Title:	**The Construction Industry**
Level:	1
Credit value:	3
GLH:	21
Unique Reference Number:	**D/651/4794**
Sector Subject Area:	5.2 Building and Construction
Aim:	The aim of this unit is to provide learners with an overview of the construction industry and influencing factors both locally and nationally.
Assessment Type:	Multiple-choice test.
Assessment Guidance:	This unit is assessed through a multiple-choice test of 30 questions. Learners will need to achieve an overall pass at 70%, (21/30). The test is available on the Test Platform.

Learning outcomes
The learner will:

1. Know about the areas that construction operates in and the roles involved.

Delivery content:

The purpose of this learning outcome is to introduce learners to the different **areas of construction** that they may be working in.

The learner must know the:

- different areas/sectors construction operates in.
- trades relevant to each area.
- types of work and support roles associated with each of the areas.
- routes into these roles.
- impact and benefits on the local and national economy that each of the areas of construction can deliver.
- different types of **customers** who may procure work.
- opportunities for those involved in the industry to work nationally and internationally.

2. Know about the different stages of a construction project.
Delivery content: The purpose of this learning outcome is to introduce the construction methods utilised for the different **stages of construction**. The learner must know the different: • stages of a construction project. • trades involved with each stage. • materials involved with each stage. • methods utilised for each stage.
3. Know about the materials used in construction.
Delivery content: The purpose of this learning outcome is to introduce the common materials used within the construction industry. The learner must know the: • common **materials** used in construction. • processes for producing common materials. • areas of construction common materials are used in. • benefits and negative issues with each material, including sustainability. • forms that each of the materials can take. • materials combined to create **composite products**.
4. Know about the sources of information in the construction industry.
Delivery content: The purpose of this learning outcome is to introduce learners to the **sources of information** that can be used when working in construction. The learner must know: • the different sources of information and the details they contain. • who is responsible for producing and maintaining sources of information. • the reporting procedures if issues are found with the information provided or further clarification is required. • the methods for ensuring that information sources are up to date as well as potential impacts if this is not ensured.

5. Know about new technology in construction.
Delivery content: The purpose of this learning outcome is to introduce learners to various **new technologies.** The learner must know: • about building information modelling (BIM), including the methods for producing a 3D model and the information that is attached to the individual components. • how BIM can assist in the development of a project, including project life cycle and clash detection. • about the benefits offered by off-site manufacturing including cost, quality and sustainability. • about the benefits of just-in-time delivery.
6. Know about sustainability in construction.
Delivery content: The purpose of this learning outcome is to introduce learners to **sustainability** within construction and what the term refers to. The learner must: • understand the **3 Rs.** • know how to manage resources sustainably. • know the benefits offered by reducing waste and how this is achieved. • know the importance of ensuring the correct disposal of waste. • know the various forms of renewable energy, both in terms of how they can support construction as well as benefit the end user. • know how construction can impact on the natural environment, including the production of materials, impacts of the construction project and the protection of flora and fauna.

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,

knowledge of which will benefit their learners, based on location, types of work available and from the tutors own professional experience.

What would you expect the learner to be able to do or not to do?

Learners must be able to identify the different areas construction operates in; the roles found within those areas; the different stages of a project and the recognised routes to securing employment in those roles. They must be aware of the different materials used within construction and sources of information that will support their work. Learners must be able to understand the way the industry is changing through modern methods of construction and the importance of sustainability.

Delivery would be enhanced, where possible, by the use of guest speakers, especially in regard to modern methods of construction and sustainability. Operatives and project managers will be able to provide actual examples of the areas covered.

It is expected that tutors expand on the areas to be covered to make relevant to the local area and employment opportunities and explain terms in using wording that is understandable to their learners.

Areas of construction	Civil Engineering Housebuilding Repair, refurbishment and maintenance	General building Demolition Infrastructure Utilities	
Trades	Labouring Bricklaying Carpentry and Joinery Plastering Tiling Painting and decorating Roofing	Plant operation Piling Steel fixing Formwork Concreting Groundworks Fenestration Floor laying Highways	Electrical Plumbing Heating and Ventilation engineering Civil engineering
Customer	Public Sector (National governments, Local authorities) Private Sector Utility companies	Housing associations Home owners Private individuals	
Stages of construction	Design stage Planning Site clearance Groundworks Utilities Piling/foundations	Walls Floors Roofs Fit out Fenestration Remediation	Drainage and irrigation Landscaping Shopfitting First and second fix Surveying

Materials	Timber Steel Concrete Plastic Glass	Paint Roof tiles/slate Plaster/render Wall/floor tiles Masonry	Insulation Modern materials Damp proof materials Drainage
Composite materials	Reinforced concrete Cross-laminated timber Manufactured timber boards	Steel cables Plastics Artificial stone	
Sources of information	Job specifications Method statements Risk assessments Manufacturers guidance Plans, drawings and models (2D and 3D) Client requests	Permits/permission to work Organisational policies and procedures Gantt chart Job sheet Schedule	
New technologies	Building Information Modelling (BIM) Just-in-time delivery Off-site manufacturing	Virtual and augmented reality Drones, remote controlled plant and robots Lean construction	
Sustainability	Social	Environmental	Economic
3 Rs	Reduce	Reuse	Recycle