

NEBOSH National Construction Certificate Unit NCC1 - Managing and Controlling Hazards in Construction Activities (Exams from October 2015)

Introduction

This Supplement contains updates to your study material for Unit NCC1 of the NEBOSH Construction Certificate. Please read it carefully.

Element 1: Construction Law and Management

LEARNING OUTCOMES

The third **Learning Outcome** is now:

- “Identify the scope and application of 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This main section has been replaced by a new main section on the **Construction (Design and Management) Regulations 2015**.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 materials for the new content.

Sources of External Construction Health and Safety Information

In the **KEY INFORMATION** box at the beginning of this main section, the text now reads:

“In addition to the internal information provided by the client, designers and the principal contractor, relevant health and safety information is available from a range of external sources.”

Summary

In this main section, the sixth bullet point now reads:

- “Identified the scope and application of the main legal instrument in the construction industry, the Construction (Design and Management) Regulations 2015.”

Element 2: Construction Site – Hazards and Risk Control

Initial Site Assessment

In the second paragraph beneath the **KEY INFORMATION** box, “**CDM Regulations 2007**” has been updated to “**CDM Regulations 2015**”.

Health, Welfare and Work Environment Requirements

Provision of Health and Welfare Facilities

In this subsection, the second paragraph has been amended to read:

“The specific requirements for health and welfare facilities are to be found in Schedule 2 to the **Construction (Design and Management) Regulations 2015** and HSE publications.”

Element 8: Chemical and Biological Health – Hazards and Risk Control

Forms, Classification and the Health Risks from Hazardous Substances

Main Classification of Hazardous Substances

This subsection (including the **TOPIC FOCUS** boxes) has been replaced by the following revised subsection:

“Health Hazards Classification

The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) is a single internationally agreed system of **chemical classification and hazard communication using labelling** and **Safety Data Sheets (SDS)**.

It includes harmonised criteria for the classification of:

- **Physical hazards**, e.g. explosive, oxidising, highly flammable.
- **Health hazards**, e.g. toxic, harmful, irritant, carcinogenic.
- **Environmental hazards**, e.g. harmful to aquatic organisms, dangerous for the ozone layer.

TOPIC FOCUS

The main **classifications of chemicals hazardous to health** can be summarised as follows:

- **Toxic** (or very toxic) – small quantities cause death or serious ill health if inhaled, swallowed or absorbed via the skin.
- **Harmful** – may cause death or serious ill health when inhaled, swallowed or absorbed through the skin in large doses.
- **Corrosive** – destroys living tissue on contact, such as sulphuric acid and hydrochloric acid in chemical cleaners, e.g. for masonry or brickwork.
- **Irritant** – causes inflammation of the mucous membranes (eyes and lungs) or skin from immediate, prolonged or repeated contact.
- **Carcinogenic** – may cause cancer (abnormal growth of cells in the body) when inhaled, swallowed or absorbed via the skin.

Criteria for classifying chemicals have been developed for the following GHS health hazard classes:

- **Acute Toxicity**
These chemicals cause acute toxic effects after ingestion, skin absorption or inhalation. They are allocated to one of five toxicity categories and category 1 toxic chemicals are those requiring the lowest dose to cause a toxic response.
- **Skin Corrosion/Irritation**
These chemicals cause:
 - Irreversible corrosive damage to the skin,
 - or
 - Irritation of the skin which is reversible.

- **Serious Eye Damage/Eye Irritation**

These chemicals cause:

- Serious tissue damage in the eye or serious physical decay of vision.

or

- Irritation of the eye which is reversible.

- **Respiratory or Skin Sensitisation**

These chemicals cause sensitisation, which means they can produce an allergic reaction that will gradually worsen as exposure is repeated. There are two types:

- **Respiratory sensitisers** – these can cause asthma and similar effects if inhaled (e.g. wood dusts and isocyanates).

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- **Skin sensitisers** – these can cause allergic dermatitis on contact with the skin (e.g. epoxy resin used in adhesives and paints).

- **Germ Cell Mutagenicity**

Mutagenic chemicals may cause genetic mutations that can be inherited.

- **Carcinogenicity**

Carcinogenic chemicals may induce cancer or increase its incidence.

- **Reproductive Toxicity**

Chemicals that are toxic to reproduction may cause sterility or affect an unborn child.

- **Specific Target Organ Toxicity (Single and Repeated Exposure)**

All significant health effects, not otherwise specifically included in the GHS, that can impair function, (both reversible and irreversible, immediate and/or delayed) are included in this class. Narcotic effects and respiratory tract irritation are examples of this.

- **Aspiration Hazard**

Aspiration is the entry of a liquid or solid directly through the mouth or nose, or indirectly from vomiting, into the trachea and lower respiratory system. Some hydrocarbons (petroleum distillates) and certain chlorinated hydrocarbons are aspiration hazards. Acute effects include pneumonia, varying degrees of pulmonary injury or death.”

Assessment of Health Risks

Sources of Information

In the **GLOSSARY** box in this subsection, the second paragraph now reads:

“Note: Often wrongly called ‘**COSHH** Sheets’ they are, in fact, nothing to do with the **COSHH Regulations** but rather relate to **REACH**.”

The two paragraphs beneath the **GLOSSARY** box have been replaced by the following:

“**CLP** and the European **Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation** are the foundation of general chemicals legislation.”

The **MORE** box in this subsection has been removed.

Product Labels

The first paragraph under this subheading has been amended to read:

“When supplying dangerous substances/mixtures, a product label must give the following information:

- Name, address, and telephone number of the supplier.
- The nominal quantity of the substance/mixture (though this may be elsewhere on the package) – but only where it is made available to the general public.

- Product identifiers:
 - for substances this would be: name, identification number (EC number, CAS number or inventory number);
 - for mixtures this would be: trade name, and then the identity of all the substances (maximum of 4) in the mixture which contribute to its classification.
- Hazard pictograms.
- Signal word (as applicable).
- Hazard statements (as applicable).
- Precautionary statements (as applicable).
- Supplementary information.”

The second paragraph has then been deleted.

(The label is unchanged.)

Workplace Exposure Limits

Long-Term and Short-Term Limits

The original first paragraph under this subheading has been deleted.

The subsection now begins:

“The two reference periods commonly used for Workplace Exposure Limits are:”

After this subsection, the following new subsection has been inserted:

“Significance of Time-Weighted Averages

Workplace exposure limits are Time-Weighted Average (TWA) exposures. They are calculated by measuring a person’s average exposure over a specific reference period of time, either **15 minutes** (short-term exposure limit) or **8 hours** (long-term exposure limit). Consequently, they do not provide a limit for airborne concentrations measured over a very short period of time (say 1 or 2 seconds). Although such instantaneous measurements are useful as part of a monitoring programme to identify peak concentrations, only time-weighted averages can be used to legally assess exposure against WELs.”

Limitations of Exposure Limits

After this subsection, the following new subsection has been inserted:

“Application Of Workplace Exposure Limits

WELs are designed to control absorption into the body of airborne harmful substances following **inhalation**. EH40 contains the list of substances for which WELs have been set together with the LTEL and STEL values of these WELs.

In order to determine whether exposure to an airborne contaminant has been adequately controlled, as required by the **COSHH Regulations**, EH40 is one of the reference documents used. Adequate control of exposure to an airborne contaminant which is hazardous to health means not exceeding the WEL, or for a substance that is carcinogenic, mutagenic or causes asthma, reducing exposure to as low as is reasonably practicable.”

Safe Handling and Storage of Waste

Hazardous Waste

The text in this subsection has been amended to read as follows:

“**Hazardous waste** is generally waste that is highly flammable, toxic, carcinogenic, corrosive, etc.

Non-hazardous waste generally includes household waste, paper, wood and other biodegradable materials.

Hazardous waste is defined in legislation with additional duties on those involved that are in addition to those assigned to non-hazardous waste.”

Element 10: Working at Height – Hazards and Risk Control

Safe Working Practices for Access Equipment and Roofwork

Scaffolding

Requirements for Scaffold Erectors

In the third paragraph under this subheading, the last bullet point has been amended to read:

- “Application of the **Construction (Design and Management) Regulations 2015** and the **Work at Height Regulations 2005** in the operations above.”

Working Over or Near Water

Additional Appropriate Control Measures

Safety Boat

In the first paragraph under this subheading, “**Construction (Design and Management) Regulations 2007**” has been updated to “**Construction (Design and Management) Regulations 2015**”.

Platforms and Gangways

In the first paragraph under this subheading, “**Construction (Design and Management) Regulations 2007**” has been updated to “**Construction (Design and Management) Regulations 2015**”.

Element 11: Excavation Work and Confined Spaces – Hazards and Risk Control

Excavation Work Hazards and Assessment

Risk Assessment

In the first paragraph under this subheading, “**Construction (Design and Management) Regulations 2007**” has been updated to “**Construction (Design and Management) Regulations 2015**”.

Control Measures for Excavation Work

Inspection Requirements For Excavations

The third paragraph under this subheading now begins:

“An inspection report must be made and kept (**CDM Regulation 24**).”

Element 12: Demolition and Deconstruction – Hazards and Risk Control

Demolition and Deconstruction Hazards and Risks

Hazards Relating To Demolition And Deconstruction

In the first paragraph under this subheading, “**Construction (Design and Management) Regulations 2007**” has been updated to “**Construction (Design and Management) Regulations 2015**”.

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

Control Measures

General Control Measures For Demolition Work

Competence of the Workforce

In the first paragraph under this subheading, “**CDM Regulations 2007**” has been updated to “**CDM Regulations 2015**”.

Purpose and Scope of Pre-Demolition, Deconstruction or Refurbishment Survey

Duties

The first paragraph under this subheading has been amended to read:

“The **property owner** or person in control of the premises has a duty to ensure that a pre-demolition survey is carried out on non-domestic premises. In the case of refurbishment or deconstruction, the local authority building department should be consulted before any structural alterations are made.”

Control Measures Included in a Method Statement

The Method Statement

Emergency Arrangements

In this subsection, the last bullet point has been updated to read:

- “**Control of Major Accident Hazards Regulations 2015**.”

Named Responsible Persons

This subsection has been updated and now reads as follows:

“All construction and demolition activities are covered by the **CDM Regulations 2015** (discussed in Element 1). This places duties on responsible persons.

The Client

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.

Contractors

The principal contractor is the main contractor involved and is normally a specialist in managing demolition projects. Significant to this role is the planning, managing and monitoring of the demolition activity and coordinating matters relating to health and safety to ensure that the work is carried out without risks to health or safety.

The principal contractor must also consult and engage with the workforce to ensure that measures for their health, safety and welfare are developed, promoted and checked for effectiveness.”

Co-ordination of Work Activities On Site

This subsection has been revised and now reads as follows:

“Demolition projects require a more rigorous approach to co-ordination, co-operation and planning than general construction work. Those undertaking the work must understand the risks involved and how to control them.

The demolition plan details the arrangements of how the demolition work will be carried out and must be prepared before demolition or dismantling starts. This requirement applies to all demolition work:

- The **principal contractor** is responsible for preparing and reviewing the demolition plan and co-ordinating the activities of all contractors to ensure compliance with health and safety legislation and the demolition plan. The principal contractor may give information, instruction and site induction to other contractors and arrange for their training where appropriate.
- All other demolition contractors must:
 - Plan, manage and monitor their own work so that risks to health and safety are minimised.
 - Take reasonable steps to ensure that work is carried out in accordance with the demolition plan.The principal contractor must be kept informed of the appointment of any other contractors.”

Exam Skills

Question 2 has been removed.

Suggested Answers to Revision Questions

Element 1: Construction Law and Management

Question 6

The answer is now:

“The five duty holders are the client, the designer, the principal designer, the principal contractor and contractors.”

Question 7

The answer is now:

“The HSE is notified of a project if the construction work in it will last for 30 days or more and involve more than 20 workers at any one time, or involve more than 500 person-days.”

Question 8

The answer is now:

“**CDM 2015** applies to all construction work.”

Element 8: Chemical and Biological Health - Hazards and Risk Control

Question 7

The answer is now:

“A product label must give the following information:

- Name, address, and telephone number of the supplier.
- Nominal quantity of the substance/mixture (may be elsewhere on the package) – where made available to the general public.

- Product identifiers:
 - for substances: name and identification number (EC number, CAS number or inventory number);
 - for mixtures: trade name, and identity of all the substances (maximum of 4) in the mixture which contribute to its classification.
- Hazard pictograms.
- Signal word (as applicable).
- Hazard statements (as applicable).
- Precautionary statements (as applicable).
- Supplementary information.”

Element 12: Demolition and Deconstruction - Hazards and Risk Control

Question 9

In this answer, “**CDM Regulations 2007**” has been updated to “**CDM Regulations 2015**”.