Unit 3: Sustainability in the Construction Industry

Unit code: L/600/0063

QCF Level: 2

Credit value: 5

Guided learning hours: 30

Unit aim and purpose

This unit develops learners' understanding of sustainability, explores how sustainability is integrated into construction projects and investigates how sustainability issues can be addressed more effectively in the future.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes	Assessment criteria
1 Understand the concept of sustainability as it applies to the construction and built environment sector	1.1 explain what is meant by sustainability
	1.2 explain the relevance of sustainability to the construction and built environment sector
2 Know the issues affecting the development of a sustainable built environment	2.1 identify the issues associated with the provision of a sustainable built environment
	2.2 describe the issues associated with the provision of a sustainable built environment
3 Know how sustainability can benefit the built environment both locally and nationally	3.1 identify the benefits of using sustainable construction, in both local and national terms
	3.2 describe the benefits of using sustainable construction, in both local and national terms
4 Know how sustainable design and construction techniques are used to address environmental issues.	4.1 identify the sustainable design and construction techniques used to minimise environmental impact
	4.2 describe the sustainable design and construction techniques used to minimise environmental impact.

Unit content

1 Understand the concept of sustainability as it applies to the construction and built environment sector

Definitions of sustainability: the meaning of sustainability in social, physical, economic and general terms

Relevance of sustainability: finite resources; global warming; melting ice-caps; rising sea levels; climate change; flooding; shortages; extinction of species; potential consequences of a reduction in biodiversity; needs of future generations; local and global context; inter-relationships eg impact on construction design and planning

2 Know the issues affecting the development of a sustainable built environment

Built environment issues: nature of the built environment (significant features, existing and future); impact of the built environment on the natural environment eg local, national, existing, future; duty of the construction industry to present and future generations eg safeguard, maintain, improve and expand the built environment without harming the natural environment

Social and economic issues: meeting local and national needs; improved business and employment opportunities; skills development; positive economic impact, eg contribution to gross domestic product (GDP), financial return on development, increased prosperity; negative social impact, eg over development, pollution

3 Know how sustainability can benefit the built environment both locally and nationally

Local benefits: employment; social benefits; green spaces; aesthetics; community consultation; local involvement; improved environments; regeneration

National benefits: cleaner air; reduction in flooding; education; conservation of resources; economic well being; environmental protection; better quality standards; change in education; government benefits; tourism

4 Know how sustainable design and construction techniques are used to address environmental issues

Influencing factors: stages of the development process (planning, design, construction); factors influencing these stages (physical, technical, financial, legal and aesthetic); impact on the natural environment at each stage

Respecting the natural environment: overall aims and objectives; minimisation of waste; reduction of pollution; control of rate of consumption of valuable resources; conservation of natural assets; preservation of wildlife, flora and fauna; protection of biodiversity

Sustainable construction: techniques, eg environmentally friendly design, specification of locally sourced materials, improved site management, improved resource management, improved waste management, reclamation and recycling, alternative energy technology