

U17402 Maintain and repair structures and surfaces

Unit Descriptor:

This unit covers maintaining and repairing structures and surfaces. Structures may be permanent or temporary and could include; drains, water pipes, fences, sheds, greenhouses, and workshops. Surfaces could include standing areas, container beds, roads and pathways. Such structures and surfaces will require some form of on-going maintenance and, at some point, will be in need of repair in order that they can continue to be used safely.

You are required to carry out maintenance and repair in a safe and effective way according to the specification. Maintenance will be undertaken in a routine and planned way, and when it is required due to certain circumstances (e.g. after severe weather). You are expected to identify, through regular monitoring and maintenance, when structures or surfaces require some form of repair. It is important that you recognize the limits required are beyond your ability and should be undertaken by someone else.

The unit is designed to be appropriate for the maintenance and repair of surfaces and structures using hand-held or pedestrian controlled power tools.

During both maintenance and repair, you may have to deal with unforeseen events such as accidental damage to a structure, or an environmental risk from pollution. You must be able to perform competently in such events.

ELEMENT

PERFORMANCE CRITERIA

To be competent you must achieve the following:

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| 1. Maintain structures and surfaces | 1.1 Prepare and maintain the necessary equipment and materials for the work in a fit state for use. |
| | 1.2 Prepare the structure or surface and the surrounding site in a manner appropriate for the maintenance which is to be carried out. |
| | 1.3 Maintain the structure or surface to specification at the appropriate time. |
| | 1.4 Use tools and equipment correctly and in a way which achieves their purposes. |
| | 1.5 Ensure methods, materials and equipment cause minimal disturbance to the site's environment. |

- 1.6 Take the appropriate action when problems are encountered during the week.
 - 1.7 Maintain safety and health during the work consistent with relevant legislation and codes of practice.
 - 1.8 Make sure that the structure or surface and its site meet **specifications** following operations.
 - 1.9 Provide data so that accurate, legible and complete records can be kept.
 - 1.10 Manage **waste** safely and correctly.
 - 1.11 Restore the site to a safe condition Which is consistent with the surrounding environment and is clear of unwanted materials.
2. Repair structures and surfaces
- 2.1 Prepare the necessary equipment and materials for the work in a fit state of use.
 - 2.2 Prepare the structure or surface and the surrounding site in a manner appropriate for the repair.
 - 2.3 Repair the structure or surface to **specification** at the appropriate time.
 - 2.4 Use tools and equipment correctly and in a way which achieved their purpose.
 - 2.5 Make sure that methods, materials and equipment cause minimal disturbance to the site and environment.
 - 2.6 Take the appropriate action if problems arise during the work.
 - 2.7 Maintain safety and health during the work consistent with relevant legislation and codes of practice.
 - 2.8 Make sure that the structure or surface and its site meet **specifications** following operations.

RANGE STATEMENT

You must cover the items below:

Element 1: Maintain structures and surfaces: *(Also applies to element 2)*

A. Interpret the **specification** in relation to the following categories:

- (i) security/safety
- (ii) quality
- (iii) design
- (iv) construction

B. Manage the following **waste**: *(Also applies to element 2)*

- (i) hazardous
- (ii) non-hazardous

UNDERPINNING KNOWLEDGE AND SKILLS

1. Why surfaces and structures must be maintained and potential problems if not carried out.
2. The equipment and materials which may be used and their usefulness in specific circumstances.
3. Methods of preparing, checking and adjusting, servicing, cleaning and storing the relevant equipment and materials.
4. The preparation methods required prior to maintaining structures and surfaces.
5. The requirements of the specification and how to finish the structure or surfaces so that it meets the specification.
6. The different maintenance methods which promote health and safety.
7. Working methods and systems which promote health and safety.
8. The types of problems which may occur, including; accidental damage, pollution and not meeting the specification.
9. The actions to take if any problems occur.
10. Safety and health risks in the maintenance of structures and surfaces.
11. Organisational safety and health policy.
12. Your specific responsibilities under legislation in relation to health, safety and the environment.
13. The difference between hazardous and non-hazardous waste and how to dispose of both types safely and effectively.
14. The purpose of the structure and surface and the relationship to the specification.
15. The reasons for the repair work and potential problems if not carried out.
16. The preparation methods necessary prior to the repair work.
17. Methods of repairing the structure and/or surface and any relationship to the planned use.
18. The requirements of the specification.
19. Working methods and systems which promote the health and safety of yourself and others.
20. Safety and health risks during the repair of structures and surfaces.
21. How to minimise the likelihood of problems and what to do if they occur.
22. How to dispose of organic and inorganic waste.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Assessment should involve observation of how you maintain and repair structures and surfaces. Structures may be permanent or temporary and could include; drains, water pipes, fences, sheds, greenhouses and workshops. Surfaces could include standing areas, container beds, roads and pathways.

It is important that you recognise the limits of your competence, therefore, you must be able to accurately identify cases when the repairs required are beyond your ability and should be undertaken by someone else.

In demonstrating competence in maintaining and repairing structures and surfaces you are required to:

A. Interpret the **specification** in relation to the following categories:

- (i) Security/safety
- (ii) Quality
- (iii) Design
- (iv) Construction

B. Manage the following **waste**:

- (i) Hazardous
- (ii) Non-hazardous

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:

- Preparing and maintaining the necessary equipment and materials for the work in a fit state for use
- Maintaining the structure or surface to specification at the appropriate time
- Taking the appropriate action when problems are encountered during the work
- Making sure that the structure or surface and its site meet specifications following operations
- Managing waste safely and correctly

Answers to written or oral questions from your assessor.

(3) Context of Assessment

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