



Australian Government

AHCECR303 Implement biological reintroduction works

Release: 1

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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 implement biological reintroduction works for ecological restoration areas with plants, other biota and animals not subject to animal ethics and animal welfare requirements.

The unit applies to individuals who work in conservation and ecosystem management in terrestrial, marine or aquatic environments under broad direction. They use discretion and judgement in the selection and use of available resources.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

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. Prepare for biological reintroduction works	1.1 Identify goal and objectives for biological reintroduction project from restoration plan 1.2 Identify method and timing of biological reintroduction work 1.3 Identify the need for habitat features 1.4 Select tools and materials required and check functionality and cleanliness

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 Identify, obtain and store biological materials required for reintroduction 1.6 Determine and organise labour and machinery requirements 1.7 Prepare a works schedule and provide to management or client
2. Prepare the biological reintroduction site	2.1 Identify site health and safety hazards, assess risks and implement controls according to workplace procedures 2.2 Define boundaries of biological reintroduction site according to site plan 2.3 Undertake site preparation according to biological reintroduction plan 2.4 Assess site for conditions that will inhibit biological reintroduction performance outcomes 2.5 Select and apply treatments to rectify inhibiting conditions 2.6 Use substrate nutrients and amelioration according to biological reintroduction plan specifications 2.7 Install protective structures according to site safety controls
3. Undertake biological reintroduction works	3.1 Select, check and use personal protective equipment 3.2 Carry out biological reintroduction works according to biological reintroduction plan using sustainable practices 3.3 Inspect biological stock before works and discard defective materials according to restoration plan and biosecurity procedures 3.4 Reintroduce biological stock and treat with required nutrients/ameliorants according to biological reintroduction plan 3.5 Install plant protection systems for protecting, securing or anchoring new plants 3.6 Confirm the biological reintroduction program outcomes have been achieved 3.7 Identify and report potential threats to biological reintroduction works 3.8 Select and implement retention or addition of habitat features to restoration plan 3.9 Maintain records and reporting according to workplace requirements
4. Maintain revegetated	4.1 Monitor biological reintroduction site and identify factors

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
site	detrimental to plant growth 4.2 Undertake remedial action and plant protection to rectify identified detrimental factors 4.3 Apply site maintenance procedures according to biological reintroduction plan 4.4 Clean, maintain and store tools and equipment according to workplace and biosecurity 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
Reading	Interpret biological reintroduction plans and use the information to comply with the standards and requirements of biological reintroduction works
Numeracy	Transpose dimensions from scale drawings to define the site boundaries using basic survey techniques

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR303 Implement biological reintroduction works	AHCNAR303 Implement revegetation works	Changed to unit code to reflect new unit sector Title changed Changes to Application and Performance Criteria to reflect a broader application Changed Performance Evidence, Knowledge	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Evidence and Assessment Conditions	

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 AHCECR303 Implement biological reintroduction works

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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 prepared and implemented biological reintroduction works on two different ecological environments.

There must also be evidence that the individual has:

- conducted biological reintroduction works according to biological reintroduction plan, sustainable practices and biosecurity procedures
- prepared the site for biological reintroduction works
- conducted a site hazard assessment and implemented controls
- assessed the site for inhibitors to biological reintroduction works, and implemented treatments
- treated weeds and competing plants
- cleaned and maintained the revegetated site
- used, cleaned, maintained and stored machinery and equipment according to manufacturer instructions.

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:

- biological reintroduction techniques
- ecological principles related to biological reintroduction including:
 - locations on the revegetation site where natural regeneration can be facilitated
 - recognition of fundamental ecosystem structures
 - interactions between flora and fauna and impact on ecological stability
 - vegetation types and their general characteristics relevant to biological reintroduction activities
 - ecological environments and their fundamental differences

- importance of biodiversity when revegetating for an ecologically stable community, including:
 - terrestrial plants and basic plant community structures
 - marine and water plants and interaction with marine creatures
 - contribution of biological reintroduction works on preserving biodiversity
 - intricate relationships between microbiota, including insects, molluscs, worms and microbes and impact on biological reintroduction practices
- genetic principles for ecological restoration, including genetic integrity and genetic diversity
- environmental factors to be considered in biological reintroduction works, including:
 - ecology in land based, coastal zones or marine parks
 - existing boundaries of regeneration potential
 - marine, shore and terrestrial species
 - natural and human threats to places of natural significance
 - pollution sources and damage potential
 - substrate factors for accessing sites and conducting biological reintroduction work
- defining the biological reintroduction site boundaries, including:
 - ecosystem and habitat boundaries
 - basic surveying techniques
 - tools and equipment for marking out site boundaries
- factors affecting the timing and method of planting, including:
 - weather
 - climate
 - tidal influences
 - soil/substrate type and condition
 - access to site
 - impact on fauna natural cycles
 - impact of plant growth cycles
- assessing site condition requiring rectification/treatment prior to biological reintroduction, including:
 - accumulated waste
 - polluting materials
 - weeds, including staging site preparations to accommodate weed invasion
 - pests and diseases affecting vegetation
- maintenance activities and practices to support revegetated plant growth, including:
 - controlling plant competition from weeds and vigorous regrowth
 - erosion control strategies
 - animal grazing and damage
- workplace health and safety procedures, including:
 - safety hazards and associated risks on biological reintroduction sites

- personal protective equipment
- handling, mixing and using hazardous treatments
- sun protection
- materials handling safety
- exclusion fencing
- identification and control of weeds, and pests and diseases
- basic plant physiology of plant growth, including:
 - detrimental effects from pollution
 - competition from weeds
 - nutrients and ameliorants used for planting and their impact on plant health
- techniques for protecting, securing or anchoring plantings.

Assessment Conditions

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

- physical conditions:
 - skills must be demonstrated on ecological environments requiring biological reintroduction works
- resources, equipment and materials:
 - tools, materials and equipment required by the biological reintroduction plan
 - personal protective equipment
- specifications:
 - workplace policies and procedures for safety, biosecurity and biological reintroduction activities
 - ecological biological reintroduction plan with specifications specific to a site.

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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