

U17502**Construct new structures and surfaces**

Unit Descriptor:

This unit is about constructing new structures and surfaces on land-based sites. It is designed to be appropriate for construction work using hand-held or pedestrian controlled power tools. Structures may be permanent or temporary and could include, for example: rubble walls, drains, permanent drainage systems, boundaries (such as post-and-rail fences), animal holding pens and greenhouses etc. Surfaces may include: stepping stones pathways.

Although the construction of structures and surfaces is often contracted out to specialist companies, there will be occasions when the employees of an enterprise have to build structures and surfaces themselves. This unit is concerned with the competence required on these occasions.

You are required to prepare for, and build, structures and surfaces in a safe and effective way according to the specification. In preparing for the construction, you must assemble the necessary materials and resources, and locate them on site according to the specification. During construction, consideration should be given to the likely impact of the structures/surfaces on the surrounding environment, and environmental damage must be minimized.

During both preparation and construction, you may have to deal with unexpected events such as accidental damage, or difficulty in conforming to the specification. You must be able to take the correct action in such circumstances.

ELEMENT**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

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| 1. Prepare for the construction of new structures and surfaces | 1.1 Correctly identify and prepare the necessary equipment and materials for the work. |
| | 1.2 Ensure the preparation of structures and surfaces is consistent with the specification . |
| | 1.3 Prepare the site in a manner appropriate for the structure of surface, and which minimizes the effect on the surrounding environment. |

- 1.4 Maintain safety and health during the work consistent with relevant legislation and codes of practice.
 - 1.5 Ensure working methods allow for waste to be disposed of safely and correctly.
 - 1.6 Take the appropriate action if any problems occur.
2. Construct new structures and surfaces
- 2.1 Make sure the foundations of the structure or surface are secure and appropriate to the expected use and the context in which it is set.
 - 2.2 Construct the structure or surface in accordance with the **specification**.
 - 2.3 Use tools and equipment safely and correctly in a way which achieves their purpose.
 - 2.4 Make sure that the work causes minimal disturbance to the site's environment.
 - 2.5 Make sure the structure or surface meet the **specification** and are fit for purpose on completion of the work.
 - 2.6 Make sure the site is clear of unwanted materials and fit for purpose.

RANGE STATEMENT

You must cover the items below:

Element 1: Prepare for the construction of new structures and surfaces: *(Also applies to element 2)*

A. Prepare the structure and surface according to the **specification** of:

- (i) setting out and location
- (ii) materials and resources
- (iii) timescale
- (iv) working methods
- (v) waste management
- (vi) the relationship of the structure and surface to its context

UNDERPINNING KNOWLEDGE AND SKILLS

1. The purposes the structures and surfaces are designed to meet.
2. The equipment and materials which are used to construct the structures or surfaces and how to assess their suitability.
3. Methods of preparing, checking and adjusting, servicing, cleaning and storing the equipment and materials which are being used.
4. How to interpret specifications and the importance of following the specification.
5. Correct preparation methods for different structures and surfaces and how these are related to timing and scheduling.
6. Potential causes of damage to the environment and ways of preventing or minimizing them.
7. Your basic responsibilities in relation to safety and health and the environment.
8. Your specific responsibilities under environmental and conservation legislation.
9. The potential conflicts between constructing structures and surfaces conserving and protecting the natural environment.
10. The types of problems which may occur and the actions to take, including; remedying the situation or informing others who need to act.
11. Methods of constructing the structure and/or surface and the relationship of this to its planned use.
12. The requirements of the specification and how to finish the structure or surface so that it meets the specification.
13. The correct handling and use of tools and equipment including their maintenance, transportation and storage.
14. How to use materials correctly.

15. The problems which may arise, including those caused by; accidental damage, pollution and difficulties with specification.
16. How to minimise problems and the appropriate action to take if problems occur, including;
17. Remedying the situation and/or informing those who need to act.
18. Safety and health risks in the construction of structures and surfaces.
19. Working methods/systems that promote the safety and health of self and others.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Assessment should involve observation of how you construct new structures and surfaces on land-based sites. You must assemble the necessary materials and resources and locate them on site according to the specification. During preparation and construction you may have to deal with unexpected events such as accidental damage or difficulty in conforming to the specification. You must be able to take the correct action in such circumstances.

In demonstrating competence in constructing new structures and surfaces you are required to:

- A. Prepare the structure and surface according to the **specification** of:
 - (i) Setting out and location
 - (ii) Materials and resources
 - (iii) Timescale
 - (iv) Working methods
 - (v) Waste management
 - (vi) The relationship of the structure and surface to its context

Use of equipment, chemical and all other activities must meet the requirements of the law and relevant safety and health codes of practice.

(2) Methods of Assessment

Observation by your assessor of you:

- Ensuring the preparation of structures and surfaces is consistent with the specification
- Preparing the site in a manner appropriate for the structure or surface and which minimises the effect on the surrounding environment
- Using tools and equipment safely and correctly in a way which achieves their purpose
- Making sure the site is clear of unwanted materials and fit for purpose

Answers to written or oral questions from your assessor.

(3) Context of Assessment

Evidence from simulations is **not** acceptable for this unit.