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RRC Sample Trainer Pack

NEBOSH
Health and Safety Management for Construction (International) Unit CI1

nebosh

LEARNING PARTNER GOLD 335

NEBOSH
Health and Safety Management for Construction (International)
Unit CI1
Sample Contents

INTRODUCTION

CI1 SAMPLE - Element 1: The Foundations of Construction Health and Safety Management

- Lesson plan
- PowerPoint slides
- Study text chapter

SAMPLE - Full list of study text contents for Unit CI1

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NEBOSH
Health and Safety Management for Construction (International)
Unit CI1
Introduction to the RRC Sample Resource Pack

RRC's Trainer Packs have been designed to include all the resources you need to deliver the NEBOSH Health and Safety Management for Construction (International) course. The full pack - of which this is a sample - includes the following resources:

- An electronic copy of the RRC study text (course notes) for the course, supplied for use by the tutor as reference only.
- Daily lesson plans (MS Word) - a suggested breakdown of how the detailed subjects specified in the qualification syllabus will be covered on each day of the course.
- Slides (MS PowerPoint) - full colour slides addressing the subjects specified in, and following the structure of, the qualification syllabus.

Some third-party resources may be suggested in the Lesson Plans, or in the notes to the slides - for example, video footage, further reading, etc. These are not essential and they are not included as part of the licensed Trainer Pack - it is up to the tutor to source the suggested material, should he or she wish to do so.

This 'Sample Trainer Pack' contains a selection of pages from the lesson plan, a number of corresponding slides, and the relevant pages from the study text. These pages and slides are representative of the presentation, design and language of the full materials.

For more information, please contact RRC's customer advisers on 020 8944 3100 or e-mail info@rrc.co.uk

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NEBOSH
Health and Safety Management for Construction (International)
Unit CI1
Sample Classroom Lesson Plan

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NEBOSH Health and Safety Management for Construction (International)

CI1 (2022 Syllabus) Full Course (10-Day Delivery)

This lesson plan is based on the requirements of the NEBOSH Health and Safety Management for Construction (International) Specification. It is designed as a guide for tutors in planning their teaching of the course.

The lesson plan is based on 10 days of teaching with a teaching time of 7 hours per day. Where the teaching time allocated does not match the NEBOSH recommended hours, clear guidance is given as to the required “Directed Study” to ensure the NEBOSH taught hours are met. This is in addition to Private Study.

The lesson plan can be easily adapted for other delivery structures, extending the number of days or delivering in shorter sessions.

The duration is based on NEBOSH Guidance and reflects the recommended teaching times. It also includes a 2 hour tutorial on the open-book exam. Whilst NEBOSH expects Lesson Plans that comply with the recommended study hours, in practice individual sessions can be shortened and extended depending on the experience, pre-knowledge and English language skills of the learners in a particular group.

Lesson Plan Front Sheet

Tutor:	**Course Title and Topic:**
Venue:	**Date & Time:**
Number of Adult Learners:	**Knowledge/Ability assumed:** This 10-day course has been developed to fulfil the requirements of Element 1-13 of CI1 (2022 syllabus version) of the NEBOSH Health and Safety Management for Construction (UK). It is likely that some learners will have practical experience of some of the issues covered in the course. Others are likely to have little or no knowledge of the subject matter. In the introduction at the start of the course, the individual learners' present knowledge level should be assessed.
Course Duration: **68 Taught Hours** **3 Hours' Directed Study**	

Lesson Aims - *the aims of the session are to*:
As per NEBOSH syllabus guide

Objectives (Assessment criteria) - *by the end of the session students should be able to*:
As per NEBOSH syllabus guide, stated at the start of each element on slides.

Brief reasoning for the way the lesson has been planned:
The following are guidelines on how the course should be taught. Different tutors obviously have different styles and experiences and these should be taken into account when delivering the course. To keep the learners interested, a variety of different methods should be used and the tutor should not rely solely on slides.

Any constraints:

- The course will require learners to undertake some research.
- They will require at least some access to internet resources for this purpose.

Equipment/Aids to be used:

- Computer (with internet and sound capability), data projector, flip charts/whiteboard.
- Use of PPT presentations. Though PPT slides exist for most (if not all) subjects covered, they should be used judiciously rather than exclusively.
- Internet access.
- Learners are provided with a set of printed course notes.
- Tasks are stated on PPT slides (these are, with a few exceptions, short activities to assist learning; tutor's decision on how they should be delivered, e.g. class discussion, learner group work, and learner solo work).
- Prepared Workshop sheets are available for most elements of the course (these are usually more in-depth learning activities than tasks).
- Questions set for directed study may constitute study questions and exam skills questions in study text, RRC sample assessments or other relevant questions - tutor to make the decision.

CI1 Day 1

7 Taught Hours
0 Directed Study Hours

TIME	DURATION (MINS)	CONTENT AND TUTOR ACTIVITY	AIDS AND EQUIPMENT	STUDENT ACTIVITY
09:00 - 09:15	**15**	Introduction Tutor to Group, Group to Tutor. Introduce course plan and domestic arrangements.	Flip chart.	Listening.
09:15-10:45	**90 mins**	**ELEMENT 1: THE FOUNDATIONS OF CONSTRUCTION HEALTH AND SAFETY MANAGEMENT** 1.1 Morals and Money ● Moral expectations of good standards of health and safety ● The financial costs of incidents (insured and uninsured costs)	Slides, Flip Chart, Name cards, Course notes,	Listen, introduce self, Write notes for reflective study. Learner participates in discussion.
10:45-11:00	**15**	**MORNING BREAK**		
11:00-12:45	**105 mins**	1.2 The Management of Construction Activities ● Managing construction activities: ○ managing the risks by designing out foreseeable hazards ○ appointing the right people and organisations at the right time ○ making sure everyone has the information, instruction, training and supervision they need to carry out their jobs in a way that secures health and safety ○ co-operating, communicating and co-ordinating work between all parties involved in the project ○ consulting with workers and engaging with them to promote and develop effective measures to secure health, safety and welfare ● The general duties of the following roles: ○ employers ○ principal contractors ○ designers, engineers and architects ○ clients ● Pre-selection and management of contractors	Slides and course notes.	Listen, take notes, ask questions

		• How technology can be used to plan and manage construction project lifecycles.		
12:45-13:15	**30**	**LUNCH BREAK**		
13:15-15:00	**105 mins**	1.3 Types, Range and Issues Relating to Construction Activities • Types of construction in Article 2 of the ILO Safety and Health Convention C167 and the ILO Code of Practice on Safety and Health in Construction (revised 2022 edition) • Types of construction work and range of activities: construction, alteration and maintenance of premises; demolition or dismantling; clearance; excavation; structural work; site movements; service maintenance • Why you need to maintain the stability of structures 1.4 Site Assessment and Control Measures • Initially assessing the site: historical and current use, likelihood of asbestos and contaminants • Area of site, topography and features of the surrounding area • Site control measures: site planning, preparation for specialist activities, security and client/occupier arrangements	Slides and course notes. ILO CoP Safety and health in construction (Revised 2022 edition). https://www.ilo.org/sector/Resources/codes-of-practice-and-guidelines/WCMS_861584/lang--en/index.htm	Listen, take notes, ask questions. Listen, take notes, ask questions
15:00-15:15	**15**	**AFTERNOON BREAK**		
15:15-17:00	**105 mins**	1.5 Site Order and Security • The need for safe entry and exit from the site • Safe and suitable arrangement of the working space, including housekeeping arrangements • The requirement to identify the site perimeter, either with suitable signs or fencing • Any out-of-hours security arrangements (if necessary)	Slides and course notes.	Listen, take notes, ask questions.
17:00-17:15	**15 mins**	Review of day and directed study brief		

CI1 Day 1 - Self-reflection	
Assessment of Learning – how will I tell whether learning has taken place? By: • Continuous assessment through Q&A and discussions. • Assessment through participation in workshops.	**Private Study Set:** • Set a relevant question(s) for homework. • Self-revision of key principles from element(s) covered today. • Learners to look at websites identified in course notes under 'More...' sections.

Lesson Evaluation – how did the lesson go? Any changes? Etc.

CI1 Day 2

7 Taught Hours
0 Directed Study Hours

TIME	DURATION (MINS)	CONTENT AND TUTOR ACTIVITY	AIDS AND EQUIPMENT	STUDENT ACTIVITY
09:00 - 09:15	**15**	Review answers to questions from previous evening private study. Overview of previous day training.	Flip chart	Whole group feedback on answers
09:15-10:45	**90 mins**	1.6 Management of Temporary Works ● Management of parts of the works that allow or enable construction of, protect, support or provide access to, the permanent works (which may or may not remain in place at the completion of the works) e.g. falsework/ formwork, excavations and temporary equipment foundations. 1.7 Other Construction Issues including Welfare Arrangements ● Welfare requirements for: ○ toilets and washing facilities ○ changing rooms and lockers ○ rest and eating facilities ○ drinking water	Slides and course notes.	Listen, take notes, ask questions.
10:45-11:00	**15**	**MORNING BREAK**		
11:00-12:45	**105 mins**	1.7 Other Construction Issues including Welfare Arrangements ● Welfare requirements for: ○ toilets and washing facilities ○ changing rooms and lockers ○ rest and eating facilities ○ drinking water ● The types of temporary accommodation units (Shelters, TAU) required for sites ● Requirements of location for TAU (Shelters) ● Particular construction issues relating to: ○ use of migrant workers ○ temporary nature of construction activities and the constantly changing	ILO CoP Safety and health in construction Section 7.6	Listen, take notes, ask questions.

		○ workplace ○ time pressures ○ weather conditions ○ levels of numeracy and literacy of workers ○ communicating with workers speaking different languages		
12:45-13:15	**30**	**LUNCH BREAK**		

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Moral Expectations of Good Standards of Health and Safety

- We don’t expect to be harmed at work, and shouldn’t cause harm to anyone else.
- To prevent ill health and injury.
- Duty of care to others.
- Ethical reasons.
- Corporate social responsibility.
- Societal expectations.

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The Financial Cost of Incidents (Insured and Uninsured Costs)

Incidents cost money:

- Insurance premiums increase.
- Fines and prosecution costs.
- Project delays.
- Penalty clauses.
- Lost reputation.
- Payment of damages.
- Medical fees.

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The Financial Cost of Incidents (Insured and Uninsured Costs)

- The ILO has estimated that globally millions of workers are killed as a consequence of poor working conditions.
- A great many more (100's of millions) are involved in occupational accidents.
- The construction industry is disproportionately represented in these figures.
- The most common causes of construction fatalities are falls, electrocution and crush injuries.

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The Financial Cost of Incidents (Insured and Uninsured Costs)

Typical causes of injury:

- Falls from height.
- Slips, trips and falls.
- Being struck by falling/moving objects.
- Manual handling.

1.2 The Management of Construction Activities

Management of Construction Activities

- The **ILO Safety and Health in Construction Convention 1988 (C167)** provides a detailed framework for managing construction projects.
- Article 13 of C167 requires all appropriate precautions to be taken to ensure the workplace is safe.
- CoP requires employers to:
  - Provide and maintain workplaces, plant, equipment, tools and machinery.
  - Organise construction work so there is no risk of accident or injury to health of workers, as far as reasonably practicable.
- Construction should be planned.

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Management of Construction Activities

Managing the risk by designing out foreseeable hazards.

- Fire safety measures should be considered throughout all stages of design and implemented during the construction phase.
- Elements 4 through 13 of the study materials covers a range of hazards that commonly occur in construction activities.
- Examples:
  - Select materials that are lighter.
  - Design windows to be cleaned from inside not outside.
  - Manufacture roof trusses off site.

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Management of Construction Activities

Making sure everyone has information, instruction and training.

No one should be employed until they have received:

- Information:
  - On the hazards present.
- Instruction:
  - On control measures to reduce risk.
- Training:
  - On the measures to reduce risk so they are effective.
- In a language that is understood by the worker involved.
- Supervised by a competent person.

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Management of Construction Activities

The ILO code of practice outlines the role of:

- Client.
- Designers, engineers and architects.
- Employers.
- Principal contractors and competent persons.
- Contractors.

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Client

- Any ‘natural or legal person’ or a company.
- Has a duty to nominate a competent person or company to ensure construction is carried out safely.
- Inform contractors of special risks and existing general fire precautions.
- Require tenders for work to include the cost of health and safety measures.
- Take account of health and safety requirements when estimating how long each phase of the project will take.

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Morals and Money

IN THIS SECTION...

- There are two main reasons for an organisation to manage health and safety: moral and financial.
- The International Labour Organization (ILO) states that the construction industry has a disproportionately high rate of recorded accidents. Fatal accidents vary significantly by nation. Non-fatal injuries are often associated with activities related to manual handling and material installation work.

Moral Expectations of Good Standards of Health and Safety

To prevent workplace accidents and illnesses, companies must stop viewing safety simply as complying with the law and start treating it as an ethical or moral issue. Keeping workers safe isn't just about avoiding prosecution; it's about upholding an employer's ethical obligations. Conscientious employers accept that it is an essential part of their corporate social responsibility.

The moral reasons for managing health and safety are based on a person's general duty of care not to cause harm to themselves or others in the workplace. The moral reasons reflect the duty towards the other human who is working for you or with you. Employers and workers must take reasonable care to prevent situations that could cause injury or ill health to others.

The media ensures best practice is known by everyone and establishes a norm that people expect. In recent years, societal attitudes to issues such as drink driving and smoking have prompted changes that have improved standards of health and safety everywhere, not just in the workplace. Better staff will only work for employers with better standards.

In simple terms, the moral reason can be summarised as, 'it's the right thing to do'. It is right and proper that workers going to work to earn a living should return home in the same state, not suffering from ill health or serious physical injury. People expect this as a fundamental right. Workers expect it. Society expects it. Over time, this societal expectation has been translated into legal standards. In this way, the moral argument drives legislation.

The Financial Cost of Incidents (Insured and Uninsured Costs)

The financial reasons for health and safety can be difficult to calculate, but incidents cost money to the company (lost production, repair of damage, replacement labour), to the injured person (lost wages, lost opportunities) and to society (emergency services, hospitals).

Companies have gone out of business after major incidents.

Insurance companies often now take considerable interest in health and safety performance and employers who fail to identify hazards and manage risks properly may well find their insurance premiums significantly increased. Following prosecutions, fines imposed by the criminal courts can only be met from the employer's own funds as insurance cover is not possible against criminal penalties.

Manual handling injuries remain a cause for concern for inspectors on construction sites

The International Labour Organization (ILO) has estimated that globally millions of workers are killed as a consequence of poor working conditions. A great many more (measured in 100's of millions) are involved in occupational accidents. The ILO considers that there is a gross underreporting of occupational accidents and diseases, including fatal accidents. The construction industry is disproportionately represented in these figures, having a very high rate of recorded incidents. The most common causes of construction fatalities are falls, electrocution and crush injuries, though thousands of workers die as a consequence of past or present exposure to asbestos.

Good construction health and safety is a large contributor to reducing the number of injuries, but it must be maintained to ensure the number of incidents resulting in injury continues to fall. The hazards and risks of construction activities must be recognised and management systems put in place to eliminate or reduce those risks. Typical areas of high-injury incidence in the UK are:

- **Falls from height** - still a prime cause of fatalities and major injuries.
- **Slips, trips and falls occurring on the same level** - still causing a number of over-seven-day injuries.
- **Being struck by falling/moving objects** - materials and objects dropped from access equipment and buildings causing fatalities and specified injuries.
- **Manual handling** - lifting and carrying on construction sites - a major cause of lost work days, due to specified injuries and over-seven-day injuries.

TOPIC FOCUS

The construction industry is a major source of employment within ILO member states and it is also an employment sector with a proportionally high number of job-related accidents and diseases.

The industry is still labour-intensive despite a strong move towards mechanised methods of working. The industry also has a tradition of employing migrant farm labour from lower wage economies.

In 2005, the ILO estimated that at least 60,000 fatal accidents occur annually in construction activities around the world. This means that one fatal accident occurs every 10 minutes. Construction accounts for 1 in 6 deaths worldwide from working activities.

The construction sector accounts for between 6% and 10% of the global workforce. It also accounts for 25% to 40% of fatalities.

Some member states report up to 30% of construction workers suffer from musculoskeletal disorders.

The construction industry adopted its first convention in 1937. In recognition of a need for a broader approach to health and safety in construction, the Safety and Health in Construction Convention C167 and its associated recommendation R175 were adopted in 1988.

STUDY QUESTIONS

1. What are the two key areas into which consequences of poor health and safety fall?
2. Identify two risk areas in construction that have a high-injury incidence rate.

(Suggested Answers are at the end.)

The Management of Construction Activities

IN THIS SECTION...

- The **ILO Safety and Health in Construction Convention 1988 (C167)** sets out requirements for management of construction activities:
  - Managing the risks by designing out foreseeable hazards.
  - Appointing the right people and organisations at the right time.
  - Making sure everyone has the information, instruction, training and supervision they need to carry out their jobs in a way that secures health and safety.
  - Co-operating, communicating and co-ordinating work between all parties involved in the project.
  - Consulting workers and engaging with them to promote and develop effective measures to secure health, safety and welfare.
- The general duties of:
  - Clients.
  - Designers, engineers and architects.
  - Employers.
  - Principal contractors.
  - Contractors.
- Pre-selection and management of contractors is vital to the safety of everyone involved in a project and contractors can be selected following assessment of their competence.

Management of Construction Activities

The **ILO Safety and Health in Construction Convention 1988 (C167)** provides a detailed framework for managing construction projects. Article 13 of C167 requires all appropriate precautions must be taken to ensure a workplace is without risk of injury to the workers and that the workplace is safe, this includes the risk fro fire. The code of practice provided by the ILO 'Safety and Health in Construction' requires employers to provide and maintain workplaces, plant, equipment, tools and machinery and to organise construction work that, as far as is reasonably practicable, there is no risk of accident or injury to health of workers. Construction work should be planned so that:

- Dangers liable to arise are prevented as soon as possible.
- Difficult postures and movements are avoided.
- Work is organised to take into account their safety and health.
- Materials and products are used that are safe.
- Working methods are used to protect against the harm arising from chemicals, physical and biological agents.

Managing the Risk by Designing Out Foreseeable Hazards

All appropriate precautions should be taken to ensure workplaces are safe and without risk to injury or health. Elements 4 through 13 of the study materials cover a range of hazards that commonly occur in construction activities.

Decisions can be made at the design stage, e.g. by selecting materials that are lighter to handle, designing windows that can be cleaned from the inside rather than working at height outside and constructing roof trusses off site. It is essential to consider fire safety measures throughout all stages of the design process and to effectively implement them during the construction phase.

Clients must make suitable arrangements for managing a project, including the allocation of sufficient time and other resources, and ensure that these arrangements are maintained and reviewed throughout the project. They must also provide pre-construction information as soon as is practicable to every designer and contractor appointed to the project; this must include existing fire precautions, building layout and identify the presence of flammable and combustible materials.

In addition, they must ensure that, before the construction phase begins, a construction phase plan is drawn up by the contractor or principal contractor which includes project-specific fire risks and procedures in case of fire; and that the principal designer prepares a health and safety file for the project.

Appointing the Right People and Organisations at the Right Time

In order to prevent accidents and diseases that affect workers that arise from employment in construction, the right people and organisations should be appointed at the right time. Laws or regulations should provide for the duties of clients, designers, engineers and architects to take into consideration the safety and health aspects in the designing of buildings, structures or construction projects. The appointment of competent people with sufficient time to perform their tasks is vital.

Making Sure Everyone has Information, Instruction and Training

No one should be employed on a construction project unless that person has received the necessary information (on the hazards present), instruction (on control measures to reduce risk) and training (on the measures to reduce risk so they are effective) to be able to do the work competently and safely. The information, instruction and training should be in a language understood by the worker. Supervision must be undertaken by a competent person.

Co-operating, Communicating and Co-ordinating of Work between All Parties Involved in the Project

The **ILO Safety and Health in Construction Convention 1988 (C167)** requires member states to have national laws that provide for co-ordination on construction projects. Those with primary responsibility for the project or others undertaking activities simultaneously at one construction project, must provide safety and health measures and ensure compliance with national laws and regulations. National laws should also be used to ensure communication and co-operation between employers and workers to promote health and safety.

Consulting Workers and Engaging with them to Promote and Develop Effective Measures to secure Health, Safety and Welfare

Employers should set up and maintain a process for effective consulting with workers and their representatives in line with relevant national laws. The consultation process should spread information on shared concerns to arrive at the best possible solutions for health and safety for everyone involved. Consultation should be free from prejudice and apply to all workers. Consultation should not affect the rights of workers to be part of organisations for collective negotiation.

General Duties

Clients

The client is regarded as the person ('any natural or legal person') or even a company, for whom a construction project is carried out. The requirements placed upon the client in the ILO Code of Practice (CoP) (Section 2.5.1) are to:

- Co-ordinate and manage all workers and contractors on site (or nominate a competent person or company to do it) to ensure all activities that are part of the construction project are carried out safely and without risk to health at all stages of the project.
- Inform all contractors involved in the project of any special risks to health and safety of which the client knows or become aware.
- Require any contractors and subcontractors submitting tenders for work to include the cost of health and safety measures required in the construction process.

Clients are to take account of all health and safety requirements of the construction process when estimating how long each stage of the construction might take, and for the overall time required to complete a project.

Provision of Information

Clients should provide pre-construction information to designers and contractors who may be bidding for the work; this information takes the form of project-specific health and safety information which is needed to identify hazards and risks which are likely to be associated with the design and construction work. It should include existing general fire precautions, building layout and any presence of hazardous materials such as flammable or combustible materials.

In the first instance this information may be part of the tendering process or procurement process. This information is required in good time as it will be needed for those preparing bids for the work so they can decide what resources will be needed for design, planning and construction to be carried out properly. If contractors are appointed during the construction project (after construction has started), each contractor bidding for the work must be provided with the pre-construction information in order to prepare their bid.

The client should commission surveys, for example asbestos surveys, to ensure information provided is up to date.

Designers, Engineers and Architects

'Designers' includes the designers, engineers, architects, etc. who actually take part in the overall design and planning of the construction project. They are required to:

- Have adequate health and safety training themselves and include the health and safety of the construction workers into the design and planning process, and not to add it on after the design stage.
- Not include anything in the design or planning of the construction project that would require the use of dangerous structural or other procedures. This includes not using any materials that may be hazardous to the health and safety of the construction workers which could be avoided by designing them out or by substituting safer materials.
- Ensure risk of fire is identified, eliminated and controlled.
- Take into account all safety problems associated with the subsequent maintenance and upkeep of any structures or construction projects that would involve special risk.
- Include facilities in the design of the construction for all work to be carried out with the minimum of risk to the health and safety of the construction workers involved.

Employers

Employers should:

- Establish the safety and health of workers consistent with national law.
- Provide and maintain workplaces that are safe.
- Establish committees with worker representatives.
- Take precautions to protect people in the vicinity of construction sites.
- Arrange for regular safety inspections.
- When purchasing plant and equipment, take into account ergonomic principles.
- Provide supervision to ensure workers perform their tasks with due regard to health and safety.
- Assign workers to tasks to which they are suited by their age, physique, state of health and skill.
- Ensure that workers are suitably instructed.
- Establish a 'checking system' for lone workers to ensure they are safe.
- Provide appropriate first aid.

Principal Contractors and Competent Persons

DEFINITION

COMPETENT PERSON

Any person who has adequate qualifications (such as suitable training and sufficient knowledge, experience and skill) to ensure the construction work is carried out safely. Some national authorities may define what specific qualifications must be attained to be 'competent', and what duties may be assigned to them.

The principal contractor (or employer) is a person or company with actual control over or the main responsibility for overall construction site activities where two or more different contractors could be involved in the work at that site. They are responsible for co-ordinating and ensuring that the health and safety measures are put in place, including those for project-specific fire risks, and followed by everyone on site.

The principal contractor shall nominate a competent person or company at the site with authority to ensure on his/her behalf that the health and safety measures are in place and followed when he/she is not there.

You should note that there is a possible inconsistency, in that the ILO CoP suggests that it is the duty of the client to nominate a competent person to be the co-ordinator. In practice, national or regional legislation will determine who, in fact, is to fulfil this duty - client or principal contractor.

Contractors

They are responsible for planning, managing and monitoring construction work under their control so that it is carried out without risks to health and safety. For projects involving more than one contractor, they must co-ordinate their activities with others in the project team and, in particular, comply with directions given to them by the designer or principal contractor. They must ensure fire mitigation measures are maintained and additional risks are not created.

Pre-Selection and Management of Contractors

Contractors are used widely in construction projects, either to deliver a specific project or skill, or to deliver extra labour when needed. For example, a site wanting to extend the premises would usually take on a building contractor to deliver the project rather than employing the manpower directly.

The reliance on using contractors and subcontractors in the construction industry raises the issue of competency, training, skill levels, ill health, stress, violence, and behavioural problems. Contractors and subcontractors (who may be individuals) are often on site for short periods of time and may therefore be constantly changing their place of work.

Selecting, monitoring, and managing contractors is therefore of vital importance to the safety of everyone involved in the project.

Contractors can be selected following an assessment of their competence. This may be established by the completion of a questionnaire when applying for a contract or by the production of evidence that demonstrates competence.

TOPIC FOCUS

Competence of Contractors

A contractor's competence needs to be assessed by use of certain questions or a checklist, such as:

- The experience they have in the type of work required.
- Their health and safety policies and practices.
- Their monitoring arrangements.
- The quality of their risk assessments.
- Their accident record.
- Any recent claims or prosecutions.
- The suitability of their method statements.
- What qualifications and skills they have, and what qualifications their employees have.
- The quality of references provided.
- The ways in which they appraise and control their subcontractors.
- Whether they are a member of a professional body or trade association.
- Whether they have (adequate) insurance.

Clearly, if a contracting company is unable to demonstrate its competency in these health and safety areas it may not be invited to tender for a project in the future.

The principal contractor will have primary responsibility for construction site activities. They should, therefore, ensure suitable site inductions are conducted and that workers are consulted and engage with measures to secure their health and safety. The principal contractor should ensure work standards are monitored and take prompt action where necessary to ensure that standards are maintained.

Use of Technology

Building Information Modelling

Building information modelling, or BIM, is a process for creating and managing information across the lifecycle of a construction project, from design through to the maintenance and use of the building. Use of a common data environment, usually cloud-based software, enables collaborative working, with all parties having access to the same information at the same time, and in the same format.

The BIM process creates a three-dimensional (3D) database in the form of a model, containing all the elements and information for the design of a building. Having a 3D model aids the identification of elements that will clash, and need to be moved or re-designed, before they occur on site, such as structures, pipework, or cables.

By allowing all parties to add to and refer back to all the information in the BIM model, it provides a single source of information which can be of benefit to the building owner/operator once the building is handed over. They will be able to use the information contained within the BIM model for events such as maintenance work, refurbishment or upgrade, decommissioning, even changes in legislation or in the party responsible for maintaining or operating the building. Enabling them to easily establish manufacturers, part numbers, and any other information that is contained within the BIM model that has previously been input.

The benefits of using BIM not only include collaborative working, but time and cost savings at both pre-construction and construction stages, improved safety and regulatory compliance, operational efficiency, and better profit margins.

STUDY QUESTIONS

3. Who are the five dutyholders on a construction project?
4. What are three duties of a principal contractor?
5. Give five examples of ways contractor competence can be tested.

(Suggested Answers are at the end.)

NEBOSH
Health and Safety Management for Construction (International) Unit CI1
Full List of Study Text Contents

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Health and Safety Management for Construction (INT)

Element 1: The Foundations of Construction Health and Safety Management

Element 2: Improving Health and Safety Culture and Assessing Risk

Element 3: Managing Change and Procedures

Element 4: Excavation

Element 5: Demolition

Element 6: Mobile Plant and Vehicles

Element 7: Working at Height

Suggested Answers to Study Questions

Health and Safety Management for Construction (INT)

Element 8: Musculoskeletal Health and Load Handling

Element 9: Work Equipment

Element 10: Electricity

Element 11: Fire

Element 12: Chemical and Biological Agents

Element 13: Physical and Psychological Health