

**MANAGING ENVIRONMENTAL  
RESOURCES**  
Access 3

**Second edition – published November 1999**

**NOTE OF CHANGES TO ACCESS 3 ARRANGEMENTS  
SECOND EDITION TO BE PUBLISHED NOVEMBER 1999**

**CLUSTER TITLE:** Managing Environmental Resources (Access 3)

**CLUSTER NUMBER:** C055 09

**National Cluster Specification**

Cluster Details: No significant changes  
Core skills statements expanded

**National Unit Specification**

*All units* Core skills statements expanded

## National Cluster

### MANAGING ENVIRONMENTAL RESOURCES (ACCESS 3)

**CLUSTER NUMBER** C055 09

#### STRUCTURE

This programme of study has three mandatory units as follows:

<i>D553 09</i>	<i>Planning an Environmental Area (Acc 3)</i>	<i>1 credit (40 hours)</i>
<i>D554 09</i>	<i>Developing an Environmental Area (Acc 3)</i>	<i>1 credit (40 hours)</i>
<i>D555 09</i>	<i>Monitoring and Maintaining an Environmental Area (Acc 3)</i>	<i>1 credit (40 hours)</i>

In common with all clusters, this programme of study includes 40 hours over and above the 120 hours for the component units. This may be used for induction, extending the range of learning and teaching approaches, support, consolidation and integration of learning. This time is an important element of the programme of study and advice on its use is included in the cluster details.

#### RECOMMENDED ENTRY

Entry is at the discretion of the centre.

#### CORE SKILLS

This cluster gives automatic certification of the following:

<b>Complete core skills for the cluster</b>	Problem Solving	Acc 3
<b>Core skills components for the cluster</b>	Using Graphical Information	Acc 3

For information about the automatic certification of core skills for any individual unit in this cluster, please refer to the general information section at the beginning of the unit.

Additional information about core skills is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

---

#### Administrative Information

<b>Publication date:</b>	November 1999
<b>Source:</b>	Scottish Qualifications Authority
<b>Version:</b>	02

© Scottish Qualifications Authority 1999

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

Additional copies of this specification (including unit specifications) can be purchased from the Scottish Qualifications Authority for £7.50. **Note:** Unit specifications can be purchased individually for £2.50 (minimum order £5).

## **National Cluster: details**

### **CLUSTER**           Managing Environmental Resources (Access 3)

#### **RATIONALE**

The Managing Environmental Resources (Access 3) programme of study has been designed to articulate with, and provide progression to, the Managing Environmental Resources (Intermediate 1) course. The programme of study will, through a mainly practical approach, promote an active interest in the natural environment and the breadth of rewarding activities linked with its associated industries.

The programme of study will contribute to the candidate's general, scientific and vocational education by offering first-hand experiences of the living world. Opportunities exist for the development of skills required to grow, care for and monitor plants and animal wildlife. This will encourage a responsible and caring attitude to the environment. Many of the experiences contributing to this programme of study involve group activities which will foster personal and interpersonal development.

A variety of candidate needs can be met by this programme of study. As well as providing a foundation for further study, training and employment in the land-based sector, the programme of study will provide an enriching and rewarding experience which will enhance day-to-day life.

#### **CONTENT**

The programme of study at Access 3 level in Managing Environmental Resources consists of three 40-hour units which can be offered in a variety of ways to suit particular circumstances.

This programme of study concentrates on the management of an environmental area which, depending on circumstances, expertise and resources, could involve horticultural, agricultural, forestry or wildlife projects, and the development of the appropriate skills to plan, prepare, monitor and maintain the chosen area. Projects may involve, for example, a greenhouse, garden, allotment, vegetable plot, crops, tree nursery or wildlife area and may be undertaken in an appropriate locality, such as the grounds of the centre, a local community centre, nursing home or hospital. Use of additional units from the Managing Environmental Resources framework would allow an emphasis on rural skills to be developed.

Undertaking the units as a coherent whole offers a number of benefits:

- together the component units offer opportunities for delivery as a coherent, integrated, holistic experience
- balance and breadth of candidates' experiences and learning will be promoted
- both specific and core skills may be explored and developed
- practical and applied activity may be integrated across the units
- skills and abilities developed through integrated practical activities support learning as a whole
- candidates' abilities to sustain effort and concentration, come to conclusions, make decisions, complete a process and evaluate their work are developed

The following tables indicate the content and suggested learning activities through which knowledge and understanding, problem-solving and practical abilities relating to the planning, development, monitoring and maintenance of an environmental area will be developed. The content statements, and supplementary notes which provide amplification, give the mandatory content of the units, while appropriate learning activities are suggested in the right-hand column.

## National Cluster: details (cont)

### CLUSTER Managing Environmental Resources (Access 3)

#### UNIT: planning an environmental area (Acc 3)

##### Introduction

This unit is designed to encourage candidates to develop an awareness of their natural environment and of the opportunities to assist in the planning of improvements to relatively small areas for wildlife. A highly practical approach is taken for the delivery of the unit and candidates will develop knowledge and understanding of the topic by surveying sites, setting achievable objectives, and identifying appropriate plant and animal groups and landscape features. Tasks involved will foster responsible attitudes towards the environment by introducing ideas of interdependence between organisms and the effects of human activities on wildlife. Group discussions, the recording of site specifications and objectives, and the use of an illustrated diary or scrapbook are important parts of the unit.

CONTENTS	NOTES	LEARNING ACTIVITIES
Selection of site.	Potential sites can vary in size depending on circumstances.	Make visits to a number of potential sites and select the most appropriate.
Identification of area's existing plants and animals.	Representative plants and animals of the site are identified by surveys and by means of simple photographic, diagrammatic or sensory identification keys and charts. Direct observation, quadrats, transects and walk surveys, as appropriate, for plants. Sweep nets, sample pots, pooters, Tullgren funnels and direct observation, as appropriate, for animals.	Use library, video and group discussion to decide on survey methods to be used. Survey plants and animals present at selected site. Identify plants and animals present at site using methods appropriate to the organisms and the capabilities of the candidates. Record relevant information such as date, time of day, weather, plants and animals.
Purposes of proposed environmental area.	Educational, scientific and aesthetic value of proposed environmental area. Purposes of plants: ground cover; colour, smell and interest; attractions for wildlife, as appropriate. Purposes of animals: decomposers, for example soil invertebrates; consumers of plants, for example caterpillars; consumers of other animals, for example spiders, as appropriate. The various activities of common insects, birds and mammals, as appropriate.	Use library, video and group discussion to decide on particular objectives. Make site visits and use visiting speakers to help the development of ideas. Assist with the development and production of a scale outline plan of the site.

## National Cluster: details (cont)

### CLUSTER Managing Environmental Resources (Access 3)

CONTENTS	NOTES	LEARNING ACTIVITIES
	<p>Purposes of constructed features: access for disabled; raised beds; scent gardens; attractions for wildlife, as appropriate.</p> <p>Suitability of site for agreed purpose.</p> <p>Scale outline plans.</p>	
Selection of plant groups for the environmental area.	<p>Key features and reasons for selection of groups such as wild flowers, shrubs, trees, bedding plants, vegetables and other crops, as appropriate. Cost and availability considerations, as appropriate.</p> <p>Use of outline plan to position plants.</p>	<p>Visit parks, gardens, wildflower meadows, nature areas, garden centres, tree nurseries and farms, as appropriate.</p> <p>Prepare a folio using sketches, photographs and illustrations from seed and plant catalogues.</p> <p>Assist in positioning of plants in the outline plan.</p>
Selection of constructed features for the environmental area.	<p>Reasons for selection of features such as path, raised bed, rock garden, pond, wall, fence, shelf, glasshouse structure, bird table, bird/squirrel feeder and nest box, as appropriate.</p> <p>Use of outline plan to position at least two features.</p>	<p>Visit parks, gardens, wildflower meadows, nature areas, garden centres, tree nurseries and farms, as appropriate.</p> <p>Prepare a folio using sketches, photographs and illustrations.</p> <p>Assist in positioning of features in the outline plan.</p>
Plant and feature specifications.	<p>Plant specifications such as species, size and age range, planting distribution, feeding, watering, maintenance requirements and cost, as appropriate.</p> <p>Feature specifications such as type, number, material, construction design, maintenance and cost, as appropriate.</p>	<p>Make site visits and/or use visiting speakers with appropriate expertise.</p> <p>Prepare a folio of planting plans and plans for feature construction using established design plans and manuals, as appropriate.</p> <p>Assist with the production of specifications.</p>

## National Cluster: details (cont)

### CLUSTER Managing Environmental Resources (Access 3)

CONTENTS	NOTES	LEARNING ACTIVITIES
Equipment requirements.	Appropriate hand tools and power-driven tools and equipment. Description of tools, equipment and safe working practices. Adapted and modified equipment for use by people with particular special needs.	Visit garden centres, museums and libraries, as appropriate, and consider a range of modern and superseded tools and equipment. Prepare a folio using appropriate sketches, photographs and illustrations.

## National Cluster: details (cont)

### CLUSTER Managing Environmental Resources (Access 3)

#### UNIT: Developing an environmental area (Acc 3)

##### Introduction

This unit is designed to introduce candidates to the range of tasks and skills involved in developing an environmental area according to a predetermined plan. A highly practical approach is taken to the delivery of the unit. The importance of weather conditions for plant propagation and planting out, the ability to follow a plan in the construction of features, the safe use of tools and equipment and safe working methods and conditions will all be emphasised and thereby enhance the candidate's knowledge of the physical and living environment and their interactions. The recording of information and the use of an illustrated diary or scrapbook are important parts of the unit.

The development of a new environmental area or the extension or modification of an existing area would be equally appropriate for this unit.

CONTENTS	NOTES	LEARNING ACTIVITIES
Plant propagation:	Pre-determined plans used as the basis for development and referred to throughout. Loam based and non-loam-based growing media, as appropriate.	Select appropriate tools, equipment and materials, assist with given tasks according to safe working practices and keep an appropriate record of activities undertaken using a diary, scrapbook, video or photographic evidence. Record relevant information such as date, time of day and weather conditions.
i seeds	Sowing of house plant, bedding plant, vegetable, wild flower, tree and shrub seeds, as appropriate. Raising of seedlings in trays, pots and directly in the ground. Use of germination cabinets. Pricking out and hardening off young plants. General care and recognition of disorders and diseases during establishment of young plants. Use of polythene and glass.	
ii cuttings	Stem, leaf, leaf bud and root cuttings. Use of propagator and propagating equipment. Hormone rooting powder, potting on, hardening off and planting out, as appropriate.	

## National Cluster: details (cont)

### CLUSTER Managing Environmental Resources (Access 3)

CONTENTS	NOTES	LEARNING ACTIVITIES
Ground preparation and planting out.	<p>Pre-determined plans used as the basis for development and referred to throughout.</p> <p>Marking out site boundaries.</p> <p>Site preparation prior to planting up, as appropriate.</p> <p>Single digging, double digging, raking, levelling to a fine tilth and firming, as appropriate.</p> <p>Application of nutrients and soil conditioners, as appropriate.</p> <p>Spacing requirements are considered.</p> <p>Planting out transplants and bare-rooted, root-balled and container-grown plants, as appropriate. Examples such as bedding and ornamental plants, vegetables and other crop plants, wild flowers, trees and shrubs, as appropriate.</p> <p>Watering, mulching and tidying, as appropriate.</p>	<p>Select appropriate tools, equipment and materials, assist with given tasks according to safe working practices and keep an appropriate record of activities undertaken using a diary, scrapbook, video or photographic evidence. Record relevant information such as date, time of day and weather conditions.</p>
Feature construction.	<p>Pre-determined plans used as the basis for development and referred to throughout.</p> <p>Hand tools, power tools and materials required to construct features.</p> <p>Mark out and prepare ground for features, if appropriate.</p> <p>The number of features constructed should depend on their nature, scale and complexity. Appropriate feature(s) could be selected from the following: path, raised bed, rock garden, pond, wall, fence, shelf, glasshouse structure, bird table, bird/squirrel feeder, nest box.</p>	<p>Select appropriate tools, equipment and materials, assist with given tasks according to safe working practices and keep an appropriate record of activities undertaken using a diary, scrapbook, video or photographic evidence. Record relevant information such as date, time of day and weather conditions.</p>

## National Cluster: details (cont)

### CLUSTER Managing Environmental Resources (Access 3)

#### UNIT: monitoring and maintaining an environmental area (Acc 3)

##### Introduction

This unit is designed to introduce candidates to the importance of regular monitoring of plant and animal activity in an environmental area and of the importance of essential maintenance activities in harmony with the natural environment. A highly practical approach is taken for the delivery of the unit. Candidates will develop knowledge and understanding of the site, its component parts and of the materials, tools, equipment and activities required to maintain it.

CONTENTS	NOTES	LEARNING ACTIVITIES
Observation and monitoring of wildlife.	Surveys and simple photographic, diagrammatic or sensory identification keys and charts. Direct observation, quadrats, transects and walk surveys, as appropriate, for plants. Sweep nets, sample pots, pooters, Tullgren funnels and direct observation, as appropriate, for animals.	Use library, video and group discussion to decide on survey methods to be used. Survey plants and animals present at site. Identify plants and animals present at site using methods appropriate to the organisms and the capabilities of the candidates. Record relevant information such as date, time of day, weather, plants and animals.
Maintenance of site.	Identification of normal day-to-day duties involved in maintaining the cleanliness, tidiness and safety of the environmental area, as appropriate. Undertaking activities such as removal of obstructions, collection and removal of litter, treatment of slippery paths, as appropriate. Sustainable activities such as composting of waste. Appropriate techniques, conditions and times for specified maintenance tasks. Variations in site maintenance tasks according to season.	Select appropriate tools, equipment and materials and assist in carrying out maintenance tasks according to safe working practices and keep an appropriate record of activities undertaken using a diary, scrapbook, video or photographic evidence.

## National Cluster: details (cont)

### CLUSTER Managing Environmental Resources (Access 3)

CONTENTS	NOTES	LEARNING ACTIVITIES
Maintenance of plants.	<p>Identification of cultivation and maintenance techniques, such as feeding, watering, mulching, weeding, replanting, pruning, staking and tying in, as appropriate. Turf maintenance activities such as mowing and edging. Common diseases and pest infestations. Cultural, biological and chemical control techniques, as appropriate.</p> <p>Appropriate techniques, conditions and times for specified maintenance tasks.</p> <p>Variations in maintenance tasks according to season.</p>	<p>Observe signs of poor growth, diseases and pest infestations, as appropriate.</p> <p>Select appropriate tools, equipment and materials and assist in carrying out maintenance tasks according to safe working practices and keep an appropriate record of activities undertaken using a diary, scrapbook, video or photographic evidence.</p>
Maintenance of constructed features.	<p>Identification of maintenance tasks relating to the constructed features.</p> <p>Importance of repairing, reusing and recycling, as well as replacing.</p> <p>Appropriate techniques, conditions and times for specified maintenance tasks.</p> <p>Variations in maintenance tasks according to season.</p>	<p>Select appropriate tools, equipment and materials and assist in carrying out maintenance tasks according to safe working practices and keep an appropriate record of activities undertaken using a diary, scrapbook, video or photographic evidence.</p> <p>Assist in carrying out tasks with the appropriate tools and equipment according to safe working practices at different times of year and in a range of weather conditions.</p>
Maintenance of tools and equipment.	<p>Pre-use checks of tools and equipment.</p> <p>Standard uses and safe working practices with respect to tools and equipment.</p> <p>Appropriate conditions for use of tools and equipment.</p> <p>Routine cleaning and safe storage of tools and equipment.</p> <p>Periodic or end-of-season servicing of tools and equipment.</p>	<p>Assist with tool and equipment maintenance tasks.</p> <p>Keep an appropriate record of activities undertaken using a diary, scrapbook, video or photographic evidence.</p>

## **National Cluster: details (cont)**

### **CLUSTER**            Managing Environmental Resources (Access 3)

#### **ASSESSMENT**

Assessment should reflect the rationale of the programme of study by covering all key aspects of it. Wherever possible, assessment instruments should be designed to reflect learning and teaching activities, and could cover more than one outcome.

Candidates should be aware of assessment criteria and instruments. It is anticipated that ongoing assessment will take place, informing and supporting candidates. Holistic approaches to assessment should be adopted. A variety of approaches to assessment may be appropriate.

The units which comprise the programme of study will be assessed internally. Details of internal assessment are provided in the unit specification.

Candidates will prepare for the outcomes of each unit, which will evolve through learning and activities across the units.

#### **APPROACHES TO LEARNING AND TEACHING**

Suggestions for appropriate learning activities are contained within the tables of content. These activities, together with the use of relevant support materials, will provide opportunities for active learning. An investigative approach should be taken to the learning and teaching of Managing Environmental Resources. Such an approach draws heavily on practical work and should provide opportunities to develop individual and group activities using a variety of resources alongside the more traditional approaches to classroom delivery. Although individual evidence of attainment of every learning outcome is a prerequisite for each candidate, group activities can enhance the value of investigative work and foster personal, interpersonal and organisational skills.

#### ***The additional 40 hours***

This time may be best distributed throughout the duration of the programme of study. It should be used:

- to provide an introduction to the programme of study and to assessment methods
- to allow more practical work to be undertaken
- to allow the integration of skills from separate units to enhance the learning experience
- to prepare candidates for assessment
- for support in particular aspects of units in which candidates require to be reassessed

#### **SPECIAL NEEDS**

This specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment and Certification Arrangements for Candidates with Special Needs/Candidates whose First Language is not English* (SQA, 1998).

## **National Cluster: details (cont)**

**CLUSTER**            Managing Environmental Resources (Access 3)

### **SUBJECT GUIDES**

A Subject Guide to accompany the Arrangements documents has been produced by the Higher Still Development Unit (HSDU) in partnership with the Scottish Consultative Council on the Curriculum (SCCC) and Scottish Further Education Unit (SFEU). The Guide provides further advice and information about:

- support materials for each cluster
- learning and teaching approaches in addition to the information provided in the Arrangements document
- assessment
- ensuring appropriate access for candidates with special educational needs

The Subject Guide is intended to support the information contained in the Arrangements document. The SQA Arrangements documents contain the standards against which candidates are assessed.

## National Unit Specification: general information

<b>UNIT</b>	Planning an Environmental Area (Access 3)
<b>NUMBER</b>	D553 09
<b>CLUSTER</b>	Managing Environmental Resources (Access 3)

### SUMMARY

This unit seeks to develop an awareness of wildlife and of the opportunities for designing an area in an appropriate land-based context.

### OUTCOMES

- 1 Identify an appropriate site for an environmental area.
- 2 Design an outline plan for the environmental area.
- 3 Identify specifications for the environmental area.

### RECOMMENDED ENTRY

Entry is at the discretion of the centre.

### CREDIT VALUE

1 credit at Access 3.

---

### Administrative Information

<b>Superclass:</b>	QA
<b>Publication date:</b>	November 1999
<b>Source:</b>	Scottish Qualifications Authority
<b>Version:</b>	02

© Scottish Qualifications Authority 1999

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

Additional copies of this unit specification can be purchased from the Scottish Qualifications Authority. The cost for each unit specification is £2.50 (minimum order £5).

## **National Unit Specification: general information (cont)**

**UNIT**                      Planning an Environmental Area (Access 3)

### **CORE SKILLS**

This unit gives automatic certification of the following:

<b>Complete core skills for the unit</b>	None	
<b>Core skills components for the unit</b>	Critical Thinking	Acc 3
	Planning and Organising	Acc 3

Additional information about core skills is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

## **National Unit Specification: statement of standards**

### **UNIT**                      Planning an Environmental Area (Access 3)

Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to the Scottish Qualifications Authority.

#### **OUTCOME 1**

Identify an appropriate site for an environmental area.

##### **Performance criteria**

- (a) The identification of an appropriate site for an environmental area is correct.
- (b) The survey methods selected for the site are appropriate.
- (c) The identification of organisms at the site using simple keys is accurate.

##### **Evidence requirements**

Evidence of an appropriate level of attainment should be generated with items covering all performance criteria. Evidence of the candidate's ability to provide identifications and select survey methods is required to meet the performance criteria. Depending on the activity, the generation of evidence may involve group work.

#### **OUTCOME 2**

Design an outline plan for the environmental area.

##### **Performance criteria**

- (a) The identification of objectives for the environmental area is appropriate to the selected land-based context.
- (b) The selection of plant groups for the environmental area is appropriate.
- (c) The selection of features for the environmental area is appropriate.
- (d) The outline plan for the environmental area is appropriate with respect to objectives, methods and costs.

##### **Evidence requirements**

Evidence of an appropriate level of attainment should be generated with items covering all performance criteria. Evidence of the candidate's ability to identify objectives, select plants and features, and produce an outline plan according to the objectives is required to meet the performance criteria. Depending on the activity, the generation of evidence may involve group work.

## **National Unit Specification: statement of standards (cont)**

### **UNIT**                      Planning an Environmental Area (Access 3)

#### **OUTCOME 3**

Identify specifications for the environmental area.

##### **Performance criteria**

- (a) The identification of plant specifications for the environmental area is appropriate.
- (b) The description of methods for construction of features in the environmental area is appropriate.
- (c) The identification of equipment required to create the environmental area is appropriate.
- (d) The specifications for the environmental area are appropriate with respect to objectives, methods and costs.

##### **Evidence requirements**

Evidence of an appropriate level of attainment should be generated with items covering all performance criteria. Evidence of the candidate's ability to describe plant specifications and construction methods, identify necessary equipment and produce a plan with specifications according to the selected land-based context is required to meet the performance criteria. Depending on the activity, the generation of evidence may involve group work.

For each outcome respectively the candidate's responses must show that the main features of identification of an appropriate site, design of an outline plan, specification for the environmental area have been recognised and that processes have been identified to deal with the situations. The candidate's responses should also show the interpretation and communication of graphical information at the appropriate level.

The activities undertaken should afford opportunities, at the appropriate level of demand, for the candidates to demonstrate through their responses, oral and written, and through their performance that they have:

- identified the necessary sequences of steps
- selected and obtained the requisite resources
- carried out the tasks in the required manner

## **National Unit Specification: support notes**

### **UNIT                      Planning an Environmental Area (Access 3)**

This part of the unit specification is offered as guidance. The support notes are not mandatory.

While the time allocated to this unit is at the discretion of the centre, the notional design length is 40 hours.

#### **GUIDANCE ON CONTENT AND CONTEXT FOR THIS UNIT**

Full details to assist staff who are delivering the unit as a free-standing unit are given in the content section of the details of the cluster. The outline of content and context is as follows:

- 1     Selection of site.
- 2     Identification of area's existing plants and animals.
- 3     Purposes of proposed environmental area.
- 4     Selection of plant groups for the environmental area.
- 5     Selection of constructed features for the environmental area.
- 6     Plant and feature specifications.
- 7     Equipment requirements.

#### **GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT**

Details of suitable approaches are given in the details of the cluster.

#### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

All outcomes can be assessed by an appropriate level of attainment with regard to performance evidence, reports and records of work undertaken.

The observations made by staff and the oral and/or written reports produced by candidates should enable candidates to generate evidence relating to the outcomes and performance criteria such as:

- consideration of the purposes of environmental areas and the reasons for the acceptance and rejection of various sites. For example, candidates may wish to plan an area for small children and reject a site because it is too steep or too near a road or too distant from adult supervision
- following practice of various methods, choices of appropriate ones for surveying the site. Survey of a site with description and/or diagram of equipment. Listings of organisms identified using keys
- indications of use of sources of information, such as texts, catalogues, visits and visitors, and the selection, drawing on these inputs, of appropriate plants, features and equipment to suit the planned area and its purpose
- organising these selections into a concise conclusion including a map or diagram of the site showing placing of plants and features with the diagram to a reasonable accuracy of scale. Drawings of features. Lists with costs of plants, features and equipment
- comments on the completed plan relative to the intended purpose eg adaptations made to the initial plans on cost or practical or technical grounds, amendments made in the light of research at the planning stage to include features of particular value for the users of the area

## **National Unit Specification: support notes (cont)**

**UNIT**                      Planning an Environmental Area (Access 3)

### **SPECIAL NEEDS**

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment and Certification Arrangements for Candidates with Special Needs/Candidates whose First Language is not English* (SQA, 1998).

## National Unit Specification: general information

<b>UNIT</b>	Developing an Environmental Area (Access 3)
<b>NUMBER</b>	D554 09
<b>CLUSTER</b>	Managing Environmental Resources (Access 3)

### SUMMARY

This unit seeks to develop an awareness of the skills, tools, equipment and materials required for the development of an environmental area in an appropriate land-based context. The importance of appropriate records will also be emphasised.

### OUTCOMES

- 1 Propagate selected plants.
- 2 Prepare an environmental area for planting.
- 3 Plant out the environmental area.
- 4 Construct a feature for the environmental area.

### RECOMMENDED ENTRY

Entry is at the discretion of the centre.

### CREDIT VALUE

1 credit at Access 3.

---

### Administrative Information

<b>Superclass:</b>	SD
<b>Publication date:</b>	November 1999
<b>Source:</b>	Scottish Qualifications Authority
<b>Version:</b>	02

© Scottish Qualifications Authority 1999

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

Additional copies of this unit specification can be purchased from the Scottish Qualifications Authority. The cost for each unit specification is £2.50 (minimum order £5).

## **National Unit Specification: general information (cont)**

**UNIT**                      Developing an Environmental Area (Access 3)

### **CORE SKILLS**

This unit gives automatic certification of the following:

**Complete core skills for the unit**                      Problem Solving                      Acc 3

**Additional core skills components for the unit**                      None

Additional information about core skills is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

## **National Unit Specification: statement of standards**

### **UNIT**                      Developing an Environmental Area (Access 3)

Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to the Scottish Qualifications Authority.

#### **OUTCOME 1**

Propagate selected plants.

##### **Performance criteria**

- (a) The selection of steps, tools and materials for the tasks is appropriate.
- (b) Seed sowing is carried out appropriately and according to agreed plans and safe working practices.
- (c) Cuttings are taken appropriately and according to agreed plans and safe working practices.
- (d) The record of the tasks performed is complete with regard to description, time and labour requirements.

##### **Evidence requirements**

Evidence of an appropriate level of attainment should be generated with items covering all performance criteria. Performance evidence is required and could be provided in the form of observation of activity for performance criteria (a) to (c). Additional evidence in the form of a record of work is required for performance criterion (d). Depending on the activity, the generation of evidence may involve group work.

#### **OUTCOME 2**

Prepare an environmental area for planting.

##### **Performance criteria**

- (a) The preparation of the site is appropriate with respect to agreed plans.
- (b) The selection of tools, steps and materials required to prepare the environmental area for planting is appropriate.
- (c) The preparation of the area for planting is appropriate and according to plant requirements and safe working practices.
- (d) The record of the preparation of the environmental area is complete and accurate.

##### **Evidence requirements**

Evidence of an appropriate level of attainment should be generated with items covering all performance criteria. Performance evidence is required and could be provided in the form of observation of activity for performance criteria (a) to (c). Additional evidence in the form of a record of work is required for performance criterion (d). Depending on the activity, the generation of evidence may involve group work.

## **National Unit Specification: statement of standards (cont)**

### **UNIT**                      Developing an Environmental Area (Access 3)

#### **OUTCOME 3**

Plant out the environmental area.

##### **Performance criteria**

- (a) The selection of steps, tools and materials for tasks is appropriate.
- (b) The planting of the area is carried out according to the specifications and safe working practices.
- (c) The record of the planting out of the environmental area is complete and accurate.

##### **Evidence requirements**

Evidence of an appropriate level of attainment should be generated with items covering all performance criteria. Performance evidence is required and could be provided in the form of observation of activity for performance criteria (a) and (b). Additional evidence in the form of a record of work is required for performance criterion (c). This should record the tasks carried out and include reference to materials, tools and processes used and a report on the results. Depending on the activity, the generation of evidence may involve group work.

#### **OUTCOME 4**

Construct a feature for the environmental area.

##### **Performance criteria**

- (a) The preparation of the site is appropriate with respect to agreed plans.
- (b) The selection of steps, equipment and materials required to construct the feature is appropriate.
- (c) The feature is constructed according to the specifications and safe working practices.
- (d) The record of preparation and construction of the feature for the environmental area is complete and accurate.

##### **Evidence requirements**

Evidence of an appropriate level of attainment should be generated with items covering all performance criteria. Performance evidence is required and could be provided in the form of observation of activity for criteria (a) to (c). Additional evidence in the form of a record of work is required for performance criterion (d). Depending on the activity, the generation of evidence may involve group work.

For each outcome respectively the candidate's responses must show that the main aspects of propagation, preparation of the site, planting out of the site and construction of a feature have been recognised and that processes have been identified to deal with the situations.

The activities undertaken should afford opportunities, at the appropriate level of demand, for the candidates to demonstrate through their responses, oral and written, and through their performance that they have:

## **National Unit Specification: statement of standards (cont)**

### **UNIT**                      Developing an Environmental Area (Access 3)

- identified the necessary sequences of steps
- selected and obtained the requisite resources
- carried out the tasks in the required manner
- recorded the tasks undertaken including materials, tools and processes used, including a simple report on the results of developing the environmental area
- given simple criteria, reviewed and evaluated their activities

## **National Unit Specification: support notes**

### **UNIT**                      Developing an Environmental Area (Access 3)

This part of the unit specification is offered as guidance. The support notes are not mandatory.

While the time allocated to this unit is at the discretion of the centre, the notional design length is 40 hours.

#### **GUIDANCE ON CONTENT AND CONTEXT FOR THIS UNIT**

Full details to assist staff who are delivering the unit as a free-standing unit are given in the content section of the details of the cluster. The outline of content and context is as follows:

- 1     Plant propagation:
  - i     seeds;
  - ii    cuttings.
- 2     Ground preparation and planting out.
- 3     Feature construction.

#### **GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT**

Details of suitable approaches are given in the details of the cluster.

#### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

All outcomes can be assessed by an appropriate level of attainment with regard to performance evidence, reports and records of work undertaken.

The observations made by staff and the oral and/or written responses produced by candidates should enable candidates to generate evidence relating to the outcomes and performance criteria such as:

- consideration of the plans for the area and consequent selection of appropriate resources for:
  - plant propagation eg the types and numbers of plants required to fit the purpose and layout of the area, the methods of propagating the chosen plants
  - site preparation eg choosing suitable tools for ground preparation, marking out boundaries and sub-areas as required
  - planting out eg spacing of plants and planting them using appropriate techniques
  - feature construction eg deciding on suitable features and their placement, choosing the appropriate tools and materials for the features
- planning the various tasks, collecting necessary resources, making necessary measurements and carrying out the tasks
- keeping records with relevant details of the work undertaken, of information such as weather conditions, of difficulties overcome, of adaptations made and of results achieved
- evaluative comments, given simple criteria, on the completed development eg:

## **National Unit Specification: support notes (cont)**

### **UNIT**                      Developing an Environmental Area (Access 3)

- reasons for success or otherwise of propagation and planting
- adaptations made to the plans in the light of plant availability, of weather conditions or of cost of materials
- suggestions for further development of the site
- suggestions for improvements to the steps undertaken in the developing the site

### **SPECIAL NEEDS**

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment and Certification Arrangements for Candidates with Special Needs/Candidates whose First Language is not English* (SQA, 1998).

## National Unit Specification: general information

<b>UNIT</b>	Monitoring and Maintaining an Environmental Area (Access 3)
<b>NUMBER</b>	D555 09
<b>CLUSTER</b>	Managing Environmental Resources (Access 3)

### SUMMARY

This unit seeks to develop an awareness of the skills, tools, equipment and materials required for the monitoring and maintenance of an environmental area in an appropriate land-based context. The importance of appropriate records will also be emphasised.

### OUTCOMES

- 1 Observe and monitor an environmental area.
- 2 Maintain plants and constructed features in the environmental area.
- 3 Operate and maintain equipment used in the environmental area.

### RECOMMENDED ENTRY

Entry is at the discretion of the centre.

### CREDIT VALUE

1 credit at Access 3.

---

### Administrative Information

<b>Superclass:</b>	SE
<b>Publication date:</b>	November 1999
<b>Source:</b>	Scottish Qualifications Authority
<b>Version:</b>	02

© Scottish Qualifications Authority 1999

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

Additional copies of this unit specification can be purchased from the Scottish Qualifications Authority. The cost for each unit specification is £2.50 (minimum order £5).

## **National Unit Specification: general information (cont)**

**UNIT**                      Monitoring and Maintaining an Environmental Area (Access 3)

### **CORE SKILLS**

This unit gives automatic certification of the following:

**Complete core skills for the unit**                      Problem Solving                      Acc 3

**Additional core skills components for the unit**                      None

Additional information about core skills is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

## **National Unit Specification: statement of standards**

### **UNIT**                      **Monitoring and Maintaining an Environmental Area (Access 3)**

Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to the Scottish Qualifications Authority.

#### **OUTCOME 1**

Observe and monitor an environmental area.

##### **Performance criteria**

- (a) The observation of the environmental area is accurate and carried out according to agreed plans.
- (b) The record of plant and animal wildlife of the environmental area is complete and accurate.
- (c) The record of changes in the constructed features of the environmental area is complete and accurate.

##### **Evidence requirements**

Evidence of an appropriate level of attainment should be generated with items covering all performance criteria. Performance evidence is required and could be provided in the form of observation of activity for performance criterion (a). Additional evidence in the form of a record of observations is required for performance criteria (b) and (c). Depending on the activity, the generation of evidence may involve group work.

#### **OUTCOME 2**

Maintain plants and constructed features in the environmental area.

##### **Performance criteria**

- (a) The identification of tasks required to maintain the environmental area is accurate.
- (b) The selection of steps, equipment and materials for the maintenance of plants and constructed features is appropriate with respect to agreed objectives.
- (c) The maintenance of plants is carried out appropriately and according to safe working practices.
- (d) The maintenance of constructed features is carried out appropriately and according to safe working practices.
- (e) The record of maintenance tasks performed is complete with regard to description, time and labour requirements.

##### **Evidence requirements**

Evidence of an appropriate level of attainment should be generated with items covering all performance criteria. Performance evidence is required and could be provided in the form of observation of activity for performance criteria (a) to (d). Additional evidence in the form of a record of work is required for performance criterion (e). Depending on the activity, the generation of evidence may involve group work.

## **National Unit Specification: statement of standards (cont)**

**UNIT**                      Monitoring and Maintaining an Environmental Area (Access 3)

### **OUTCOME 3**

Operate and maintain equipment used in the environmental area.

#### **Performance criteria**

- (a) The equipment is selected and operated correctly with respect to the nature of the tasks and safe working practices.
- (b) The cleaning, maintenance and storage of the equipment is appropriate to the situation and in accordance with safety requirements.
- (c) The record of equipment use, maintenance and storage is complete and accurate.

#### **Evidence requirements**

Evidence of an appropriate level of attainment should be generated with items covering all performance criteria. Performance evidence is required and could be provided in the form of observation of activity for performance criteria (a) and (b). Additional evidence in the form of a record of work is required for performance criterion (c). Depending on the activity, the generation of evidence may involve group work.

For each outcome the candidate's responses must show the main aspects of observation and monitoring, of maintenance of plants, features and equipment and of operation of equipment have been recognised and that processes have been identified to deal with the situations.

The activities undertaken should afford opportunities, at the appropriate level of demand, for the candidates to demonstrate through their responses, oral and written, and through their performance that they have:

- identified the necessary sequences of steps
- selected and obtained the requisite resources
- carried out the tasks in the required manner
- recorded the tasks undertaken including a simple report on the results of monitoring and maintaining the environmental area
- given simple criteria, reviewed and evaluated their activities

## **National Unit Specification: support notes**

### **UNIT**                      **Monitoring and Maintaining an Environmental Area (Access 3)**

This part of the unit specification is offered as guidance. The support notes are not mandatory.

While the time allocated to this unit is at the discretion of the centre, the notional design length is 40 hours.

#### **GUIDANCE ON CONTENT AND CONTEXT FOR THIS UNIT**

Full details to assist staff who are delivering the unit as a free-standing unit are given in the content section of the details of the cluster. The outline of content and context is as follows:

- 1      Observation and monitoring of wildlife.
- 2      Maintenance of site.
- 3      Maintenance of plants.
- 4      Maintenance of constructed features.
- 5      Maintenance of tools and equipment.

#### **GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT**

Details of suitable approaches are given in the details of the cluster.

#### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

All outcomes can be assessed by an appropriate level of attainment with regard to performance evidence, reports and records of work undertaken.

The observations made by staff and the oral and/or written responses produced by candidates should enable candidates to generate evidence relating to the outcomes and performance criteria such as:

- choice of appropriate methods for surveying the site, description and/or drawing of equipment used in survey, listings of organisms identified using keys, notes of changes in features of the site
- consideration of the aspects of the area and consequent selection of appropriate methods, tools and materials for maintenance of:
  - site eg timetable for specified maintenance tasks, collection and removal of leaves, composting
  - plants eg timing of tasks in keeping with the season, feeding, weeding, replacement
  - constructed features eg repair, refurbishment
  - tools and equipment eg safe working practices, cleaning and storage
- planning the various tasks, collecting necessary resources and carrying out the tasks
- keeping records with relevant details of the work undertaken, of information such as weather conditions, of difficulties overcome, of adaptations made and of results achieved

## National Unit Specification: support notes (cont)

### UNIT Monitoring and Maintaining an Environmental Area (Access 3)

- evaluative comments, given simple criteria, on the period of monitoring and maintenance:
  - reasons for deterioration of features or plants and remedial actions taken
  - reasons for necessary changes to the site due to weather conditions, plant replacement or change of use
  - success in meeting purposes of the area such as attracting birds, producing plants to decorate the centre or giving pleasure to users
  - suggestions for future improvements to the ways of monitoring and maintaining the site

### SPECIAL NEEDS

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment and Certification Arrangements for Candidates with Special Needs/Candidates whose First Language is not English* (SQA, 1998).