



Australian Government

AHCLSC317 Construct landscape features using concrete

Release: 1

AHCLSC317 Construct landscape features using concrete

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 7.0.

Application

This unit of competency describes the skills and knowledge required to construct concrete structures and features as a component of landscape project works, including preparing for work, setting out and preparing site, mixing pouring and finishing concrete, checking and cleaning up site.

The unit applies to individuals who construct landscape features using concrete under broad direction, and take responsibility for their own work and for the quality of the work of others.

State/territory licensing, legislative or certification requirements apply in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Pre-requisite Unit

Nil

Unit Sector

Landscape (LSC)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare work	1.1 Interpret site plans and specifications 1.2 Identify potential hazards and risks, and implement safe working practices to manage risks 1.3 Check quantity and quality of materials 1.4 Select tools, equipment and machinery required for construction work and check for safe operation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Select, fit, use and maintain personal protective equipment (PPE) applicable to the task 1.6 Identify and minimise environmental impacts of proposed concrete works
2. Set out and prepare the site	2.1 Determine, locate and mark out services from site plan 2.2 Mark out position of structure or feature according to site plan 2.3 Establish profiles to conform to nominated tolerances 2.4 Excavate site according to site plan 2.5 Prepare subsoil by removing all debris, vegetable matter and topsoil to provide a solid foundation for concrete 2.6 Install drainage systems according to plans and specifications 2.7 Install form work on site in a manner that will ensure it remains rigid during concrete pouring operations and allow for ease of dismantling without damage to concrete 2.8 Place and compact sub-base material to required finished levels 2.9 Complete preparation of site according to type of structure or feature to be constructed 2.10 Place expansion joints and reinforcement steel according to site plan and specifications
3. Mix and pour concrete	3.1 Determine proportions for concrete mix according to strength requirements of project 3.2 Determine volume of dry materials necessary to produce final concrete mix 3.3 Mix together all dry ingredients and required additives to ensure a thorough blending of all materials is achieved 3.4 Introduce sufficient water to produce a concrete mix to required consistency 3.5 Perform concrete slump test 3.6 Pour concrete to designated levels in a manner to avoid segregation of materials 3.7 Consolidate concrete using an approved vibration method
4. Finish concrete	4.1 Screed concrete to desired finished level 4.2 Apply appropriate trowelling techniques

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.3 Finish concrete off according to site plan and specifications 4.4 Install control joints according to site plan and specifications
5. Check quality of work and clean-up site	5.1 Inspect quality of finished works to ensure required standard has been achieved 5.2 Remove and clean form work to allow reuse 5.3 Ensure all clean-up works minimise impact to environment 5.4 Clean, maintain and store tools and equipment 5.5 Identify and report unserviceable tools and equipment according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	Use clear language and standard industry terminology to report tool and equipment unserviceability
Numeracy	- Calculate quantities of material, take measurements, read and use scale rulers - Calculate concrete mix proportions - Set out geometric shapes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCLSC317 construct landscape features using concrete	AHCLSC302 construct landscape features using concrete	Minor changes to application Minor changes to performance criteria	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCLSC317 Construct landscape features using concrete

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has constructed landscape features applying two concrete finishes and has:

- interpreted site plans and specifications
- applied workplace health and safety requirements, including fitted and used personal protective equipment (PPE)
- selected, used and maintained tools and equipment required for constructing landscape features using concrete
- set out and prepared a site for concrete
- measured and constructed profiles
- established levels using levelling equipment
- installed expansion joints and placed steel reinforcement
- performed concrete slump test
- poured and finished concrete, including consolidation and trowelling techniques
- checked quality of work and cleaned up site
- reported unserviceable tools and equipment.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of constructing concrete landscape features, including:
 - Australian standards and codes relevant to reinforcing and consolidating concrete
 - Megapascal (MPa) testing theory and what affects MPa specifications in a concrete mix
 - industry standard terminology relevant to constructing landscape features using concrete

- sub-base and sub-grade materials and preparation
- expansion joints and steel reinforcement purpose and installation techniques
- slump testing procedures
- concrete pigments and additives use and preparation
- concrete applications and placement techniques
- concrete curing processes and finishing techniques
- the comparative environmental implications associated with soil removal and the placement of concrete
- workplace requirements applicable to health and safety in the workplace for constructing landscape features using concrete, including appropriate use of PPE.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
 - assessment of this competency can be conducted as part of a team working on a large group project
- resources, equipment and materials:
 - workplace procedures applicable to constructing landscape features using concrete
 - materials, tools and equipment applicable to constructing landscape features using concrete
 - concrete slump test equipment
 - PPE applicable to constructing landscape features using concrete
- specifications:
 - workplace requirements applicable to health and safety in the workplace for constructing landscape features using concrete
 - site plans and specifications applicable to constructing landscape features using concrete
 - Australian standards and codes applicable to constructing landscape features using concrete
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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