



Project to define professional functions and standards in archaeological practice

National Occupational Standards for Archaeological Practice

Accredited Standards

Section C

21st March 2003

Dr Stephen Carter
Alastair Robertson



Summary of Units and Elements

Ref	Unit & Element titles
C	Recover data from the historic environment
AC1	Research and analyse information to achieve objectives
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
AC2	Conduct non-intrusive investigations
AC2.1	Prepare for operations
AC2.2	Observe and record measurements
AC2.3	Analyse and present investigation data
AC3	Contribute to non-intrusive investigations
AC3.1	Prepare for operations
AC3.2	Observe and record measurements
AC3.3	Analyse and present investigation data
AC4	Conduct intrusive investigations
AC4.1	Prepare for operations
AC4.2	Undertake intrusive investigations
AC4.3	Assess and present investigation data
AC5	Contribute to intrusive investigations
AC5.1	Prepare for operations
AC5.2	Undertake intrusive investigations
AC5.3	Prepare records and schedules
AC6	Store items
AC7.1	Identify the appropriate environment in which to maintain and protect items
AC7.2	Control the environment to preserve and protect items
AC7	Transfer items
AC7.1	Identify the handling requirements of an item
AC7.2	Pack an item for transportation to a new location
AC7.3	Monitor the transportation of items
AC7.4	Monitor the installation of items within a new location

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.

Unit AC2 Conduct non-intrusive investigations

Elements

AC2.1 Prepare for operations

AC2.2 Observe and record measurements

AC2.3 Analyse and present investigation data

Unit Commentary:

This unit involves the carrying out of non-intrusive archaeological field investigations (primarily various types of survey). The unit is for archaeologists with responsibility for carrying out field investigations, i.e. they will be the most senior archaeologist in the field. They may report to a project manager or, in the case of small projects, they may be the project manager. This unit deals with the preparation for an investigation where the method statement has already been agreed, the observation and recording of measurements in the field leading to the analysis and presentation of the data.

AC2 Conduct non-intrusive investigations

AC2.1 Prepare for operations

Performance Required

This will involve:

- a) verifying the **investigation** method statement with interested parties prior to commencement
- b) confirming relevant **permissions** have been obtained before commencement
- c) verifying relevant **insurances** as valid and sufficient for planned activities
- d) ensuring that **site facilities** are appropriately located, sufficient for planned operations and fit for purpose
- e) bringing suitable equipment to **site** and making safe and secure
- f) checking measuring and recording equipment and, where required, calibrating accurately prior to use
- g) briefing personnel assisting in the **investigation** clearly and accurately on their role, **investigation methods**, the **site**, the **equipment** and **safety arrangements**
- h) providing third parties who will be affected by the conduct of the **investigation** with clear and accurate information and obtaining their co-operation
- i) checking that **safety arrangements** including, signing, personal protection and access equipment comply with legislation and regulations

Occupational Context

1 Type of investigation:

- building survey
- topographical survey
- geophysical survey
- geochemical survey
- landscape survey
- aerial survey

2 Investigation methods:

- visual
- approximate measured
- detailed measurement of all specified features
- graphic / photographic
- instrumental

3 Permissions from:

- client
- site owner and occupiers
- adjoining owners and occupiers
- notifiable authorities

4 Insurances:

- third party
- personnel
- equipment
- professional indemnity

5 Site facilities

- accommodation, storage & sanitary facilities
- parking
- transport
- catering
- communications equipment
- power
- water & waste disposal
- health, safety and welfare provision

6 Type of site:

- landscape
- earthworks
- sub-surface deposits
- structures
- terrestrial
- intertidal
- underwater

7 Survey, measuring and recording equipment:

- mechanical
- optical
- electronic
- digital

8 Safety arrangements:

- personal safety and safety of others
- equipment and clothing
- safe use of access equipment
- health and safety practice and regulations
- codes of practice
- special constraints applying to site including protection of features

AC2 Conduct non-intrusive investigations

AC2.1 Prepare for operations

Knowledge Requirements

You need to know and understand how to:

- Verify the aims and goals of the project
- Verify investigation method statements
- Select and secure suitable equipment and spares
- Check and calibrate equipment
- Establish site facilities
- Brief personnel on investigation methods
- Check safety arrangements and working practices

You need to know about:

- Types and modes of investigation
- Sources of permission for access
- Types of insurance which may be needed
- Types of equipment which may be required
- Types of facilities requirements
- Types of and sources of information on safety arrangements and safe working practices, legislation and regulations which may be required

Required Skills

You should demonstrate:

- How to check and calibrate equipment
- How to check brief investigation personnel
- How to check communicate with third parties

Evidence Required

You should provide evidence that you can prepare for operations

The candidate should be questioned, based upon the documentation provided, to explore the following

- investigation method statements
- permissions
- insurances
- site facilities (on and off site)
- Information provided to third parties
- safety checks

Evidence Rules

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

AC2 Conduct non-intrusive investigations

AC2.2 Observe and record measurements

Performance Required

This will involve:

- a) conducting the **investigation** efficiently and systematically and in accordance with the method statement
- b) adapting work procedures and practices appropriately to allow for different **circumstances and conditions**
- c) maintaining the integrity of the site, observing **safe working practices** and ensuring disruption to other activities on the site is kept to a minimum
- d) ensuring observations and measurements are accurate and fully meet specified data requirements
- e) consulting expert advice in instances where additional, specialist information is required which is relevant to the **investigation**
- f) advising **interested parties** promptly of potentially critical findings and constraints arising during the conduct of the **investigation**
- g) identifying and recording features of the site which may require more detailed investigation
- h) ensuring that **investigation** data are recorded clearly and accurately and are stored securely for later analysis
- i) keeping a clear and accurate record of time spent on the investigation and of any problems arising during its course that may bear on either cost or accuracy
- j) maintaining effective working relationships and ensuring that the project team is kept fully informed of progress and significant developments
- k) maintaining equipment in operational order and storing it securely

Occupational Context

1 Type of investigation:

- building survey
- topographical survey
- geophysical survey
- geochemical survey
- landscape survey
- aerial survey

2 Mode of investigation:

- visual
- approximate measured
- detailed measurement of all specified features
- graphic/ photographic
- instrumental

3 Safe working practices (cover):

- personal safety
- safety of others (including the public)
- equipment and clothing
- safe use of access equipment
- health and safety practice and regulations
- codes of best practice
- special constraints applying to survey site including protection of features

4 Circumstances and conditions:

- structural stability
- cultural and historical significance of site and site features
- current use of site
- geotechnical factors
- weather conditions
- fragility of features and materials
- ecology
- emergency circumstances

5 Interested parties:

- site personnel (including subcontractors)
- client
- the professional and academic community
- owners / occupiers
- community and special interest groups
- regulatory authorities

AC2 Conduct non-intrusive investigations

AC2.2 Observe and record measurements

Knowledge Requirements

You need to know and understand how to:

- Conduct investigations
- Identify and follow safe working practices
- Obtain specialist information and advice
- Observe and measure accurately
- Adapt investigation procedures and practices to suit different conditions
- Record and store investigation data
- Maintain equipment

You need to know about:

- Types and modes of investigation
- Safe working practices which apply to the conduct of investigation
- Sources of expert advice and specialist information
- Circumstances and conditions which can affect investigation operations
- Data protocols used in different investigation methods
- Types of recording format and data storage systems used

Required Skills

You should demonstrate:

- How to conduct investigations using non-intrusive methods and techniques

Evidence Required

You should provide evidence that you can observe and record measurements

The candidate should be questioned, based upon the documentation provided, to explore the following:

- use of appropriate modes of investigation
- investigation data
- relevant features identified
- advice to interested parties regarding critical discoveries
- features of site which require more detailed investigation
- expert advice consulted
- time spent on the investigation and problems arising
- actions taken to deal with specific site circumstances and conditions

Evidence Rules

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

AC2 Conduct non-intrusive investigations

AC2.3 Analyse and present investigation data

Performance Required

This will involve:

- a) verifying that **data** collected during investigation is sufficient for analytical purposes and is collated accurately
- b) checking and verifying investigation **data** for accuracy and integrity
- c) processing investigation **data** accurately and presenting it in a format that will assist in making a balanced interpretation
- d) seeking additional **data** and specialist advice where essential for accurate analysis and interpretation of investigation findings
- e) ensuring that **data outputs** and supporting information comply with the requirements of the method statement, are accurate and are presented clearly in an agreed format, suitable for those who will wish to use them
- f) prepare report containing interpretation, diagnosis and advice, based on **data outputs**, to **interested parties**

Occupational Context

1 Investigation data:

- visual
- approximate measured
- detailed measurement of all specified features
- graphic / photographic
- instrumental

2 Data outputs:

- measurement data
- visual records
- written testimony
- interpretive data

3 Interested parties:

- site personnel
- client
- the professional and academic community
- owners / occupiers
- community and special interest groups
- regulatory authorities

Knowledge Requirements

You need to know and understand how to:

- Identify data sources and select and collate data
- Apply valid methods to verify investigation data
- Process, format and present investigation data suitable for end use
- Advise users on the interpretation of investigation

You need to know about:

- Types of investigation data
- Limitations of techniques and data
- Types of data analysis
- Data presentation formats

AC2 Conduct non-intrusive investigations

AC2.3 Analyse and present investigation data

Required Skills

You should demonstrate:

- How to present investigation data, data analysis, commentary and supporting information

Evidence Required

You should provide evidence that you can analyse and present investigation data

The candidate should be questioned, based upon the documentation provided, to explore the following:

- investigation data
- investigation data presented including:
- specialist advice on analysis and interpretation
- commentary and supporting information presented

Evidence Rules

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

Unit AC3 Contribute to non-intrusive investigations

Elements

AC3.1 Prepare for operations

AC3.2 Observe and record measurements

AC3.3 Prepare records and schedules

Unit Commentary:

This unit involves making contributions to non-intrusive archaeological field investigations (primarily various types of surveys). The unit is for junior field archaeologists working under the direction of a more senior archaeologist who will be responsible for carrying out the field investigation. This unit deals with the contributions to preparation for an investigation, the fieldwork and the analysis and presentation of the data.

AC3 Contribute to non-intrusive investigations

AC3.1 Prepare for operations

Performance Required

This will involve:

- a) understanding the **investigation** method statement and your role in the investigation prior to commencement
- b) understanding the nature of the **site**, the **investigation methods** and **safety arrangements**
- c) bringing suitable **equipment**, clothing and materials to site and making safe and secure

Occupational Context

1 Type of investigation:

- building survey
- topographical survey
- geophysical survey
- geochemical survey
- landscape survey
- aerial survey

2 Investigation methods:

- visual
- approximate measured
- detailed measurement of all specified features
- graphic / photographic
- instrumental

3 Type of site:

- landscape
- earthworks
- sub-surface deposits
- structures
- terrestrial
- intertidal
- underwater

4 Survey, measuring and recording equipment:

- mechanical
- optical
- electronic
- digital

5 Safety arrangements:

- personal safety and safety of others
- equipment and clothing
- safe use of access equipment
- health and safety practice and regulations
- codes of practice
- special constraints applying to site including protection of features

Knowledge Requirements

You need to know and understand how to:

- Select and secure suitable equipment and spares
- Check safety arrangements and working practices

You need to know about:

- Types and modes of investigation
- Types of equipment which may be required
- Types of and sources of information on safety arrangements and safe working practices, legislation and regulations which may be required

AC3 Contribute to non-intrusive investigations

AC3.1 Prepare for operations

Required Skills

You should demonstrate:

- The safe use of equipment used for investigation

Evidence Required

You should provide evidence that you can prepare for operations

The candidate should be questioned, based upon the documentation provided, to explore the following

- goals of the project
- investigation methods
- candidate's own role in the project
- equipment safety and security
- arrangements for safety checks

Evidence Rules

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

AC3 Contribute to non-intrusive investigations

AC3.2 Observe and record measurements

Performance Required

This will involve:

- a) contributing to the **investigation** efficiently and systematically and in accordance with the method statement
- b) adapting work procedures and practices if instructed to allow for different **circumstances and conditions**
- c) maintaining the integrity of the site, observing **safe working practices** and ensuring disruption to other activities on the site is kept to a minimum
- d) making observations and measurements that are accurate and fully meet specified data requirements
- e) consulting with senior manager when uncertain about any aspect of the investigation or own responsibilities for action
- f) recording **investigation** data clearly and accurately and storing them securely for later analysis
- g) maintaining equipment in operational order and storing it securely

Occupational Context

1 Type of investigation:

- building survey
- topographical survey
- geophysical survey
- geochemical survey
- landscape survey
- aerial survey

2 Mode of investigation:

- visual
- approximate measured
- detailed measurement of all specified features
- graphic/ photographic
- instrumental

3 Safe working practices (cover):

- personal safety
- safety of others
- equipment and clothing
- safe use of access equipment
- health and safety practice and regulations
- codes of best practice
- special constraints applying to survey site including protection of features

4 Circumstances and conditions:

- structural stability
- cultural and historical significance of site and site features
- current use of site
- geotechnical factors
- weather conditions
- fragility of features and materials
- ecology
- emergency circumstances

Knowledge Requirements

You need to know and understand how to:

- Conduct investigations
- Identify and follow safe working practices
- Observe and measure accurately
- Adapt investigation procedures and practices to suit different conditions
- Record and store investigation data
- Maintain equipment
- Use personal protection clothing & equipment

You need to know about:

- Types and modes of investigation
- Safe working practices which apply to the conduct of investigation
- Circumstances and conditions which can affect investigation operations
- Data protocols used in different investigation methods
- Types of recording format and data storage systems used

AC3 Contribute to non-intrusive investigations

AC3.2 Observe and record measurements

Required Skills

You should demonstrate:

- The safe and appropriate use, care and calibration of equipment
- The safe use of access equipment
- Lifting and handling techniques
- Techniques applicable to non-intrusive archaeological investigations
- The application of data recording protocols

Evidence Required

You should provide evidence that you can observe and record measurements

The candidate should be questioned, based upon the documentation provided, to explore the following:

- investigation data recorded and stored
- equipment in operational order and stored
- candidate's own role in the project

Evidence Rules

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

AC3 Contribute to non-intrusive investigations

AC3.3 Prepare records and schedules

Performance Required

This will involve:

- a) checking and verifying **investigation data** for accuracy and integrity
- b) processing **investigation data** accurately and presenting it in a format that will assist in making a balanced interpretation

Occupational Context

1 Investigation data:

- visual
- approximate measured
- detailed measurement of all specified features
- graphic / photographic
- instrumental

2 Data outputs:

- measurement data
- visual records

Knowledge Requirements

You need to know and understand how to:

- Apply valid methods to verify investigation data
- Process, format and present investigation data suitable for end use

You need to know about:

- Types of investigation data
- Types of data analysis
- Data presentation formats

AC3 Contribute to non-intrusive investigations

AC3.3 Prepare records and schedules

Required Skills

You should demonstrate:

- How to present investigation data, data analysis

Evidence Required

You should provide evidence that you can prepare records and schedules

The candidate should be questioned, based upon the documentation provided, to explore the following

- investigation data selected, collated, checked and verified
- investigation data processed and presented

Evidence Rules

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

Unit AC4 Conduct intrusive investigations

Elements

AC4.1 Prepare for operations

AC4.2 Undertake intrusive investigations

AC4.3 Assess and present investigation data

Unit Commentary:

This unit involves the carrying out of intrusive archaeological field investigations ranging from surface artefact collection to excavation. The unit is for archaeologists with responsibility for carrying out field investigations i.e. they will be the most senior archaeologist in the field. They may report to a project manager or, in the case of small projects, they may be the project manager. This unit deals with the preparation for an investigation where the method statement has already been agreed, the undertaking of the fieldwork and the analysis and presentation of the data.

AC4 Conduct intrusive investigations

AC4.1 Prepare for operations

Performance Required

This will involve:

- a) verifying the **investigation** method statement with interested parties prior to commencement
- b) confirming relevant **permissions** as accurate before commencement
- c) verifying relevant **insurances** as valid and sufficient for planned activities
- d) ensuring that **site facilities** are appropriately located, sufficient for planned operations and fit for purpose
- e) bringing suitable equipment to site and making safe and secure
- f) checking measuring and recording equipment and, where required, calibrating accurately prior to use
- g) briefing personnel assisting in the **investigation** clearly and accurately on their role, **investigation** methods, the **site**, the equipment and **safety arrangements**
- h) providing third parties who will be affected by the conduct of the **investigation** with clear and accurate information and obtaining their co-operation
- i) checking that **safety arrangements** comply with legislation and regulations

Occupational Context

- 1 **Type of investigation:**
 - surface artefact collection
 - auguring
 - hand excavation
 - machine excavation
 - watching brief (excavation by others)
- 2 **Type of site:**
 - sub-surface deposits
 - structures
 - terrestrial
 - intertidal
 - underwater
- 3 **Permissions from:**
 - client
 - site owner and occupiers
 - adjoining owners and occupiers
 - notifiable authorities
- 4 **Insurances:**
 - third party
 - personnel
 - equipment
 - professional indemnity
- 5 **Site facilities**
 - accommodation, storage & sanitary facilities
 - parking
 - transport
 - catering
 - communications equipment
 - power
 - water & waste disposal
 - health, safety and welfare provision
- 6 **Safety arrangements:**
 - personal safety and safety of others
 - equipment and clothing
 - safe use of access equipment
 - health and safety practice and regulations
 - codes of practice
 - risk assessment

AC4 Conduct intrusive investigations

AC4.1 Prepare for operations

Knowledge Requirements

You need to know and understand how to:

- Verify investigation method statements
- Select and secure suitable equipment
- Check and calibrate equipment
- Establish site facilities
- Brief personnel on investigation methods
- Check safety arrangements and working practices

You need to know about:

- Types and modes of investigation
- Sources of permission for access
- Types of insurance which may be needed
- Types of equipment which may be required
- Types of facilities requirements
- Types of and sources of information on safety arrangements and safe working practices, legislation and regulations which may be required

Required Skills

You should demonstrate:

- How to check and calibrating equipment
- How to brief investigation personnel
- How to communicate with third parties

Evidence Required

You should provide evidence that you can prepare for operations

The candidate should be questioned, based upon the documentation provided, to explore the following:

- investigation method statements
- permissions
- insurances
- site facilities (on and off site)
- information provided to third parties
- safety checks

Evidence Rules

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

AC4 Conduct intrusive investigations

AC4.2 Undertake intrusive investigations

Performance Required

This will involve:

- a) conducting the **investigation** efficiently and systematically and in accordance with the method statement
- b) identifying and accurately recording relevant features
- c) ensuring observations and measurements are accurate, are in appropriate format and fully meet specified data requirements
- d) ensuring that **investigation** data are recorded clearly and accurately and are stored securely for later analysis
- e) adapting **work procedures and practices** appropriately to allow for different **circumstances and conditions**
- f) maintaining the integrity of the site, observing safe working practices and welfare arrangements and ensuring disruption to other activities on the site is kept to a minimum
- g) Make good the site in accordance with the method statement
- h) consulting **expert advice** in instances where additional, specialist information is required which is relevant to the **investigation**
- i) advising **interested parties** promptly of potentially critical findings and constraints arising during the conduct of the **investigation**
- j) maintaining effective working relationships and ensuring that the project team is kept fully informed of progress and significant developments
- k) maintaining equipment in operational order and storing it securely

Occupational Context

- 1 Type of investigation:**
 - surface artefact collection
 - auguring
 - hand excavation
 - machine excavation
 - watching brief (excavation by others)
- 2 Type of site:**
 - sub-surface deposits
 - structures
 - terrestrial
 - intertidal
 - underwater
- 3 Work procedures and practices:**
 - excavation
 - recording
 - recovery of finds and samples
 - reinstatement
- 4 Safe working practices (cover):**
 - personal safety
 - safety of others (including the public)
 - equipment and clothing
 - safe use of access equipment
 - health and safety practice and regulations
 - codes of best practice
 - risk assessment
- 5 Circumstances and conditions:**
 - stability of structures and excavations
 - nature of features and deposits revealed
 - cultural and historical significance of site and site features
 - current use of site
 - geotechnical factors
 - weather conditions
 - fragility of features and materials
 - emergency circumstances
- 6 Sources of expert advice:**
 - finds specialists
 - environmental specialists
 - period specialists
 - archaeological conservators
- 7 Interested parties:**
 - site personnel (including sub-contractors)
 - client
 - the professional and academic community
 - owners / occupiers
 - community and special interest groups
 - regulatory authorities

AC4 Conduct intrusive investigations

AC4.2 Undertake intrusive investigations

Knowledge Requirements

You need to know and understand how to:

- Conduct investigations
- Identify and follow safe working practices.
- Obtain specialist information and advice
- Observe and measure accurately
- Adapt investigation procedures and practices to suit different conditions
- Record and store investigation data
- Maintain equipment

You need to know about:

- Types and modes of investigation
- Safe working practices which apply to the conduct of investigation
- Sources of expert advice and specialist information
- Circumstances and conditions which can affect investigation operations
- Data protocols used in different investigation methods
- Types of recording format and data storage systems used

Required Skills

You should demonstrate:

- How to conduct investigations using intrusive methods and techniques
- How to work with specialists and subcontractors to achieve objectives

Evidence Required

You should provide evidence that you can undertake intrusive investigations

The candidate should be questioned, based upon the documentation provided, to explore the following

- conduct of investigations
- investigation data recorded
- investigation procedures and practices adapted to suit different conditions
- working with subcontractors

Evidence Rules

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

AC4 Conduct intrusive investigations

AC4.3 Assess and present investigation data

Performance Required

This will involve:

- a) verifying that **data** collected during investigation is sufficient for analytical purposes and is collated accurately
- b) checking and verifying **investigation data** for accuracy and integrity
- c) processing **investigation data** accurately and presenting it in a format that will assist in making a balanced interpretation
- d) seeking additional data and **specialist advice** where essential for accurate assessment and interpretation of investigation findings
- e) ensuring that **data outputs** and supporting information comply with the requirements of the method statement, are accurate and are presented clearly in an agreed format, suitable for those who will wish to use them
- f) prepare report containing interpretation, diagnosis and advice, based on **investigation data to interested parties**

Occupational Context

1 Investigation data:

- finds
- samples
- measurement data
- visual records
- written records
- interpretive data

2 Sources of specialist advice:

- finds specialists
- environmental specialists
- period specialists
- archaeological conservators

3 Interested parties:

- site personnel
- client
- the professional and academic community
- owners / occupiers
- community and special interest groups
- regulatory authorities

Knowledge Requirements

You need to know and understand how to:

- Identify data sources and select and collate data
- Apply valid methods to verify investigation data
- Process, format and present investigation data suitable for end use
- Advise users on the interpretation of investigation
- Prepare investigation reports
- Liaise with specialists and integrate specialist information in reports

You need to know about:

- Types of investigation data
- Types of data analysis
- Data presentation formats
- Limitations of data

AC4 Conduct intrusive investigations

AC4.3 Assess and present investigation data

Required Skills

You should demonstrate:

- How to present investigation data

Evidence Required

You should provide evidence that you can undertake intrusive investigations

The candidate should be questioned, based upon the documentation provided, to explore the following

- investigation data
- investigation data presented including:
- specialist advice sought to aid analysis and interpretation
- commentary and supporting information presented
- advice given on the interpretation of investigation data

Evidence Rules

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

Unit AC5 Contribute to intrusive investigations

Elements

AC5.1 Prepare for operations

AC5.2 Undertake intrusive investigations

AC5.3 Prepare records and schedules

Unit Commentary:

This unit involves making contributions to intrusive archaeological field investigations ranging from surface artefact collection to excavation. The unit is for junior field archaeologists working under the direction of a more senior archaeologist who will be responsible for carrying out the field investigation. This unit deals with the contributions to preparation for an investigation, the fieldwork and the analysis and presentation of the data.

AC5 Contribute to intrusive investigations

AC5.1 Prepare for operations

Performance Required

This will involve:

- a) understanding the **investigation** method statement and your role in the investigation prior to commencement
- b) understanding the nature of the **site**, the **investigation methods** and **safety arrangements**
- c) bringing suitable equipment and clothing to site and making safe and secure

Occupational Context

1 Type of investigation:

- surface artefact collection
- auguring
- hand excavation
- machine excavation
- watching brief (excavation by others)

2 Type of site:

- sub-surface deposits
- structures
- terrestrial
- intertidal
- underwater

3 Safety arrangements:

- personal safety and safety of others
- equipment and clothing
- safe use of access and lifting equipment
- health and safety practice and regulations
- codes of practice
- risk assessment

Knowledge Requirements

You need to know and understand how to:

- Select and secure suitable equipment and clothing
- Check safety arrangements and working practices

You need to know about:

- Types and modes of investigation
- Types of equipment which may be required
- Types of recording materials which may be required
- Types of and sources of information on safety arrangements and safe working practices, legislation and regulations which may be required

AC5 Contribute to intrusive investigations

AC5.1 Prepare for operations

Required Skills

You should demonstrate:

- The safe use of equipment used for investigation

Evidence Required

You should provide evidence that you can prepare for operations

The candidate should be questioned, based upon the documentation provided, to explore the following

- methods and goals of the investigation
- equipment on site - its safety and security
- arrangements for safety checks
- recording materials

Evidence Rules

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

AC5 Contribute to intrusive investigations

AC5.2 Undertake intrusive investigations

Performance Required

This will involve:

- a) contributing to the investigation efficiently and systematically and in accordance with the method statement
- b) identifying and accurately recording relevant features
- c) making observations and measurements that are accurate and fully meet specified data requirements
- d) recording **investigation** data clearly and accurately and storing it securely for later analysis
- e) adapting work procedures and practices if instructed to allow for different circumstances and conditions
- f) consulting with senior manager when uncertain about any aspect of the investigation or own responsibilities for action
- g) maintaining the integrity of the **site**, observing **safe working practices** and ensuring disruption to other activities on the site is kept to a minimum
- h) using equipment appropriately, maintaining it in operational order and storing it securely

Occupational Context

1 Type of investigation:

- surface artefact collection
- auguring
- hand excavation
- machine excavation
- watching brief (excavation by others)

2 Type of site:

- sub-surface deposits
- structures
- terrestrial
- intertidal
- underwater

3 Work procedures and practices:

- excavation
- recording
- recovery of finds and samples
- reinstatement

4 Safe working practices (cover):

- personal safety
- Safety of others
- equipment and clothing
- safe use of access equipment
- health and safety practice and regulations
- codes of best practice
- risk assessment

5 Circumstances and conditions:

- stability of structures and excavations
- nature of features and deposits revealed
- cultural and historical significance of site and site features
- current use of site
- geotechnical factors
- weather conditions
- fragility of features and materials
- emergency circumstances

AC5 Contribute to intrusive investigations

AC5.2 Undertake intrusive investigations

Knowledge Requirements

You need to know and understand how to:

- Conduct investigations
- Identify and follow safe working practices.
- Observe and measure accurately
- Adapt investigation procedures and practices to suit different conditions
- Record and store investigation data
- Use and maintain equipment
- Use personal protection clothing & equipment

You need to know about:

- Types and modes of investigation
- Safe working practices which apply to the conduct of investigation
- Circumstances and conditions which can affect investigation operations
- Data protocols used in different investigation methods
- Types of recording format and data storage systems used

Required Skills

You should demonstrate:

- The use and calibration of measuring equipment
- The safe and appropriate use and care of hand tools
- The safe and appropriate use and care of plant, power tools and equipment
- The safe use of access and lifting equipment
- Lifting and handling techniques
- Techniques applicable intrusive archaeological investigations
- The use of forms for recording and of the recording materials

Evidence Required

You should provide evidence that you can undertake intrusive investigations

The candidate should be questioned, based upon the documentation provided, to explore the following

- investigation data recorded and stored
- methods and purposes of investigation
- own role in investigation and in team
- recording protocols

Evidence Rules

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

AC5 Contribute to intrusive investigations

AC5.3 Prepare records and schedules

Performance Required

This will involve:

- a) checking and verifying **investigation data** for accuracy and integrity
- b) processing **investigation data** accurately and presenting it in a format that will assist in making a balanced interpretation

Occupational Context

1 Investigation data:

- finds
- samples
- measurement data
- visual records
- written records
- interpretive data

Knowledge Requirements

You need to know and understand how to:

- Apply valid methods to verify investigation data
- Process, format and present investigation data suitable for end use

You need to know about:

- Types of investigation data
- Types of data analysis
- Data presentation formats

AC5 Contribute to intrusive investigations

AC5.3 Prepare records and schedules

Required Skills

You should demonstrate:

- The presentation of investigation data
- How to analyse data

Evidence Required

You should provide evidence that you can prepare records and schedules

The candidate should be questioned, based upon the documentation provided, to explore the following:

- investigation data selected, collated, checked and verified
- investigation data processed and presented

Evidence Rules

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

Unit AC6 Store items

Elements

AC6.1 Identify the appropriate environment in which to maintain and protect items

AC6.2 Control the environment to preserve and protect items

Unit Commentary

This unit is for an archaeologist who is responsible for the care of items (including artefacts and ecofacts, samples, archives and collections). Items going into store may remain there for a considerable time, so it is essential to be aware of the agents of deterioration, and of the means of monitoring and controlling the environment to ensure optimum storage conditions. It is essential to be able to assess deterioration in the items and to record it accurately. In order to do this effectively, a programme of monitoring both the environment and the condition of the items must be set up.

AC6 Store items

AC6.1 Identify the appropriate environment in which to maintain and protect items

Performance Required

This will involve:

- a) Identifying the optimum **preservation conditions** for each of the different **material types** present
- b) Obtaining specialist advice on optimum **environmental conditions**
- c) **Monitoring** the environment of the storage area(s) prior to installation to ensure they meet specifications
- d) Ensuring that the storage environment is also consistent with security and Health and Safety considerations
 - e) Assessing accurately the resources to implement specified procedures and passing details to the **relevant people**
- f) Recording and disseminating recommendations and procedures according to requirements

Occupational Context

1 Preservation conditions

- Storage provision
- Human and material resources
- Environmental conditions
- Security arrangements
- Access

2 Material types may include

- Ceramic
- Metal (ferrous/non-ferrous)
- Glass
- Stone
- Bone
- Wood
- Leather
- Cloth
- Paper
- Mineral sediment
- Organic sediment

3 Environmental conditions

- controlled temperature/humidity
- controlled/limited light
- air quality: clean, pollutant-free
- protection from pests
- protection from shock/ vibration
- use of biological and chemical agents

• Monitoring

- Through observation
- Through measurement
- Through data analysis

5 Relevant people

- supervisors/ managers
- professional experts/ consultants
- maintenance and support staff
- researchers

Knowledge Requirements

You need to know and understand how to:

Assess the accuracy of recording equipment and arrange for its regular calibration or maintenance

You need to know about:

Environments for storing archaeological items

- For different items, materials
- In terms of security, Health and Safety implications
- Relating to access

Equipment and techniques for monitoring, recording and maintaining appropriate conditions

AC6 Store items

AC6.1 Identify the appropriate environment in which to maintain and protect items

Required Skills

You should demonstrate:

- Using the technology sensitively to retrieve accurate and useful readings

Evidence Required

You should provide evidence that you can identify the appropriate environment in which to maintain and protect items

The candidate should be questioned, based upon Portfolio or case study evidence of having

- located and installed finds or samples into a new site

Evidence Rules

- The candidate should produce evidence of storing both stable and unstable items on at least two contrasting sites.

AC6 Store items

AC6.2 Control the environment to preserve and protect items

Performance Required

This will involve:

- a) **Monitoring** and maintaining the **environment** of items, and evaluating their **effectiveness**.
- b) Ensuring schedules and procedures for monitoring and maintaining the environment of items are correctly implemented
- c) Identifying as quickly as possible any evidence of instability or change in the items and any other indications that the environment is not suitable, and taking **appropriate action**
- d) Assessing accurately the resources to implement appropriate action and passing details to the **relevant people**
- e) Complying at all times with health and safety procedures

Occupational Context

1 Monitoring

- Through observation
- Through measurement
- Through data analysis

2 Environment

- temperature
- humidity
- light
- air quality
- protection from pests
- protection from shock/ vibration
- use of biological and chemical agents

3 Effectiveness

- efficient protection and maintenance of condition
- in terms of costs and benefits of resources and their outputs
- in relation to strategy expectations, targets and milestones

4 Appropriate action

- removal from/adjusting environment
- improving monitoring, observation, inspection and measurement procedures

5 Relevant people

- supervisors/ managers
- professional experts/ consultants
- maintenance and support staff
- researchers

Knowledge Requirements

You need to know about:

- How the environment can be accurately monitored, and the principal factors to monitor
- The indications that an environment is not suitable for the items
- The action that can be taken if the environment is not suitable for the item
- Who are the appropriate people to inform of any problems
- The health and safety implications of the available treatments
- The implications of an inappropriate environment

AC6 Store items

AC6.2 Control the environment to preserve and protect items

Required Skills

You should demonstrate:

- Observation skills
- Record-keeping and data analysis skills

Evidence Required

You should provide evidence that you can control the environment to preserve and protect items

The candidate should be questioned, based upon the documentation provided, to explore how they

- monitor and evaluate the environmental protection of items.

Evidence Rules

- The candidate should produce evidence of storing both stable and unstable items on at least two contrasting sites.

Unit AC7 Transfer items

Elements

- AC7.1 Identify the handling requirements of an item**
- AC7.2 Pack an item for transportation to a new location**
- AC7.3 Monitor the transportation of items**
- AC7.4 Monitor the installation of items within a new location**

Unit Commentary

This unit is for archaeologists who are responsible for the handling, packaging, transport and care of items on archaeological sites or from sites to other locations: for example, for storage, research, display, exhibition, or conservation purposes. Items can include artefacts, ecofacts, and samples. It can also include the transfer of collections and archives.

AC7 Transfer items

AC7.1 Identify the handling requirements of an item

Performance Required

This will involve:

- a) Obtaining all available information on the condition of the item
- b) Obtaining information on the conservation and environmental needs of the item
- c) Identifying and assessing any risks of damage to or deterioration of the item arising from **handling** and **moving** the item
- d) Identifying and assessing any risks to handlers arising from handling and moving the item
- e) Identifying the materials required to protect the item
- f) Identifying and obtaining the necessary equipment, and assessing its ability to handle the item safely
- g) Testing handling methods for their effectiveness before implementing them
- h) Basing recommendations on whether the item should be moved on consultation with relevant specialists and an analysis of all significant factors
- i) Ensuring packing and handling procedures will not prejudice subsequent scientific examination
- k) Ensuring that schedules for the collection, transportation and delivery of items is in accordance with specifications

Occupational Context

1 Handling items

- stable
- unstable
- specific analytical requirements

2 Moving items

- on-site
- off-site.

Knowledge Requirements

You need to know and understand how to:

- Check the identity and condition of different types of item
- Obtain information on the conservation needs of the item and potential risks of damage to or deterioration of it

You need to know about:

- The materials that are suitable and available for encasing the item
- The type of equipment that is suitable and available for moving the item
- Appropriate and available handling methods, and how these can be tested
- When to consult expert advice

AC7 Transfer items

AC7.1 Identify the handling requirements of an item

Required Skills

You should demonstrate:

- How to test handling methods

Evidence Required

You should provide evidence that you can identify the handling requirements of an item

The candidate should be questioned, based upon the documentation provided, to explore how they

- Identify the handling requirements of items that are stable and unstable, and items being moved on-site and off-site

Evidence Rules

- The candidate should produce evidence of transferring both stable and unstable items on at least two contrasting sites

AC7 Transfer items

AC7.2 Pack an item for transportation to a new location

Performance Required

This will involve:

- a) Ensuring the equipment, materials and people necessary to pack the item are available
- b) Packing the item according to the specified guidelines and procedures
- c) Agreeing any departures from specified guidelines and procedures with the **relevant people**, and seeking additional advice from specialists where necessary
- d) Using protective materials and equipment that are appropriate to the **conservation requirements** of the item
- e) Ensuring the packaging provides the agreed level of protection, environmental control and security for the item in its predicted environment
- f) Clearly marking packaging with the correct handling and destination instructions

Occupational Context

1 Relevant people may include

- Clients
- Managers/Supervisors
- Curators

2 Conservation requirements

- Relating to location
- Relating to environment
- Relating to conditions

Knowledge Requirements

You need to know and understand how to:

- Ensure that packaging will provide the agreed level of protection and how to assess this accurately and reliably

You need to know about:

Packing procedures

- What equipment, materials, financial and human resources are required to pack an item
- What guidelines and procedures should be followed
- What information or which guidelines should be made explicit, i.e. What to put on the packaging to ensure that the object is handled correctly and reaches its destination
- Who to consult if departures from specified guidelines and procedures are necessary
- Where to consult expert advice and further information

AC7 Transfer items

AC7.2 Pack an item for transportation to a new location

Required Skills

You should demonstrate:

- Careful and safe handling techniques

Evidence Required

You should provide evidence that you can pack an item for transportation to a new location

The candidate should be questioned, based upon the documentation provided, to explore how they

- understand and apply the procedures for packing an item for transportation to a new location.

Evidence Rules

- The candidate should produce evidence of transferring both stable and unstable items on at least two contrasting sites

AC7 Transfer items

AC7.3 Monitor the transportation of items

Performance Required

This will involve:

- a) Confirming with all the **relevant people** the authority to transport items
- b) Checking that the equipment used to transport the items is suitable for the items, and confirming its specification and availability with the appropriate people
- c) Following relevant handling guidelines and procedures
- d) Taking prompt **corrective action** to minimise actual or potential hazards to the items
- e) Keeping all relevant documentation with the items at all times
- f) Follow procedures for confirming the collection and delivery of all the items in the required condition, and to schedule

Occupational Context

1 Relevant people may include

- clients
- authorities and regulatory bodies
- managers/supervisors

2 Corrective action

- immediate physical response
- forward planning or rearranging
- after consultation
- prior to full checking and verification procedures

Knowledge Requirements

You need to know about:

Delivery Procedures

- Customs and import/export regulations, where appropriate
- Documentation of the receiving organisations
- Contractual agreements with couriers, legal representatives, insurers, clients
- Health and safety legislation

Contents

- The physical composition of the item, e.g. to analyse the effect of packing materials on different materials
- The significance and value of the material under transportation
- Descriptions: how information should be recorded, distributed and stored

AC7 Transfer items

AC7.3 Monitor the transportation of items

Required Skills

N/A

Evidence Required

You should provide evidence that you can monitor the transportation of items

The candidate should be questioned, based upon the documentation provided, to explore how they

- understand and apply the procedures for monitoring the transportation of items

Evidence Rules

- The candidate should produce evidence of transferring both stable and unstable items on at least two contrasting sites

AC7 Transfer items

AC7.4 Monitor the installation of items within a new location

Performance Required

This will involve:

- a) Confirming the identity of the items being installed and checking their condition
- b) Identifying and obtaining the resources necessary to install the items
- c) Checking the location and installation meet the specification
- d) Checking the items are placed in the correct locations or with the appropriate person
- e) Taking appropriate action if the location or installation is **unsuitable**
- f) Recording accurately the information relating to the installation and passing it to the appropriate people speedily
- g) Monitoring and recording the **environmental conditions** necessary to maintain the condition of the items
- h) Maintaining the **security** of the items at all times using appropriate measures

Occupational Context

1 Unsuitable

- In terms of location and environment
- In immediate terms or for the long term
- For the client/ owner/ public
- In terms of access

2 Environmental conditions

- temperature
- humidity
- light
- air pollution
- physical stability

3 Security

- in terms of theft
- in terms of damage
- in terms of publicity and dissemination practices

Knowledge Requirements

You need to know and understand how to:

Status of different items:

- Identify similar articles
- Assess items' ideal conditions in terms of their composition
- Monitor environmental conditions
- Maintain the security of the object

You need to know about:

Installation Procedures:

- The acquisition or loan procedures of the receiving organisation
- The resources necessary to install them

Location requirements:

- Security and protection for fire, theft, environment, etc
- Access and availability of installation site to audience/ clients/ curators/ researchers/ the public/authorities
- The optimum environmental conditions to keep the items in their present condition
- Identifying environmental features and the means of monitoring them
- What to do if the location or installation is unsuitable

AC7 Transfer items

AC7.4 Monitor the installation of items within a new location

Required Skills

You should demonstrate:

- Identification and composition analysis
- Measuring and assessing conditions

Evidence Required

You should provide evidence that you can monitor the installation of items within a new location

The candidate should be questioned, based upon the documentation provided, to explore how they

- understand and apply the procedures for monitoring the installation of items within a new location

Evidence Rules

- The candidate should produce evidence of transferring both stable and unstable items on at least two contrasting sites