

# Unit 1: Health, Safety and Welfare in Construction and the Built Environment

<b>Unit code:</b>	<b>L/600/0211</b>
<b>QCF Level 3:</b>	<b>BTEC Nationals</b>
<b>Credit value:</b>	<b>10</b>
<b>Guided learning hours:</b>	<b>60</b>

## ● Aim and purpose

This unit enables learners to understand the responsibilities of employers and employees and the control measures used to reduce risk and meet legal requirements. They will gain knowledge of how to undertake risk assessments and accident recording and reporting procedures.

## ● Unit introduction

The construction industry is complex, dynamic and diverse. It is essential that high standards of health, safety and welfare are maintained during all stages of a construction project. This should be a major priority and dedicated resources must be made available to ensure consistently high standards of safety. This unit encourages learners to explore the health, safety and welfare procedures used to mitigate and control risks on site. The unit will provide learners with a knowledge and understanding of the legal framework relating to the responsibilities of employers, employees, site visitors and the general public.

Learners will investigate common accidents and dangerous occurrences and how to report an accident. They will explore the importance of planning for health and safety and the consequences of technical, engineering and human failures for themselves and others. Learners will become familiar with enforcement routes for breaches of health and safety including prosecution costs and fines.

Learners will explore risk assessment methods and the legislation used to identify and report workplace hazards, risks and control measures in construction. Hazards covered will include physical, environmental, psychosocial, chemical and biological. Control strategies and risk control hierarchies will be explored. Learners will produce risk assessments in a format that can be understood by everyone who needs to read or review the risk assessment, or comply with its contents.

Learners will become familiar with the legal requirements for and required content of a health and safety policy including organisational sections and safe systems of work. They must be able to identify and implement adequate monitoring and review arrangements for all identified control measures. Learners will become familiar with components of health and safety management systems and understand the importance of training, information, instruction and supervision, along with techniques which can be used to aid understanding and adherence on site.

## ● Learning outcomes

### On completion of this unit a learner should:

- 1 Know the responsibilities of employers and employees under current health, safety and welfare legislation
- 2 Know how to undertake risk assessments using appropriate principles and formats
- 3 Understand the control measures used to reduce risk and meet legal requirements
- 4 Know their own role in accident recording and reporting procedures.

# Unit content

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## 1 Know the responsibilities of employers and employees under current health, safety and welfare legislation

*Persons:* client; employers; designers, architects, directors, managers, employees; principal contractor; construction design and management coordinator; sub-contractors; directors; managers; Health and Safety Executive (HSE); local authority; consequences for individuals and employers (eg corporate manslaughter, fines, imprisonment)

*Health, safety and welfare legislation:* relevant provisions of Health and Safety at Work Act 1974; Construction Design and Management Regulations 2007; Work at Heights Regulations 2005; Management of Health and Safety at Work Regulations 1999; Fire Regulatory Reform (Safety) Order 2006; Provision and Use of Work Equipment Regulations 1998; Lifting Equipment and Lifting Operations Regulations 1998; Control of Substances Hazardous to Health Regulations 2002; Personal Protective Equipment Regulations 1992; Electricity at Work Regulations 1989; Confined Spaces Regulations 1997; Noise at Work Regulations 2005; Control of Vibration at Work Regulations 2005

## 2 Know how to undertake risk assessments using appropriate principles and formats

*Identification of hazards:* direct observation of work environment; use of accident data, checklists and method statements; regular safety inspections

*Hazard and risk:* difference between hazard and risk

*Persons who may be at risk:* employees; site visitors; general public; indirect and direct exposure

*Consequences for individuals and employers:* eg corporate manslaughter, fines, imprisonment

*Risk rating and reporting methods:* qualitative and quantitative risk assessment methodology; hazard; likelihood and overall risk rating calculations

*Hazards:* environmental; physical; chemical; biological; psychosocial

*Principles:* employer obligations under Management of Health and Safety at Work Regulations 1999 and other secondary legislation; development of safe system of work; minimisation of risk to employees and others affected by work; concept of 'reasonably practicable' in terms of cost and other design goals; advantages of using a standard format

*Five steps to risk assessment:* identification of hazards in the proposed work activity or the adjacent area; consideration of who might be harmed and how; evaluation of risks and existing requirements; risk control hierarchy principles; recording of findings; review of risk assessments; revision where necessary

*Formats:* risk assessment templates (COSHH assessments; work at heights assessments; provision and use of workplace equipment assessments; manual handling assessments)

## 3 Understand the control measures used to reduce risk and meet legal requirements

*Control measures:* for workplace procedures; hazardous substances; lifting and manual handling; working at height; working in excavations; site traffic and plant; contaminated ground

*Legal requirements:* duty of everyone to conform to health, safety and welfare legislation and workplace policies

*Policies:* general workplace health and safety; non smoking; drugs and alcohol

## 4 Know their own role in accident recording and reporting procedures

*Accident:* definition of accident, near miss and dangerous occurrence; major injury; occupational disease; elements of a typical accident; chain of events or omissions leading to accidents; main accident investigation elements; relevant legislation eg First Aid at Work Regulations, Reporting of Injuries Diseases and Dangerous Occurrences Regulations (RIDDOR)

*Recording and reporting:* current regulations on recording and reporting accidents, diseases, near misses and dangerous occurrences; procedures to be followed after an accident; individual roles and responsibilities; accident investigation principles; evidence gathering techniques, interviewing and questioning; report formatting; root causes; explanation of contributory factors

## Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria			
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:	
<p><b>P1</b> outline the roles and responsibilities of people assigned specific health and safety duties at work [IE4]</p>	<p><b>M1</b> explain how members of the site construction team interact in terms of their health, safety and welfare roles and responsibilities</p>		
<p><b>P2</b> outline the legal duties of employees and employers in relation to three pieces of health, safety and welfare legislation relevant to the construction and built environment sector [IE2]</p>			
<p><b>P3</b> describe how to identify the hazards present in a given workplace situation, the people who may be at risk, and the possible consequences [IE3, TW4]</p>	<p><b>M2</b> carry out a typical risk assessment for a given workplace situation using a suitable format</p>		
<p><b>P4</b> describe the main principles and features of a typical risk assessment for a given workplace situation [IE2]</p>			
<p><b>P5</b> select control measures for a given workplace situation to reduce risks and meet legal requirements, using workplace health and safety policies [EP2]</p>	<p><b>M3</b> explain how accurate data on accidents and incidents contributes to improving health, safety and welfare in the workplace.</p>		<p><b>D1</b> justify the contents of a risk assessment, in terms of available control measures and what is 'reasonably practicable'</p>
<p><b>P6</b> describe the role of the individual in accident recording and reporting procedures. [IE2, EP3]</p>			

**PLTS:** This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

<b>Key</b>	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

# Essential guidance for tutors

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## Delivery

Tutors can use a wide range of techniques to deliver this unit. Lectures, discussions, case studies, DVDs or video material and footage, seminar presentations, site visits, supervised practicals, research using the internet and/or library resources and use of personal and/or industrial experience are all suitable. Delivery should stimulate, motivate, educate and enthuse learners. Visiting expert speakers could add to the relevance of the subject.

Early in the delivery of the unit learners should be made aware of the importance of good health, safety and welfare practice, from the inception to completion of every construction project. It is essential to embed health, safety and welfare in the delivery of all construction design and production units. Study of this unit depends on a knowledge and understanding of construction methods to enable learners to identify and appraise safety hazards. Learners also need to appreciate the importance of effective communication between members of the site construction team in minimising safety risks.

Centres will benefit from developing a working relationship with a local construction contractor or learners' employers. This can be a valuable delivery vehicle for providing factual evidence in support of the grading criteria and a source of useful material. It will also afford opportunities for site visits to broaden learners' experience and place it within a real world context. The use of real-life experiences, as opposed to virtual scenarios, will reinforce the human cost of an accident and make learners more aware of the dangers inherent in the construction industry. This will also provide industry standard examples of health, safety and welfare practice and documentation to assist learners with the risk assessment process.

Examples from learners' employers could be used to enhance vocational relevance. Health and safety videos and DVDs are a valuable source of visual information, particularly for hazard identification and risk assessment. Further enhancement of the learning process could be achieved by seeking specialised input from current practitioners. Group working may be of some value in analysing health, safety and welfare policies to identify responsibilities and roles, enabling those learners working in construction to share resources.

Valuable guidance is given in the Association of Colleges *Best Practice Guide to Incorporating Health and Safety into the Construction Curriculum*, and this should form the basis of the teaching strategy adopted for health, safety and welfare in this unit and in the qualification as a whole.

Group activities are allowed, but tutors will need to ensure that individual learners have equal experiential and assessment opportunities.

**Health, safety and welfare issues are paramount and should be reinforced through close supervision of all workshops and activity areas, and risk assessments must be undertaken before practical activities are taken. Centres are advised to read the *Delivery approach* section in the specification, and *Annexe H: Provision and Use of Work Equipment Regulations 1998 (PUWER)*.**

## Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

### Topic and suggested assignments/activities and/assessment

Introduction to unit content

Introduction to health, safety and welfare in the construction industry

Whole-class teaching – examples of the types of legislation, eg statute and civil and Health and Safety at Work Act/main health and safety regulations in relation to construction activities

Group discussion on moral, legal and financial implications and importance of health and safety

Explain UK health and safety legal system – statute and civil law and enforcement structure (Magistrates/Crown Court) and terms 'reasonably practicable', 'absolute', 'so far as is reasonably practicable'

Learner activity – researching relevant statute and civil case law in relation to incidents which have occurred in the construction industry and group discussion

Whole-class teaching – explain legal responsibilities of employers, self-employed, employees and levels of management under Health and Safety at Work Act 1974 (HASWA) and other key legislation (Management of Health and Safety at Work Regulations).

Explain legal responsibilities of designers, architects, construction design and management coordinator, principal contractor, contractors under the scope of the Construction, Design and Management Regulations and the key factors of the regulations (demonstrating competence, provision of information, cooperation)

Whole-class teaching – explain workplace health and safety policies. Policy statements, responsibilities, safe system of work, method statements, overall requirement for risk assessment and different types of risk assessments

Learner activity – researching own company's health and safety policy and accompanying documentation

Preparation for **Assignment 1: Health and Safety Responsibilities at Work**

Producing a leaflet



## Topic and suggested assignments/activities and/assessment

Explain attributes of an accident: define 'accident', 'near miss', 'dangerous occurrence', 'occupational disease'; 'major injury'; 'minor injury', 'property damage'

Explain accident reporting requirements and in-house reporting procedures

Explain applicable legislation – First Aid at Work Regulations, Reporting of Injuries, Diseases and Dangerous Occurrence Regulations

Show DVDs/videos on major accidents/incidents. Set learner activities and promote group discussion and review after watching

Group work activity and feedback on accident case studies including research

Whole-class teaching – give overview of accident trends in UK and causes of accidents in the construction industry: causation factors, frequency and severity of accidents over last five years as reported by Health and Safety Executive (HSE)

Explain costs and consequences of accidents including human costs and financial costs in general terms (to individuals, companies and society)

Whole-class teaching-explain accident investigation – elements of typical accident, Domino theory, Hale and Hale model, chain of events leading up to an accident

Explain key factors to include in an accident investigation – gathering of facts to include review/obtaining key documentation, training records, communication methods, environmental factors, levels of supervision, competency, machinery/equipment/materials being used at time of accidents, purpose of accident interviews

Group work to investigate accident scenario and feed back

Group work to carry out calculations for incident frequency rate and severity rate

Whole-class teaching-risk assessment – purpose, definitions of 'hazards', 'risks' and 'risk controls'

Explain hazard groups: environmental, physical, biological, chemical and psychosocial

Whole-class teaching explain in greater detail the governing legislative requirements which pertain to both general and specific risks (Management of Health and Safety at Work Regulations, Noise at Work Regulations, Vibration at Work Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Confined Spaces at Work Regulations)

Explain quantitative and qualitative risk assessment techniques

Explain quantitative risk ratings and risk reduction measures

Explain purpose of risk control hierarchy, describe workplace precautions and risk control systems

Group activity to identifying various workplace precautions and risk control systems

Learner activity to carry out risk assessment of a workshop on site

Explain specific types of risk assessments and formats that can be used

## Topic and suggested assignments/activities and/assessment

Whole-class teaching – explain working at height and risk control measures – use DVD footage, site visits and hazard spotting exercise

Explain Work at Height Regulations

Whole-class teaching – overview of plant and key equipment (mobile and hand tools) used in the construction industry and hazards arising from using these

Explain requirements for operator competence and safe systems of work, inspection and testing regimes and references to Provision and Use of Work Equipment Regulations, Electricity at Work Regulations and Lifting Equipment and Lifting Operations Regulations

Explain hazardous chemical substances – main types in the construction industry (solvents, thinners, epoxies, resins, mortar, dusts generated from mixing, cutting, demolition), routes of exposure, respiratory, skin and toxicological health effects, risk and safety phrases, classification of chemical hazard warning labels, personal protective equipment grades and types, respiratory protective equipment grades and types, overview of Workplace Exposure Limits and health surveillance

Explain biological hazards – leptospirosis, legionellosis, pigeon droppings, mould and spores, hepatitis A, B and C, importance of good personal hygiene and other control measures if working with dry rot, wet rot and moulds

Explain electricity hazards including buried and overhead services, use of 110 volt on site, detection of cables, colour coding, selection of voltages 110, 240V, 415V, safe working practices when excavating (hand digging) and when working near overhead cables

Explain confined spaces (definition of), overview of confined space risk assessments, safe systems of work and permit to work systems, competence, control measures and emergency arrangements for confined space working – show pictures

Explain working below ground – show standard trench support systems and excavation techniques, consideration of protection of persons working in excavations and barriering off, detection of underground services and isolation, monitoring and controls for inclement weather conditions and inspection regimes

Explain fire precautions – give overview of theory of fire triangle, fire prevention on site, classes of fires, types of fire extinguishers, hot work consideration and examples of PTW forms and fire watch

Preparation for **Assignment 2: Risk Assessment**

Produce and deliver a presentation on risk assessment

## Topic and suggested assignments/activities and/assessment

Group activity to identify various workplace precautions and risk control systems

Learner activity to carry out risk assessment of a workshop on site

Whole-class teaching

Explain principles of the publication *Successful health and safety management HS(G)65* and other management systems eg BS8800 ISO 18001

Provide greater detail for each section of HS(G) 65 and include group and learner activities whilst covering the following

Explain, with examples, health and safety policies and variations of safe systems of work. Learner activity to obtain own Policy and responsibilities

Explain importance of organisational responsibilities, emphasising on importance of assigning responsibilities to people; ensuring adequate training; communication; monitoring; review mechanisms to ensure responsibilities are discharged effectively

Explain the planning and implementation stage: processes for identifying required risk assessments, carrying out risk assessments, planning for safety at design stage; implementing preventative and protective measures; importance of training, instruction, supervision; provision of information; use of permit to work and method statements; effective site management procedures and control measures for workplace procedures; hazardous substances; lifting and manual handling; working at height; working in excavations; site traffic and plant; contaminated ground

Arrangements for measuring performance: accident statistics; audit results; safety inspections; insurance audit renewals; HSE prosecutions database

Whole-class teaching

Review and audit mechanisms used to determine whether objectives and aims have been met, how this feeds into management reviews and re-determining policy and future goals, emphasis on legal driver (eg new or amended legislation) and overall moral duty of care for everyone to conform to health, safety and welfare legislation and workplace policies; consequences for individuals and employers (eg corporate manslaughter, fines, imprisonment)

### Preparation for **Assignment 3: Accident investigation**

Produce a report on an accident investigation

Visit to local, regional or national construction company

Practical work on risk assessment and reporting of risk assessment

Review of unit delivery and assessment

## Assessment

The evidence requirements for pass, merit and distinction grades are shown in the grading criteria grid. Evidence for this unit may be gathered from a variety of sources, including well-planned investigative assignments, case studies or reports of practical assignments.

There are many suitable forms of assessment that could be used and some examples are suggested below. However, these are not intended to be prescriptive or restrictive, and are provided as an illustration of the alternative forms of assessment evidence that would be acceptable.

Some criteria could be assessed directly by the tutor during practical activities. If this approach is used, suitable evidence would be observation records or witness statements. Guidance on the use of these is provided on the Edexcel website.

The structure of the unit suggests that the grading criteria could be addressed fully by using three assignments. The first of these would cover P1, P2 and M1, the second would cover P3, P4, M2 and D1 and the third would cover P5, P6, M3 and D2. To achieve a pass grade learners must achieve the six pass criteria listed in the grading grid.

For P1, learners must outline the roles and responsibilities of the people responsible for health, safety and welfare on a construction project. This demands a knowledge of the key personnel involved from the inception to completion of a typical project and their influence on all aspects of health, safety and welfare. To contextualise this area of study, learners should have access to relevant information from an actual construction project or realistic scenario.

For P2, learners must outline the legal duties of employees and employers in relation to three pieces of health, safety and welfare legislation relevant to the construction and built environment sector. Learners must include three of the five pieces of legislation stated in the unit content. One of these must be the HASAWA 1974 and learners should be encouraged to access this document using the internet. Only two sections of the document are needed to meet this criterion: the legal duties of the employer and the legal duties of employees. One way to approach this is for learners to identify legal obligations that have been or are being ignored by an employer.

For P3, learners must describe how to identify the hazards present in a given workplace situation, the people who may be at risk, and the possible consequences if the hazards are ignored. Learners must have access to either an actual construction project or a realistic scenario that might include supporting visual material such as photographs, a video or DVD. Case studies taken from the construction media will bring a fresh and factual approach to addressing the task, as will interviews with others working in construction. This is an ideal workplace observation exercise where the learners can identify real hazards with a potential to harm. The use of secondary sources is permitted where this is not possible.

For P4, learners must describe the main principles and features of a typical risk assessment for a given workplace situation. A standard tabular format for risk assessments will provide a suitable basis for the required evidence. Learners are not required to produce their own risk assessments at this stage, and examples drawn from the construction industry will be sufficient. The use of the *Five Steps to Risk Assessment* is recommended as HSE guidance, but is not mandatory. The method used must, however, be coherent and consistent.

For P5, learners must select control measures for a given workplace situation to reduce risks and meet legal requirements, using workplace health and safety policies. Learners must select control measures, which may be categorised as low, medium or high. This may be linked to the risk assessment carried out for M2, but this is not mandatory as some learners may not achieve M2. It is, therefore, acceptable for learners to work from alternative scenarios.

For P6, learners must describe the role of the individual in accident recording and reporting procedures. This must include the procedures used to record and report accidents, dangerous occurrences and near misses to a supervisor or manager. There is no requirement to analyse the procedures at this stage.

To achieve a merit grade learners must meet all six of the pass grade criteria **and** the three merit grade criteria.

For M1, learners must explain how members of the site construction team interact in terms of their health, safety and welfare roles and responsibilities. Learners must expand on the issues addressed in P1 and P2 to explain how those charged with health, safety and welfare responsibilities interact to discharge their legal responsibilities. The important issues are who reports to whom, who is responsible for whom, and who does what. There must be some explanation of the hierarchy of responsibilities and this must include reference to the personnel mentioned in the unit content.

For M2, learners must carry out a typical risk assessment for a given workplace situation using a suitable format. This should expand on the issues addressed in P3 and P4 and produce a typical risk assessment for either a real-life construction situation or a realistic scenario. It is expected that learners will use the format described in P4.

For M3, learners must explain how the collection of accurate data and information on accidents and incidents contributes to improving health, safety and welfare in the workplace. Learners must use health and safety statistics to explain how future health, safety and welfare legislation and provision can be influenced by accurate data relating to previous accidents and incidents. Some, or all, of the following should be discussed: gender, age, type of injury (minor, major, fatal), location, occupation and cause of accident. Learners should use the data to show how keeping accurate records can lead to noticeable improvements.

To achieve a distinction grade learners must meet all of the pass and merit grade criteria **and** the two distinction grade criteria.

For D1, learners must justify the contents of a risk assessment, for example that produced for M2, in terms of available control measures and what is 'reasonably practicable'. Learners must expand on the risk assessment to justify the decisions made in terms of the consequences of risk, as indicated by accident data and what is 'reasonably practicable'. This should be based on a clear definition of what is meant by 'reasonably practicable'.

For D2, learners must be able to evaluate a given accident report and suggest improvements that could be made to workplace systems to avoid a recurrence. Learners must evaluate a real or simulated accident report and suggest how the workplace could be improved in light of the report in terms of health, safety and welfare.

### Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2 and M1	Health and Safety Responsibilities at Work	Your construction company asks you to produce an information leaflet for employees on the responsibilities of employers and employees at work, including people assigned specific duties related to health and safety.	Leaflet.
P3, P4, M2 and D1	Risk Assessment	Your company asks you to give a presentation on how to undertake a risk assessment.	Presentation.

Criteria covered	Assignment title	Scenario	Assessment method
P5, P6, M3 and D2	Accident Investigation	You are an HSE officer who has been asked to produce an accident investigation report and select control measures to reduce the risk of the accident reoccurring.	Accident investigation report.

## Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Construction and the Built Environment sector suite. This unit has particular links with the following unit titles in the Construction and the Built Environment suite:

Level 1	Level 2	Level 3
Health and Safety and Welfare in Construction	Exploring Health, Safety and Welfare in Construction	Construction Technology and Design in Construction and Civil Engineering
		Building Technology in Construction

This unit links to the Edexcel Level 3 NVQ in Technical Design (Construction Environment), the Edexcel Level 3 NVQ in Construction, Plant and Equipment Supervision, the Edexcel Level 4 NVQ in Site Inspection and the Edexcel Level 4 NVQ in Construction, Plant and Equipment Management.

The unit links to the following Level 3 National Occupational Standards:

- BE Design
- Transportation
- Spatial Data Management
- Construction Contracting Operations
- Construction Plant and Equipment Supervision
- Construction Site Supervision
- Surveying, Property and Maintenance
- BE Development and Control.

## Essential resources

The Health and Safety Executive (HSE) provide excellent resources for all matters concerning health, safety and welfare, as do CITB-Construction Skills and the IOSH website discussion forums. These website are excellent teaching and learning resources and can be used to research a wide range of health, safety and welfare matters. The HSE website is particularly useful for statistics, downloadable material and footage. The best resource is access to a construction site and ongoing construction work. Learners can find information using books, case studies, journals, magazines, suggested websites and newspapers. A broad range of personal protective equipment should be available as referred to in the delivery guidance.

Learners should have access to a range of practical construction activity resources/workshops or a construction site.

Access to a range of information resources to complete assignments and case studies will be essential, including relevant CD ROMs and the internet.

## Employer engagement and vocational contexts

Visits to construction sites and from employers are extremely useful for this unit. Support to enable centres to initiate and establish links to industry, and to networks arranging visits to industry and from property practitioners is given below:

- CITB-Construction Skills Education Teams [http://constructingexcellence.org.uk/pdf/construction\\_ambassadors\\_0405.pdf](http://constructingexcellence.org.uk/pdf/construction_ambassadors_0405.pdf) [www.ciob.org.uk/home](http://www.ciob.org.uk/home)
- Learning and Skills Network [www.vocationallearning.org.uk](http://www.vocationallearning.org.uk)
- National Education and Business Partnership Network [www.nebpn.org](http://www.nebpn.org)
- The Royal Institution of Chartered Surveyors [www.rics.org](http://www.rics.org)
- Work Experience/Workplace Learning Frameworks – Centre for Education and Industry (CEI University of Warwick) [www.warwick.ac.uk/wie/cei/](http://www.warwick.ac.uk/wie/cei/)

## Indicative reading for learners

### Textbooks

Topliss S, Hurst M and Skarratt G – *BTEC Level 3 National Construction and the Built Environment Student Book* (Pearson, 2010) ISBN 9781846906565

Topliss S, Hurst M and Skarratt G – *BTEC Level 3 National Construction and the Built Environment Teaching Resource Pack* (Pearson, 2010) ISBN 9781846906558

Barber J – *Health and Safety in Construction* (Thomas Telford, 2002) ISBN 0727731181

CITB – *Construction Site Safety – Health, Safety and Environmental Information* (CITB, 2009) ISBN 9781857512991

Griffith A and Howarth T – *Construction Health and Safety Management* (Pearson Higher Education, 2001) ISBN 0582414423

HSC – *Health and Safety Statistics 2000/2001* (HSE Books, 2001) ISBN 0717621103

HSE – *Control of Substances Hazardous to Health* (HSE Books, 2002) ISBN 0717625346

HSE – *Essentials of Health and Safety at Work* (HSE Books, 2006) ISBN 9780717661794

HSE – *Investigating Accidents and Incidents HSG 245* (HSE, 2004) ISBN 9780717628278

HSE – *Management of Health and Safety at Work L21* (HSE, 2000) ISBN 9780717624881

HSE – *Managing Health and Safety in Construction L144* (HSE Books, 2007) ISBN 9780717662234

HSE – *Managing Health and Safety: Your Role* (HSE Books, 1996) ISBN 0717611531

HSE – *Successful Health and Safety Management HSG65, 2nd Edition* (HSE Books, 1997) ISBN 9780717612765

Hughes P and Ferret E – *Introduction to Health and Safety in the Construction Industry, 2nd Edition* (Butterworth Heinemann, 2007) ISBN 978075068117

Perry P – *CDM 2007 Questions and Answers* (Butterworth Heinemann Elsevier, 2008) ISBN 9780750687089

St John Holt A – *Principles of Construction Safety* (Blackwell Publishing, 2005) ISBN 9781405134460

## Websites

<a href="http://www.cskills.org/workinconstr/healthsafety/index.aspx">www.cskills.org/workinconstr/healthsafety/index.aspx</a>	Construction Skills
<a href="http://www.hse.gov.uk/construction/">www.hse.gov.uk/construction/</a>	Health and Safety Executives, Construction
<a href="http://www.iosh.co.uk/index.cfm?go=discussion.thread_forum=1">www.iosh.co.uk/index.cfm?go=discussion.thread_forum=1</a>	Institute of Occupational Health and Safety
<a href="http://www.workplacelaw.net/topic/show/list/Construction">www.workplacelaw.net/topic/show/list/Construction</a>	Workplace Law Network

## Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
<b>Independent enquirers</b>	<p>analysing and evaluating information, judging its relevance and value through active discussions on accident case studies, the fines imposed and key investigation findings</p> <p>considering the influence of circumstances, beliefs and feelings on decisions and events</p> <p>planning and carrying out research, appreciating the different perspectives when undertaking accident investigation and risk assessment assignments and exercises</p> <p>exploring issues, events or problems from different perspectives when carrying out accident investigations and researching accident case studies and case law</p>
<b>Team workers</b>	<p>showing fairness and consideration to others when reporting risk assessment findings and control measures</p> <p>providing constructive support and feedback to others when undertaking assignment on managerial responsibilities and contextualising this to their working environment</p>
<b>Effective participators</b>	<p>discussing issues of concern, seeking resolution where necessary</p> <p>proposing practical ways forward when highlighting any further control measures required in the risk assessment report and clearly presenting a reasonable case and benefits for workforce and management responsibility. This can also be applied when completing the accident investigation report, breaking these down into manageable steps</p> <p>identifying impacts that would benefit others as well as themselves when reporting on control measures and any required future controls.</p>



## ● Functional Skills – Level 2

Skill	When learners are ...
<b>ICT – Use ICT systems</b>	
Manage information storage to enable efficient retrieval	creating, saving, renaming, deleting, opening, printing, closing, naming and saving files either through own hard drive, CD or use of mass storage device
Follow and understand the need for safety and security practices	respecting confidentiality and data protection and use of appropriate material keeping password, PIN and any storage device safe arranging workstation to prevent DSE risks taking frequent breaks from workstation
Troubleshoot	
<b>ICT – Find and select information</b>	
Select and use a variety of sources of information independently for a complex task	using newspapers, DVDs, downloadable materials, books, journals, conversations, CDs and images to gather information for a task, avoiding plagiarism
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	searching for and selecting information to meet their needs
<b>ICT – Develop, present and communicate information</b>	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> <li>• text and tables</li> <li>• images</li> <li>• numbers</li> <li>• records</li> </ul>	producing tables/graphs from risk assessment findings producing graphs from analysis of accident statistics using formulae to carry out calculations
Present information in ways that are fit for purpose and audience	producing assignment reports
Evaluate the selection and use of ICT tools and facilities used to present information	producing tables/graphs from risk assessment findings producing graphs from analysis of accident statistics using formulae to carry out calculations

Skill	When learners are ...
<b>English</b>	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	<p>listening to complex information and evaluating an appropriate meaningful response</p> <p>presenting information and ideas clearly to others in a persuasive manner</p> <p>making significant contributions to discussions and helping to keep the discussions moving forward</p>
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	researching various materials in order to gather relevant information and ideas for assignments and activities
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	writing reports for practical and investigative assignments such as accident investigations and risk assessment reports