



Australian Government

Department of Education, Employment and Workplace Relations

AHCNAR503A Design a natural area restoration project

Release: 1

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Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the design of a natural area restoration project and defines the standard required to: establish the project purpose, scope and extent, and costs and benefits; prepare a base plan incorporating landforms, soils, fauna and flora and habitat; determine options for natural area restoration and incorporate into a concept design and; produce a final design with supporting documentation, including costings.
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Application of the Unit

Application of the unit	This unit applies to restoration managers designing a natural area restoration project.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

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1. Develop a design brief	<p>1.1. The client is consulted to establish the purpose and requirements of design.</p> <p>1.2. The ecological aims and objectives for the restoration project are developed and confirmed with client.</p> <p>1.3. The design brief is developed and scope of extent of project is agreed with the client.</p> <p>1.4. The project budget is prepared in liaison with the client.</p> <p>1.5. A base plan of the site is obtained or prepared.</p> <p>1.6. Existing site data and information is reviewed prior to visiting the site.</p>
2. Undertake a site analysis	<p>2.1. The project site is visited and inspected at the first stage of the design work.</p> <p>2.2. Physical elements and features of the site, its physical and biological condition and the presence of threats are quantified and mapped onto the base plan.</p> <p>2.3. Soil, topography, aspect, habitat resources, existing vegetation and climatic factors are recorded on the base plan and in the site report.</p> <p>2.4. Legal requirements and constraints on restoration work are assessed.</p> <p>2.5. The potential for natural regeneration is assessed and the limiting factors are identified and recorded.</p> <p>2.6. Options for passive and active interventions are determined.</p> <p>2.7. Other relevant information is assessed and recorded.</p>
3. Develop a concept design	<p>3.1. Concept design is prepared to illustrate location and layout of the proposed restoration project according to the design brief.</p> <p>3.2. Consultation with the client is undertaken to establish agreement on options and approaches for development in accord with the proposed ecological aims and goals.</p> <p>3.3. A professional graphic format is used to present the concept design with supporting written information and justification or reasons for the proposed actions.</p>
4. Produce a final design	<p>4.1. A detailed plan is prepared and drafted according to the design brief, concept design and enterprise guidelines.</p> <p>4.2. Information on the design is relevant and precise and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>must clearly communicate the project works in a sequential manner.</p> <p>4.3. Plan, notes and specifications are included on the design to give an interpretation of the plan, to establish the quality and standard of the works, and the responsibilities of the contractor during implementation.</p> <p>4.4. Appropriate construction and engineering principles are applied to restoration design according to accepted industry standards and regulations.</p> <p>4.5. Further design documentation is organised and/or prepared according to the design brief and enterprise guidelines.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- use a range of graphic techniques for illustrating design concepts
- source and review site data
- assess ecological restoration needs and prescribe solutions
- carry out natural resource mapping for a site
- prepare a concept design
- use a professional graphic format
- interpret legislation and regulations in relation to natural area restoration works.
- prepare a Bill of Materials
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

REQUIRED SKILLS AND KNOWLEDGE**Required knowledge**

- design process.
- construction principle and practices
- graphical presentation and drafting techniques
- recognition of plant species and a range of ecological communities
- natural regeneration potential and limits
- ecological restoration theory and techniques
- drafting techniques
- cost estimating
- calculations of materials, labour, machinery and equipment
- environmental implications of restoration works.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • establish the project purpose, scope and extent, and costs and benefits • prepare a base plan incorporating landforms, soils, fauna and flora and habitat • determine options for natural area restoration and incorporate into a concept design • produce a final design with supporting documentation, including costings.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Restoration projects include:	<ul style="list-style-type: none"> • seeding/planting of vegetation • release and/or protection of native animal species • weed and pest animal control • assisted natural regeneration • protection of remnant plant species and communities • maintenance and protection of sites of cultural or natural significance.

Unit Sector(s)

Unit sector	Natural area restoration
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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