



Australian Government

Department of Education, Employment and Workplace Relations

RTF2204A Construct low-profile timber or modular retaining walls

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This competency standard covers the process of constructing low profile timber or modular retaining walls in landscape settings. Construction work is likely to be performed under routine supervision with intermittent checking. Responsibility for some roles and co-ordination within a team may be required. Competency is demonstrated by the application of knowledge and skills in tasks such as marking out sites, preparing footings, and preparing and installing retaining wall components.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

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Element	Performance Criteria
1 Plan and prepare work	<p>1.1 Work instructions relating to constructing the retaining wall are interpreted and confirmed with the supervisor.</p> <p>1.2 Services are located according to site and construction plans.</p> <p>1.3 Tools and equipment are prepared and used according to the supervisor's instructions.</p> <p>1.4 The quantity and quality of materials are checked to ensure they conform to the requirements of the job.</p> <p>1.5 Manual handling and other OHS hazards are identified, risks assessed and reported to the supervisor.</p> <p>1.6 Personal protective clothing and equipment is selected, used and maintained.</p>
2 Mark out site for retaining wall	<p>2.1 The position of the retaining wall is marked out according to site and construction plans.</p> <p>2.2 The location and depth of excavations are determined from site and construction plans.</p> <p>2.3 Profiles are established to conform to the tolerances designated by the supervisor and/or site and construction plans.</p> <p>2.4 Survey benchmarks are established.</p>
3 Prepare footings according to industry standards	<p>3.1 Foundations for the retaining wall are excavated to depth and dimensions according industry standards.</p> <p>3.2 Soil and waste material are removed and stockpiled to ensure a safe working area.</p> <p>3.3 Reinforcing and/or steps in the excavated site are located and positioned according to industry standards.</p> <p>3.4 Pegs or levels are positioned to maintain even</p>

- depth and horizontal plane to the top of footings.
- 3.5 **Footings** are placed, consolidated and finished to determined levels, to ensure coverage of reinforcement as necessary and according to **industry standards**.
- 4 Prepare and install retaining wall components
- 4.1 Components for installation are prepared and laid out.
- 4.2 Components to be cut are marked out to length and/or shape and cut accurately to the requirements of profiles already established.
- 4.3 Drainage media is installed according to supervisors instructions.
- 4.4 Base layer of retaining wall is constructed to a point above the top of the drainage media and weep holes are formed where indicated.
- 4.5 Fill material is back-filled and compacted behind base of retaining wall.
- 4.6 Retaining wall components are constructed to dimensions, profiles and levels as outlined in the specified site and construction plans and/or according to supervisors instructions.
- 4.7 Capping to top of retaining wall is set to specified levels with a tolerance appropriate to the style of capping.
- 5 Clean up site and store tools and equipment
- 5.1 Soil and waste material from the site is disposed of or recycled to minimise damage to the environment.
- 5.2 Unused construction materials are stored and stacked for future re-use according to supervisors instructions.
- 5.3 All tools and equipment are cleaned and stored according to supervisors instructions.

Required Skills and Knowledge

Not applicable.

Evidence Guide

What evidence is required to demonstrate competence for this standard as a whole?

Competence in constructing retaining walls requires evidence that work can be planned and prepared, that the retaining wall site can be marked out, footings and reinforcing can be located, components for the wall can be installed and the site can be cleared and cleaned up according to supervisors instructions.

The skills and knowledge required to construct retaining walls must be **transferable** to a different work environment. For example, this could include different construction materials, site slopes and locations, and soil types

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

1. different construction materials for retaining walls
2. construction approaches and methods
3. OHS responsibilities of employees
4. safe lifting practices for carrying large and heavy components
5. the environmental impact of soil disturbance when excavating an area to be retained and the environmental effects of altering water flow when installing retaining walls, with or without drainage media
6. methods of disposing of soil and waste materials in order to minimise damage to the environment
7. Building Code of Australia relating to constructing retaining walls.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

8. read and interpret site and construction plans
9. calculate the amount of materials required and accurately mark out the area to be retained
10. sort soil and waste material from the excavation site in an environmentally aware and sensitive manner, such as sorting it into organic, inorganic and recyclable piles.

What processes should be applied to this competency standard?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

1. How can **communication of ideas and information (1)** be applied? Ideas and information regarding the tasks to be performed when constructing a retaining wall should be discussed with other members of the work team and/or the supervisor.
2. How can **information be collected, analysed and organised (1)**? Site and construction plans and information regarding industry standards should be obtained from the supervisor and read and interpreted to undertake construction activities.
3. How are **activities planned and organised (1)**? Activities using equipment and materials may need to be planned and organised to ensure completion of the project on time and within budget.
4. How can **team work (1)** be applied? Teamwork may be necessary to complete specified tasks in the construction of a retaining wall.
5. How can the use of **mathematical ideas and techniques (1)** be applied? Mathematical techniques should be used to measure and calculate construction areas and components.
6. How can **problem-solving skills (1)** be applied? Problems may arise when interpreting site and construction plans or with the installation of footings and reinforcement.
7. How can the **use of technology (1)** be applied? Equipment and machinery used for installing retaining walls may require the use of technology.

Are there other competency standards that could be assessed with this one?

This competency standard **could** be assessed on its own or in combination with other competencies relevant to the job function.

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

Range Statement

Range of Variables

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in particular training and assessment requirements may depend on the work situations available

<p>What work instructions might be required for this standard?</p>	<p>Work instructions may include standard operating procedures (SOPs), specifications, work notes, manufacturers instructions, site plans, construction plans or verbal directions from the manager, supervisor, or senior operator.</p>
<p>What services may need to be located?</p>	<p>Services may include water supply, power (electricity), storm water, drainage and sewerage.</p>
<p>What tools and equipment are likely to be used when building retaining walls?</p>	<p>Tools and equipment may include timber or concrete saws, wheelbarrows, concrete mixers, hammers, mallets, and levels.</p>
<p>What materials are likely to be used when constructing a retaining wall?</p>	<p>Materials used may include timber and modular concrete units.</p>
<p>What OHS hazards may be associated with building retaining walls?</p>	<p>Hazards may include solar radiation, noise, heavy materials, sharp tools, uneven surfaces, holes and steep gradients.</p>
<p>What personal protective clothing and equipment may be required?</p>	<p>Personal protective clothing and equipment may include boots, gloves, overalls, sun hat, sunscreen lotion, goggles and earmuffs, knee guards/pads.</p>
<p>What may be used as survey benchmarks?</p>	<p>Survey benchmarks may include a boundary line, a building or structure, a temporary benchmark or a datum point.</p>
<p>What type of footings may be required when constructing retaining walls?</p>	<p>Footings may include concrete, road rubble and quartz sand.</p>
<p>What industry standards may apply when constructing a retaining wall?</p>	<p>Industry standards may include the type, size and height of the retaining wall. Compliance with the Building Code of Australia requirements may be necessary when constructing retaining walls.</p>

For more information on contexts, environment and variables for training and assessment, refer to the Sector Booklet.

Unit Sector(s)

Not applicable.