

# ASTUTIS

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## NEBOSH

National Diploma in Occupational Health and Safety

- Unit course notes
- Exam question and answer booklet
- Mock exam
- Unit DNI guidance

**SAMPLE  
COURSE  
MATERIALS**

**NEBOSH**

National Diploma in Occupational Health and Safety

**UNIT A:** Managing health and safety

**A1**

**Principles of health and safety management**



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On completion of this element, candidates should be able to:

- ▶ **Explain** the moral, legal and economic reasons for the effective management of health and safety.
- ▶ **Outline** the societal factors which influence an organisation's health and safety standards and priorities.
- ▶ **Outline** the uses of, and reasons for introducing a health and safety management system.
- ▶ **Explain** the principles and content of an effective health and safety management system including the reasons for integration with other management systems.

## Moral, legal and economic reasons for the effective management of health and safety

Society exerts pressure through three overlapping and interacting spheres of influence, as shown in Figure 1.1.

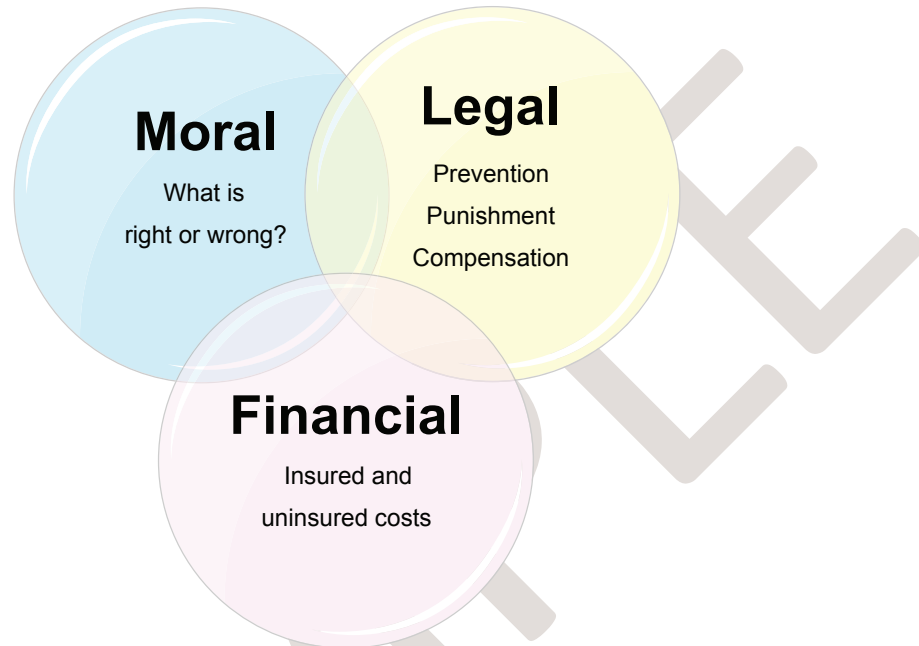


Figure 1.1: Moral, legal and financial drivers

### Moral

Morals are the codes of conduct, or rules of behaviour imposed by a society regarding what is right and wrong.

For people to be killed, or seriously injured, or to suffer illness as a consequence of work is clearly wrong.

Although, in the UK there are generally good standards of workplace health and safety, a lot of harm is still caused each year.

The [Health and Safety Executive \(HSE\) publishes annual statistics](#) of reported cases of workplace injury and illness. As can be seen the numbers of cases of occupational illness is significantly higher than the numbers of injuries. Numbers of reported accidents for 2014 / 15 are shown in Table 1.1.

Injury type	Reported numbers 2014 / 15	Rate per 100 000 workers	
		2014 / 2015	Average over 5 years
Fatal injuries (all workers)	142	0.46	0.53
Notified specified injuries (e.g. broken arm or leg)	18 084	292.9*	306.2  (over 3 years since RIDDOR change 2013)
Reported 'over 7 day' injury (unable to do normal work for more than 7 days)	57 970		
* Rate of non-fatal injury per 100 000 workers (recent HSE figures do not provide split of non-fatal injury rates)			

Table 1.1: Numbers of injuries reported 2014 / 15

The trend for workplace injuries has been generally downwards over the last twenty years but is less clear since about 2008 / 09. Allowing for changes to the RIDDOR Regulations it seems as if the downward trend is slowing if not plateauing off.

The two major causes of reported non-fatal injuries are:

- ▶ slips and trips (28%)
- ▶ handling, lifting and carrying (24%).

It should also be noted that there is substantial under-reporting of non-fatal injuries. Current levels of reporting are estimate at below 50%.

Data on occupational ill-health is compiled from a number of sources including self-reports, medical reporting systems and the industrial injury disability benefit scheme.

Estimated numbers of cases of work-related ill health self-reported in 2014 / 15 are shown in Table 1.2.

Type of ill-health	Total cases (Prevalence) of self-reported work related illness (central estimate)	New cases (Incidence) of self-reported work related illness (central estimate)
All illnesses	1 243 000	516 000
Musculoskeletal disorders	553 000	169 000
Stress, depression and anxiety	440 000	234 000

Table 1.2: Occupational ill-health reports 2014 / 15

Table 1.3 shows numbers of workplace deaths attributable to occupational cancers. The total is more than 30 times that for fatal injuries.

Causes of death	Estimate of deaths each year
Occupational cancers (general)	8 000
Asbestos related cancers	4 000

Table 1.3: Typical numbers of annual deaths by occupational cancers

## The impact of organisational size on incident rates

Generally speaking there is an inverse relationship between organisation size and accident / incident rates, i.e. larger organisations tend to have lower rates of accidents and occupational illnesses than small organisations.

An explanation for this might be that larger organisations are: better organised, have a greater awareness of health and safety, have higher rates of unionisation and worker engagement, better training, and more resources to implement comprehensive health and safety arrangements.



### WEB LINKS

HSE statistics:

[www.hse.gov.uk/statistics](http://www.hse.gov.uk/statistics)

## Legal

There are two systems of law that influence the management of health and safety. These are introduced in **Element A2** and explored more fully in **Elements A3** and **A4**.

The **criminal law** establishes a set of rules for acceptable behaviour. In the workplace the main duties are covered by the [Health and Safety at Work Act 1974](#) and the [Management of Health and Safety at Work Regulations 1999](#).

If the necessary standards are not met the enforcement agencies (either the Health and Safety Executive (HSE), the Office of Road and Rail (ORR), or the local authority environmental health department, depending on the nature of the work) may take preventive action through prohibition notices (stopping activities posing a risk of serious injury) and improvement notices (requiring improvements to achieve legal compliance), and / or punitive action to prosecute offenders for breaking the rules.

The **civil law** allows an injured person to sue a third party for compensation for their injury or loss if the injury was caused through the third party's negligence. Civil action may also obtain an injunction to stop a continuation or recurrence of harmful behaviour.

### Principle of self-regulation

The Robens Report (which led to the creation of the Health and Safety at Work etc. Act 1974) advocated a goal-based approach to health and safety regulation and also expressed the need for a *'more effectively self-regulating system'*.

It was hoped at the time that this would grow out of an increased atmosphere of communication and co-operation between employer and employees, capitalising on the role of the Trade Unions.

In reality a hybrid approach developed in the UK, with the HSE taking the lead in the publication of guidance and advice leaving much of industry in a position of following their lead rather than taking the initiative.

The approach has generally been successful with rates of workplace fatalities, injuries and illnesses decreasing.

The debate over the merits of self-regulation (and the broader issue of deregulation) over state regulation is part of a broader political and philosophical argument about the required levels of state involvement in and regulation of business activities.



In the 1980s, Margaret Thatcher's Government embraced the ideology of a free market economy and began the process of reducing burdens upon business, publishing two discussion papers entitled *Building Business, Not Barriers* and *Lifting the Burden*, which clearly stated the government position on the matter.

In 1992 John Major's government responded to on-going calls from business and the Conservative Party to lift the burden on business by launching a *deregulation initiative aimed at removing unnecessary red tape from business*.

Lord Sainsbury was appointed to head up a central Deregulation Task Force overseeing eight Business Task Forces as part of the Cabinet Office. The Government position at the time was that:

*A certain amount of regulation is essential, not least to ensure public safety and promote quality standards, but these benefits have to be weighed against the cost of enforcing regulation and complying with it.*

The Task Forces were expected to examine the *jungle of regulation embarking on a new blitz on regulation* leading to a *bonfire of unnecessary controls* moving from *regulation for regulation's sake* to reduce the burdens on business. Alternatives to State regulation, such as public education programs, codes of practice, economic incentives for business to improve and in particular, **self-regulation by industry** were also considered.

Prior to the final report of the Deregulation Task Force, the Deregulation and Contracting Out Bill 1994 was laid before Parliament. It proposed wide-ranging powers for the Secretary of State for Employment to remove existing health and safety legislation, among others, effectively enabling 'fast track' deregulation.

The Final Report of the DTI's Deregulation Task Force was unveiled in 1995. It was criticised by the Trades Unions over its *big industry* bias and clear agenda of reducing financial burdens on business, alleging a hidden agenda of lessening the protection of employees in the workplace. The Trades Unions also challenged the Government regarding what it considered to be a 'burden' and whether those burdens were 'perceived' or real. The Trades Union position was that many of the:

*...burdens are perceived rather than real and that in practice they are far outweighed by burdens imposed on such businesses as a result of failure to manage health and safety effectively.*

The HSC was simultaneously conducting its own review of the relevance and usefulness of over 400 separate pieces of health and safety legislation. The HSC review came out firmly against deregulation and proposed re-regulation – simplifying and streamlining the law and introducing new packages of regulations on hazards not yet covered by existing legislation.

The report was presented to the DTI's Deregulation Task Force, and recommended the repeal of seven pieces of primary legislation and ninety four sets of regulations, together with a greater shift from detailed prescriptive requirements towards general and simple goal-based requirements.

It further recommended that the self-employed and small businesses remain covered by legislation but were better supported with additional advice and assistance.

The New Labour administration set up the Better Regulation Task Force in 1997:

*To advise the Government on action to ensure that regulation and its enforcement are proportionate, accountable, consistent, transparent and targeted.*

The Task Force became the Better Regulation Commission on 1 January 2006. In October 1999, the task force published its interim report defining self-regulation as:

*...the means by which members of a profession, trade or commercial activity are bound by a mutually agreed set of rules which govern their relationship with the citizen, client or customer.*

Self-regulation carries, it was argued, numerous advantages being: more flexible, more readily complied with, more relevant to the needs of a particular industry, able to ensure confidence in an entire industry, more cost-effective and able to lead to a better relationship between industry and clients.

[The Lofstedt Review \(2011\)](#) is the latest UK Government commissioned review of health and safety regulation. Its purpose is to:

*Consider the opportunities for reducing the burden of health and safety legislation on UK businesses whilst maintaining the progress made in improving health and safety outcomes.*

Opponents of the review have criticised the appointment of Professor Ragnar Lofstedt as chair of the review, alleging his track record in the USA as an advocate of deregulation in the areas of environmental protection and food safety introduces a bias towards this end.

*Hazards magazine* has also criticised Lofstedt for his view that tighter regulatory controls on industry mean an unjustified bill for firms that comply with the law and a disadvantage in global markets.

*Hazards magazine* has criticised the UK Government, alleging that its agenda is driven by *risk envy* of global competitors that do not abide by strict rules governing safety and decency at work. Lofstedt's view that tighter regulatory controls on industry leads to an unjustified bill for firms and a disadvantage in global markets has also been challenged. The counter view is that reacting to global competition in this way leaves the world's dirtiest players to set the standard.

Lofstedt's final report was published in November 2011. The main recommendations were:

- ▶ Exempting self-employed people whose work activities pose no potential risk of harm to others from health and safety law.
- ▶ The HSE should review all its ACoPs with the initial phase of the review completed by June 2012.
- ▶ The HSE should undertake a programme of sector-specific consolidations to be completed by April 2015.
- ▶ The HSE is given the legal authority to direct all local authority health and safety inspection and enforcement activity, in order to ensure that it is consistent and targeted towards the most risky workplaces.
- ▶ The original intention of the pre-action protocol standard disclosure list is clarified and restated and that regulatory provisions that impose strict liability should be reviewed by June 2013 and either qualified with 'reasonably practicable', where strict liability is not absolutely necessary, or amended to prevent civil liability from attaching to a breach of those provisions.

In January 2012, HSE commissioned research to help decide if the core set of health and safety regulations could be consolidated in any way to provide clarity and savings for businesses.

The research report written by Richard Matthews QC, [\*Consolidation: the practicality and effects of the options for consolidating health and safety Regulations\*](#), was published in December 2012.

In April 2013 [\*The Health and Safety \(Miscellaneous Repeals, Revocations and Amendments\) Regulations 2013\*](#) came into force.

The 'red tape challenge' was introduced by the 2010 to 2015 Conservative and Liberal Democrat coalition government as a cross-Government programme to tackle the stock of what they perceived to be 'unnecessary and over-complicated regulation'. The intention of the programme is to reduce the burdens for business and society, save taxpayers money and support economic growth. The initiative continues under the current Conservative government and is said to have scrapped or improved 84% of health and safety legislation.

The [Deregulation Act 2015](#) became law, on 26 March 2015. It provides for the removal or reduction of burdens on businesses, civil society, individuals, public sector bodies and the taxpayer. These include measures relating to general and specific areas of business, companies and insolvency, the use of land, housing, transport, communications, the environment, education and training, entertainment and alcohol, public authorities and the administration of justice. In addition, the Act repeals legislation that is no longer of any practical use.

Part 1 of the Act 'Measures affecting the workplace: general' includes a number of modifications to health and safety legislation, notably:

- ▶ Limiting the scope of the general duty on self-employed persons section 3 of the Health and Safety at Work Act 1974, by applying the duty to those self-employed persons carrying out certain activities on a prescribed list, rather than all those who are self-employed.
- ▶ Extending the exemption for turban wearing Sikhs from wearing a safety helmet from construction sites to all workplaces (except in urgent response to hazardous situations such as fire or riots, or if a member of HM Forces and taking part in a military operation).



## WEB LINKS

Health and Safety at Work etc. Act 1974

[www.legislation.gov.uk/ukpga/1974/37](http://www.legislation.gov.uk/ukpga/1974/37)

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Management of Health and Safety at Work Regulations 1999

[www.legislation.gov.uk/uksi/1999/3242/contents/made](http://www.legislation.gov.uk/uksi/1999/3242/contents/made)

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Lofstedt review: *Reclaiming health and safety for all: An independent review of health and safety legislation*, November 2011

[www.gov.uk/government/publications/reclaiming-health-and-safety-for-all-lofstedt-report](http://www.gov.uk/government/publications/reclaiming-health-and-safety-for-all-lofstedt-report)

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*Consolidation: the practicality and effects of the options for consolidating health and safety regulations* report by Richard Matthews QC

[www.hse.gov.uk/legislation/assets/docs/consolidation-report-2012.pdf](http://www.hse.gov.uk/legislation/assets/docs/consolidation-report-2012.pdf)

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The Health and Safety (Miscellaneous Repeals, Revocations and Amendments) Regulations 2013

[www.legislation.gov.uk/uksi/2013/448/contents/made](http://www.legislation.gov.uk/uksi/2013/448/contents/made)

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Deregulation Act 2015

[www.legislation.gov.uk/ukpga/2015/20/contents/enacted](http://www.legislation.gov.uk/ukpga/2015/20/contents/enacted)

## Financial

Accidents clearly cost money as a consequence of injured people, damaged plant and machinery and wasted product.

The total economic cost of workplace injuries and ill health includes both the financial costs incurred (e.g. lost production and healthcare costs) and a valuation of the human costs (e.g. impact on quality of life or consequences of loss of life).

In 2013 / 14 the HSE estimated the total cost to society of workplace injury and illness to be £14.3 billion with around 2 / 3 of the cost attributable to illness as shown in Figure 1.2

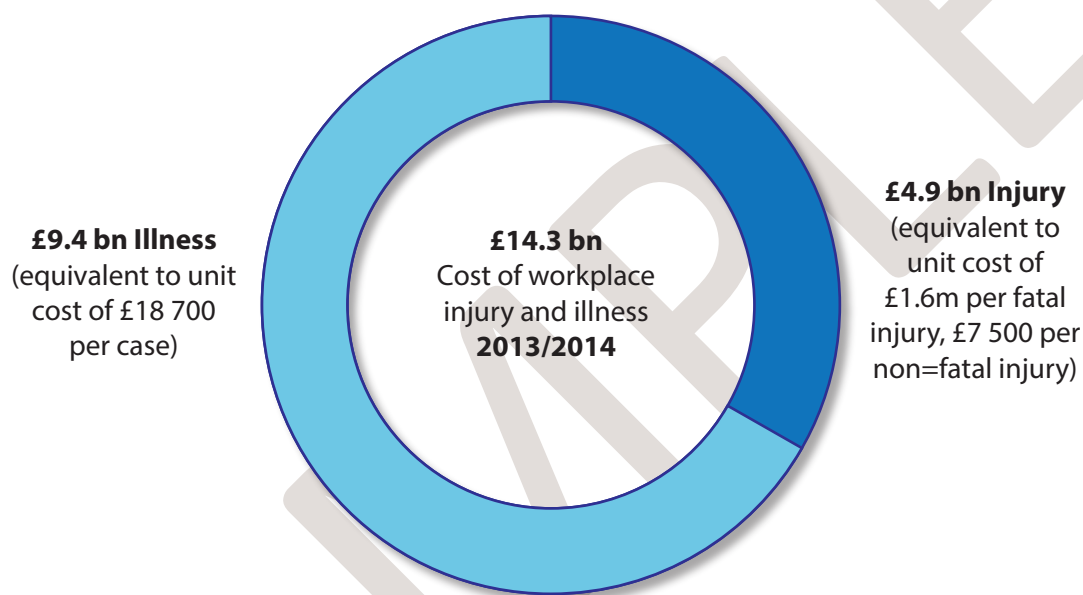


Figure 1.2: Estimated total cost of workplace injuries and illness 2013 / 14

These figures are around 18% lower than the 2004 / 05 figures but broadly consistent with 2009 / 10 figures. The costs of injuries have decreased by  $\frac{1}{3}$  over this period whereas the costs of illness remain broadly the same.

The total cost figure can be apportioned between the costs to individuals, employers and the government as shown in Figure 1.3. and Table 1.4.

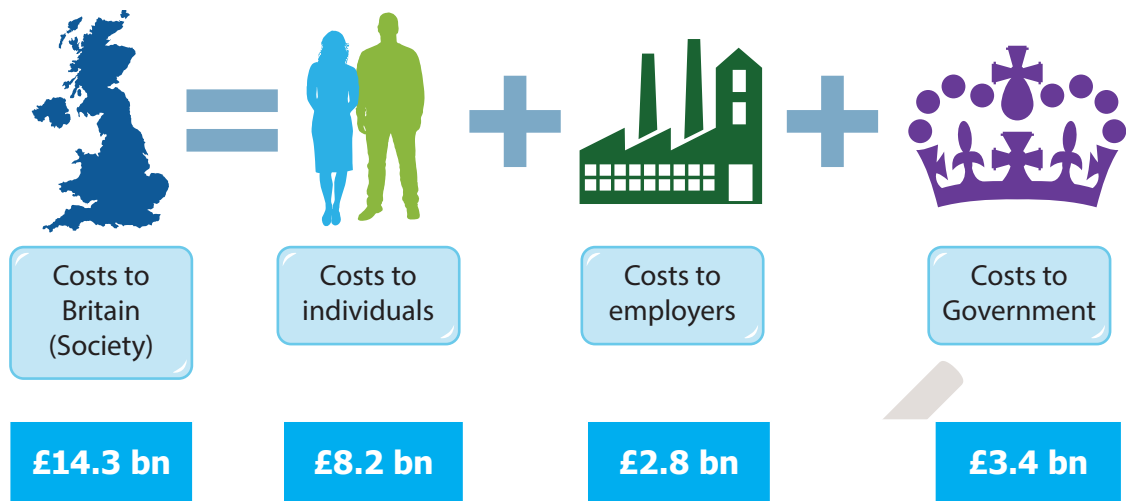


Figure 1.3: Total costs apportioned by bearer

Cost category	Cost bearer		
	Individuals	Employers	Government / taxpayer
Productivity costs	✓	✓	✓
Health and rehabilitation costs	✓	✓	✓
Admin and legal costs	✓	✓	✓
Employers' Liability Compulsory Insurance	✓	✓	
Non-financial human costs	✓		

Table 1.4: Cost components by bearer

## Employers / organisational costs

The HSE estimates that occupational injuries and illnesses cost the UK in the region of £20 billion to £30 billion each year if the total costs to individuals, employers and society are considered.

The costs of highly visible accidents involving large scale loss of life or major property damage as a result of fire and explosion are often determined by official inquiries.

- ▶ The BP Texas City fire and explosion in 2005 cost over \$21 million in fines, \$2 billion in civil claims, and \$1 billion in reinstating the site.
- ▶ The Buncefield oil refinery fire in 2005 is believed to be the most expensive accident in UK history with a total cost of over £1 billion, including £9.5 million in fines.

Smaller accidents have proved much more difficult to cost as relatively few companies have systems in place to quantify them.

Over thirty years ago the Confederation of British Industry (CBI) gave evidence to the Robens Committee on Health and Safety at Work, stating:

*At the company level, if a readily applied and simple formula could be devised by which the financial loss caused by accidents and diseases could be measured, it would make a valuable contribution towards reducing industrial accidents and occupational ill-health.*

In 1989 the HSE began a series of five case studies with organisations from different industrial sectors with the aim of developing a means accurately identifying the full cost of accidents. The study findings were published 1993 in a HSE Guidance booklet *The Costs of Accidents at Work* (HSG96), which is no longer available from the HSE.

The five participating projects were a construction project, a creamery, an independent transport company working with the creamery, a North Sea oil platform, and an NHS hospital. All had a history of average, or better than average health and safety performance.

The study used a definition of 'accident' covering a broad range of losses including injury and ill-health, damage to property, plant, materials and the environment, and the loss of business opportunity.

All personal injury accidents were included, as were all other losses above a minimum reportable level which was set at the minimum unit of product or its financial equivalent.

The study accounted separately for financial and opportunity costs.



**Financial costs** are the basic costs incurred to return the situation to what it was before an accident happened. This covers both material and labour costs.

**Opportunity costs** (or lost opportunity costs) include those incurred through people stood idle or being unproductive as a result of dealing with the consequences of an accident and energy costs from plant running idle and buildings being lit and heated.

The key findings of the study are presented in Table 1.5. The following should be considered in interpreting the findings:

- 1 No major or catastrophic losses were experienced during the study.
- 2 No prosecutions or significant civil claims were undertaken during the study.
- 3 There was probably under reporting as a result of the minimum level of loss criteria for reporting.
- 4 The financial values quoted are actual 1990 figures and have not been adjusted for inflation.

Business	Total loss	Annualised loss	Representing
Construction	£245 075	£700 000	8.5% of tender price
Creamery	£243 834	£975 336	1.4% of operating costs
Transport	£48 928	£195 712	1.8% of operating costs company 37% of profits
Oil platform	£940 921	£3 763 684	14.2% of potential output
Hospital	£99 285	£397 140	5% of annual running costs

Table 1.5: HSG96 calculated losses for each organisation

The HSE provided guidance in 2002 in 'Reduce Risks – Cut Costs' (INDG355), which identified three methods for quickly and crudely estimating uninsured costs of accidents.

- 1 The uninsured costs of an accident are approximately 10 times the insurance premiums paid.
- 2 Uninsured losses from accidents in smaller firms add up to £315 per employee per year.
- 3 The average uninsured cost of an accident causing absence from work is approximately £2 100.



As every business and every incident are different the only accurate way of determining costs is to measure them. The HSE has devised an Incident Cost Calculator (see Table 1.6) for the purpose.

#### Incident Cost Calculator

Date and time of incident
Description
Person(s) involved

#### Dealing with Incident (immediate action)

Examples	Time Spent	Cost (£)
First aid treatment		
Taking injured person to hospital / home		
Making the area safe		
Fire fighting		
Immediate staff downtime (work stopped)		
Other		

#### Investigation

Examples	Time Spent	Cost (£)
Staff time to investigate and report		
Meetings to discuss incident		
Time spent with HSE / LA enforcement officer		
Consultants fees		
Other		

Table 1.6 (1): Incident cost calculator

### Getting Back to Business

Examples	Time Spent	Cost (£)
Assessing / rescheduling work activities		
Recovering work / production		
Cleaning / waste disposal		
Product reworking		
Repairing damage		
Hiring or purchasing tools, plant, equipment etc.		
Other		

### Business Costs

Examples	Time Spent	Cost (£)
Salary costs of injured person off work		
Salary costs of replacement workers		
Lost work time		
Overtime costs		
Recruitment costs for new staff		
Contract penalties		
Cancelled and lost orders		
Other		

### Action to Safeguard Future Business

Examples	Time Spent	Cost (£)
Reassuring customers		
Providing alternative sources of supply for customers		
Other		

Table 1.6 (2): Incident cost calculator

### Sanctions and Penalties

Examples	Time Spent	Cost (£)
Compensation claim payments		
Solicitors fees and legal expenses		
Staff time dealing with legal case		
Fines and costs due to criminal proceedings		
Increase in insurance premiums		
Other		

### Other

Examples	Time Spent	Cost (£)

### Total

--	--	--

Table 1.6 (3): Incident cost calculator

Making the costs of accidents explicit and drawing the information to the attention of management may not be sufficient on its own to motivate managers to consider health and safety factors as part of their business decision making processes.

The calculations of health and safety costs are unlikely to help unless the response to the following variables is positive:

- ▶ the significance of health and safety costs relative to other cost categories or company turnover in the company
- ▶ the level of direct influence management action has over health and safety costs
- ▶ the lag between management action and the effect on health and safety costs (so that managers can see the benefits of their actions)
- ▶ management access to information about the effects of management initiatives on health and safety costs.

## Insured and uninsured costs

HSE Guidance on the real costs of accidents at work indicates that the uninsured costs of an accident may be more than 10 times the insurance premiums paid. Figure 1.4 shows examples of accident costs that would not be covered by employers' liability insurance.

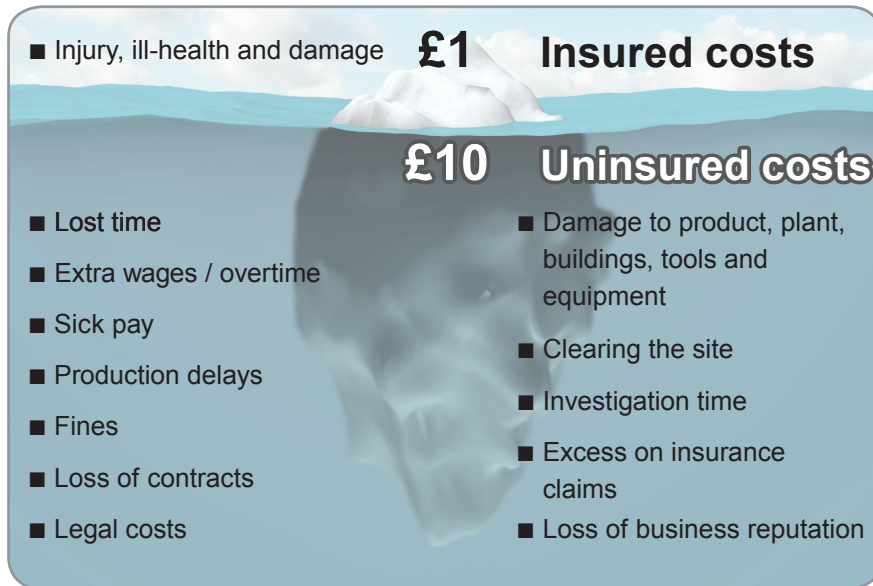


Figure 1.4: Insured and uninsured accident costs

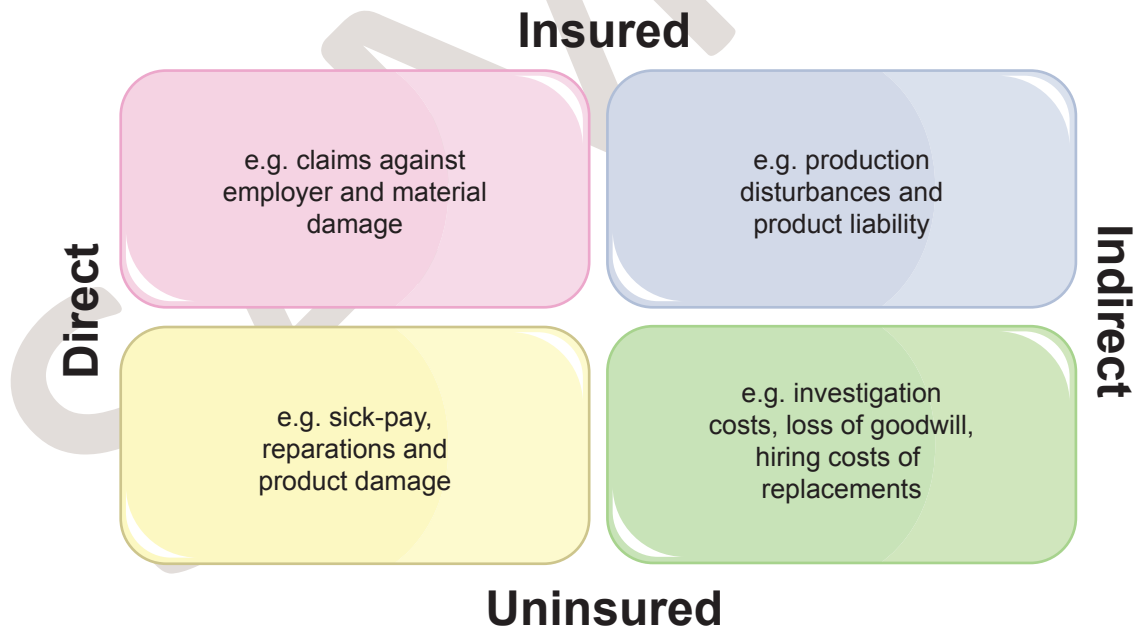


Figure 1.5: Insured / uninsured costs and direct / indirect costs

## Employers' liability insurance claims

The number of civil claims for compensation against employers as a result of accidents fell steadily in the early twenty first century and the total cost of compensation cases in Britain has remained, in real terms, static since 1989.

More than 850 000 people are injured or made ill as a result of their job each year. The Association of British Insurers (ABI) put the numbers who gain compensation from their employer at around 60 000 a year.

Average damages for an Employers' Liability Insurance (ELI) claim are £7 500. Britain pays out much less on civil compensation (as a percentage of GDP) than other major European countries and about a third of the USA figure. The average cost of employers' liability insurance is 0.25% of total payroll costs and is the lowest in Europe.

In 1999 the ABI reported that the cost of claims and costs was 54% higher than the amount that they received in insurance premiums. Since then the costs of ELI have been seen to rise significantly. The major driver for this has been the global economy, not an increase in the number of claims or the size of compensation awards.

Other factors include major increases in legal and medical costs (50% more than inflation) largely because of failure to follow the civil procedure rules resulting in unnecessary costs.

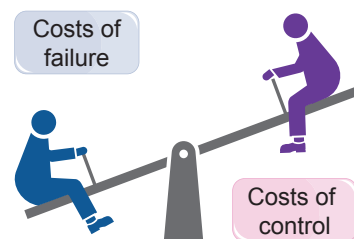
## Costs and benefits of health and safety management

*If you think safety's expensive, try an accident* is an often cited maxim which was brought back to the fore by Sir Stelios Haji-Iaonnou in his 2004 interview on BBC Radio 4s 'On the Ropes.'

Stelios also reflected that *it takes years to build a reputation, but it can be destroyed overnight.*

Health and safety costs can be classified broadly into two overall categories:

**The costs of control** – these are the costs associated with risk assessment and the development and implementation of a health and safety management system to manage preventive and protective measures. These costs tend to be relatively stable.



**The costs of failure** – the consequences of occupational accidents or work related illnesses can lead to an increase in existing costs as well as a potential reduction in income. These costs will vary with the type and number of consequences.

Cost-Benefit Analysis (CBA) has been used to evaluate the costs and benefits of investment into health and safety management systems. CBA takes account of both private and external costs and benefits and attempts to measure them in monetary terms. A project (development of safety management system) is only worth undertaking if the discounted benefits outweigh the discounted costs.

Applying cost-benefit analysis to health and safety management systems can be difficult because of the challenges of quantifying costs monetarily and potentially long delays between action being taken and the benefits becoming apparent.

Few, if any, leading companies have reached the point where the investment in their health and safety management system is not delivering a net benefit.

The Troodos shipping company tanker M/T Haven (formerly Amoco Milford Haven) exploded, caught fire and sank off the coast of Genoa, Italy in 1991, killing six Cypriot crew members and leaking 50 000 tonnes of crude oil into the Mediterranean. Stelios (and his father) faced manslaughter charges in Italy before eventually being cleared in the Italian Supreme Court.

### Cost Benefit Analysis (CBA)

- (1) Identify all costs and benefits on the basis of opportunity cost.
- (2) Convert all costs into monetary value.
- (3) Conduct a sensitivity analysis – i.e. consider the likelihood of the cost or benefit occurring.
- (4) Discount for the timing of the costs and benefits – a £1,000 benefit now is worth more than £1,000 benefit in ten years time.



## EXAM QUESTIONS

- (a) **Explain** why organisations often identify the costs of health and safety control measures much more easily than they identify the costs that can arise from poor health and safety standards.

(6 marks)

---

- (b) **Outline**, with examples, the meaning of the terms 'insured' and 'uninsured' costs in connection with accidents and incidents at work **AND outline** the relative size of these two costs in an organisation as demonstrated by accident costing studies.

(4 marks)

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Answers from the examiner's feedback are on **page 2** of the Unit A: *Exam questions and answers* PDF



## EXAM QUESTIONS

A large public limited company (plc) has recently experienced a fire and explosion resulting in multiple fatalities and extensive environmental damage. **Outline** a range of consequences that may affect the company as a result of this incident.

(5 marks)

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Answers from the examiner's feedback are on **page 4** of the Unit A: *Exam questions and answers* PDF

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## NEBOSH

National Diploma in Occupational Health and Safety

**Unit A:** Managing health and safety

**Exam questions and answers**

from January 2010 to July 2017

NEBOSH Examiners' reports\*

SAMPLE



## Unit A: Managing health and safety

### Element A1 – Principles of health and safety management

#### exam question

**(a) Explain** why organisations often identify the costs of health and safety control measures much more easily than they identify the costs that can arise from poor health and safety standards. **6 marks**

**(b) Outline**, with examples, the meaning of the terms 'insured' and 'uninsured' costs in connection with accidents and incidents at work **AND outline** the relative size of these two costs in an organisation as demonstrated by accident costing studies. **4 marks**

#### answer expected by examiners

- ✓ Relatively easy to quantify capital and running costs of providing control measures
  - ✓ Control measures are generally immediate and therefore easily visible
  - ✓ Financial losses arising from poor health and safety standards are much harder to identify, for reasons such as:
    - savings gained in terms of a reduction in accidents and incidents are not immediate but generally medium to long term
    - costs of accidents and incidents of ill health may not be fully understood and there may be no adequate procedure in place to collect such costs, either because of lack of relevant expertise or the time needed to collect such information
    - difficult to assess the realistic cost of loss of productivity, reputation, good will, etc.
- 
- ✓ Costs normally covered by insurance would include those associated with employer's liability insurance, public liability and fire, for example.
  - ✓ Uninsured costs arising from accidents and incidents at work include: damage to property, repair of plant and the cost of any clean up required.
  - ✓ Uninsured costs are typically between eight and thirty six times greater than insured costs. (*Note: These figures are from the HSE guidance HSG96, which has since been replaced with those from more recent HSE guidance on the cost of accidents at work. The more recent guidance indicates that the uninsured costs of an accident may be more than 10 times the insurance premium paid.*)

# Unit A: Managing health and safety

## Element A1 – Principles of health and safety management

### exam question

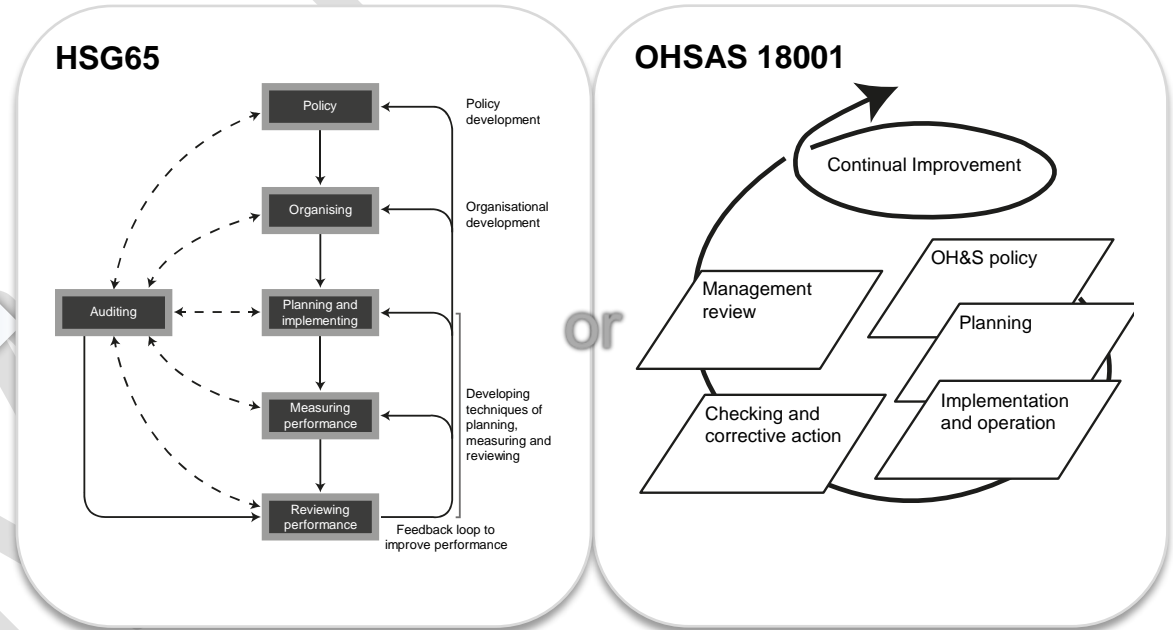
HSG65 and OHSAS 18001 are nationally recognised health and safety management models.

(a) Select **ONE** of the health and safety management system models mentioned above **AND draw** a labelled diagram showing the main elements of the model and any links between those elements **6 marks**

(b) For your chosen model, **identify** the system elements into which the following activities would fit: **4 marks**

- i. Promotion of employee competence
- ii. Setting and revising of health and safety objectives
- iii. Carrying out health surveillance
- iv. Establishing health and safety responsibilities for individuals.

### answer expected by examiners



- HSG65**
- i. Organising
  - ii. Planning and implementing
  - iii. Measuring performance
  - iv. Organising

- OHSAS 18001**
- i. Implementation and operation
  - ii. Planning
  - iii. Checking and corrective action
  - iv. Implementation and operation

## Unit A: Managing health and safety

### Element A1 – Principles of health and safety management

#### exam question

A large public limited company (plc) has recently experienced a fire and explosion resulting in multiple fatalities and extensive environmental damage.

(a) **Outline** a range of consequences that may affect the company as a result of this incident. **5 marks**

(b) As a result of the incident, shareholders in the company have raised concerns about the risk management arrangements that are in place and have called into question the Board's annual statement that was provided as part of compliance with the Turnbull/Financial Reporting Council guidelines on 'internal control'. **5 marks**

**Explain** the purpose of these guidelines and why they are relevant to this type of incident.

#### answer expected by examiners

Consequences include:

- ✓ Possibility of criminal prosecution by the relevant enforcing authority
- ✓ Initiation of civil actions for damages
- ✓ Regulators could have less trust in the organisation in the future
- ✓ Licences could be lost
- ✓ Could be more stringent requirements for issue of licences in the future
- ✓ Likely to be direct costs to the company, such as the cost of clearing up the accident (not usually covered by insurance)
- ✓ Likely to be a variety of indirect costs, such as the effect on the morale of the work force; difficulty recruiting new staff; failure to supply a promised output; loss of confidence among shareholders and investors; loss of reputation amongst the companies' clients and its immediate community.

- ✓ The **purpose** of the Turnbull/Financial Reporting Council guidelines on 'internal control' is to ensure that good risk management practice is in place in order to safeguard the organisation's assets and shareholders' investments, to minimise losses and improve profitability and to assist in compliance with legal obligations.
- ✓ The guidelines **relevance** to this type of incident is that many of the risks they are designed to manage are realised in such an incident. The risks typically relate to health, safety and the environment, business continuity, financial stability and customer relations. Following the guidelines should reduce considerably the probability of such an incident occurring.

## Unit A: Managing health and safety

### Element A1 – Principles of health and safety management

#### exam question

**Outline** ways in which a health and safety practitioner could evaluate and develop their own competence **10 marks**

#### answer expected by examiners

Health and safety practitioners can **evaluate** their own practice in a number of ways:

- ✓ Measuring the effect of changes and developments they have implemented in their organisation
- ✓ Setting personal objectives and targets and assessing their performance against them
- ✓ Reviewing failures or unsuccessful attempts to produce change
- ✓ Benchmarking their practice against that of other practitioners and against good practice case studies or information
- ✓ Seeking feedback from others in the organisation and as part of the annual appraisal of their performance by senior management.

Health and safety practitioners can **develop** their own practice by:

- ✓ Obtaining a recognised professional qualification to further improve their core knowledge and competence
- ✓ Keeping up to date by undertaking training in relevant areas
- ✓ Participating in CPD schemes
- ✓ Ensuring they have access to suitable information sources
- ✓ Networking with peers at safety groups and conferences
- ✓ Seeking advice from other competent practitioners and consultants
- ✓ Initiating and following a personal development plan.

# SAMPLE



## NEBOSH National Diploma Unit A mock exam

To help you with your revision and exam preparation for the NEBOSH National Diploma Unit A exam, we are offering you the opportunity to complete a mock exam for this Unit.



### Questions and answers

The exam questions have been put together from past NEBOSH Diploma exam papers by our NEBOSH qualified tutor and marker. Your answers will be marked by your tutor and your paper, with their feedback, returned to you within 4 weeks.



### Handwritten or typed?

We recommend that you handwrite your answers to give yourself practice for the real exams. 3 hours is a long time to write legibly for, and the more practice you have the better! To help you we have provided an exam style booklet for you to print out and complete.



### How long?

We suggest you set aside 3 hours to sit the mock exam, as though it was the real thing. If this is not possible we suggest you break down the questions, depending how much time you have. As a guide you should allow 15 minutes to answer a 10 mark question from Section A and 30 minutes to answer a 20 mark question from Section B.



## Submission

You can submit your mock exam to us either by post or by email.

### By post:

**Print out the answer booklet, complete it by hand and return to us:**



NEBOSH Diploma Mock Exam

*[Your tutor's name]*

Astutis Ltd

6 Charnwood Court

Parc Nantgarw

Cardiff

CF15 7QZ

### By email:

**Print out the answer booklet, complete by hand, scan and save ...**

**... OR ...**



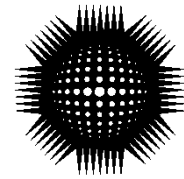
**... word process your answers and return to us by email:**

- Send to your tutor
- Copy in [d-learningadvisor@astutis.com](mailto:d-learningadvisor@astutis.com)
- The subject of your email should be: *NEBOSH Diploma Mock Exam*

THE NATIONAL EXAMINATION BOARD IN OCCUPATIONAL  
SAFETY AND HEALTH



NEBOSH NATIONAL DIPLOMA IN OCCUPATIONAL HEALTH  
SAFETY



AND

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Accredited Centre  
807

Unit A: Managing health and safety

Date XXXXXXXXXXXX

3 hours, 0930 to 1230

*10 minutes reading time is allowed before the start of this examination. You may not write anything during this period.*

**Answer both Section A and Section B**

---

**SECTION A**

This section contains six questions. Answer **ALL SIX** questions.

All questions carry equal marks.

The maximum marks for each question, or part of a question, are shown in brackets.

You are advised to spend about **15 minutes** on each question.

Start each answer on a new page.

---

- 1 (a) **Outline** reasons for establishing effective consultation arrangements with employees on health and safety matters in the workplace (4)
- (b) **Outline** a range of formal and informal consultation arrangements that may contribute to effective consultation on health and safety matters in the workplace. (6)
- 2 Human failure was identified as a significant factor in an accident involving a crane. An employee was seriously injured when struck by material being transported by the crane.
- Outline** the types of human failure which may have contributed to the accident **AND** in **EACH** case give examples relevant to the scenario to illustrate your answer. (10)



- 3 (a) With reference to relevant case law, **explain** the meaning of '*vicarious liability*' in civil law **AND** describe the circumstances in which an employer will have vicarious liability for the acts of employees. (5)
- (b) **Describe** the principle of '*strict liability*' in civil law. **Illustrate** your answer with **ONE** example of where such liability exists **AND** explain clearly the criteria for liability in the example you choose. (5)
- 4 A Health and Safety Executive inspector visits a small, limited company. The inspector decides to serve a prohibition notice on the employer in respect of an unguarded machine.
- (a) **Identify** the legal criteria that must be satisfied before a prohibition notice may be lawfully served. (2)
- (b) If the employer chooses to appeal against the notice **identify** the effect of the appeal **AND** the timescale within which an appeal must be made. (2)
- At a subsequent visit the inspector discovers that the unguarded machine is still in use by an employee and that this activity has been agreed by the Operations Director. The inspector decides to bring a prosecution against the Operations Director by virtue of Section 37 of the Health and Safety at Work etc Act 1974 in respect of the breach of the prohibition notice.
- (c) Outline the legal criteria that the inspector would need to satisfy to bring a successful prosecution. (3)
- (d) Identify the maximum penalties that would be available on conviction of the Operations Director. (3)

- 5 Regulation 7 of the Management of Health and Safety at Work Regulations 1999 requires that employers appoint persons to assist them in complying with their legal health and safety obligations.
- (a) **Outline** the main requirements of this regulation. (4)
- (b) **Outline** the key areas of *strategic* involvement of the health and safety professional with respect to developing and maintaining an employers' health and safety management system. (6)
- 6 **Outline** the issues that should be considered when planning a health and safety inspection programme.  
(Information on the specific workplace conditions or behaviours that might be covered in an inspection is **NOT** required) (10)

---

## SECTION B

This section contains five questions. Answer **THREE** questions only.

All questions carry equal marks.

The maximum marks for each question, or part of a question, are shown in brackets.

You are advised to spend about **30 minutes** on each question.

Start each answer on a new page.

---

7

A low pressure storage vessel is connected via pipework to a manufacturing plant which could, in the event of malfunction, generate a pressure great enough to rupture the vessel. To prevent this a pressure detector is installed in the low pressure storage vessel. If pressure starts to rise above an acceptable level the detector activates a valve control system. This in turn closes the inlet valve to the vessel isolating it from excessive pressure. It has been estimated that pressure great enough to rupture the low pressure storage vessel would be generated once every four years on average. Reliability data for the system is given below:

Component	Reliability
Pressure detector	0.95
Valve control system	0.99
Inlet valve	0.8

- (a) **Construct** an event tree for the protective system described above **AND** use it to **calculate** the frequency of a rupture of the low pressure storage vessel. (12)
- (b) It is proposed that, in addition to the protective system described above, the low pressure storage vessel is also fitted with a suitable pressure relief valve (reliability 0.9). Assuming that the vessel would only rupture if both the protective system and the pressure relief valve failed at the same time, **calculate** the frequency of rupture of the low pressure storage vessel in these circumstances. (4)
- (c) **Outline** the issues that would need to be considered when deciding whether both protective systems were needed on the low pressure storage vessel. (4)

- 8 The case of *R v Swan Hunter Shipbuilders Ltd and Another* [1982] arose from a serious fire during a ship repair at Swan Hunter's shipyard. Swan Hunter were convicted in the Court of Appeal.
- (a) **Identify** the specific provisions of the Health and Safety at Work etc Act 1974 under which Swan Hunter Shipbuilders Ltd (Swan Hunter) were prosecuted **AND** in **EACH** case **outline** the reasons why the company was convicted. (6)
- (b) The Management of Health and Safety at Work Regulations 1999 were not in force at the time of this case. Had these Regulations been in force, **identify** the requirements of the Regulations under which Swan Hunter could have been prosecuted specifically in connection with the fire incident **AND outline** reasons in **EACH** case.  
**Requirements in the Regulations relating to competent health and safety assistance and emergency procedures should be excluded.** (8)
- (c) The Management of Health and Safety at Work Regulations 1999 are supported by an Approved Code of Practice and guidance. In criminal proceedings **outline** the legal status of:
- (i) an Approved Code of Practice. (3)
- (ii) Guidance. (3)
- 9 Company A engaged the services of Contractor 8 to undertake repair work inside a storage tank. The production supervisor of Company A issued a permit-to-work for Contractor B's employees to enter the tank to undertake the work. The work involved the use of flammable solvents and Contractor B's employee was badly burned when some of the solvent was spilled from an open bucket and was ignited by an ordinary hand-lamp that had been provided for their use by Company A.
- With reference to *possible* breaches of the Health and Safety at Work etc Act 1974 and the Management of Health and Safety at Work Regulations 1999, in this scenario, **outline** the company or individuals who may have committed breaches **AND** the specific legal requirements that may have been breached.
- Your answer should include relevant case law and an explanation of its relevance.** (20)

- 10 A fast-growing manufacturing organisation employs 150 people. Health and safety standards at the organisation are poor as arrangements have developed in an unplanned way without professional advice. The organisation has managed to avoid any serious accidents and staff at all levels do not seem particularly concerned. However, two employees have recently experienced near miss incidents and have complained jointly the Health and Safety Executive (HSE). A subsequent visit by a HSE inspector in connection with the near miss incidents has resulted in the issue of three improvement notices.
- The managing director wishes to dismiss the two employees whom he has described as troublemakers.
- (a) **Explain** what advice a health and safety adviser should give to the managing director about the proposed disciplinary action against the employees who have complained. (5)
- (b) **Outline** steps that could be taken to gain the support of the workforce in improving the health and safety culture in the organisation. (15)
- 11 A forklift truck is used to move loaded pallets in a large distribution warehouse. On one particular occasion the truck skidded on a patch of oil. As a consequence the truck collided with an unaccompanied visitor and crushed the visitor's leg.
- (a) **Outline** reasons why the accident should be investigated. (4)
- (b) The initial responses of reporting and securing the scene of the accident have been carried out. **Outline** the actions which should be taken in order to **collect evidence** for an investigation of the accident. (8)
- (c) The investigation reveals that there have been previous skidding incidents which had not been reported and the company therefore decides to introduce a formal system for reporting 'near miss' incidents. **Outline** the factors that should be considered when developing and implementing such a system. (8)

NEBOSH  
National Diploma  
Unit A  
Answer booklet for



**UNIT A mock exam**

**Name:**

Remember to start each question on a new page and to enter the question number in the box at the top right of the page.

**Please note:** This booklet has been designed to be printed out and the mock exam completed by hand, to give you practice for the real exam.

Enter question  
number in this box

Leave this column blank  
for feedback from your  
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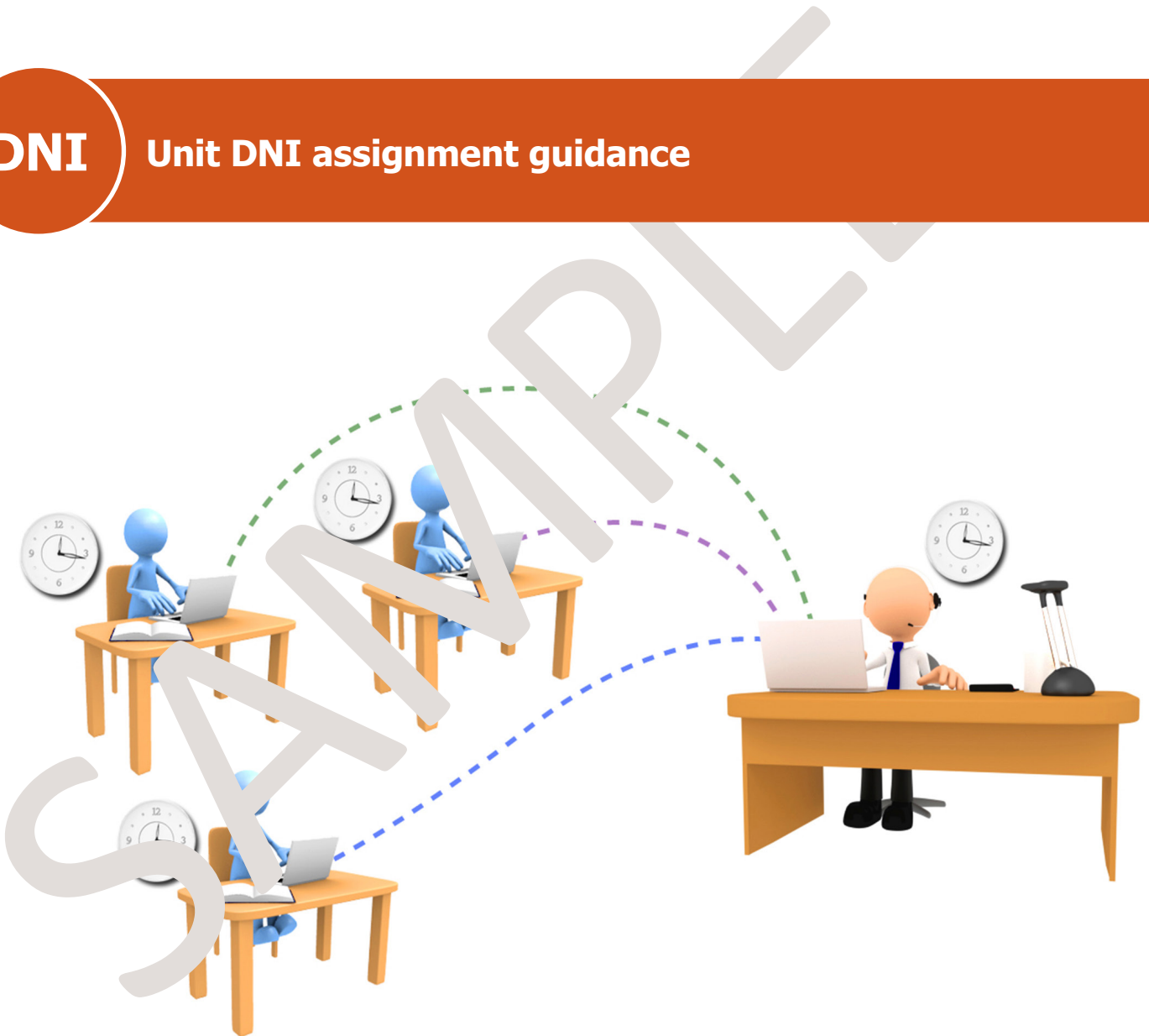
SAMPLE

# NEBOSH

Diploma in Occupational Health and Safety

**DNI**

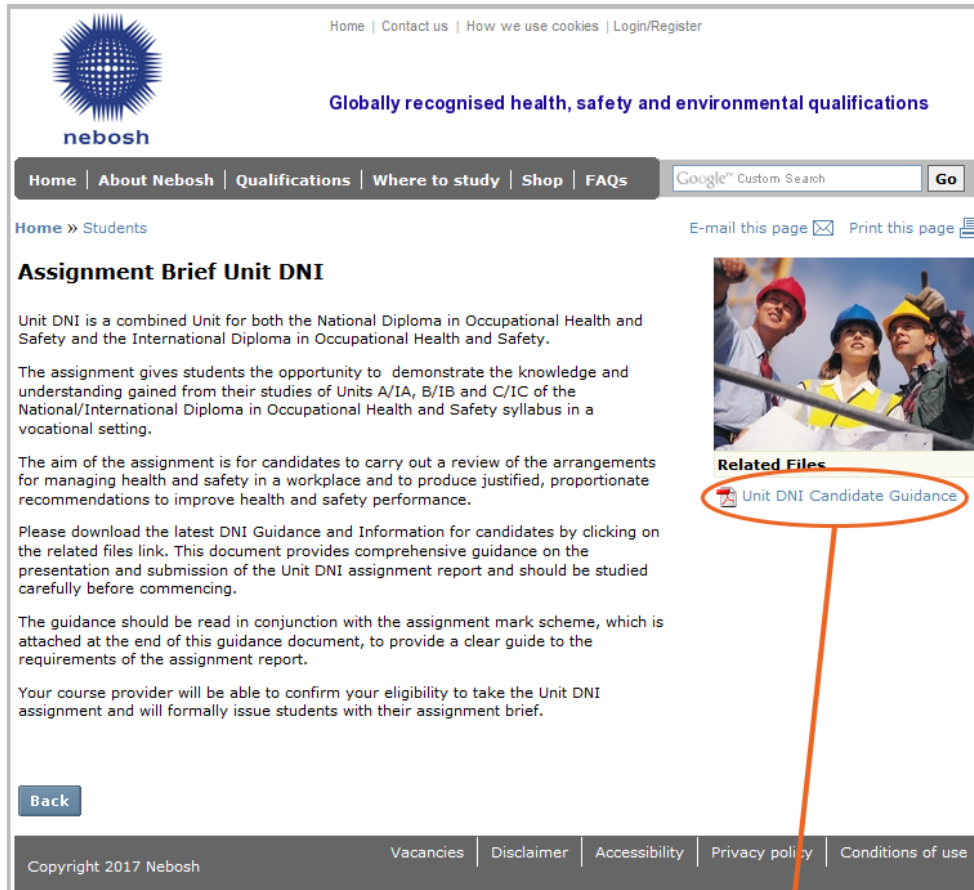
**Unit DNI assignment guidance**





## Guidance from NEBOSH

All the information you need for completing your Unit DNI assignment is available to download from the [NEBOSH Diploma Assignment brief Unit DNI](#) webpage of the NEBOSH website.



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### Assignment Brief Unit DNI

Unit DNI is a combined Unit for both the National Diploma in Occupational Health and Safety and the International Diploma in Occupational Health and Safety.

The assignment gives students the opportunity to demonstrate the knowledge and understanding gained from their studies of Units A/IA, B/IB and C/IC of the National/International Diploma in Occupational Health and Safety syllabus in a vocational setting.

The aim of the assignment is for candidates to carry out a review of the arrangements for managing health and safety in a workplace and to produce justified, proportionate recommendations to improve health and safety performance.

Please download the latest DNI Guidance and Information for candidates by clicking on the related files link. This document provides comprehensive guidance on the presentation and submission of the Unit DNI assignment report and should be studied carefully before commencing.

The guidance should be read in conjunction with the assignment mark scheme, which is attached at the end of this guidance document, to provide a clear guide to the requirements of the assignment report.

Your course provider will be able to confirm your eligibility to take the Unit DNI assignment and will formally issue students with their assignment brief.

Back

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The **Unit DNI Candidate Guidance** is essential reading for anyone before they start the Unit DNI assignment, along with the additional information and support we offer in the following pages.



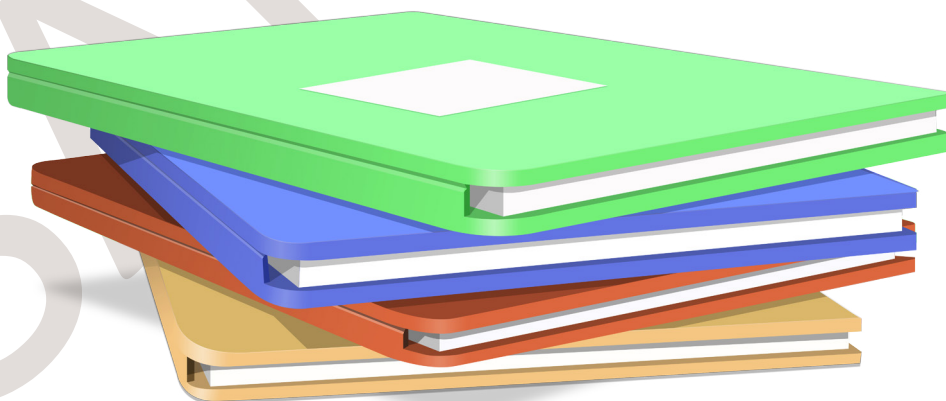
The aim of the Unit DNI assignment is to produce an overall review of the health and safety arrangements in an organisation and indicate the organisation's priorities for the future.

This assignment enables you to demonstrate the ability to carry out a range of activities expected of a competent occupational health and safety practitioner.

When carrying out the Unit DNI assignment your focus will be on applying the knowledge and understanding you have developed in the course to your workplace. This will provide you with opportunities to:

- ▶ carry out research
- ▶ critically analyse and evaluate the information you gather
- ▶ make recommendations for the workplace
- ▶ present all of this in a formal report for senior managers and executives at your workplace.

You will need to refer to the material in the course notes on the role of the health and safety practitioner when completing this part of the assignment.



**Page 2 (point 1)** of the *NEBOSH Unit DNI Assignment – guidance and information for candidates* gives you the information you need about the **purpose and aim**.

## When?

You need to have completed your study for the other units before completing and submitting your Unit DNI assignment to NEBOSH. There are a number of submission dates each year, which are detailed on the [NEBOSH Diploma exam dates page](#). The [How do I submit my Unit DNI assignment](#) section of this guide gives you more information.

## Where?

A suitable workplace must be chosen ... ideally it will be your own workplace. The workplace should be large enough to provide the opportunity for the review of health and safety arrangements.

If the workplace is very large you should limit the area you consider to a department or a division, to ensure that the assignment is manageable and the report can be completed within the specified word limit.

**If you do not have access to a suitable workplace**, contact your tutor for advice.

**Page 3 (point 4)** of the *NEBOSH Unit DNI Assignment – guidance and information for candidates* gives you the information you need about the **assessment location**.

### Before you write the report

- ▶ Decide on the workplace, department or division.
- ▶ Find out about the health and safety arrangements within the organisation.
- ▶ Review and critically analyse the management of health and safety.
- ▶ Identify the top three priorities where improvements should be made.

### Writing the report

The report should be between 8 000 to 12 000 words in total, excluding the References/ Bibliography and Appendices.

The report should be word processed (typed) and presented in an 'approved manner', which means:

- ▶ A4 page size
- ▶ 2 cm margins top and bottom, left and right
- ▶ legible font, such as Arial
- ▶ minimum font size of 11 pt
- ▶ single line spacing
- ▶ numbered pages.

Remember to spell-check your report, or get someone else to read it through for you before you submit it to NEBOSH.

*Note:* Inappropriately presented assignments are liable to be returned.

**Pages 3-4 (point 5) and pages 4-5 (point 8) of the NEBOSH Unit DNI Assignment – guidance and information for candidates** gives you the information you need about **word limits and formatting the report**.