



Australian Government

AHCGRI501 Design roof gardens

Release: 1

AHCGR1501 Design roof gardens

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to design roof gardens in consultation with system/component suppliers, building and landscape design professionals and other landscape and horticultural specialists. It includes the selection of roof garden components based on structural limitations and opportunities, and the application of knowledge of the benefits and risks associated with roof gardens into designs that meet client requirements and comply with applicable building and relevant authorities' regulations and guidelines.

The unit applies to individuals with existing horticultural, landscaping, landscape design and/or construction experience, who research information about roof garden principles and guidelines and consult with green infrastructure and/or building and landscape design specialists to design roof gardens for existing and/or new buildings.

This unit of competency is suitable for individuals dealing with predictable and unpredictable problems and deciding on solutions to a range of complex problems during the design process through research, analysis and consultation.

Roof garden design must meet all requirements of national, state, territory and local government authorities and building regulations, standards and codes.

Licensing, legislative or certification requirements may apply to the work undertaken in this unit in some jurisdictions. Users are advised to check with the relevant regulatory authorities.

Pre-requisite Unit

Nil

Unit Sector

Green Infrastructure (GRI)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Research roof garden design information	1.1 Establish purpose, functions, benefits and risks associated with roof gardens 1.2 Access and interpret building regulations, standards and codes, and relevant national, state, territory and local authority policies, procedures and permits to determine applicable restrictions or limitations relating to roof gardens 1.3 Identify environmental and energy efficiency impacts of green infrastructure design 1.4 Identify factors that will impact roof garden designs
2. Scope project requirements	2.1 Consult with client to clarify type, purpose, features and requirements of roof garden to inform design parameters 2.2 Identify project location and complete site analysis 2.3 Confirm structural requirements relating to roof gardens with architect, engineer and/or other relevant specialists 2.4 Establish constraints and/or opportunities for meeting client expectations and requirements, and clarify design scope with client
3. Design roof gardens	3.1 Acquire engineering plans to determine drainage outlets and weight limits 3.2 Design roof garden to utilise spatial availability, enable access and egress, and comply with building regulations, standards and codes 3.3 Consult growing media and/or horticulture specialist on selection of media and plants based on the location conditions and maintenance requirements 3.4 Document specifications for waterproofing, irrigation and drainage systems and/or lighting, including recommended suppliers 3.5 Calculate total weight of materials, components and water in consultation with suppliers, green infrastructure specialists and/or building professionals to ensure the total weight complies with parameters set by an engineer 3.6 Design plant and component anchoring system appropriate to project location and weather conditions in consultation with engineers and other building and/or landscape professionals 3.7 Prepare a design concept of proposed roof garden, confirm with specialists and/or building professionals, and present to client 3.8 Prepare design plans, specifications, maintenance program and estimated costs for roof garden, in consultation with qualified specialist if required

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
Reading	Research and analyse researched information to select materials and components for roof gardens
Writing	Develop relevant documentation using digital technology
Oral communication	Determine stakeholder requirements through open-ended questioning, active listening and summarising
Numeracy	- Apply decimals and percentages to estimate and calculate project costs - Use measurements and formulas to calculate length, area, volume and weight - Interpret data and numerical data displayed in graphs, charts and/or tables

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCGR1501 Design roof gardens	Not applicable	The unit has been created to address an emerging skill or task required by industry	Newly created

Links

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