**Unit 202: Changing practices over time**

# Worksheet 6: 21st-century construction methods (Tutor)

**Task 1**: Answer the following questions about methods of 21st-century construction.

1. State and describe three professional job roles on a construction site involved in the surveying and planning of projects.

Answer examples:

* Land surveyor – Collect and analyse data to map the land for civil engineering and construction projects. Carry out surveys and identify potential effects of construction on the environment. Use GPS and surveying instruments. Use digital images and satellite photos.
* Architect – Transform building designs into reality, ensuring functionality, safety and creative vision. Collaborate with engineers to develop concepts for structures that meet project goals and operational standards, bringing architectural projects to life.
* Building surveyor – Assess the quality of buildings, from houses to public and commercial properties. Examine the condition of buildings and advise on ways to improve them.
* Quantity surveyor – Estimate and control costs for large construction projects. Ensure that structures meet legal and quality standards. Involved at every stage of a project.

*Other answers at tutor’s discretion.*

1. How does BIM benefit a construction project?

Answer: The BIM process helps all parties involved in a construction project to communicate easily, using the most up-to-date information. Everything is available in one place, and using cloud-based software means it is accessible from anywhere. The design and construction intent are made clear, which allows different teams to work in unison.

1. What does CAD stand for?

Answer: computer-aided design

1. What are the benefits of 3D modelling in the construction industry?

Answer:

* Allows more room to be creative.
* Helps communicate site layout.
* Reduces lead time and identifies problems earlier.
* Produces easy to review designs.
* Promotes team collaboration.
* Improves customer communication and visualisation.