9.1	£0.6	£1.1
<i>Costs of increased compliance with existing duties under CDM 94</i>				
Designer training costs	£44.7	£78.2	£5.2	£9.1
Planning supervision/co-ordination costs	£2,322.4	£3,405.2	£269.8	£395.6
Cost to client of competence checks	£29.9	£307.1	£3.5	£35.7
Cost to client to ensure information is available	£389.3	£1,320.1	£45.2	£153.4
Cost to contractors of providing information and training	£124.0	£131.8	£14.4	£15.3
Cost to principal contractor of consulting the workforce	£125.3	£639.8	£14.6	£74.3
<i>Cost Savings</i>				
Savings due to productivity improvements	-£9,792.9	-£8,813.6	-£1,137.7	-£1,023.9
Savings due to improved guidance on checking and demonstrating competence	-£1,943.3	-£908.9	-£225.8	-£105.6
<i>Costs to HSE</i>	£0.1	£0.1	£0.01	£0.01
<b>Total</b>	<b>-£7,140.3</b>	<b>-£2,032.5</b>	<b>-£829.5</b>	<b>-£236.1</b>

*Health and Safety Benefit Uncertainties*

142. The estimated health and safety benefits are uncertain. It is unlikely that they will be smaller than the magnitudes estimated as long-term benefits flowing from designers considering the risks with the intended use of the building have not been quantified. Commercial benefits are likely to arise from a reduction in future expenditure, (in terms of time and money), by workplace (e.g. factories, office, schools) owners and occupiers because health and safety issues are tackled at the design stage, rather than alterations being required after occupation. It can be very expensive to modify unsafe traffic routes, slippery floor surfaces, and poor access to lights for cleaning and maintenance purposes

if such issues are not addressed at the design stage. Potential litigation costs arising from accidents or ill health linked to such features should also be reduced. The benefits from both of these could be substantial.

#### *Productivity Increases*

143. It has been estimated that the proposed Regulations could reduce project costs by 3%. If the reduction in project costs matched the 'Demonstrations' with a reduction of 6% then the value of the productivity increases would be £3.9 billion to £11.8 billion assuming expected compliance and £17.6 to £19.6 billion assuming 100% compliance, over the appraisal period.

#### *Other Cost Uncertainties*

144. There are a number of uncertainties in the costs that have been estimated. To reflect these uncertainties ranges have been used where appropriate.

## **12. Enforcement And Sanctions**

145. Depending on the type of construction activity involved, the Regulations will be enforced by either the Health and Safety Executive or Local Authorities.
146. Compliance is expected to be higher, due to many of the requirements being easier to understand for duty holders. Many of the requirements are already being met within the industry and there is the capacity to share this existing compliant practice as well as good practice.
147. Inspectors will identify non-compliance by responding to queries raised, investigating accidents and incidents, and routine checks. Inspectors may offer duty holders information and advice. Where appropriate, enforcement action may be taken in accordance with the HSC Enforcement Policy Statement.
148. The Health and Safety at Work etc. Act 1974, section 33 (as amended) sets out the offences and maximum penalties under health and safety legislation.

## **13. Arrangements For Monitoring And Evaluation**

149. HSE commissioned research to inform this document, and to provide baseline data for future evaluation of the Regulations. There will also be post-implementation monitoring of the Regulations, including the incidence of fatalities, injuries and near misses, to determine impact in the light of ongoing feedback (Infoline enquiries, operational and stakeholder feedback etc); and formal evaluation is expected to take place around 5 years after implementation. The evaluation will encompass all aspects of the proposals including the impact of the changes on small clients and the effect of the measures described in paragraph 131. It is estimated that this evaluation will cost between £75,000 and £100,000.

## 14. Summary and Recommendation

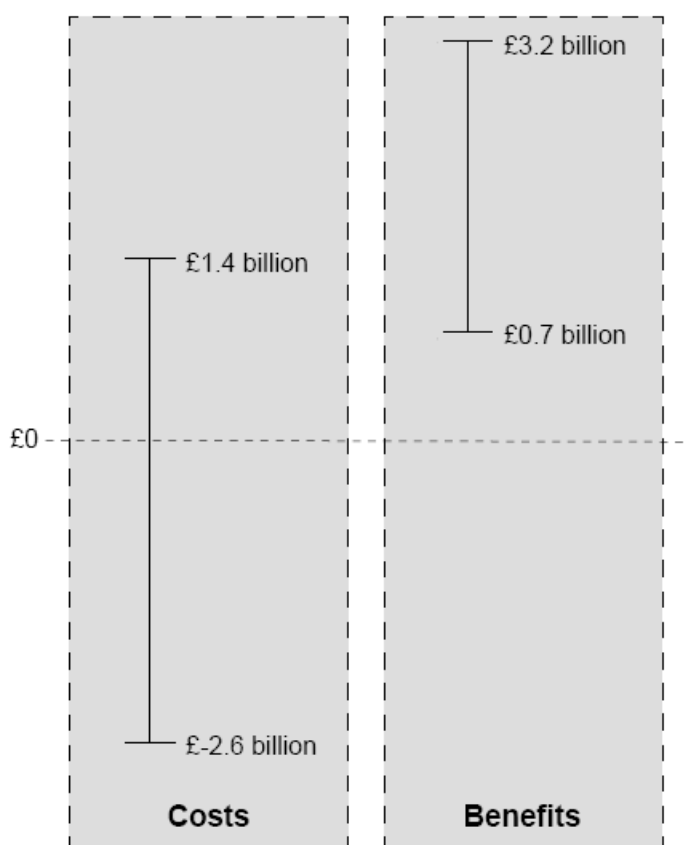
**Table 16: Summary total costs and benefits over the ten-year appraisal period**

Total Present Costs (millions)	Total Present Benefits (millions)
-£2,671 to £1,393	£740 to £3,232

150. Table 16 presents the total benefits estimated under the ECIA approach (see paragraph 55). These figures are singled out because they are felt to best represent the costs and benefits which are likely to result from the changes. Note that a negative cost indicates a cost saving. The benefits also include a contribution from the benefits which would accrue from a reduction in non-injury accidents.

151. Figure 1 presents the overall costs and benefits of Table 16 in graphical form.

**Figure 1: Summary total estimated costs and benefits**



152. The cost estimates vary between a potential cost saving of £2.6 billion at one extreme to a potential cost of £1.4 billion at the other. A general contributing factor to this uncertainty is the fact that in the relevant research, project costs have been estimated according to their value, with no account taken of whether they are notifiable or not. In the RIA we have attempted to link the projects value to whether or not they are notifiable, and this has introduced an extra layer of uncertainty around the cost figures. Specific assumptions about changes in levels of compliance also contribute to the wide variation in many of the calculations. For example, the planning supervision/co-ordination costs



(paragraph 88) are estimated for a range of compliance rates between 50% to 55% and 60% to 65% - so the two extremes of the possible outcomes are a 5% point increase in compliance or a 15% point increase – a factor of 3 different. Similarly, possible productivity savings are corrected for estimated existing compliance and likely future compliance. This gives a range of possible changes in compliance of between 5% and 15%, which produce widely divergent figures. Since we are considering cost savings together with costs, the ranges can fall either side of zero, which adds to the feeling of a wide range.

153. A substantial driver for the variation in the benefits estimates are variations in the predicted compliance rates (see paragraph 55). Since this is also a key factor influencing the cost variations, the cost and benefit ranges set out in Table 16 should not be regarded as being wholly independent of each other. Higher compliance rates will tend to lead to higher end costs, but also higher end benefits. This relationship is not a direct one because there are other assumptions within the RIA which affect costs and benefits independently of one another, but it does mean that outcomes involving opposite ends of the cost and benefit ranges (for example costs of 1.4 billion and benefits of £0.7 billion) are unlikely to occur in practice.
154. Taken at the highest end of the ranges, the costs would amount to £1.4 billion, with benefits of around £3.2 billion, giving a net gain to society of around £1.8 Billion. Taken at the mid point, cost savings of around £0.6 billion would be associated with benefits of around £1.9 billion, giving a net gain to society of £2.5 billion. Taken at the lowest end of the ranges, cost savings of around £2.6 billion would be associated with benefits of around £0.7 billion, giving a net gain to society of around £3.3 billion.

#### 14.1. Recommendation

155. Concerns have been raised about the ability of small or ‘one off’ clients to comply with an enhanced duty placed on them under the revised regulations (see section 8). In response to these concerns, HSE has:
- Changed the regulation to make it much clearer and less onerous;
  - Greatly strengthened the guidance for smaller clients in the ACoP
  - Worked with the Construction Clients Group (CCG) to develop industry guidance specifically targeted at small and one-off clients and will be arranging for this guidance to be distributed through Planning Control, and Building Control offices so that people receive that guidance at point of need;
  - Begun work with the Department of Communities and Local Government (DCLG) to seek ways of achieving better integration between the Building Control, Planning Control and the CDM regimes. Where opportunities are identified, these will be incorporated into Simplification Proposals to the Cabinet Office’s Better Regulation Executive.
156. Small clients will be the key focus for the launch arrangements for the regulatory package to make sure that they gain a clear understanding of what is expected from them; that the information they

need will be provided where and when they need it and that the approach they adopt is proportionate to the health and safety risks of the project,

157. Whilst HSE recognises the concerns which have been raised, it remains committed to achieving improved health and safety performance on smaller projects which are responsible for a disproportionately high number of the fatal accidents (see paragraph 126). There will be business benefits to clients in that the improved standards of management will make it more likely that the work will be delivered on time, within budget and to the expected quality standards. HSE and the CONIAC CDM Working Group who have assisted with the revision strongly believe that clients should have duties commensurate with their level of influence. HSE is steadfast in its belief that the changes are justified, and that the actions outlined above will be sufficient to address these concerns.
158. On balance, given the strong support shown for the proposals during the public consultation and subsequent development, and the favourable comparison between costs and benefits, it is recommended that the proposed regulatory changes be proceeded with.

## **Annex: Implications for “Administrative Burden” Measurement**

1. In 2005 PricewaterhouseCoopers was commissioned by the UK government to measure the total administrative burden placed on firms as a result of government regulation and intervention. This work resulted in the construction of a baseline against which future interventions would be measured. This annex gives figures to update that baseline.
2. The administrative burden baseline was calculated under the assumption of 100% compliance. Maintaining this assumption means that there are no changes in the total burden as a result of the costs outlined in section 7.2.2.2.
3. Section 7.2.2.1 contains three new sets of costs associated with the regulations. The client duty and training costs are policy costs, so also do not impact on the administrative burden. Familiarisation costs do affect the total administrative burden, however, and these costs (under 100% compliance) come to between £114.4 million and £177.5 million in present value terms (£13.3 million and £20.6 million, annualised).
4. The cost savings in section 7.2.3 will reduce the total administrative burden on business as a result of health and safety regulations. Assuming 100% compliance, the burden will be reduced by between £908.9 million and £1,943.3 million in present value terms (between £105.6 million and £225.8 million, annualised).
5. These figures do not affect the calculations and conclusions of the main body of this document.

**MINISTERIAL DECLARATION**

I have read the Regulatory Impact Assessment and I am satisfied that the benefits justify the costs.

Signed .....

Lord McKenzie of Luton

Date .....

**CONTACT POINT**

Michael J Ryan  
Health and Safety Executive  
Level 5 South Wing, Rose Court, 2 Southwark Bridge, SE1 9HS  
Tel: 020 7556 2106, e-mail: [michael.ryan@hse.gsi.gov.uk](mailto:michael.ryan@hse.gsi.gov.uk)

## **PART II**

### **NORTHERN IRELAND COSTS AND BENEFITS**

#### **The Construction (Design and Management) Regulations (Northern Ireland) 2007**

1. The Northern Ireland construction industry is extremely diverse with clients, contractors and designers ranging from the self-employed to multi-national companies. There are around 73,000 people employed in construction in Northern Ireland. Everyone in Northern Ireland is potentially a construction client and could be an individual or organisation from any business sector.
2. The Northern Ireland costs and benefits are based on the Great Britain assessment for the GB Regulations. To estimate NI costs an apportionment factor is used of the total number of people employed in construction in NI to the total number employed in construction in GB, i.e. 2,310,000:73,000<sup>49</sup> or **3.2%**.
3. Applying the apportionment factor of 3.2% to the GB costs figures shows that NI costs, over the 10 year appraisal period, vary between a potential costs saving of £86.4 million to a potential cost of £44.8 million. Benefits vary from £23.7 million to £102.4 million.

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<sup>49</sup> Figures are taken from Quarter 1 2007 of the Labour Force Survey provided by Department of Enterprise, Trade and Investment Statistics Research Branch.