

Title:	Supervising Construction Technology
Level:	4
Credit value:	20
GLH	75
Unique Reference Number:	A/618/8644
Aim:	The aim of this unit is to provide learners with the skills and knowledge to be able to identify, describe and select suitable construction technologies, methods and materials for construction projects.
Assessment	Assessment of this unit will be through the completion of a mandatory multiple choice assessment.

Learning outcomes

The learner will:

1. Be able to identify and describe construction technologies, methods and materials used in the construction of the structure of a building.

Delivery content:

The aim of this learning outcome is to provide the learners with the skills and knowledge to identify and describe the processes and resources used in the construction, refurbishment or retrofit of the structure of a building.

The learner must know:

- the principles, resources and processes used in **preparing a construction site** for a construction project.
- the principles, resources and processes used in **foundation and substructure construction** for a construction project.
- the principles, resources and processes used in **wall construction** for a construction project.
- the principles, resources and processes used in **floor construction** for a construction project.
- the principles, resources and processes used in **roof construction** for a construction project.
- the principles, resources and processes used in the **construction of a superstructure** on a construction project.
- the principles, resources and processes used in the **temporary works** for the construction of a building structure.

2. Be able to evaluate the technologies, methods and materials used in the construction of the structure of a building.

Delivery content:

The aim of this learning outcome is to provide the learners with the knowledge and skills to analyse a construction project and the available construction technologies, materials and methods and identify suitable options for construction, refurbishment or retrofit of the structure of a construction project.

The learner must:

- know the benefits and limitations of the range of construction technologies, methods and materials used in site preparation, foundation, wall, floor, roof or superstructure construction.
- be able to select the most suitable construction technologies, methods and materials to use in site preparation, foundation, wall, floor, roof or superstructure construction.

3. Be able to identify and describe construction technologies, methods and materials used in the fit out of a building.

Delivery content:

The aim of this learning outcome is to provide the learners with the skills and knowledge to identify and describe the processes and resources used in the fit out, refurbishment or retrofit of a building.

The learner must know:

- the principles, resources and processes used in the **construction of partitions** for a building or structure.
- the principles, resources and processes used in the **covering for floors, walls, partitions and ceilings** of a building or structure.
- the principles, resources and processes used in the **installation of services** and utilities to a building or structure.

4. Be able to evaluate the technologies, methods and materials used in the fit out of a building.

Delivery content:

The aim of this learning outcome is to provide the learners with the knowledge and skills to analyse a construction project and the available construction technologies, materials and methods and identify suitable options for the fit out, refurbishment or retrofit of a building or structure.

The learner must:

- know the benefits and limitations of the range of construction technologies, methods and materials used in the fit out of a construction project.
- be able to select the most suitable construction technologies, methods and materials to use in the fit out of a construction project.

5. Be able to recognise modern methods of construction and evaluate their suitability for a construction project.

Delivery content:

The aim of this learning outcome is to provide the learners with the skills and knowledge to recognise the **modern methods of construction** and evaluate their suitability for use on a construction project.

The learner must:

- be able to describe a range of modern construction methods.
- identify the benefits and limitations of a range of modern construction methods.
- analyse a construction project to gauge the suitability of using modern construction methods.

6. Be able to know when and where to seek advice on the use of construction technology, methods and materials.

Delivery content:

The aim of this learning outcome is to provide the learners with the skills and knowledge to recognise when specialist information and advice is needed to progress a construction project and the sources of the information.

The learner must:

- know who and where to refer to when additional information is needed regarding:
 - site preparation
 - foundation / substructure construction
 - wall construction
 - floor construction
 - roof construction
 - superstructure construction
 - constructing partitions
 - covering walls / floors / ceilings
 - the installation of services

- temporary works.
- specialist works.
- be aware of the **requirements when working on historical / traditional buildings** and when and where to source expert help.
- know the requirements of working with planning and **building regulators**.

Scope of Training

The Scope of Training identifies areas that must be covered during the delivery of this unit. This is the minimum that is expected, but tutors are expected to include other areas of knowledge which will benefit their learners, based on location, types of work available and from the tutor's own professional experience.

Scope of Assessment

This unit is assessed by a 35 question multiple choice assessment. The assessment material is available from NOCN.

Requirements

Preparing a construction site	Processes and requirements of site clearance (ground surveys, radiation detection, location of water table, removal of pollution / contaminants, removal / movement of soil / earth) Processes and requirements of setting out (traditional and modern methods)
Foundation and substructure construction	The types of foundation and substructure construction (Strip, piled, raft etc.) The technologies used in foundation and substructure construction The materials used in foundation and substructure construction and their properties and performance characteristics The processes involved in foundation and substructure construction
Wall construction	The types of wall construction (solid, cavity, thin joint, concrete, pre-cast, timber panels etc.) The technologies used in wall construction The materials used in wall construction and their properties and performance characteristics The processes involved in wall construction
Floor construction	The types of floor construction (solid, suspended, concrete, timber, metal etc.) The technologies used in floor construction The materials used in floor construction and their properties and performance characteristics The processes involved in floor construction
Roof construction	The types of roof construction (traditional, flat, truss mono pitch etc.) The technologies used in roof construction

	The materials used in roof construction and their properties and performance characteristics The processes involved in roof construction	
Construction of a superstructure	The types of superstructure construction (reinforced concrete etc.) The technologies used in superstructure construction The materials used in superstructure construction and their properties and performance characteristics The processes involved in superstructure construction	
Material properties and performance characteristics	Structural integrity Resistance to forces Thermal efficiency Fire resistance Weather resistance	Sound insulation Flexibility Availability Cost Moisture control
Construction of partitions	The types of partitions (metal stud, timber stud etc.) The technologies used in the construction of partitions The materials used in the construction of partitions and their properties and performance characteristics The processes involved in the construction of partitions	
Covering for floors, walls, partitions and ceilings	The types of covering for floors, walls, partitions and ceilings (timber, plaster, paint etc.) The technologies used in covering for floors, walls, partitions and ceilings The materials used in covering for floors, walls, partitions and ceilings and their properties and performance characteristics The processes involved in covering for floors, walls, partitions and ceilings	
Installation of services	Gas Water Electricity	Communications Security Fire and safety systems
Modern methods of construction	Off-site production Modular Use of technologies Use of BIM	Robotics Exoskeletal work Unmanned aerial vehicles Augmented and / or virtual reality
Requirements when working on traditional buildings	Planning and conservation restraints Specialist trade and material requirements	
Building regulators	Local authorities NHBC	Building control organisations
Coverage of the Construction Site Supervisor Standard		
K3 Construction Technology	Understand different construction methods and materials	
S3 Construction Technology	Assist in the implementation of the most appropriate solutions for construction projects	
B1 Professional Judgement	Be able to work within own level of competence and know when to seek advice from others.	
B2 Commitment to Code of Ethics	Work within Rules and Regulations of Professional Competence and Conduct for the industry's recognised professional bodies.	
B7 Demonstrate Innovation	Be able to identify areas for improvement and suggest innovative solutions.	



PART OF **nocn** GROUP

© NOCN January 23