



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **AHCILM501A Conduct field research into natural and cultural resources**

**Release: 1**

## AHCILM501A Conduct field research into natural and cultural resources

### Modification History

Not Applicable

### Unit Descriptor

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Unit descriptor</b> | This unit covers the process of conducting field research into natural resource and cultural areas for resource management and related purposes and defines the standard required to: use a range of electronic and manual recording systems to support research; identify stakeholders including current tenure, Indigenous history and community interest; review existing knowledge; develop research objectives, staff, resources and design; conduct field investigations to investigate impacts on fauna, flora and natural resources of the site; report on the field investigation. |
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### Application of the Unit

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| <b>Application of the unit</b> | This unit applies to those who conduct field research into natural resource and cultural areas for resource management and related purposes. It is often done prior to, or in conjunction with, the development of a resource management plan. |
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

|                           |  |  |
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| <b>Prerequisite units</b> |  |  |
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## Employability Skills Information

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| <b>Employability skills</b> | This unit contains employability skills. |
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## Elements and Performance Criteria Pre-Content

Not Applicable

## Elements and Performance Criteria

| <b>ELEMENT</b> | <b>PERFORMANCE CRITERIA</b> |
|----------------|-----------------------------|
|                |                             |

| ELEMENT                      | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| 1. Review existing knowledge | <p>1.1.Existing information gathered through investigation and enterprise recording processes is examined to determine key features.</p> <p>1.2.Oral evidence, where it exists, is reviewed.</p> <p>1.3.Sites are inspected to assess condition and availability of further information.</p> <p>1.4.Information, records and places previously destroyed or damaged or under threat are identified as factors to be incorporated in the assessment process, strategies and plans.</p> <p>1.5.Scope of information is assessed for adequacy against the requirements of legislation, Codes of Practice and protocols.</p> <p>1.6.Appropriate database, geographic information system and other electronic and manual recording systems are identified for data collection according to enterprise procedures.</p> <p>1.7.Sources of expertise in research environments, identification of pollution, degradation and disturbance, and national and international issues and agreements are identified and accessed within and external to the enterprise.</p> <p>1.8.Areas of inadequate information are identified and recorded.</p> |
| 2. Identify stakeholders     | <p>2.1.Stakeholders are identified in conjunction with local communities and groups, and government documentation and interviews.</p> <p>2.2.The current and relevant past land tenure for the place/area is investigated and recorded.</p> <p>2.3.Indigenous interests are determined through culturally appropriate approaches to regional and community organisations and individuals.</p> <p>2.4.Proper protocols are applied and key consultations conducted in approaches to regional and community organisations and individuals.</p> <p>2.5.Privacy requirements are complied within, according to the directions of stakeholders and according to legislative and enterprise requirements.</p> <p>2.6.Process of identifying stakeholders may be completed under the direction of a relevant cultural reference group.</p>                                                                                                                                                                                                                                                                                                  |
| 3. Develop research          | 3.1.Objectives of the field research are determined in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| ELEMENT                         | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| approach                        | <p>conjunction with those commissioning the research according to enterprise procedures.</p> <p>3.2. Objectives are used to identify specific types of investigation, techniques to be used, and physical areas of investigation.</p> <p>3.3. The types of investigation and techniques selected are assessed for hazards and risks in designated environment, including the special OHS requirements, access issues, and management of the research in a range of weather and area conditions.</p> <p>3.4. Existing information and data records are reviewed to determine the starting point(s) for the fieldwork.</p> <p>3.5. Research methodology is consistent with the research objectives and in accordance with established natural resource management practice.</p> <p>3.6. Required resources are identified to establish and maintain the research program within the required time schedules and are appropriate to the environments that will be encountered.</p> <p>3.7. Personnel are selected for their competency in research techniques and safe operation in the expected environmental/cultural conditions.</p> <p>3.8. Stakeholders to be included in the consultation process are identified.</p> <p>3.9. Costs of field research are estimated and submitted for approval according to enterprise procedures.</p> <p>3.10. Sampling and recording processes are established for research information according to enterprise requirements, best practice and scientific standards.</p> |
| 4. Conduct field investigations | <p>4.1. Consultation and fieldwork undertaken to obtain information required to meet investigation objectives.</p> <p>4.2. Previously determined methodology is adjusted in light of progressive results and stakeholder feedback.</p> <p>4.3. Observations, records and monitoring are in accord with scientific practice and coordinated to meet research objectives.</p> <p>4.4. Impacts from areas external to area under investigation are identified.</p> <p>4.5. Equipment, techniques and people deployed to carry out investigations.</p> <p>4.6. Each field operation is documented and approved according to legislative and enterprise requirements</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| ELEMENT                                          | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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|                                                  | <p>for work in the research environment.</p> <p>4.7. Where required, appropriate equipment and skills are sourced for the capture, management and sampling of animal species.</p> <p>4.8. Information is analysed for impact on previously held hypothesis and other resources.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 5. Develop process for involving decision-makers | <p>5.1. Information on stakeholders is used to determine interests held by organisations, groups and individuals, and cultural dimensions.</p> <p>5.2. Issues to be addressed with interest groups are defined.</p> <p>5.3. Consultation and decision-making process is developed to address the issues with individuals, groups and organisations in a culturally appropriate manner.</p> <p>5.4. Appropriate time is provided for consultative processes within groups and between individuals to occur and to obtain feedback on issues.</p> <p>5.5. Decision-making group, such cultural reference groups and other groups are formed where assistance is required to direct investigation, access information, to address issues and/or review the significance of place/area.</p> |
| 6. Report on the field investigation             | <p>6.1. Stakeholders are consulted on draft findings.</p> <p>6.2. The basis for the determination of outcomes is documented to legislative requirements, the organisation's policies and practices, and international and national processes.</p> <p>6.3. The determination of significance is submitted to the organisation and its external review processes, as required by legislation and Codes of Practice.</p>                                                                                                                                                                                                                                                                                                                                                                   |

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

#### Required skills

- review existing knowledge

## REQUIRED SKILLS AND KNOWLEDGE

- identify stakeholders
- develop research approach
- conduct field investigations
- develop process for involving decision-makers
- report on the field investigation
- 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 knowledge

- conservation legislation, charters, Codes of Practice relating to natural and cultural resource areas
- various systems and processes for assessing significance
- ecology and biological diversity including aspects of living organisms, habitats and communities, and interactions between species
- geological diversity including aspects of stratigraphy, palaeontology, paedology, and soil classification
- relationships between geology and flora/fauna in natural resource environments
- microbiology including entomology for the area under assessment
- population dynamics and control approaches
- monitoring including life cycles and food chains
- general understanding of range of cultural issues
- accepted scientific processes, including conservation processes and charters
- historical research processes
- research processes into cultures, religions, political systems, and arts and crafts.
- geography, societies and related economics
- general understanding of impacts of natural resources, such as geological settings, ecological processes, and interaction between natural and cultural processes
- monitoring including fabric deterioration, damage and likely causes of deterioration and damage
- relevant international, national and local legislation and agreements as applying to park/reserve, including a good understanding of the concepts and potential operation of the Burra Charter, guidelines associated with the Charter and other ICOMOS
- legislation under which enterprise operates and research is commissioned

**REQUIRED SKILLS AND KNOWLEDGE**

- grouping of Indigenous peoples appropriate to the area under review, and their cultural heritage
- processes defined in the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Island Heritage Places
- links between Indigenous heritage and natural resources.

## 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

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:

- use a range of electronic and manual recording systems to support research
- identify stakeholders including current tenure, Indigenous history and community interest
- review existing knowledge
- develop research objectives, staff, resources and design
- conduct field investigations to investigate impacts on fauna, flora and natural resources of the site
- report on the field investigation.

#### 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.

Field research techniques may include:

- identification of ecosystems and mapping of cycles and species
- recording species, populations, densities and health of the species
- field observations and manual recording
- taking, preserving and examining samples
- capturing and examining wildlife

**RANGE STATEMENT**

|  |                                                                                                                                                                                                                                                                                                                               |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"><li>• taking photographic records</li><li>• tracking individual specimens by manual and electronic means</li><li>• establishing databases and loading records</li><li>• planning information collection to cover specific seasonal impacts</li><li>• to obtain longitudinal data.</li></ul> |
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**Unit Sector(s)**

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| <b>Unit sector</b> | Indigenous land management |
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**Co-requisite units**

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| <b>Co-requisite units</b> |  |  |
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**Competency field**

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| <b>Competency field</b> |  |
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