



Unit 18A

The Circular Economy in the Construction Sector

Innovation in Sustainable Construction

1 Introduction

Unit 18A provides resources for vocational trainers seeking to incorporate the circular economy into their courses in the Construction sector, focusing on innovative work practices and technology. This unit explores the importance of understanding what changes could the modular designs and builds, as well as the building information modelling (BIM) bring into the construction industry within the circular economy context.

2 Learning Outcomes

Knowledge	To be knowledgeable around the importance of innovation in the sector to support circular economy thinking.
Skills	To be familiar with specific innovations in support of sustainable construction.
Competencies	To know which technologies can be used to improve sustainable construction practices.
EQF Level	This material is mainly suited to EQF level 4-5.



3 Lesson Plan

Method	Description	Suggested duration in minutes (total minutes)
Brainstorming session	Brainstorming where you as a trainer write down definitions, notions and connotations ought to be used for future discussions and references. You can continue the brainstorming session with the following questions if needed: <ul style="list-style-type: none"> Discuss what a modular building is and explore various complexity levels of these buildings and their circular economy benefits. Learn what Building Information Modelling (BIM) is and what are benefits of these models within circular economy. 	15
Presentation by trainer using PPT	Overview	30
	Unit Learning Objectives	
	Modular Design and Build	
	Modular Building and Circular Economy	
	Case Study: Finch, Alkamaar	
	Discussion	
	Building Information Modelling (BIM)	
	BIM and Circular Economy	
	Discussion	
	Case Study: Marishal Square Aberdeen	
Assessment	Quiz	15

4 Quiz

- 1. Modular build saves up to ___ cost of production.**

Answer: 60%

- 2. Production of modular buildings consumes ___ of conventional builds energy.**

Answer: 87%

- 3. BIM saves money by:**

Answer: Both answers:

- Cutting down on clashes in design before they reach the construction site
- Waste reduction through clash avoidance