



Australian Government

AHCECR502 Conduct biological surveys

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 plan and conduct biological surveys and produce a biological survey report, according to client requirements and biological components to be surveyed.

The unit applies to individuals working as land restoration managers who analyse information and exercise judgement to complete a range of advanced skilled activities demonstrating a deep knowledge in specific technical areas within land management. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

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. Carry out preliminary design activities for the biological survey	1.1 Identify survey scope, objectives and constraints according to client brief 1.2 Source, collate and evaluate current data relevant to survey requirements 1.3 Develop processes for data collection and processing consistent

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	with the survey scope, objectives and constraints 1.4 Design survey plan reflecting client requirements and present to client for approval 1.5 Incorporate workplace health and safety and environmental sustainability and biosecurity procedures into plan
2. Determine requirements of the biological survey	2.1 Identify biological survey indicators and evaluate constraints and opportunities for data collection 2.2 Identify data collection points that are repeatable and statistically representative 2.3 Identify hazards associated with a biological survey, assess risks and develop controls, determine costs, and document in the survey design 2.4 Secure permits and approvals required for survey according to ethical standards, workplace procedures and legislative requirements 2.5 Determine tools, equipment and machinery required for the survey and confirm availability with suppliers 2.6 Schedule survey activities and surveyor access according to the survey design 2.7 Document survey procedures and schedules and present to stakeholders and client for approval
3. Conduct the biological survey	3.1 Conduct field visit to verify existing data and update information 3.2 Conduct the biological survey according to the survey design 3.3 Monitor survey activities for accuracy, compliance to the survey design and legislative and ethical standards 3.4 Undertake staged data collection according to the survey design, scheduling and surveyor access requirements 3.5 Record all monitoring and survey data according to specifications of the survey design
4. Compile a biological survey report	4.1 Analyse data and draw conclusions based on evidence and reasoned arguments 4.2 Prepare a biological survey report according to agreed timeframes and client outcomes and workplace standards 4.3 Present report to the client

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	Draw on a broad range of strategies to interpret, build and maintain understanding from data sets and reference materials when planning, collating and interpreting survey data
Writing	Record outcomes of surveys and incorporate into biological survey reports, expressing ideas and exploring complex issues, and ensuring it is constructed logically, succinctly and accurately
Numeracy	Capture, record and analyse survey data and use calculations to help formulate conclusions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR502 Conduct biological surveys	AHCNAR502 Conduct biological surveys	Changed unit code to reflect new unit sector Minor changes to Application and Performance Criteria Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

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 AHCECR502 Conduct biological surveys

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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 planned and conducted at least one biological survey with at least two of the following biological elements:

- flora
- vertebrate fauna
- fungi
- invertebrate fauna
- microorganisms

The survey must also be conducted in at least one of the following environments:

- terrestrial
- marine or aquatic
- arboreal

There must be evidence that the individual has:

- planned, conducted and reported on biological surveys according to client requirements, workplace policies and industry best practice
- identified scope, objectives and constraints for a biological survey
- assessed current data and determined data collection and processing needs
- identified biological indicators that are repeatable and statistically representative
- developed a survey plan that documents survey methods and indicators
- secured permits and approvals
- scheduled survey activities and established access to the site
- conducted a biological survey with data collection staged and recorded according to the survey plan and health and safety requirements, and that must include:
 - species, identified by biological and vernacular name
 - frequency
 - distribution

- condition
- habitat
- produced a biological survey report with analysis and conclusions, including:
 - survey findings according to the survey scope and objectives
 - identified areas requiring remedial action and improvements
 - detailed recommendations for action
 - description and assessment of the specified biological components
- ensured survey plan and activities complied with animal welfare codes of practice and environmental and biosecurity procedures.

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 classification systems
- plant and animal recognition relevant to survey area
- environmental factors that impact on vegetation and animal populations
- survey equipment, machinery and methods for specific environments, including:
 - marine and aquatic
 - terrestrial
 - arboreal
- survey techniques and methods for different biological elements, including:
 - microorganisms
 - fungi
 - micro and macro invertebrates
 - plants
 - animals including fish
 - methods for obtaining statistically representative sample
- requirements for ensuring the legality of biological surveys, including:
 - animal welfare
 - codes of practice
 - legislative requirements
 - ethical standards and approvals
- ecological principles and terminology, including
 - ecosystem structures and habitat
 - interactions between flora and fauna
 - vegetation types and their characteristics
 - energy flows and trophic structures of communities
- assessment, reporting and client liaison procedures and best practice techniques
- workplace team management procedures
- workplace health and safety legislative requirements and codes of practice, including:

- hazard identification, assessment and control measures.

Assessment Conditions

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

- physical conditions:
 - skills must be demonstrated in the field and according to the conditions specified in the Performance Evidence or in an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - survey equipment relative to the type of survey undertaken
- specifications:
 - specific workplace policies and procedures for conducting surveys and recording results
 - client brief and specifications for survey
 - specific legislation and codes of practice for ethical surveys
- relationships:
 - client
- timeframes:
 - according to time specified in client brief.

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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