

## **Unit AC1          Research and analyse information to achieve objectives**

### **Elements**

**AC1.1    Identify sources and availability of information**

**AC1.2    Collect information to achieve research objectives**

**AC1.3    Analyse research information**

**AC1.4    Report results**

### **Unit Commentary**

This unit is for archaeologists who undertake research. It covers both researchers conducting research they have proposed, either alone or as principal investigators at the head of research teams, and researchers working as members of those teams.

A research project involves the collection and analysis of information and the timely reporting of the results. This unit includes identifying sources of information, what problems may be encountered, collecting the information to meet the needs of the research, ensuring that the information is recorded and stored correctly, recording, storing and analysing information using appropriate methods, and identifying and communicating the results of the research.

## AC1 Research and analyse information to achieve objectives

### AC1.1 Identify sources and availability of information

#### Performance Required

*This will involve:*

- a) identifying clearly the type and range of information required to achieve the research outcomes
- b) identifying and evaluating **sources of information** (including **primary** and **secondary sources**) for their potential contribution to the research
- c) ascertaining clearly the procedures that are required to access information and ensuring these are complied with.
- d) where appropriate, providing a clear explanation of the purpose of the research and the data that is likely to be relevant
- e) respecting confidentiality and intellectual copyright and complying with organisational and legal and ethical constraints on the use and disclosure of information obtained

#### Occupational Context

- **Sources of information** (may include)
  - records of survey or excavation
  - artefacts
  - environmental material
  - other samples
  - oral testimony
  - records produced during analysis
  - published analyses
  - synthetic research reports
  - museum catalogues & accession records
  - other archive material
- **Primary sources**
  - items / artefacts
  - sites
  - collections
- **Secondary sources**
  - libraries and archives
  - catalogues and databases
  - the internet
  - organisations
  - publications
  - conferences / meetings
  - individuals

#### Knowledge Requirements

*You need to know and understand how to:*

- Collect, record or access information using normal procedures

*You need to know about:*

- What the research aims of the project are
- The sources of information relevant to the research
- In the case of sub-projects, how they contribute to the project as a whole
- Relevant legislation and codes of practice

## **AC1 Research and analyse information to achieve objectives**

### **AC1.1 Identify sources and availability of information**

#### **Required Skills**

*You should demonstrate:*

- How to use text, graphic and numeric data in traditional and electronic formats
- appropriate techniques for recording, storing, manipulating and displaying different types of data in different media

#### **Evidence Required**

*You must provide performance evidence proving that you can identify sources and availability of information to achieve the research objectives. The sources of information must include: libraries and archives, catalogues, databases, organisations and publications, and where appropriate conferences, seminars, experts and specific items.*

Candidates will normally provide the outputs from research as the main evidence for this element. Typically this could be a research report and the new data/information generated.

This would be supplemented with a significant degree of questioning to demonstrate that the knowledge areas are fully covered.

#### **Evidence Rules**

- The candidate should have been involved in at least 2 research projects

## AC1 Research and analyse information to achieve objectives

### AC1.2 Collect information to achieve research objectives

#### Performance Required

*This will involve:*

- a) collecting information in line with the research aims
- b) applying information collection **methods** correctly and consistently
- c) where appropriate, validating the authenticity and source of the information
- d) complying with organisational and legal requirements in the collection of data
- e) recording and referencing information accurately and clearly in an appropriate format
- f) observing appropriate procedures regarding the confidentiality of data, intellectual property rights and relevant codes of conduct

#### Occupational Context

##### 1 **Methods** may include:

- non-intrusive field techniques
- intrusive field techniques
- laboratory analysis
- documentary research
- statistical analysis
- questionnaires
- bibliographic research
- artefact analysis

##### **Knowledge Requirements**

*You need to know and understand how to:*

- Obtain different types of information
- Verify the authenticity of information
- Validate the source of the information
- Record information, and what formats to use

*You need to know about:*

- How different types of information relate to the research aims
- Copyright (a broad understanding) and other relevant legislation

## AC1 Research and analyse information to achieve objectives

### AC1.2 Collect information to achieve research objectives

#### Required Skills

*You should demonstrate:*

- How to retrieve information from published sources
- How to retrieve information from sites
- How to retrieve information from items and artefacts

#### Evidence Required

*You must provide performance evidence proving that you can collect information to achieve research objectives. The sources of information must include libraries, databases, people and publications, and the forms of information must include computerised, written and spoken. The methodology must include the investigation of primary or secondary sources or a combination of both.*

Information could be gained from surveys, excavations, interviews, libraries, archives, museums, etc.

This would be supplemented with a significant degree of questioning to demonstrate that the knowledge areas are fully covered.

#### Evidence Rules

- The candidate should have been involved in at least 2 research projects

## AC1 Research and analyse information to achieve objectives

### AC1.3 Analyse research information

#### Performance Required

*This will involve:*

- a) ensuring the **methods** are appropriate to the type of data and the research aims
- b) analysing information accurately according to the appropriate methodology
- c) interpreting and synthesising the results carefully, and drawing justifiable conclusions
- d) identifying any unexpected results and reviewing reasons for them with relevant people
- e) recording the results accurately and clearly in an appropriate format

#### Occupational Context

##### 1 Methods

- quantitative
- qualitative.

#### Knowledge Requirements

*You need to know about:*

- The research aims
- Which types of analysis method are appropriate

## **AC1 Research and analyse information to achieve objectives**

### **AC1.3 Analyse research information**

#### **Required Skills**

*You should demonstrate:*

- How to analyse qualitative data
- How to analyse quantitative data

#### **Evidence Required**

*You must provide performance evidence proving that you can analyse research information to achieve research objectives, analysing both quantitative and qualitative information.*

Candidates will normally provide the outputs from specific research as the main evidence for this element. Typically this will be a research report.

This would be supplemented with a significant degree of questioning to demonstrate that the knowledge areas are fully covered.

#### **Evidence Rules**

- The candidate should have been involved in at least 2 research projects

## AC1 Research and analyse information to achieve objectives

### AC1.4 Report results

#### Performance Required

*This will involve:*

- a) **presenting** the results of the work clearly in a manner appropriate to its **audience**
- b) qualifying research findings where data are insufficient or potentially unreliable
- c) acknowledging appropriately all sources of information
- d) submitting the results of the work to **relevant people** for peer review and responding to suggestions
- e) protecting confidential information in accordance with agreements and procedures

#### Occupational Context

##### 1 Presentation (may be):

- Unpublished reports
- Published reports in research journals
- 'Popular' publications
- Private and public presentations
- Exhibitions
- Web-based resources

##### 2 Audience (may be):

- Clients (internal/external)
- Professional colleagues
- Experts
- Amateurs
- The public (adults and children)

##### 3 Relevant people

- Professional colleagues
- Academics in related disciplines

#### Knowledge Requirements

*You need to know and understand how to:*

- Summarise the results of relevant research
- Communicate with different audiences
- Acknowledge and cite sources of information

*You need to know about:*

- The appropriate format and medium for reporting different types of research
- Copyright (a broad understanding) and other relevant legislation
- The procedures for peer review  
The publication process

## **AC1 Research and analyse information to achieve objectives**

### **AC1.4 Report results**

#### **Required Skills**

*You should demonstrate:*

- Report construction and presentation
- How to edit report contributions

#### **Evidence Required**

*You must provide performance evidence proving that you can provide reports for others. This must include reports presented to at least two different audiences, and both a written report and an oral presentation.*

Candidates will normally provide project reports as the main piece of evidence for this element.

This would be supplemented with a significant degree of questioning to demonstrate that the knowledge areas are fully covered.

#### **Evidence Rules**

- The candidate should have been involved in at least 2 substantive research projects.