Unit 202: Changing practices over time

Worksheet 4: Use of Heavy Plant in Ground Works (Tutor)

Task 1: Answer the following questions.

1. What is heavy plant in the UK construction industry?

Heavy plant, also known as heavy equipment, refers to the machinery and equipment used in the UK construction industry for a range of tasks such as excavation, material handling, transportation and lifting.

1. What are some examples of heavy plant commonly used in the UK construction industry?

Examples of heavy plant commonly used in the UK construction industry include excavators, bulldozers, cranes, dump trucks, concrete mixers and pumps, loaders and pavers.

1. What regulations govern the use of heavy plant in the UK construction industry?

The use of heavy plant in the UK construction industry is subject to various regulations, including the Provision and Use of Work Equipment Regulations (PUWER) and the Construction (Design and Management) Regulations (CDM).

1. What is a slip form paver machine used for in the UK construction industry?

Slipform paver machines are used in the UK construction industry for the construction of concrete roads and other large-scale concrete pavements.

1. What is the main difference between tarmac paver machines and slipform paver machines?

Tarmac paver machines are used to lay asphalt or tarmac surfaces, while slip form paver machines are used for laying concrete surfaces. Additionally, the techniques used by each type of paver machine are different, with tarmac pavers using a conveyor and screed system, while slip form pavers use a continuous mould and finishing tools.

Task 2: Answer the following questions about how materials have evolved.

1. What is the reason for the declining use of concrete pipes in drainage systems in the UK?

a They are more difficult to install than plastic pipes.

b They are not as durable as plastic pipes.

c They are more expensive than plastic pipes.

d They are not fire-resistant.

1. What are the advantages of using concrete pipes in drainage systems?

a Lightweight and easy to install.

b Low cost and easy maintenance.

c Fire resistance and durability.

d High flexibility and adaptability.

1. Why are clay pipes not commonly used for drainage in modern construction projects in the UK?

a They are too expensive.

b They are not durable enough.

c They are difficult to install.

d Other materials offer advantages over clay pipes.

1. What advantages do plastic pipes offer over clay pipes?

a Cost, durability and ease of installation.

b Fire resistance and durability.

c Flexibility and adaptability.

d Lightweight and low maintenance.

1. Which materials have become the preferred choice for drainage pipes in the UK and many other countries?

a Clay and concrete.

b Concrete and PVC.

c High density polyethylene (HDPE) and polyvinyl chloride (PVC).

d HDPE and clay.

1. In what type of construction projects are concrete pipes most commonly used in the UK?

a Residential buildings.

b Commercial buildings.

c Industrial buildings.

d Underground drainage systems, culverts and stormwater management.

1. What is the primary reason why concrete pipes are suitable for heavy-duty applications?

a They are lightweight.

b They are easy to install.

c They are durable and strong.

d They are low cost.

1. Why are pre-formed kerbs, drainage channels and retaining structures subject to strict regulations and standards?

a To ensure their safety, durability and effectiveness.

b To reduce their cost of production.

c To increase their aesthetic appeal.

d To streamline the construction process.

1. Which of the following materials is commonly used for pre-formed kerbs in civil engineering?

a Timber.

b Metal.

c Concrete.

d Plastic.

1. What is the main advantage of using precast concrete products in civil engineering projects?

a They are cheaper than other construction materials.

b They are quicker to install than other construction materials.

c They are more durable than other construction materials.

d They are more environmentally friendly than other construction materials.