REGULATORY IMPACT ASSESSMENT

SAFETY, HEALTH AND WELFARE AT WORK (CONSTRUCTION) REGULATIONS 2006

Prepared by the Department of Enterprise, Trade and Employment

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Department of Enterprise, Trade and Employment

Note

The Department of Enterprise, Trade and Employment has prepared this Regulatory Impact Analysis (RIA) in consultation with the Health & Safety Authority who prepared the Regulations on behalf of the Department. This RIA can be considered a Screening RIA under the terms of the RIA Guidelines *How to Conduct a Regulatory Impact Analysis* (Dept. of the Taoiseach, 2005).

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Executive Summary

Construction activities are typically labour-intensive and high risk in occupational health and safety terms. Growth in the Irish economy has seen the Construction Industry workforce almost double in the last 7 years. Over the same period, there has also been an increase in the number of fatal accidents in the sector, with 23 occurring in 2005 compared to 18 in 1998. With an increasing workforce and a recent increasing number of fatalities, a tightening of the regulation of safety, health and welfare in the sector has become imperative.

Momentum for legislative address of workplace safety has also come from the European Union. In 1992 the Temporary or Mobile Construction Sites Directive (92/57/EEC) was introduced to tackle a number of issues relating to construction site worker safety. Regulatory measures were introduced in the sector in 1995 and developed on in 2001 through the recommendations of the tripartite Construction Safety Partnership. This latest phase of regulations is a further development with an emphasis on client and management issues.

Costs related to the impact of safety and health issues in the sector include insurance, fines, liabilities, lost output, legal fees, costs of shutdowns/site closures, inquiries, etc. Earlier regulations also introduced training costs in the form of a general safety awareness scheme and task-specific construction skills certification. The Health & Safety Authority estimates that enforcement and awareness activities in the sector accounted for €8.7m of its budget during 2005, roughly equivalent to €35 for each construction worker employed in the sector. The new regulations propose to take account of structural changes as regards certification schemes and also to clarify the nature of client and project supervisor responsibilities.

Performance indicators for the success of the legislative measures will include injury, illness and fatality statistics maintained by the Authority, CSO Labour Market data as well as qualitative measures such as attitudinal and awareness surveys. The Health & Safety Authority also reviews its activities in various sectors, including Construction, in its Annual Report.

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1.0 BACKGROUND AND CONTEXT

1.1 Safety, Health and Welfare in the Construction Industry

Certain workplaces are more hazardous than others owing to exposure, working environment, and the attitude to preventative actions. Statistics maintained by the Health and Safety Authority (HSA), illustrate that the Construction Industry has a consistently poor record on worker health, safety and welfare relative to other industries. Construction activities are typically labour-intensive and high risk. Growth in the Irish economy has seen the Construction Industry expand to a workforce of over 240,000[1] mid 2005, up from 125,000 in 1998. In 2005, 23 fatalities were recorded in the sector, this compares with 16 in 2004 and 18 in 1998. With an increasing workforce and a recent increasing number of fatalities, a tightening of the regulation of safety, health and welfare in the sector has become imperative.

Momentum for legislative address of worker safety has also come from the European Union. In 1992 the Temporary or Mobile Construction Sites Directive (92/57/EEC) was introduced to tackle a number of issues relating to construction site worker safety. Regulatory measures were introduced in the sector in 1995 (S.I. No. 138 of 1995) to take account of the requirements of the Directive. In 1999, a Construction Safety Partnership was established between industry, employee and government representatives to agree measures to effect change within the industry. The Partnership proved a forum for suggestion of further legislative reform which led to the introduction of revised regulations in 2001 and the current legislative proposal which is the subject of this analysis.

The Health & Safety Authority is the national body in Ireland charged with responsibility for securing health, safety and welfare at work. As such, the Authority conducts and commissions research into the fatalities, injuries and accidents of industry sectors including the Construction Industry. Published reports on behalf of the Health & Safety Authority in this area include “Fatal accidents in the Irish construction industry 1991-2001:A survey of contributory factors” (2002), “An examination of dutyholder responsibilities: Fatal construction accidents 1997-2002” (2003) and “Safety Behaviour in the Construction Sector” (2003).

The Authority’s research, and other international research, has identified 3 main causes into Construction Industry fatal accidents: Headquarter Issues - problems at a general safety policy level or related to factors at project management rather than a site management level; Site Management (SM) issues -problems in immediate or on-going site management; Injured Party (IP) factors - relate to the individual worker and his immediate colleagues. Therefore it was recognised that there is a need to improve the awareness of health & safety requirements at all levels of the industry. The Authority’s review of Health and Safety at Work in Ireland 1992-2002 also showed that over one third of reported accidents involved employees with less than 1years experience in the sector.

[1] Source: CSO

The Construction Safety Partnership includes members from government departments, the social partners, the Health & Safety Authority and professional bodies. As a result of the Partnership, a number of initiatives have been put in place. Basic training has been implemented in the form of the Safe Pass card from FAS, introduced in 2000 but made mandatory in 2001[2], which educates construction workers on basic elements of risk awareness, personal protection and avoidance of health hazards. Site managers and safety representatives have also received training for their respective roles.

Induction has become a mandatory requirement for new employees/contractors on-site, as has plant/equipment certification, the provision of certain welfare facilities and supervision of activities. Also in 2001, a number of professions in the construction industry became regulated through the introduction of the Construction Skills Certification Scheme (CSCS) in the regulations. This established a programme of on-going training for plant operatives, roofers, scaffolders and other construction operatives in recognition of the fact that a standard for training was required and also taking into account the evolving nature of these roles. Additional roles were brought under the requirements of CSCS under the Safety, Health and Welfare at Work (Construction) Regulations 2003[3].

Table 1.1 Comparison 2003-2005: Total Number of Fatalities

Economic Sector	Fatalities			Total
	2003	2004	2005	
A – Agriculture, hunting and forestry	20	13	18	51
B – Fishing	0	3	2	5
C – Mining and quarrying	1	0	6	7
D - Manufacturing	7	3	7	17
E – Electricity/gas/water	2	0	0	2
F- Construction	20	16	23	59
G – Wholesale/retail trade; repair of goods	4	4	8	16
H – Hotels and restaurants	0	0	0	0
I – Transport, storage and communication	9	6	4	19
J – Financial intermediation	0	1	0	1
K – Real estate, renting, business	0	0	1	1
L – Public Admin/Defence	1	0	2	3
M – Education	0	1	0	1
N – Health/social work	0	1	0	1
O – Other community, social and personal services	4	2	2	8
Total	**68**	**50**	**73**	**191**

Note: These figures reflect the total number of fatalities, including Workers and Non-workers.

[2] SI 481 of 2001: Safety, Health and Welfare at Work (Construction) Regulations
[3] SI 277 of 2003: The 2003 Regulations amended Schedule 9 of the 2001 Regulations exclusively.

Despite the measures outlined above, the number of fatalities has remained high. Table 1.1 compares the number of fatalities across various industry sectors, while Table 1.2 demonstrates the corresponding injury rates. Table 1.3 illustrates the disparity between reported accidents to the Authority and injury figures recorded by the CSO through its surveys, though reporting has improved on earlier figures (see Table 4.2). The rate of fatalities per number of employees has run between 6 - 9% over the last 2 years; this represents a decrease on rates prior to the implementation of the 2001 Regulations but remains unacceptably high compared with other sectors.

Table 1.2 Comparison 2003-2005: Number of Reported Injuries (HSA)

Economic Sector	Injuries		
	2003	2004	2005
A - Agriculture, hunting and forestry	60	103	105
B – Fishing	3	5	14
C – Mining and quarrying	67	50	99
D – Manufacturing	1932	2009	1818
E – Electricity / gas / water	61	62	36
F – Construction	1117	1514	1612
G – Wholesale/retail trade; repair of goods	727	937	721
H – Hotels and restaurants	58	112	157
I – Transport, storage and communication	911	1066	1017
J – Financial intermediation	152	217	137
K – Real estate, renting, business	145	194	206
L - Public Admin / Defence	984	944	808
M – Education	80	94	85
N – Health / social work	679	940	947
O – Other community, social and personal services	191	195	135
Total	**7167**	**8442**	**7897**

Loss of life is an extreme outcome to any incident and research into the causes of fatalities has shown how the majority may have been prevented. Awareness education and training have addressed some of the on-site issues regarding health and safety.

Outstanding areas to be addressed include the consideration of health and safety issues at design stages, the competence of persons to carry out their duties and the balance between client objectives and practical requirements. Analysis of these areas suggests that the most appropriate method of reform is the introduction of a regulatory framework of duties for clients, designers and supervisors to ensure that due consideration is given to the health, safety and welfare of persons at work on construction sites. Section 17 of the Safety, Health and Welfare at Work Act, 2005 places emphasis on the responsibility of those commissioning or procuring construction projects and also those who are designing to be mindful of the safety, health and welfare requirements of those who will ultimately be involved in the work.

Table 1.3 Comparison 2003-2004: Number and rate of injury by economic sector (CSO)

Sector*	Injury						
	Total Injuries			>3 day injuries			
	Number	Rate per 1000 2004	Rate per 1000 2003	Number	Rate per 1000 2004	Rate per 1000 2003	Rate per 1000 2002
A-B	5100	45.3	36.2	1970	17.5	12.6	17.5
C-E	6700	22.5	35.6	3370	11.3	18.5	13.2
F	12600	54.1	56.4	5820	25.0	26.2	22.3
G	7400	27.7	20.5	1960	7.3	10.3	9.1
H	5500	49.0	33.6	690	6.1	9.7	12.7
I	4300	37.2	26.5	2110	18.2	11.5	15.3
J-K	3300	13.0	14.9	770	3.0	2.6	4.4
L	2800	29.0	28.9	1300	13.5	14.5	11.3
M	2000	16.7	15.1	410	3.4	4.2	2.6
N	5000	27.0	32.7	2830	15.3	10.7	13.3
O	2800	24.3	21.6	620	5.4	3.8	10.4
Total	**57500**	30.1	29.6	21840	11.4	11.9	11.8

*Sectors correspond to those as listed in Table 1.3

1.2 Background to Safety, Health and Welfare Legislation

The Safety, Health and Welfare at Work Act 2005 came into effect on September 1st, 2005. This Primary Legislation repeals and replaces the Safety, Health and Welfare at Work Act 1989, updates the law in respect of occupational health and safety, provides for the continuation of the Health and Safety Authority, and ensures Ireland's compliance with EU occupational health and safety law. In particular the Act addresses the requirements of Council Directives 89/391/EEC and 91/383/EEC to encourage improvements in the Safety and Health of workers at work including those in temporary/fixed-duration employment.

The 2005 Act is framework in nature, emphasising prevention, providing for broad general duties on employers, employees and others, and setting out organisational and structural arrangements. New elements of the law include provisions for increased penalties for breaches of the law, on the spot fines, testing of employees for intoxicants, and joint health and safety agreements. Section 17 of the Act sets out particular requirements for construction work procurement and design.

1.3 Legislative Context of Construction Regulations

The 2005 Act provides a basis for making Regulations, including those required to implement EU Directives on safety and health at work, such as on construction. Consultation held on the drafting of the Act highlighted the concerns of a number of parties relating to Construction Industry including professional bodies, local authorities, social partners and private groups. In light of the submissions made at this time, it was concluded that the Safety, Health and Welfare at Work (Construction) Regulations 2006 would be considered "a significant Statutory Instrument" and therefore warrant Regulatory Impact Analysis (RIA). Since the regulations are not directly linked to the transposition of EU Directives and are a development on existing regulations, a screening RIA was considered appropriate.

2.0 OBJECTIVES AND OPTIONS

2.1 Ultimate Objective

The ultimate objective of the Safety, Health and Welfare at Work (Construction) Regulations 2006 is to provide legislative backup in order to help prevent occupational injuries, illness and fatalities in the Construction Industry. This objective is in keeping with the aims of the Safety, Health and Welfare at Work Act, 2005 and related EU Directives. A safe working environment is basic right for employees. Both Society and the Economy benefit from a vibrant, healthy workforce.

2.2 Immediate Objectives

The immediate objectives of the Regulations are:

- to take account of policies regarding simplification, that regulations be made comprehensible to those who must comply with them,
- to introduce a clear framework of responsibilities throughout the construction industry to ensure that the health, safety and welfare of employees are protected,
- to provide for the recognition of qualifications of all workers in the construction industry,
- to set out obligations on the provision of welfare facilities for employees,
- to make specific requirements for high-risk elements of the construction industry,
- to transpose EU Directives on Health and Safety into Irish Law.

2.3 Consideration of Alternatives

2.3.1 'Do Nothing' Scenario

The Construction Industry has a widely varied record of compliance with Health and Safety Legislation. Since the introduction of the most recent regulations (2001), there has been no significant decrease in the number of fatalities. In fact, the Authority has noted an increase in fatality rates in the sector since 2004, compared with a trend of falling rates across other sectors (with the notable exception of agriculture). The industry is experiencing considerable growth, which presents logistical issues to inspectors: there are a growing number of employees in the area but construction sites are, by their nature, mobile and of a relatively short time-span.

Table 2.1 indicates the number of inspections the Authority has made in recent years relative to the number of employees in the Construction Sector. In 2005, over 6,000 inspections of the 13,552 conducted by the Authority were on construction sites. Therefore the Authority

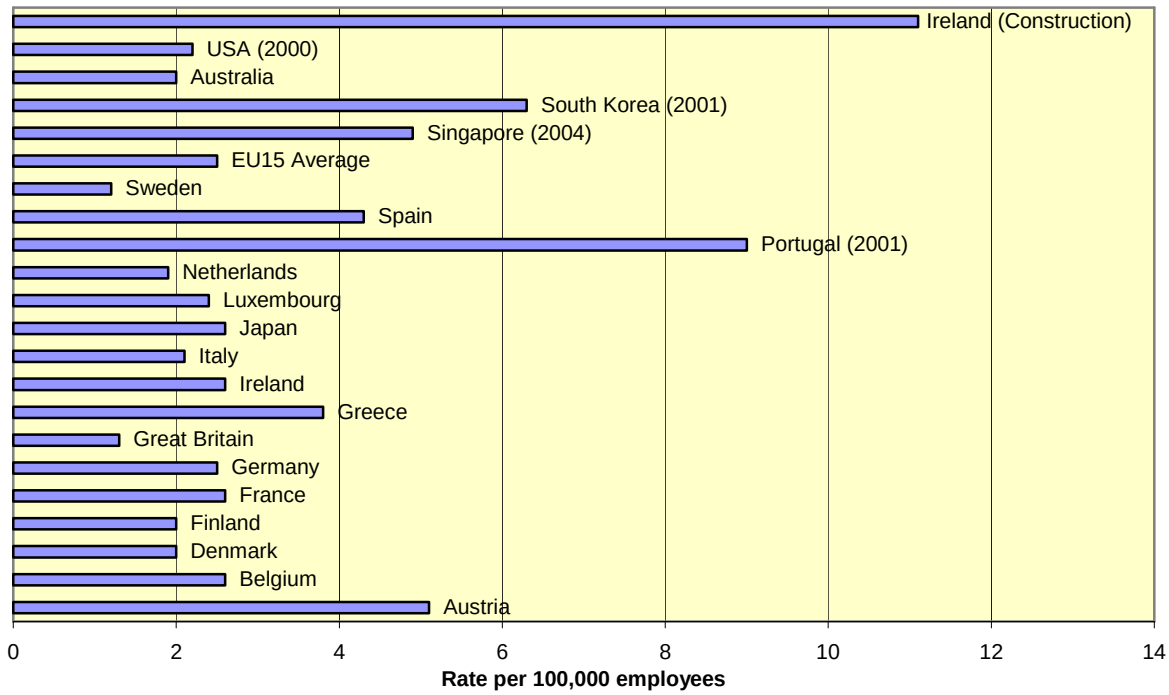
has invested, and continues to do so, a considerable mass of resources in tackling the safety issues on construction sites.

	2005	2004	2003	2002	2001
No. of employees	242,000	206,000	190,400	188,500	180,200
Inspections	6,203	5,048	4,615	6,118	6,508

Table 2.1 Inspections in Construction Sector 2001-2005

The Authority and partners in the Construction Safety Partnership have made a concerted effort to improve the culture of health and safety in the industry, including training and awareness programmes for employees, representatives and managers. The Authority operates in an advocacy role to complement and strengthen its enforcement objectives. Information campaigns have formed a key part of the process, including the provision of information in foreign languages and the development of pictogram instructions.

Figure 2.1 International Fatal Injury Statistics 2002

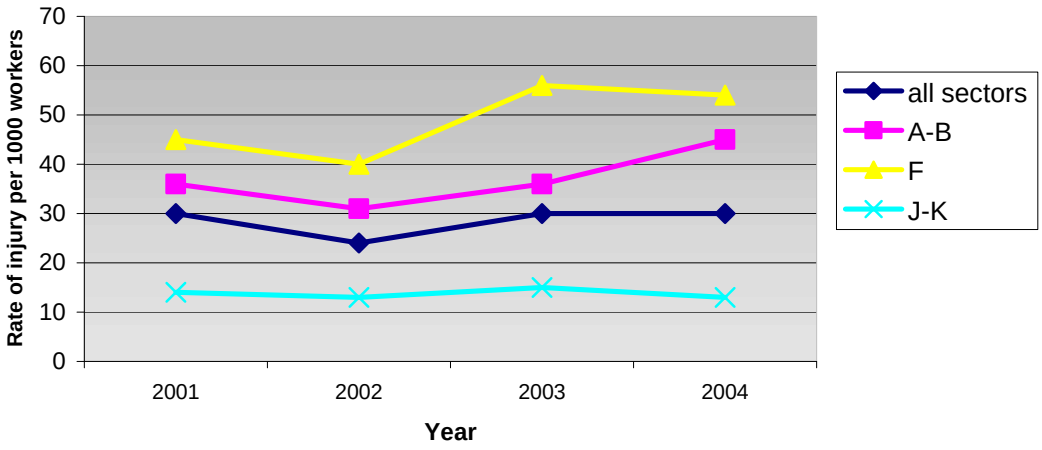


Note: Based on HSA fatality and CSO employment numbers for the industry 2002

Figure 2.1 illustrates workplace fatality rates for a number of developed countries based on the number of fatalities per 100,000 employees. The fatality rate of the Irish construction sector is much higher than the national averages for the majority of these countries. Some caution must be exercised in interpreting this comparison however, as the different countries have varied classifications for workplace injuries. Also, the Irish Construction Sector employs a higher proportion of workers than many other EU countries owing to the continuing

construction boom. This means that there are more workers at risk in a sector clearly recognisable as hazardous relatively to many other workplaces.

Figure 2.2 (HSA, 2006) demonstrates that the injury rate in the Construction Sector is clearly higher than other sectors and also has risen on 2001 levels.



A-B Agriculture, hunting and forestry, fishing; F – Construction; J–K Financial intermediation, real estate, renting, business.

Figure 2.2 Comparisons of Injury Rates 2001-2004 (HSA)

Research has underpinned the key issues to tackle to improve the safety record of the industry. Therefore, to do nothing to regulate the issue would be to allow the situation to prevail where lives are lost, people are injured or become ill and accidents occur which could all be prevented. Workplace accidents, illness and fatalities have significant impacts on the costs to the employees, to the industry, to insurers, to the economy as well as the social cost borne by families and friends. The threat of or existence of sanction is essential in such serious matters, as is the follow up enforcement activities such as inspections by the Health & Safety Authority.

2.3.2 Alternatives to Regulation

In general, where lives are at risk, it is recognised that alternatives to regulation as a stand-alone option are less appropriate. The Construction Industry is already regulated to a considerable extent in the area of Health and Safety (Safety, Health and Welfare at Work (Construction) Regulations 2001). Under the current regulatory situation, the Health and Safety Authority act as advocates of preventative health and safety actions as well as enforcers for non-compliance with legislation. A significant amount of the budget of the Health & Safety Authority is already assigned to advocacy activities. Therefore, the main alternative to regulation, i.e. advocacy, guidance support and information campaigns, is already being implemented to an appreciable level. Advocacy alone can be a poor model for

reform, since such information tends to only reach good practioners who are receptive to awareness campaigns and not those operating with disregard to the regulatory regime.

2.3.3 Alternative Implementation Models

Consideration of appropriate models of implementation of regulation on the construction industry must be mindful of the limited resources of the Authority to enforce legislation and the expanding size and scale of the workforce involved. In recent years, the construction industry has consistently been the most inspected sector of industry. This priority has been warranted on the basis of the high-risk nature of the business, the size of the workforce and the fatality record.

Self-regulation may be described as the "Control of activities by the private parties concerned without the direct involvement of public authorities" [4]. Self-regulations as an alternative in this industry is considered unlikely to be effective and therefore not appropriate. Many of the fatalities in the Construction sector occur in small and poorly-managed companies that are unlikely to respond well to self-regulation. Evidence of this can be seen from the level of reporting witnessed by such companies of accidents to the Authority; Table 1.2 and 1.3 compare the reported accidents to the Authority with the injury statistics compiled by the CSO. The consequences of non-compliance (i.e. illness, injury, death to persons) are too severe to exclude the involvement of the Courts in enforcement actions.

Co-regulation describes "the control of activities by a combination of private parties and public authorities"[5]. Co-regulation would require the development of an appropriate professional body across the industry. At present, a number of professional bodies operate within the industry, reflecting the varied roles and responsibilities of engineers, architects, designers and surveyors. Also within the mix of concerned parties are the unions, who represent some of the employees at ground level in the industry, and the Construction Industry Federation (CIF) representing employers. Outside of these organisations, there are clients who may include private persons or registered companies with financial investments in property and non-unionised employees.

In light of these many stakeholders, co-regulation would prove unwieldy and ineffective. Each of the stakeholders operates to a different agenda which could prove difficult to harmonise in the interests of health and safety. To date, the Authority has noted a breakdown in the chain of responsibilities for health and safety and a lack of understanding of the health and safety responsibilities of certain roles (see Appendix 1). These considerations suggest that co-regulation would also be an unsuitable option. However, the Authority, through the Construction Safety Partnership, engages with the various representative bodies to promote safety, health and welfare initiatives within the industry.

[4] Dept of the Taoiseach, 2005. RIA Guidelines: How to conduct a Regulatory Impact Analysis.
[5] *ibid*.

2.3.4 Alternative Compliance Incentives

Liability insurance for employers is available from insurance companies. Employer liability insurance (ELI) is compulsory in some EU states such as the UK but not in Ireland. The construction industry is a high-risk industry and as such the cost of insurance of this type is likely to be high. Compelling the industry to seek such insurance could inflate the price of premiums and add a significant cost to the industry. In practice, this initial rise may be offset in the long-term by savings on improved health and safety performance.

The Financial Regulator is currently undertaking its own Regulatory Impact Analysis on a proposal from the Competition Authority that it should publish claim statistics on ELI and public liability insurance (PLI). The availability of such statistics would inform the assessment of insurance as a non-regulatory (in safety, health and welfare terms) compliance incentive.

A recent industry survey suggests that uptake of ELI in the sector is relatively high (see Section 4.3.1). Therefore, an incentive exists for those with insurance to be compliant with health and safety legislation and to have low accident rates in order to maintain lower premiums.

2.4 Regulation Option

2.4.1 Proposed Amendments to Existing Regulations

The 2006 Regulations differ from the existing 2001 Regulations on a number of issues. The significant changes are listed below.

- A client 'election' is introduced to take account of the increasingly common use of non-traditional forms of contract where there are multiple project partners.
- Clients are required to appoint "competent" project supervisors with "adequate resources" within a prescribed timeframe and receive confirmation of acceptance in writing.
- Clients must co-operate with Project Supervisors by supplying information "relating to the state or condition of a structure" including any existing safety file.
- The regulations have been amended so that joint ventures or non-incorporated partnerships cannot act as project supervisors as legal advice was obtained to the effect that it is extremely difficult to enforce the Regulations on such "persons or organisations".
- Anyone taking on a designer or contractor must be "reasonably satisfied" that the designer/contractor is competent and has adequate resources.
- A new duty for designers to inform clients of their duties is inserted following concerns raised by designers about clients who are unaware of their obligations under the Regulations.

- The requirement of the Project Supervisor Construction Stage to report accident and dangerous occurrences is removed, but this remains the contractor/employer's duty.
- Safety Advisers must now be appointed by the Project Supervisor Construction Stage on sites where more than 100 persons are working.
- At the request of local authority officials and FÁS, a number of new activities are recognised as requiring Construction Skills Certification Scheme (CSCS) training, i.e. signing and lighting at road works, underground services detection and self-erecting tower crane operation; additions have also been made to take account of new plant types on sites.
- Provision is made for the recognition of the experience and training of workers from other Member States for the Construction Skills Certification Scheme tasks.
- The Regulations dealing with work at a height and lifting equipment are omitted, as it is intended that these will be dealt with, respectively, in the new General Application Regulations or other separate Regulations. The relevant existing provisions of the 2001 Construction Regulations will remain in place until the new lifting equipment Regulations are adopted.
- New provisions relating to the use of explosives are added to reflect the corresponding provisions of the proposed new Quarries Regulations.
- New requirements are introduced for visibility aids on vehicles; a timeframe for the requirements on new and existing plant is set out.

2.4.2 Proposed Implementation Model

A package of law, incentive and advocacy is seen as a balanced approach to dealing with safety in this sector. Each element of the package has its advantages; in this case law, when it is enforced, has a powerful incentive effect. As outlined in 2.3.1, the regulations will be supported by the advocacy, awareness campaigns and commitments to training made by the Health & Safety Authority and Construction Representation Bodies. The commitments of the Authority to enforce the statutory provisions and to generate awareness are set out later (Section 5).

3.0 PUBLIC CONSULTATION

3.1 Introduction

In the drafting of regulations and codes of practice, the Health & Safety Authority is obliged to consult "any other person or body that appears to the Authority to be appropriate having regard to the proposals to be submitted or as directed by the Minister" under Section 57 (2) of the Safety, Health and Welfare at Work Act, 2005. Appendix 2 contains a briefing note from the Health & Safety Authority on the Consultation Process for these Regulations.

3.2 Public Consultation on Draft Regulations

Public consultation on the draft Regulations began mid-September 2005, with the draft being posted onto the Internet. An interactive facility for making submissions was provided on the HSA website. The Authority also wrote directly to interested parties and made a general press announcement.

The Authority allowed one month for their consultation procedure, followed by a period of reflection. After the consultation, the comments were sent back to the Legislation and Guidance sub committee of the Authority who agreed responses to the submissions. Accordingly, the regulations were reviewed bearing in mind the observations of a very wide range of parties. A list of those who made submissions is contained in Appendix 2.

3.3 Consultation with Social Partners

The Construction Advisory Committee of the Health & Safety Authority includes representation from the Construction Industry Federation, the Unions, the Department of Finance and the Department of Environment, Heritage and Local Government. At this forum, a number of issues, which have been accommodated in the Regulations, have been discussed or come to light. Internal Authority consultation via the Legislative and Guidance (L&G) sub-committee of the Board and the Board itself also reflects the views of the social partners as both the L&G and the Board are tripartite in nature.

Following on the from the public consultation process, the Authority redrafted the regulations to amend outstanding issues and issued the Regulations to the Office of the Parliamentary Council. The Regulatory Impact Assessment will be finalised in line with the conclusion of the legislative text.

3.4 Consultation Issues

Submissions were made on the basis of a draft text provided by the Health & Safety Authority. The majority of submissions were made on the following topics:

- definitions of roles such as clients, project supervisors

- definitions of phrases related to appointments such as design process, construction stage
- definitions of fundamental phrases such as construction site, construction work
- client duties, in particular in relation to appointments
- information to be contained in safety and health plans and safety files and the responsibilities of project supervisors in relation to such information
- duties of designers and project supervisors
- safety officer appointment and role
- Safety Awareness Programme and Construction Skills Certification Scheme recognition and requirement of proof.

The Health & Safety Authority reviewed the submissions received and examined the practicalities of the points raised. The guiding light on the content of the Regulations was the EU Directive 92/57/EEC on Temporary and Mobile Construction Sites; deviations from the Directive are not possible as the Directive sets out the "minimum safety and health requirements" to be observed on construction sites. Any submission which suggested amendments to the fundamentals set out by the Directive could not be accommodated.

A considerable volume of the submissions related to the nature, timing and duties associated with appointments. The Authority took great care to deliberate over the appropriate delegation of responsibilities of those in appointed roles bearing in mind the practicalities of contractual arrangements and working procedures in the industry. Many of the submissions received provided practical insight to such arrangements and procedures that formed a basis for the final decisions taken.

4.0 COSTS, BENEFITS AND IMPACTS

4.1 Introduction

Costs indicators for poor Health and Safety can be relatively straightforward to identify since there are tangible results to occupational illness, accidents and enforcement actions. International research in this area suggests that education and awareness contribute to reduced costs of accidents but that benefits of regulations health and safety are usually difficult to measure and, consequentially, are underestimated. The success of any health and safety initiative is rarely associated only with regulation, but is complementary to principles driving the legislation and to how these principles are perceived by employers.

4.2 Current Costs related to Safety, Health and Welfare in the Construction Industry

4.2.1 General Costs

Indicators on the costs of poor health and safety implementation in the industry can be determined as the following:

- Lost time costs
- Fines
- Liabilities
- Legal costs
- Costs of shutdowns/site closures
- Inquiries, etc.

Construction accounts for a large proportion of the growth in employment in Ireland. However, the high injury rate and the associated number of persons who leave the industry due to work related injury means that the industry could face greater difficulty in attracting, retaining and training employees than would otherwise be the case. This potentially represents a large cost to the industry. It is also a significant cost to society in the form of healthcare, social welfare and loss of the quality of life for individual workers and their families. In addition, the requirement to employ immigrant workers to replace those who leave the industry imposes housing, infrastructural and social costs that would not otherwise be required.

The factor most associated with increases in accident rates in international studies is economic expansion in a particular sector. The growth rate in the construction sector continues to be unusually large; it is critical therefore that the construction regulations adequately address the key issues involved in construction accidents. During 2003, 17,900 workers were injured or became ill as a result of working in the construction sector. Of these, 11,800 were absent from work for more than three days. Since 2003 the labour force has increased by 27% (from 202,300 to over 240,000 in 2005) and it is likely that the number of injuries has also increased.

Legal costs in relation to health and safety performance relate to two issues: employee claims and enforcement actions. Employees injured on sites due to the negligence of employers/clients/etc could make insurance claims or take civil cases against those responsible. In the cases of fatalities, legal representation may be required at inquests. Liability insurance premiums are also likely to be affected by legal actions.

Year	1999	2000	2001	2002	2003	2004
Fatalities	16	15	17	21	13	15
Total Employed	142,100	166,300	180,200	188,500	190,400	206,000
Rate per 100,000	11.3	9.0	9.4	11.1	6.4	7.3
Accidents Reported	601	1,108	1,059	1,121	1,031	1,474

Table 4.1 Recent Trends in Construction Fatalities and Accidents

4.2.2 Regulatory Costs

The existing Safety, Health and Welfare at Work (Construction) Regulations 2001 require a number of appointments, which are implemented contractually in the industry. The requirement for these contracts and the timelines for these represent a cost to the industry. Such costs vary widely depending on the scope of work and time involved. Administrative costs are also put on the industry in the form of documentation that must be maintained, such as the safety and health plan, the safety file and records of employee training for Safepass/Construction Skills as appropriate.

Costs related to training were introduced in 2001 through obligations in the Regulations to employ workers who have 'SafePass' safety awareness cards and also those who have Construction Skills Certification cards for specific occupations. In many cases, employers bear the cost of putting workers through these courses. Evidence from surveys carried out as part of the Claritas Report (see Section 4.3.2) suggests that employers may bear the cost in up to two-thirds of cases.

The cost of attending the Safepass course depends on the provider and varies from €135 to €177 per individual. Over 560,000 cards for Safepass have been issued. Taking into account that it includes cards renewed, it is clear that this number exceeds the number of employees in the sector. Commentary from industry and associated professions suggests that persons of non-construction occupations (e.g. farmers, archaeologists, planning and environmental consultants, etc) who may perform work on construction sites are also undergoing the training. On the assumption that all 240,000 employees (CSO, 2005) in the sector in mid 2005 undertook Safepass and taking €155 as the average cost of the course, the year 1 cost would be of the order €37.2m. The card must be renewed every 4 years; on the current

employment figures this would suggest an annual cost of €9m to ensure that each employee has Safepass. Annual growth in the employment figures for the sector has averaged 8% since Safepass was introduced in 2000. Importantly, the 2001 Regulations only require that "craft and general construction workers as well as … persons undertaking on-site security work" undertake Safepass training. Therefore the actual cost associated with the existing Regulations is, though difficult to gauge, considerably lower than the €9m estimate.

Construction Skills Certification courses vary from €350 for plant operator training to €850 for Basic Scaffolding. Renewal costs are at a discounted rate and occur at five-year intervals. Over 45,000 cards have been issued under the Scheme. Costs are difficult to breakdown since the cost varies with the type of course and the numbers who qualify in each course but a general estimate of €5m per annum could be assumed.

Other costs associated with both CSCS and Safepass would include the cost of releasing employees to attend the training days. The Safety, Health and Welfare at Work Act, 2005 requires that employers must release employees for such training without penalty. The annual average construction wage is c. €40,000; assuming an employee is paid on release days for the courses, daily costs would be €110 per employee. Safepass and many of the CSCS courses (e.g. plant operator) are performed over 1 day while Scaffolding training involves 7-10 days. In practice, Safepass is provided at weekends by many trainers and employees may attend prior to taking up employment.

On the enforcement side, companies/individuals found to be in breach of the legislation may face court proceedings from the HSA. Details of such actions taken by the HSA in 2005 are included in section 4.4. Information is not presently available on such costs to industry. Fines made against employers under the 2001 Construction Regulations and Safety, Health and Welfare at Work Act, 1989 totalled over €230,000; this represents half of all fines made under safety, health and welfare legislation. Also in 2005 the HSA closed 26 construction sites. It is difficult to assess the cost of site closures/shutdowns as the duration of the closures varies with circumstances. Also, employees may in fact be redirected to alternative employment (i.e. another site) during such periods.

4.3 Research on Costs/Benefits of Health & Safety Issues

4.3.1 Economic Impact Assessment of SHWW Act 2005

Indecon International Economic Consultants were commissioned by the Department of Enterprise, Trade and Employment to carry out an Economic Impact Assessment on the introduction of the Safety, Health and Welfare Act 2005. The objectives of this assessment include:

"To carry out an economic assessment of the effect since 1989 of occupational safety, health and welfare law on the Irish economy, particularly on competitiveness, taking into account the

current law, the proposals in the new Safety, Health and Welfare Act 2005, the resources devoted to occupational safety health and welfare, the size of the workforce and the statistical data available with a view to ascertaining what benefits both economic and social accrue."

This assessment has regard to the different industry sectors which the legislation affects. This study provides a baseline for the existing costs to industry of complying with existing health and safety requirements. However, the construction industry formed part of the focus of the assessment as it is both high-risk and highly regulated under the legislation. A survey of industries was carried out to establish the perceived effectiveness of regulations and the attitude of the sector to the requirements of existing regulations.

Cost-Benefit Analysis in the area of health and safety is not a clear-cut exercise. Health and safety incidents often affect more than just the employees: a collapsed scaffold may cause materials as well as workers to fall; where an incident causes serious injury or damages a structure, the site may be closed for a period of inspection. Therefore the costs to industry of poor health and safety management can include the loss of productivity, time, materials and/or product. Spending on health and safety improvements is thus not restricted to complying with legislative demands but can have complementary impacts on final profits of a construction project.

Particular focus in the Economic Impact Assessment was given to the Construction Industry. The industry survey demonstrated that a significant majority of respondents felt regulations in the industry had contributed to improved working conditions, improved work performance and had reduced costs to the industry. However, there was a broad range of responses on the perceived costs of compliance with the legislation, suggesting that managers are unsure of how to assess these costs.

- Over 90% of respondents indicated that costs were less than 5% of gross annual costs, of which 37% suggested costs were less than 1%.
- Nearly 40% of respondents felt that the legislation had led to a reduction of insurance costs, while only 5% felt that insurance had risen as a result.
- Over 50% felt that the costs of accidents had decreased as a result of the legislation, with the remaining respondents indicating no observed impact on the costs of accidents.
- 85% of respondents felt the requirements for staff training in the legislation had a positive impact on their business.
- Almost 76% had a positive impression of the impact of investments made in accident prevention on their business.

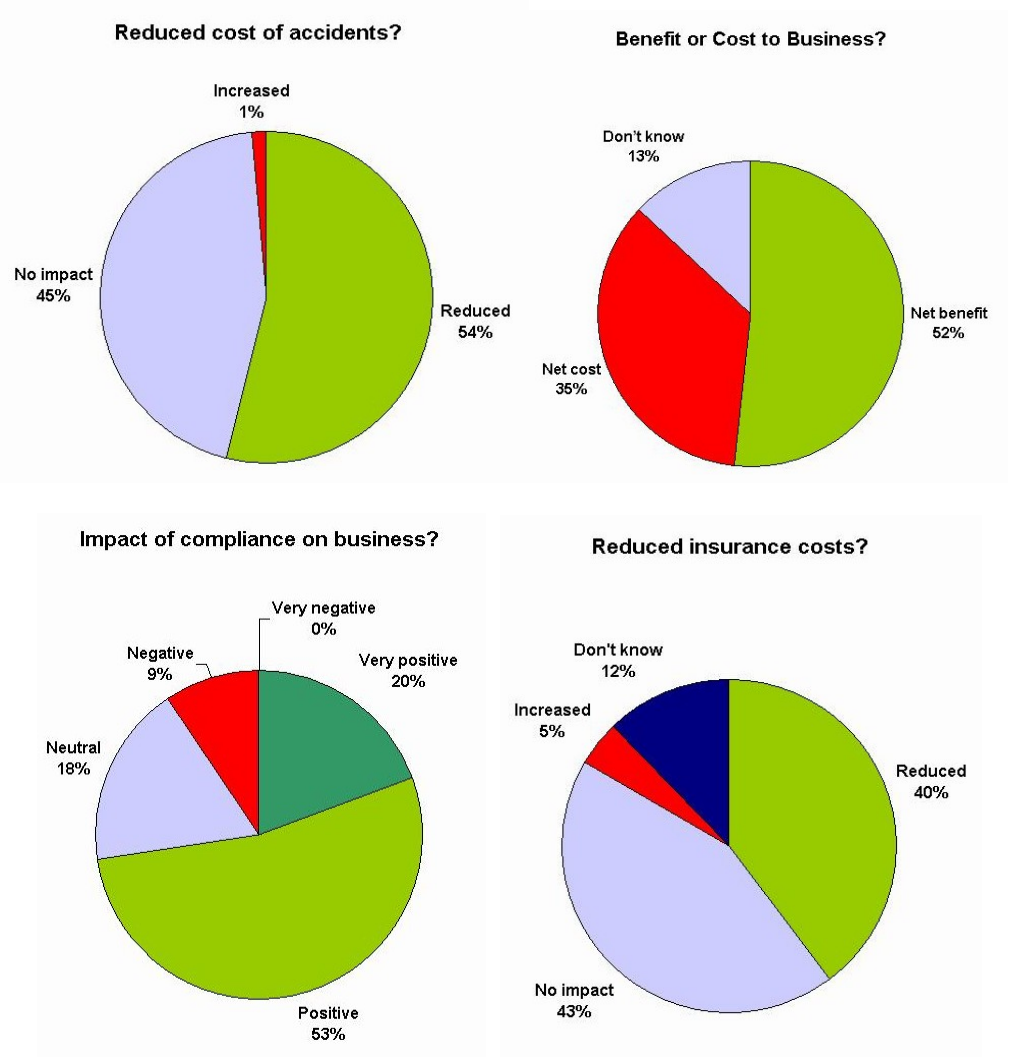


Figure 4.1 Survey of Impact of Legislation on Construction Firms

Overall, the survey demonstrated that the majority of the industry considered the requirements of the regulations to be beneficial to their business. The survey suggests that the costs of complying with legislation in this sector are not seen as an excessive burden.

Econometric analysis was carried out on the costs of accidents taking into account greater health and safety culture and enforcement. This analysis compares the various factors involved and seeks to identify potential relationships between them. Some factors can include injury, inspection and enforcement rates and age profile of the workforce (which can reflect the level of experience of the employees). International experience of econometric analysis in this field from the US and Canada demonstrates that greater enforcement of legislation minimally improves the rates of injuries/accidents in any sector.

Indecon availed of data collected by the Health & Safety Authority and the Quarterly National Household Budget Survey by the Central Statistics Office to carry out their analysis. The analysis estimates that, in the Irish context, as the number of inspections/enforcement actions increases by 10%, the rate of workplace accidents falls by 3.2%. A one-year lag was also

observed in the trend, whereby increased inspections led to a reduction in accidents in the following year.

An economy-wide assessment of the costs of accidents and illness in Ireland estimated an annual figure of €3.6billion, including lost output, insurance claims and other costs.

4.3.2 Claritas Report on Safe Pass and CSCS Schemes[6]

Claritas Consulting were commissioned jointly by the Health & Safety Authority (HSA) and FÁS, the National Training Authority, to conduct a review of the Safe Pass and Construction Skills Certification schemes to accommodate recommendations from the industry regarding delivery and content of the schemes. Both schemes were made compulsory for specific roles under the 2001 Construction Regulations. The Safe Pass Scheme provides a basic level of safety awareness on construction sites while the Construction Skills Certificate Scheme provides more specialised training including hazard awareness to specific high-risk tasks such as plant operation and scaffolding. The report was commissioned as part of a review of the performance of these schemes in delivering effective safety awareness training.

The report suggests that the provisions for delivery of Safe Pass in the 2001 Construction Regulations should be extended to include others besides FAS and also highlights the lack of recognition afforded to EU equivalent schemes. The regulatory requirement for completion of Safe Pass and CSCS for specific roles combined with the FÁS monopoly has apparently created a negative perception that the course is a revenue generator for FÁS and trainers.

The cost of Safe Pass/CSCS is borne by the applicant, i.e. employers and employees. Therefore there is an obligation on FÁS to keep this cost to a minimum. The report points to the non-commercial mandate of FÁS as guidance in this issue. There is no detailed cost analysis of the revenue accrued by FÁS through the provision and development of the course. A suggestion that the FÁS are only covering such costs by the revenue is included. Therefore the report suggests that Safe Pass/CSCS charges to applicants should keep pace only with provision and development costs for the course to preserve its integrity.

The Regulations in their current form have been mindful of the recommendations of this report. Provision has been made in the Regulations for recognition of equivalent training and experience in other European States for the purposes of the Construction Skills Certification Scheme. Since the report was compiled, the Construction Skills Certification Scheme has come under FETAC accreditation and been placed on the National Framework of Qualifications – a measure which the authors had proposed. Overall, the review sets out measures to ensure that the integrity and value of the schemes are maintained without entailing excessive training costs for the industry.

[6] This Report is due to be published shortly by the Health & Safety Authority & FÁS.

4.4 Costs of Enforcement

The Health & Safety Authority employs 164 staff as inspectors, professional specialists, administrators or clerical support. The Authority has 100 inspectors carrying out a range of roles including the development of legislative proposals at EU and national level, development of guidance, liaison with representative bodies, inspection, promotion, information and advisory activities, management and development of staff, investigation of complaints and accidents and the prosecution of offenders.

Table 2.1 (see Section 2.3.1) illustrates the trends of inspection of the industry in recent years. As outlined previously, in 2005 almost half of all Health & Safety Authority inspections were in the Construction Sector.

Economic Sector	Inspection Type			Total inspections
	Inspect for compliance	Investigate complaint	Investigate accident	
A - Agriculture, hunting and forestry	1128	21	38	1187
B - Fishing	1	2	1	4
C – Mining and quarrying	410	41	49	500
D - Manufacturing	1917	133	227	2277
E - Electricity / gas / water	47	6	9	62
F - Construction	4814	911	478	6203
G - Wholesale / retail trade; repair of motor vehicles, personal and household goods	1045	128	84	1257
H – Hotels / restaurants	41	26	7	74
I - Transport, storage, communications	801	68	49	918
J - Financial intermediation	10	3	1	14
K - Real estate, renting, business	361	37	37	435
L - Public Administration / defence	137	39	51	227
M - Education	29	21	7	57
N – Health / social work	114	18	16	148
O - Other community, social and personal services	137	35	14	186
Total	10992	1489	1068	13549

Table 4.2 Inspections made by HSA 2005

Table 4.2 expands on the nature of inspections. The majority of inspections were performed in the course of the HSA work; however, 15% and 8% of the inspections were taken on foot of complaints or accidents respectively. Two construction inspection campaigns were carried out in 2005; the first one in June resulted in over 1,500 inspections, covering construction site health and safety. The second campaign in September concentrated on local authority construction work with particular reference to roadworks and Client responsibilities under the 2001 Construction Regulations.

Table 4.3 indicates the notices served by the HSA and thereby reflects the number of instances in which action was required. It is evident from this table that the Construction Sector is one of the poorer performing sectors in complying with safety, health and welfare legislation. The HSA also noted a 54% overall compliance level in the sector, illustrating that there is considerable room for improvement in the performance of the sector.

Economic Sector	Number of notices				% visits action taken
	Number inspections	Prohibition notices	Improvement notices	Improvement directions	
A - Agriculture, hunting and forestry	1187	42	54	0	8.1
B – Fishing	4	0	0	0	0
C - Mining and quarrying	500	21	41	0	12.4
D - Manufacturing	2277	26	131	5	7.1
E - Electricity / gas / water	62	0	0	0	0
F - Construction	6203	393	118	2	8.3
G - Wholesale / retail trade; repair of motor vehicles, personal and household goods	1257	8	55	3	5.3
H - Hotels / restaurants	74	1	4	0	6.8
I - Transport, storage, communications	918	0	14	0	1.5
J - Financial intermediation	14	0	1	0	7.1
K - Real estate, renting, business	435	0	18	0	4.1
L - Public Administration / defence	227	0	6	0	2.6
M - Education	57	0	5	0	8.8
N - Health / social work	148	2	6	0	5.4
O - Other community, social and personal services	186	0	5	0	2.7
Total	13549	493	458	10	7.1

Table 4.3 Notices served by the HSA in 2005

The Health & Safety Authority employs legal personnel to assist inspectors with prosecutions and closures. In 2004, 26 sites were closed by the Authority, with only 1 case requiring court proceedings to close. However, the Authority was involved in securing 13 successful court actions against employers under the Safety, Health and Welfare at Work (Construction) Regulations 2001 during 2005, with 7 of those involving indictable offences heard before the Circuit Court. The majority of the cases were taken on foot of serious accidents. Appendix 1 outlines the circumstances under which the HSA have been unable to take such action, and illustrates the further potential workload for the legal section of the Authority. The Authority's legal team prepares inspection files for submission to the DPP and liaises with the Gardaí.

Table 4.4 compares enforcement actions taken across the EU during 2004. Member States vary in the methods used for enforcement; some States utilise verbal warnings while others favour more formal action. On average, action is taken on 22% of sites across the EU. In Ireland, the Authority implements a combined model of awareness campaigns, inspections and enforcement action to give effect to the Regulations.

	Number of sites	Verbal warning	Written warning	Cessation of work	Fine	Legal prosecution	No instruments sites	No instruments %
Austria	2049	-	1665	6	-	138	958	47%
Belgium	357	104	61	4	-	1	142	40%
Denmark	528	125	171	39	18	25	252	48%
Finland	319	-	730	2	-	2	86	27%
France	3468	1102	7109	499	14	185	249	7%
Germany	3419	2673	1268	246	69	0	246	7%
Greece	2813	1005	5879	223	340	43	111	4%
Iceland	103	105	145	5	-	-	19	19%
Ireland	775	90	457	108	-	-	63	8%
Italy	5419	-	4719	55	4109	32	341	6%
Luxembourg	60	26	6	2	-	-	7	**12%**
Netherlands	551	-	146	232	122	1	165	30%
Norway	95	193	139	89	-	-	14	15%
Portugal	1615	416	2074	898	1956	3	128	8%
Spain	1540	1739	5839	298	1687	1	24	2%
Sweden	596	47	248	18	-	15	205	34%
UK	1255	-	368	608	-	4	704	56%
Total	24962	7625	31024	3332	8315	450	3714	15%

Table 4.4 Enforcement Actions taken in EU, 2004 (SLIC, 2004)

In 2005, the Authority undertook a determined campaign to address the health and safety issues of the sector. The actions taken included:

- Co-operated with the social partners and key bodies through the Construction Safety Partnership and Construction Advisory Committee.
- Carried out 6,203 construction site inspections, which addressed: site-specific safety and health plans and safety statements, welfare facilities, notification and appointment of duty holders, working at heights, site traffic and plant etc..
- The Safe System of Work Plan (SSWP) development and promotional work continued in 2005. It won the IMHOPET supreme innovation award for Construction industry from the ISSA at the World Health and Safety Congress in Florida in September. Training in 8 different languages DVD was also produced.
- A major public consultation process on draft Safety Health & Welfare at Work (Construction) Regulations and guidelines was completed.
- A joint initiative was agreed with ESB to help reduce contact with overhead and underground lines
- New codes of practice on underground services and roof work were published
- Major campaigns carried out on house building sector and on local authorities.

- Inspected 41 architectural and engineering practices to review compliance with the design and management part of the Construction Regulations.

The Authority therefore commits a considerable volume of resources to enforcing safety, health and welfare legislation in the sector. Costs associated with this practice include:

- the cost of employing inspectors and supporting staff,
- advertising and publications for awareness campaigns,
- legal costs for taking proceedings.

The Construction Sector accounts for a substantial proportion of the overall activities of the Health and Safety Authority. In 1997 the Authority estimated that it invested over 30% of its resources in the Sector; estimates for 2005 are closer to 50%. In 2005, over 45% of all inspections carried out by the Authority related to construction. The sector also accounts for a substantial part of the legal, publications, information provision and promotional costs of the Authority. The Authority estimates that the construction sector accounted for €8.7m of its budget during 2005, equivalent to a cost of €35 for each construction worker employed in the sector.

4.5 Costs/Benefits associated with Proposed Regulations

4.5.1 Potential Costs

The Safety, Health and Welfare at Work (Construction) Regulations 2006 do not introduce significant measures which would cause the industry to incur costs compared to the existing legislative requirements. Section 2.4.1 outlines the proposed amendments contained in the current text of the Regulations.

Formal appointments previously required under the 2001 regulations are maintained; however, timelines and notifications for the appointments are now specified. Submissions from the consultation period highlight the concern of clients that the cost of maintaining such appointments throughout these timelines will be an increase on existing contractual arrangements. In practice however, these timelines should be in keeping with best practice in the industry to ensure that competent persons are in place to oversee essential supervisory roles. A new safety adviser appointment is required on sites where more than 100 persons are working at any time; this suggests potential for an added cost. However, a safety officer, as required by contractors with 20 or more persons on site can act also as safety adviser. This flexibility should limit the potential for additional costs.

Schedules 3 and 4 of the regulations deal with the arrangements for safety awareness training and Construction Skills Certification Schemes. The requirement for the training under these schemes was introduced in the 2001 Regulations. Consultation on the regulations and associated reviews of these schemes had suggested that provision be made for recognition of

equivalent schemes. This provision has been included in these regulations. This measure should ensure that the costs of training in these realms remain competitive and also that where alternative but equivalent training has been completed, there is no longer a need to duplicate by completing these schemes also.

While the requirements on training remain for those without equivalent training, a review of the operation of these schemes has been carried out and improvements in the delivery, content and access will be forthcoming (see Section 4.3.2). The operational changes to these schemes currently proposed include a review of the renewal processes, modularisation of the courses into task-specific components and changes to the assessment procedures. The Construction Skills Certification Scheme awards are now made by FETAC, the Further Education and Training Awards Council, and are placed at Level 5 on the National Framework of Qualifications. This development should also facilitate recognition of equivalence with training in other Member States.

Also, in keeping with consultation recommendations, additional roles have been added to the Construction Skills Certification Scheme. These will represent an additional cost to employers/employees in those roles (namely signing and lighting at road works, underground services detection and self-erecting tower crane operation).

The renewal requirements represent a continuous cost to industry where employees must be consistently retrained at a regular interval (e.g. four years for Safe Pass). Under the measures being considered, employees would instead first demonstrate their awareness of health and safety issues as part of an assessment for suitable retraining. This would reduce the cost to employer/employee of training and encourage employees to develop safety awareness on-the-job, which in turn should reduce the numbers of accidents.

4.5.2 Potential Benefits

The regulations set out measures to improve the safety record of the Construction Industry. Pending the successful implementation of the regulations, Irish Society can benefit from the knowledge that its projects have been built in a safe manner while the Economy can avail of a healthy, trained and experienced workforce. As set out below (Section 4.6.2), consumers who purchase structures (e.g. offices, houses, bridges, etc) are set to benefit by an improved level of service with regard to safety files.

As mentioned above in relation to costs, additional tasks have been put forward for the Construction Skills Certification Scheme. The courses in relation to roadworks have been added at the request of Local Government representatives during consultation. Ireland is currently undergoing a major phase of infrastructure delivery with an unprecedented level of road building and upgrading to accommodate the increasing number of vehicles on the roads. The addition of these courses to the Scheme should improve the way in which roadworks are signed and light up for both road users and employees involved in the work.

4.6 Potential Impacts

4.6.1 National Competitiveness

The eighth Annual Competitiveness Report (ACR), published by the National Competitiveness Council in 2005, noted "weaker productivity growth" in the Construction and other sectors which are less exposed to international competition. Performance was noted in the sector as weaker than EU/US counterparts and output per employee was found to be marginally below average international levels.

A factor affecting the potential competitiveness of any business is the cost of sourcing a property, including construction. Construction costs in Ireland are considered high in comparison with EU averages. Labour costs are in essence regulated through such measures as pay agreements; however, material costs are subject to market controls such as supply and demand. The Department of Environment suggests that costs in the industry grew by 6-7% in 2004. Consultants Bruce Shaw in their 2005 estimates note that:

- costs are much lower in the new EU states but that methods and standards are not comparable,
- UK costs are also found to be above Irish averages,
- US averages are upto 17% lower than Ireland due to economies of scale, standardisation, prefabrication and efficient site management,
- rapid growth in Asian economies will put pressure on world wide costs.

Ireland is moving towards prefabrication of construction elements; these are now seen on large infrastructure projects and residential developments alike. This move (and other factors) has led to increased mechanisation of construction sites with a greater use of cranes and telescopic plant. Changes in work practices like this that produce productivity improvements can have health and safety implications, as there is a lead-in time where employees need to be trained and gain experience.

The European Commission sets out much of the legislation that applies to safety, health and welfare in the Construction Sector. As compliance and enforcement in the newer Member States comes up to speed a more even playing field will be created for all competitors in the European Communities.

Other legislative requirements also apply costs to the industry, including planning and development and building regulations made by the Dept of Environment, Heritage and Local Government. Industry surveys (see Section 4.3) suggest costs of compliance with occupational safety and health obligations in the sector are less than 5% (less than 1% in many cases). Therefore these Safety, Health and Welfare at Work (Construction) Regulations are not likely to have a major influence on national competitiveness compared to other factors.

4.6.2 The Environment

These regulations do not have a significant impact on the environment. However, in some cases, practical working measures that seek to prevent accidents occurring can also have positive impacts on the environmental performance of an industry.

4.6.3 Significant Policy Change?

Section 1 of this report outlines the background to these regulations and their legislative context. The regulations represent the third stage in a series of regulations designed to improve the safety record of the Construction industry. Thus, the new legislation is not a significant policy change.

4.6.4 Consumers

The provisions of the regulations set out stringent requirements for the safe design and construction of projects. In this way, consumers who purchase or commission structures can benefit by knowing they are dealing with a socially responsible industry which uses of the best available practices to ensure the safety, health and welfare of its workers. In a more practical measure, the regulations have made amendments to the responsibilities as regards safety files to improve the quality and content of such files in practice. Consumers can thus benefit by having a more accurate and reliable file for a structure which should ensure that any future work can be carried out in a safe and economic fashion.

4.6.5 Rights of Citizens

The rights of citizens, namely those who work in the Construction Sector, are improved by these regulations, which set out measures to protect their safety, health and welfare at work.

4.6.6 Compliance Burden

The introduction of regulations to the Sector for occupational health and safety in 1995 brought with it a compliance burden for the industry, later added to by the second phase in 2001. The Construction Sector continues to be a lucrative industry with growing employment figures and output of units. This suggests that the burden of compliance is not so heavy as to impinge on the industry.

Sectoral surveys (see Section 4.3) illustrate that the industry feels the benefits of the regulatory measures outweigh the costs. The industry has been involved, through social partnership, in the developments that have led to the regulation of occupational well-being in the industry. This third phase of regulations does not generate excessive new requirements and actually clarifies responsibilities set out in earlier regulations that should ensure that the industry continues to support the measures.

4.6.7 Vulnerable Social Groups

Table 4.5 from the CSO QNHS illustrates how the proportion of immigrant workers in the sector is currently growing. In particular, the representation from the Accession States (EU 15-25) is visibly increasing while the numbers from the EU15 have declined. The level of employees from the UK remains static. Over the period covered by Table 4.5, a growth of 14% in employee numbers in the sector was witnessed; meanwhile a corresponding growth of 117% in non-Irish workers occurred.

In its Summary of Fatality, Injury and Illness Statistics 2004-2005, the Authority featured non-Irish nationals in the workforce as a special topic. The study found that:

- the proportion of non-Irish nationals involved in reported accidents has risen from 1% in 2000 to 9% in 2005,
- in 2005, 9 non-Irish workers lost their lives at work; 5 of those were in the Construction Sector,
- the rate of Irish worker fatalities in the sector is 7.0 per 100,000, versus 22.1 for non-Irish nationals.

Table 4.5 Construction Employees by Nationality (CSO)

Nationality	2004		2005				2006
	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Irish	209,500	211,800	215,000	220,600	229,500	227,900	227,300
Foreign nationals	12,200	15,700	18,100	21,800	22,600	25,300	26,500
of which:							
United Kingdom	4,300	4,300	4,700	5,000	5,600	5,000	5,400
EU15 excl. Irl. & UK	1,800	1,900	1,700	700	800	800	900
EU15 to EU25	3,900	6,000	8,300	12,200	12,500	15,200	16,200
Other	2,200	3,400	3,400	3,900	3,700	4,300	4,000
Total persons	221,700	227,400	233,100	242,400	252,100	253,200	253,800
Non-Irish % Workforce	6	7	8	9	9	10	10

The Safety, Health and Welfare at Work Act, 2005 introduced new requirements for employers provide information to employees in a form, manner and, as appropriate, language that is reasonably likely to be understood by the employees concerned including:

- the risk assessment details of hazards to safety, health and welfare at work
- the protective and preventive measures
- the name of the safety representative (all Section 9)
- instruction, training, supervision (Section 10)
- the safety statement (Section 20).

The Act also empowers the Minister to make regulations on these matters. As the Act came into force in September 2005, its impact is not yet likely to be seen in fatality, injury and accident trends. However as awareness and enforcement of the requirements grow, this should help to protect the safety, health and welfare of all workers on construction sites.

The new regulations require rules for safe working practices on sites to be made by the Project Supervisor for the Construction Stage in the Safety and Health Plan. There is an onus on site management, including the Project Supervisor and the Contractors, to generate awareness of the rules of the plan. The plan must also take account of safety statements made under the Act. This provision for rules of work and the requirements of the Act as regards information should ensure that employees on construction sites are given a clear understanding of health and safety obligations. This represents a potential positive impact on a particularly vulnerable social group.

The regulations also require the relevant employer to have regard to the legislative requirements concerning pregnant or breastfeeding mothers and persons with disabilities at work.

4.7 Conclusion

		Costs	Benefits
Clients	Election	Elected client may seek remuneration from others.	Clarity as to who is carrying duties. Facilitates new contract structures.
	Provide information	Administration.	PS has all available information to aid decision-making.
Project Supervisors	Legal entities	Multiple partners may accrue legal costs.	Clarity as to who is carrying duties. Addresses new contract structures.
	Competence	Potentially training.	Experienced, trained persons in place to supervise.
	Adequate resources	Nil - should be in place already.	Ensures PS can follow through on commitments taking account of health & safety requirements.
	Duration of appointments	Contractual arrangements.	Personnel in place to oversee roles during decision making.
Designers	Adequate resources	Nil - should be in place already.	Ensures Designer can follow through on commitments taking account of health & safety requirements.
	Inform clients of need to appoint PS Design	Administration.	Personnel in place to oversee roles during decision making.
Contractors	Adequate resources	Nil - should be in place already.	Ensures Contractor can follow through on commitments taking account of health & safety requirements.
Explosives	Supervision	Potentially contractual arrangements.	Experienced, trained persons in place to supervise.
	CSCS task - shotfiring	Training.	Experienced, trained persons in place to deal with hazard.
Other additional CSCS tasks		Training.	Experienced, trained persons in place to deal with hazard.
Recognition of CSCS equivalent for other EU		Administration.	Facilitates workforce mobility. EU compliant.
Visibility Aids		Modifications to existing vehicles. Potential additional cost to new plant.	Increased safety awareness - should improve safety record.

Table 4.6 Costs and Benefits of New Provisions- Summary

Table 4.6 summaries the nature of cost and benefit considerations of the new provisions of the regulations. On balance, taking all the options into account, the package proposed (see Section 2.4) including the Regulations is the best available option. A sizeable population is targeted for reform. The combination of advocacy, incentive and regulation with the prospect of enforcement model on which the Health & Safety Authority implements all regulations should ensure that all sectors of this population are reached.

5.0 PERFORMANCE OF THE REGULATIONS

5.1 Enforcement and Compliance

The Health & Safety Authority is the primary enforcer of occupational safety, health and welfare legislation through its inspectors. The Authority has in the past focused on tackling high-risk industries including the construction sector and remains committed to doing so. The evidence of the success, or lack thereof, of the performance of the regulations will therefore best be seen by the enforcers and advocates. Inspectors on the ground in industry will be best placed to gauge the way in which the regulations are received and the degree to which implementation and compliance are observed. Through reporting mechanisms in the Authority, feedback from the inspectors should illustrate the emerging trends over the lifetime of the regulations. The particular indicators are outlined in section 5.2.

The 10-year review of Health and Safety in Ireland by the Authority for the period 1992-2002 identified that the Construction Sector had the highest injury rate of all sectors. It also established that over one-third of deaths on sites involved employees who were new to the sector, i.e. with less than 1 years experience. This data pointed out the key challenges for the industry and reforms contained in the 2001 Regulations developed from this information.

While the Construction Sector injury rates remained high over the period 1992-2002 compared to other sectors, the review demonstrated that rates decreased during a time period coincident with the introduction of the 1995 Regulations. Conversely the injury rates have begun to rise in recent years (see Figure 2.2). Statistics maintained by the Authority have identified that the types of injuries/accidents are also changing, from falls at height to incidents involving plant and machinery. The new 2006 Regulations stipulate training requirements and visibility aids required for various on-site vehicles in an attempt to address this information.

These examples demonstrate how performance indicators can identify issues of concern and determine the performance of legislative measures.

In its 2006 Programme of Work for the sector, the Authority has committed to:

- carrying out 7,500 inspections
- improving reversing vehicle safety, welfare arrangements and training arrangements;
- develop and implement a major promotional campaign;
- enforce and publicise the new construction and the work at height regulations;
- produce and promote a Code of Practice for employers of three or less
- deliver a national road show on the new construction regulations;
- hold industry information briefings on the construction regulations;

- targeting managers and designers and including vibration, noise, work at height, underground services, roof work, and the lifting equipment regulations;
- research the issues involved in the employment of non-English speaking workers;
- prepare draft guidance on construction-specific aspects of work at a height and progress draft codes of practice on pre-cast construction,
- concrete anchors, and client best practice;
- develop an on-line notification form for new construction projects;
- continue the development of the innovative Safe System of Work Plan (SSWP), a new initiative aimed at simplifying the safety message for both English and non-English speakers;
- run a hard-hitting campaign to change attitudes to construction safety.

5.2 Performance Indicators

A number of potential performance indicators are available to assess the success of the regulations in achieving their objectives. From a policy perspective, Representations and Parliamentary Questions on safety, health and welfare in the Construction Industry made to the Minister for Labour Affairs would represent good performance indicators for the regulations. In real terms, the measurable success or impact of the regulations will in fact be evident from statistics such as those maintained by the Health & Safety Authority and CSO. The relevance of such statistics will develop over a suitable time period in which to identify trends. Such statistics include:

- the numbers of companies and employees in the industry (economic performance may also need to be borne in mind when examining these figures),
- the numbers obtaining/renewing the Safepass and Construction Skills Certification Schemes,
- the rate of workplace accidents and fatalities,
- the number of complaints received about construction sites to the Health & Safety Authority ,
- the number of inspections performed by the Authority,
- the number of enforcement actions taken (including those listed in Table 4.3 as well as court proceedings),
- the numbers of construction employees claiming occupational injury benefit,
- overall compliance rate with regulations.

Qualitative indicators can also be taken account of. Such indicators could include attitudinal surveys to the impact of legislation, such as was carried out on firms as part of the Economic Impact Assessment (section 4.3.1). One of the most important qualitative indicators however for any legislation is the awareness of its existence and application. The Health & Safety Authority invests considerable resources in awareness campaigns and guidance; the 2006 Regulations will feature high in these campaigns. The Annual Reports and Work Programme for the Authority will provide an annual review of progress in the sector.

6.0 REFERENCES

Bruce Shaw Group, 2006. Bruce Shaw Handbook 2006.

Claritas Consulting, 2006. Review of FÁS Safe Pass & Construction Skills Certification Scheme Programmes: Final Report & Implementation Strategy. FAS & HSA.

CSO, 2001-2005. Quaterly National Household Survey.

Dalton M., 2002. Fatal accidents in the Irish construction industry 1991-2001:A survey of contributory factors. HSA.

Dalton M., 2003. An examination of dutyholder responsibilities: Fatal construction accidents 1997-2002. HSA

Dept. of the Taoiseach, 2005. RIA Guidelines: How to conduct a Regulatory Impact Analysis.

Habilis Ltd, 2004. Peer review of analysis of specialist group reports on causes of construction accidents. Research Report 218. HSE Books.

HSA, 2006. Summary of Fatality, Injury and Illness Statistics 2004-2005.

HSA, 2003. Health and Safety at Work in Ireland 1992 – 2002.

HSA, 2003. Report of Visits to Designers undertaken by HSA Inspectors in 2001 -2002

HSA, 2001-2004. Annual Reports.

HSE, 1993. The Costs of Accidents at Work. Health and Safety Series HS (G) 96.

Indecon Economic Consultants, 2006. Indecon Report on Economic Impact of the Safety, Health and Welfare at Work Legislation. Department of Enterprise, Trade and Employment.

Jacobson D and Mottiar Z, 1995. The Costs of Accidents in the Workplace – A Case Study Analysis. DCU, commissioned by the Health & Safety Authority .

Loughborough University and UMIST, 2003. Causal factors in construction accidents. Research Report 156. HSE Books.

McDonald M & Hrymak V, 2003. Safety Behaviour in the Construction Sector: Report to the Health and Safety Authority, Dublin & the Health and Safety Executive, Northern Ireland. OSHII

Mottiar Z, 2004. Feasibility Study on Estimation of Costs of Workplace Accidents, work-related ill-health and non-injury incidents in Ireland.

National Competitiveness Council & Forfás, 2005. Annual Competitiveness Report. 2005.

SLIC, 2004. EUROPEAN CONSTRUCTION CAMPAIGN 2004. European Commission, The Hague.

Appendix 1

Examples of deficiencies in 2001 Regulations that made it more difficult to obtain convictions or to enforce the regulations.

1. Appointments of Project Supervisor Design Stage (PSDS) are not required to be in writing in 2001 regulations. The HSA lost some cases or has not been able to progress them to as prosecution as without direct evidence of the appointments being made and accepted it can be difficult to prove the identity of a project supervisor. The client has alleged that he/she has appointed a named person but the named person denies it. Without corroboration such a case will usually fail. A specific example involves the death of a man after a wall collapsed on him. The client alleged the architect was the PSDS and the architect denied this. In this case a decision had to be taken as to whether to prosecute the client for non-appointment or the architect for failure to apply the principles of prevention. The architect was prosecuted but was found not guilty due to lack of corroboration.

2. The 2001 regulations do not make it a duty of the PSDS to co-ordinate the activities of designers in relation to temporary works. This means that no such co-ordination takes place and this has been a factor both in structural collapses but has also lead to failures in the taking of prosecutions. Some examples of major collapses involved four bridge collapses, a roof collapse, a stairs collapse, a parking structure collapse, a floor collapse. Several deaths have occurred and in several cases the real “accident” was that tens if not dozens of deaths did not occur. An example of a case involved the collapse of a bridge where a case against Ascon was heard at Cork Circuit Court on February 13th 2006. The outcome was that Ascon pleaded guilty to several charges but a conviction was not obtained in relation to the coordination of the temporary works.

3. The 2001 regulations make it very difficult to obtain prosecutions and take enforcement against joint ventures acting as project supervisors as there is very little precedent in criminal law for the prosecution of partnerships. This has caused significant difficulties in relation to several infrastructural projects where the relative roles of the partners in a joint venture are unclear.

4. The use of the term “Design Stage” in the 2001 regulations gave some designers and project supervisors the impression that their responsibilities ended at the tender stage. In fact coordination factors around late design changes have been associated with some fatalities

5. The 2001 regulations did not cater for modern forms of contract, e.g. design, build, operate contracts where there may be several clients involved.

6. Where a project supervisor had problems in relation to the cooperation of a designer or contractor the project supervisor relied on the good-will of that person to take account of any advice or direction issued. It would have been difficult to take enforcement action however. The requirement to inform the Authority and Client of non-compliance will encourage compliance.

Appendix 2

HSA Desk-based research on the Cost of Workplace accidents.

The Cost of Workplace Injury and Ill-Health

Summary

Occupational injuries and ill-health causes significant losses to the state. Losses are sustained by the economy as a whole, there are increases in the cost of doing business, reductions in the competitiveness of companies, significant costs the state in health-care costs, occupational injury benefit and compensation payments and a reduction in the pool of workers available to the economy.

Most significantly, workplace injury and ill health causes a reduction in the quality of life of many injured workers and their families. Workplace injury and ill health is a leading cause of premature exit from the workforce.

Occupational injury and ill health is conservatively estimated to cost the economy between €1.1bn to €1.6bn and to cost businesses about €0.95bn. Many workers suffer death or injury leading to 813,400 lost days in 2000. The cost to the state of workplace occupational injury and illness is estimated to be between €280m and €500m plus health care costs.

An improvement of only 5% in health and safety performance could save the economy between €55m and €80m each year. A similar reduction would save the State between €14m and €25m per year plus savings on healthcare. Businesses could save about €45m. and less workers would suffer the significant financial and welfare losses caused by workplace injury and ill health.

Costs of Occupational Injury and Ill-Health

The costs set out below should be taken as indicative costs derived as a desk exercise using the best readily available research. Many assumptions are made but wherever possible the most conservative estimates have been made. It is likely therefore that more in-depth estimation would show the costs of poor health and safety to be higher than those estimated here.

The costs in this exercise are based on 2001 statistics and costs. Therefore these figures are conservative.

Costs of Occupational Injury and Ill-Health to the Economy

Studies in the UK1, a country with significantly lower fatal and non-fatal accident rates than Ireland, show that the cost of workplace accidents and ill health to the economy is in the order

of 1.3-1.8% of GDP. The total costs to society as a whole, including the loss of welfare to individuals is in the order of 2.1-2.8% of GDP. Studies in Norway2 and other countries3 with higher accident rates than the UK showed an estimated cost of 6% of GDP.

Using the UK figures (which are likely to be an underestimate in the Irish context) and using GNP instead of GDP (again being conservative) the cost of workplace accidents and ill-health to the Irish economy is in the order of €1.1bn - €1.6bn and the costs to society are likely to be in the order of €1.8bn - €2.4.

Costs of occupational injury and ill-health to Companies

IBEC claims that the average awards in the Irish courts were 12 times higher than in Britain and says that the average cost of insurance premiums has risen by 41% from 1999 to 2001 and from 3% of payroll in 1999 to 4.7% of payroll in 2001. Company expenditure on safety and accident prevention constituted an average 1.2% of payroll in large well-organised companies.

The 1996 Deloitte and Touche Report found that Ireland had the most expensive employer liability premiums in the EU and that these costs could represent as much as 8% of payroll for firms with employees of 10 people or less. The study found that for every €100 paid in combined liability insurance by an Irish company, the equivalent charge in Britain would be €34, while in the Netherlands the cost would be €13

Employers and public liability premiums in 2000 were €366m. This figure does not cover the significant number of large companies who self-insure or part self-insure. Neither does it cover those costs of workplace injury and ill health that are not insurable. A study carried out in 13 companies by Jacobsen and Mottiar4 of DCU in 1995 found that for every £1 of insured costs there were an additional £27.95 of uninsured costs related to workplace accidents.

UK studies show the cost of workplace accidents and ill health (including insurance) to employers to average between Stg£143 – Stg£297 per person employed at 1995/1996 prices. Using the higher figure (since accidents rates and legal and compensation costs are higher in Ireland) and adjusting for inflation, the total cost to Irish employers would be about €535 per worker, equating to a total cost to employers of €0.95bn. This is a more conservative figure than would have been obtained by applying a multipler effect to liability premiums.

Costs of occupational injury and ill-health to the State

The costs of occupational injury and ill health to the state are substantial. These costs consist of a number of elements including, healthcare, occupational injury benefit, absence from employment, compensation costs and legal costs.

The CSO5 estimated that there were 26,200 occupational injuries leading to 339,000 days lost and 47,300 cases of occupational ill health leading to 813,400 days lost in 2000. The

number of days lost as recorded by occupational injury benefit (OIB) was 437,000. OIB applies to only a small number of illness cases and after 6 months disability benefit applies.

The cost of healthcare to the state due to occupational injury has not been quantified in Ireland. Due to the differences in healthcare system, UK estimates need to be treated with caution. The estimated cost to the NHS of workplace injuries and ill health in 1995/1996 was between Stg£54m and Stg£238m, equivalent to an average of between Stg£82 and Stg£363 per injury. This would equate to a health care cost of between €149 to €660 per injury.

The cost of Occupational Injury Benefit (OIB) to the state in 2000 was €9.7m. An additional unknown cost was due to Disability Benefit.

A total of 262,000 work days were lost in 2000 in the public administration, defence, social security, education, health and social work sectors due to occupational injury or ill-health. The direct payroll loss for these state sectors, using the average weekly earnings, is estimated at €35m. Additional indirect costs, including the cost of property damage, work disruption and opportunity cost of loss of productivity would be a multiple of these direct costs. The additional indirect costs found in a UK study ranged between 5 and 36 times the direct costs and an Irish study found that the ratio of direct to indirect costs ranged from 1:11 to 1:30 depending on the type of organisation. Using conservative ratios of between 1:5 and 1:11 found in the UK study would imply a cost to the state of between €175m and €385m.

The cost of claims made for employers and public liability claims against Local Authorities and Health Boards insured by Irish Public Bodies Mutual is provisionally estimated at about €54m for 2001. Many Government Departments effectively self-insure and are not included in the above figures but the costs can be significant. In May 2001 the Minister for Defence, Mr. Smith said that more than £144 million had been paid out to date in settlement of Army deafness claims, of which almost half was for legal fees. This included 256 court awards and 7,422 out-of-court settlements. Another 7,587 claims are outstanding. Substantial sums have been paid out in settlement for asbestos exposure (an awarded of £58,000 against the OPW was mainly for psychological ill-health arising from asbestos exposure). One of the fastest growth areas for claims is in the area of bullying and stress and it can be anticipated that the public sector, like other sectors will incur claims in this area. It is likely that the state has an overall compensation cost of about €100m

Costs of occupational injury and ill-health to Workers

The major bearer of the cost of occupational injury and ill health is the injured worker. Many must leave their industry and seek work in less demanding work environments or they become disabled and must leave the work force altogether.

Workers suffer financial losses due to loss of wages, loss of career in some cases, and extra medical expenses. Workers also suffer significant losses in welfare and quality of life. These can be measured in financial terms using the “Willingness to Pay” WTP principle. The

National Road Authority uses WTP principles in assigning financial values to for the loss of human life in road accidents.

While assigning a financial cost can not possibly fully encapsulate the suffering caused by workplace injuries and ill health it can help to inform decisions in the allocation of scarce resources. A rough estimate of the financial and human costs of occupational injury and ill health to workers would be between €800m and €1.2bn.

There were 64 workplace fatalities in 2001 and the CSO5 estimated that there were 26,200 occupational injuries leading to 339,000 days lost and 47,300 cases of occupational ill-health leading to 813,400 days lost.

Only a proportion of these will have been compensated for their injuries. Occupational Injury Benefit only partly compensates for the financial loss. During 2000 a total of 10,175 claims were notified under employer's liability insurance, indicating that the majority of injured workers do not receive financial compensation.

Total Costs

The total cost to the economy is not the sum of the costs to the State and to companies and workers. For example, compensation or benefit paid to injured workers by a company or the State is a cost to the company and State but is not necessarily a cost to the economy but a transfer of wealth.

References:

1 The Costs to the British Economy of Work Accidents and Work Related Ill-Health - HSE books

2 The costs of occupational accidents and diseases in Norway – Rognstad. K.

3 The Costs of Occupational Accidents and Diseases – Andreoni – ILO

4 The Cost of Accidents in the Workplace a Case Study Analysis – Jacobsen & Mottiar, DCU, commissioned by Health and Safety Authority

5 Quarterly National Household Survey 2001 - CSO

6 Measuring HSE Effectiveness

[7] Key Management Motivators in Occupational Health and Safety – National Occupational Health and Safety Commission, Australia

[8] CEO and Supervisor Drivers – Neil Gunningham

Appendix 3

HSA Briefing Document on Consultation

Briefing Document on Consultation Process for Construction Regulations

During a review of the Safety Health and Welfare at Work (Construction) Regulations 1995 by the Health and Safety Authority Construction Advisory Committee (CAC) upon which all relevant parties are represented, conducted in 2000 and 2001, it was agreed to defer discussion of a number of important areas in order to achieve agreement on a range of specific measures to implement recommendations of the Construction Safety Partnership. Those measures were incorporated into the Safety, Health and Welfare at Work (Construction) Regulations 2001.

Immediately after the making of the regulations, the Health and Safety Authority made a public request for submissions in relation, in particular, to the provisions of the 2001 Regulations relating to design and management and the general duties of various parties involved in construction work, including Clients, Contractors, Project Supervisors Design Process, Project Supervisors Construction Stage etc.

A draft set of regulations were then prepared, taking account of the submissions, by the Authority. Intensive consultation took place through the CAC over the next two years up to May 2003. In mid 2003 the Authority submitted draft regulations to the Department of Enterprise Trade and Employment for transmission to the Office of Parliamentary Counsel to the Government for legal settlement.

In December of 2003 the Professional Bodies made a submission to the Minister of State at the Department of Enterprise Trade and Employment on the Construction Regulations which the Authority replied to. The Authority offered to meet with the Professional Bodies. A series of bilateral meetings were held with the Professional Bodies and the Construction Industry Federation in relation to the Regulations and these meetings continued into late 2005.

In October of 2005 the Authority issued for public consultation the Draft Construction Regulations for a period of four weeks which was latter extended by a further two weeks.

The Submissions were then collated and account was taken of all submission by the Executive of the Authority and a redraft of the Regulations prepared. The Draft Regulations were then submitted for consideration and clearance by the Legislative and Guidance Sub Committee of the Board of the Authority.

Note:
The Construction Advisory Committee of the Authority is made up of representatives of the following organisations.

IBEC
CIF
ICTU
FAS
Royal Institute of Architects of Ireland
Association of Consulting Engineers of Ireland
Society of Charted Surveyors
Department of the Environment
Department of Finance
Head of school of Construction, DIT
Institute of Engineers of Ireland
Government Contracts Committee(joined late in the process)
Health and Safety Authority