

## NEBOSH National Diploma Unit C - Workplace and Work Equipment Safety

### Introduction

This Supplement contains updates to your study material for Unit C of the NEBOSH National Diploma. Please read it carefully.

### Element C2: Principles of Fire and Explosion

Properties of Flammable and Explosive Materials and The Mechanisms By Which They Ignite

#### Properties of Solids, Liquids and Gases

##### Flash Point

In the second paragraph of the text under this subheading, the first sentence now reads:

“Under the **CLP Regulation** liquids with a flash point lower than 0°C and a boiling point lower than or equal to 35°C are classified as extremely flammable.”

##### Major Accidents

#### The Contribution of Typical Mechanical and Systems Failures to Major Accidents

##### Allied Colloids, 21 July 1992

Under the subheading Background, the first paragraph now reads:

“Allied Colloids at Bradford produces various speciality chemicals and is currently an upper-tier major hazard site under the **Control of Major Accident Hazards Regulations 2015 (COMAH)**.”

### Element C3: Workplace Fire Risk Assessment

Fixed and Portable Fire-Fighting Equipment

#### Legal Obligations Related to Environmental Protection in the Event of A Fire

In this subsection, the third bullet point has been amended to read:

- “The maximum penalties which can be imposed:
  - Magistrates’ Court:
    - Fine or three months’ imprisonment.
  - Crown Court:
    - Unlimited fine or two years’ imprisonment can be imposed.”

## Element C4: The Storage, Handling and Processing of Dangerous Substances

### Storage, Handling and Transport of Dangerous Substances

#### Dangerous Substances and Hazardous Substances

In the **GLOSSARY** box in this subsection, the first bullet point has been amended to read:

- “The **CLP Regulation** classifies substances into specific groups such as explosive, oxidising, flammable, toxic, corrosive, irritant, sensitising, carcinogenic, mutagenic, reproductive toxin, and environmentally hazardous.”

The fourth bullet point has also been amended and now reads:

- “The **Dangerous Substances (Notification and Marking of Sites) Regulations 1990** define dangerous substances very widely, whereas the **Control of Major Accident Hazards Regulations 2015 (COMAH)** define more narrowly in relation to specified substances as well as selected categories of danger listed in the schedule.”

#### Emergency Planning

In the **KEY INFORMATION** box at the beginning of this main section, the fourth and fifth bullet points have been amended to read as follows:

- “**COMAH** applies to special risk premises and requires that sites to which the Regulations apply have emergency plans. The Regulations make a distinction between:
  - ‘upper-tier’ sites, which hold large quantities of dangerous substances; and
  - ‘lower-tier’ sites, where the quantities are significantly less.
- Upper-tier operators need to:
  - Prepare and test an on-site (internal) emergency plan – this lays down the response to the emergency by those on the site.
  - Provide local authorities with information to enable them to prepare **off-site (external) emergency plans** – this lays down the co-ordinated response of external agencies to a site emergency, which may have off-site effects.
  - Review, and where necessary revise, their emergency plans to take account of any changes in the site, or within the emergency services concerned, new technical knowledge, or knowledge concerning the response to major incidents.”

#### Need For Emergency Preparedness Within an Organisation

In this subsection, “**Control of Major Accident Hazards Regulations 1999 (COMAH)**” has been updated to “**Control of Major Accident Hazards Regulations 2015 (COMAH)**”.

#### Preparation of Major Accident Hazard Emergency Plans to Meet Regulatory Requirements

The first sentence under this subheading has been updated to read:

“**COMAH (Control of Major Accident Hazards Regulations 2015)** applies to special risk premises.”

The third sentence has been updated to read:

“The regulations make a distinction between ‘upper-tier’ sites, which hold large quantities of dangerous substances (e.g. LPG, petroleum spirit, explosives, oxygen and specified toxic substances), and ‘lower-tier’ sites where the quantities are significantly less.”

#### Duties of Site Operators

In this subsection, under the subheading **Lower-Tier Sites**, the first sentence of the second paragraph now reads:

“The key documentation that needs to be prepared is the **major accident prevention policy (MAPP)**.”

The subheading **Top-Tier Sites** has been changed to **Upper-Tier Sites** and the fourth paragraph under this new subheading now reads:

“In addition, upper-tier operators also need to:

- Prepare and test an **on-site (internal) emergency plan** – this lays down the response to the emergency by those on the site.
- Provide local authorities with information to enable them to prepare **off-site (external) emergency plans** – this lays down the co-ordinated response of external agencies to a site emergency, which may have off-site effects.”

## Preparation of On-Site and Off-Site Emergency Plans Including Monitoring and Maintenance

The opening words of the third paragraph under this subheading now read:

“In developing the safety report required by **COMAH**, the operators of upper-tier establishments need to describe:”

The fourth paragraph has been amended to read:

“Some of the information needed for the emergency plan is therefore included in the operator’s safety report (for upper-tier **COMAH** sites).”

### On-Site

The opening words of this subsection now read as follows:

“Part 1 of Schedule 4 to **COMAH** identifies the information that should be included in an **internal emergency plan (on-site)**:”

At the end of the subsection, the content of the **MORE** box is now:

“The HSE document L111 *The Control of Major Accident Hazards Regulations 2015 – Guidance on regulations* is available at:

[www.hse.gov.uk/pubns/priced/l111.pdf](http://www.hse.gov.uk/pubns/priced/l111.pdf)

HSG191 *Emergency planning for major accidents* is available at:

<http://www.hse.gov.uk/pubns/books/hsg191.htm>”

### Off-Site

The opening words of this subsection now read as follows:

“Part 2 of Schedule 4 to **COMAH** identifies the information that should be included in an **external emergency plan (off-site)**:”

## Element C9: Construction Hazards and Controls

The second **Learning Outcome** for this element is now:

“Explain the scope and application of the **Construction (Design and Management) Regulations 2015**.”

### Scope and Nature of Construction Activities

#### Types of Work

In the **GLOSSARY** box in this subsection, “**Construction (Design and Management) Regulations 2007 (CDM 2007)**” has been updated to “**Construction (Design and Management) Regulations 2015 (CDM 2015)**”.

**Revision Question 1** is now:

“Describe the different types of construction work that might be covered by the **Construction (Design and Management) Regulations 2015**.”

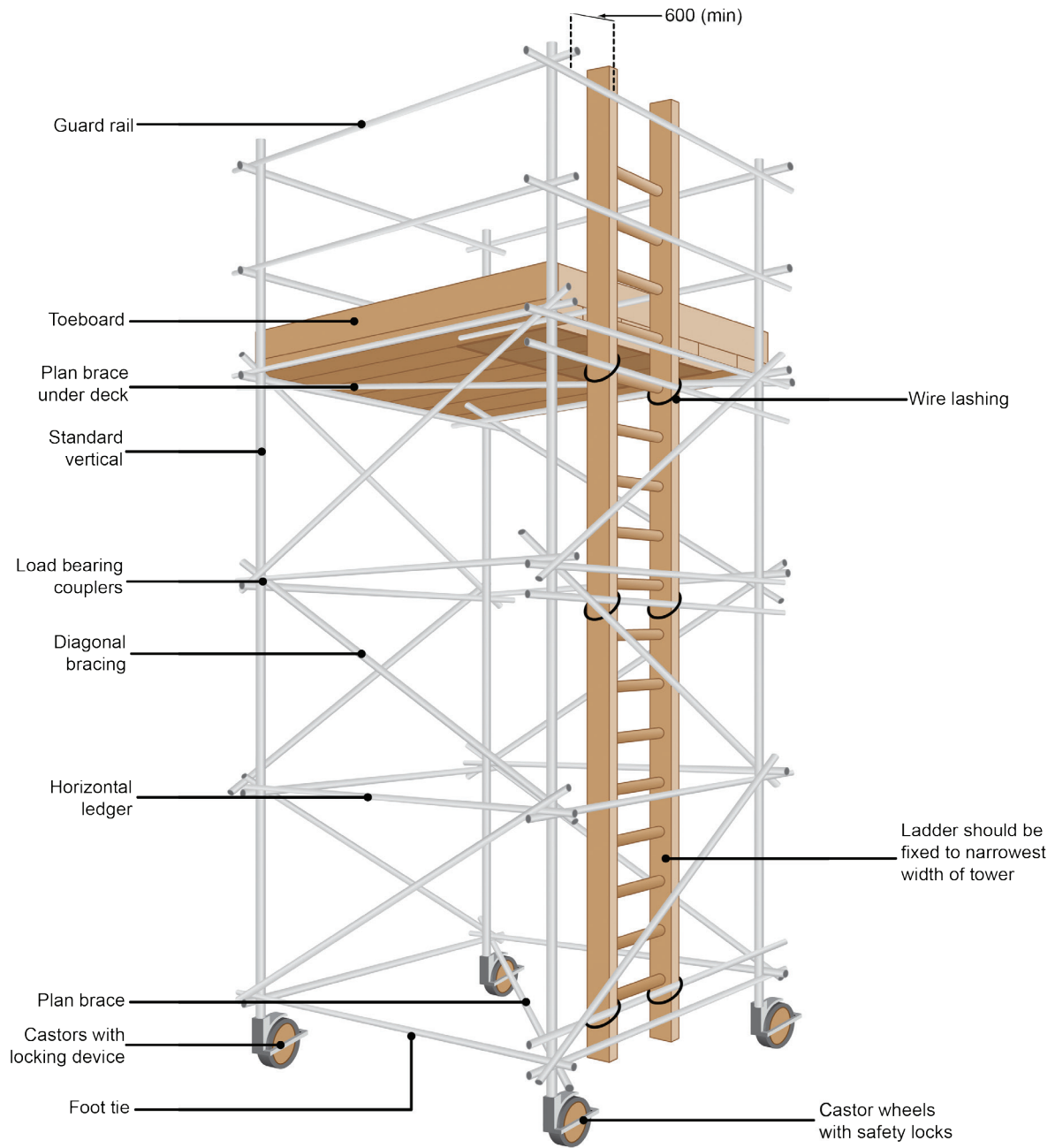
### Scope and Application of the Construction (Design and Management) Regulations 2007

This main section has been replaced by a new main section on the **Construction (Design and Management) Regulations 2015**. Please refer to your online material for the new content.

## Working at Height From Fixed or Temporary Platforms

### Tower Scaffolds

The diagram in this subsection has been amended and is now as shown below:



Mobile access tower scaffold

## Demolition Work

### Typical Hazards and Precautions

#### Planning

The original first three paragraphs under this subheading have been replaced by the following:

“Every job requires careful planning. This is a requirement of **CDM Regulations 2015**, as discussed earlier. These make the client (and his professional advisers) responsible for much of the general planning of the safety of the job before even going out to tender.

As we noted in an earlier discussion, the client must provide pre-construction information to designers and contractors. This overlaps with other aspects of the tender process but includes details such as:

- A general description of the work.
- Details of timings within the project.
- Information required by potential contractors to demonstrate competence or adequacy of resources.
- Details of risks as far as can be established at that stage.
- Information for preparing a health and safety plan for the ‘construction phase’ of the work (if the project is notifiable).”

#### Excavations

In the **KEY INFORMATION** box at the beginning of this main section, the last bullet point has been updated to:

- “There are requirements for statutory inspections and examinations of excavations under the **Construction (Design and Management) Regulations 2015**.”

#### Statutory Inspections and Examinations of Excavations

The text under this subheading has been amended to read as follows:

“The **CDM Regulations 2015** cover the safety of excavation work and an important provision in the Regulations concerns inspection of the excavation support structure. It must be thoroughly examined by a competent person. The working part of an excavation must be inspected once a day or, if greater than 2m, before each shift.

The following list details the main requirements:

- An adequate supply of suitable quality support material which has been inspected and passed by a competent person must be available in order to carry out excavations safely.
- Adequate provision must be made before working commences and during the work to secure the stability and security of any part of a structure.
- Support work involving erection, alteration or dismantling may be done only by, or under the direction of, a competent person.
- No person shall work in an excavation before it has been competently examined.
- Materials, plant or equipment must not be sited near the edges of excavations in a manner likely to endanger persons working in the excavation; and when material or equipment is being placed into an excavation, it must be done in a safe manner. Uncontrolled tipping is an offence.
- Projecting nails must not be left on a support structure.”

## Summary

### Scope and Application of the Construction (Design and Management) Regulations 2007

This subsection has been replaced by the following revised subsection:

### “Scope and Application of the Construction (Design and Management) Regulations 2015

We have:

- Noted that **CDM 2015** imposes a safety management framework on construction work and assigns specific duties to the following participants in a construction project:
  - Clients.
  - Designers.
  - Principal designers.
  - Principal contractors.
  - Contractors.
- Examined the specific duties under CDM 2015 which relate to :
  - The appointment and competence of relevant parties.
  - The notification of projects.
  - The preparation of pre-construction information.
  - The preparation of the construction phase plan.
  - The provision of appropriate and relevant information to all parties.
  - The preparation of the health and safety file.”

### Excavations

The third bullet point under this subheading now reads:

- “Noted that there are requirements for statutory inspections and examinations of excavations under the **Construction (Design and Management) Regulations 2015**.”

## Suggested Answers to Revision Questions

### Element C9: Construction Hazards and Controls

#### Question 1

The opening words of this answer are now:

“The different types of construction work that might be covered by the **Construction (Design and Management) Regulations 2015** include:”

#### Question 3

The answer has been updated and now reads as follows:

“Under **CDM 2015**, the main duties are:

- The Client should make sure:
  - Other duty holders are appointed.
  - Sufficient time and resources are allocated.
  - Relevant information is prepared and provided to other duty holders.
  - The principal designer and principal contractor carry out their duties.
  - Welfare facilities are provided.

- The Principal Designer should:
  - Plan, manage, monitor and co-ordinate health and safety in the pre-construction phase of the project.
  - Identify, eliminate or control foreseeable risks.
  - Ensure designers carry out their duties.
  - Prepare and provide relevant information to other duty holders.
  - Provide relevant information to the principal contractor to help them plan, manage, monitor and co-ordinate health and safety in the construction phase.
- The Principal Contractor should:
  - Plan, manage, monitor and co-ordinate health and safety in the construction phase of a project.
  - Liaise with the client and principal designer.
  - Prepare the construction phase plan.
  - Organise co-operation between contractors and co-ordinate their work.
  - Ensure suitable site inductions are provided.
  - Ensure reasonable steps are taken to prevent unauthorised access.
  - Ensure workers are consulted and engaged in securing their health and safety.
  - Ensure welfare facilities are provided.”

#### Question 4

The answer has been updated and now reads as follows:

“The plan should include:

- A description of the project such as key dates and details of key members of the project team.
- The management of the work including:
  - The health and safety aims for the project.
  - The site rules.
  - Arrangements to ensure co-operation between project team members and co-ordination of their work, such as regular site meetings.
  - Arrangements for involving workers.
  - Site induction.
  - Welfare facilities.
  - Fire and emergency procedures.
- The control of any particular risks where they are relevant to the work involved.”