

# Land and Environment

## *Arrangements for project-based National Courses*

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# Introduction

## National Courses

All National Courses comprise a number of units of the same level totalling 120 hours nominal duration. The design of the courses also includes an additional 40 hours for induction, consolidation, remediation and preparation for external assessment. National Course assessments are designed to assess across the component course units and also to assess the candidate's ability to retain, integrate and apply the knowledge and skills acquired in the units. Course assessments provide the basis for grading candidate attainment.

National Courses can also feature in hierarchies at different levels. Where this is the case candidates who narrowly fail to achieve a course at one level are awarded the course at the level below.

National Courses are externally assessed, some mainly by means of confidential question papers and others by projects. We describe the former as *question-paper based* and the latter as *project-based* National Courses. The scope of projects which are used to externally assess candidates for *project-based* National Courses is broader than any of those used in question-paper based National Courses.

Details on the structure and assessment of question-paper based National Courses are available in the individual Arrangements Document for each Course, entitled *the National Course Specification*. These are available from SQA on request.

National Courses may be regarded by candidates as an end in themselves and taken on a stand-alone basis or essentially as stepping stones to the completion of full Scottish Group Awards.

Both question-paper based and project-based National Courses are equivalent in demand and in most respects the arrangements and conditions for assessment are the same. For example:

- course assessment, for both types of National Course, assesses across the Outcomes in the course units and evidence arising from this is subject to external marking, or visiting examination. Exceptionally, some evidence will be internally assessed and externally moderated.
- grading of National Course assessments is similar for both types of course. Both have Grade Descriptions underpinning the detailed marking instructions for each course. Marking and grading are discussed more fully in section C.
- centres should provide course estimates for all National Courses. Estimates for project-based National Courses are discussed more fully in Section C.
- the arrangements for certificating core skills achievement are the same for both types of course. Core skills can be certificated in National Courses either through attainment of course units which contain core skills or through success in course assessments which have had the core skills incorporated into them at the design stage.
- procedures for assessment appeals and for special assessment arrangements apply to all National Courses. Appeals procedures are based on the principles described in the publications *Guidance on Estimates and Appeals* (SQA, February 1998) and *The Appeals Process* (August 1998). Procedures to deal with special assessment requirements are outlined in *Guidance on Special Assessment and Certification Arrangements* (SQA, June 1998).

The main area of difference between question paper based National Courses and project-based National Courses is that most question paper based National Courses are assessed in total, or in part, through nationally devised question papers. Some of these courses use elements of coursework or projects but these are generally used in conjunction with question papers. All project-based National Courses use project-type assessment as the sole assessment approach.

## The Role of National Courses in Scottish Group Awards (SGAs)

SGAs are a combination of National Courses, National Units and core skills designed to meet a coherent overall purpose. Each SGA will equip the candidate with a range of skills and knowledge which will form the basis for lifelong learning and development.

An SGA shows that a candidate has:

- undertaken a coherent programme in terms of personal intentions, aspirations and needs
- reached a stated level of educational attainment
- achieved a stated level of core skill competence
- achieved the knowledge and skills necessary to progress to other Group Awards, further or higher education, training or employment

Within the SQA's qualification framework, SGAs are designed to provide progression to other Group Awards including SGAs at the same or a higher level, Higher National Certificates or Diplomas and Scottish Vocational Qualifications (SVQs).

There are two types of SGA – named and general. There is a wide range of named SGAs at Intermediate 2 and Higher. In addition, there is a general SGA at each level from Access 2 to Advanced Higher to allow candidates and centres to create programmes not covered by the named SGAs at Intermediate 2 and Higher. This allows candidates to keep specialist options open until later.

SGAs have the following distinct features:

- All require candidates to complete a certain number of National Courses at specified levels
- In addition to specified National Courses, SGAs also combine National Units and core skills at up to two levels to create a coherent and extensive programme
- Candidates can include National Courses and National Units from the open section of the group award, giving greater choice, flexibility and breadth
- Candidates can count Standard Grades, SCE Higher Grades and SVQs as credits towards their SGA
- To obtain an SGA a candidate must have completed a specified core skills profile. Details of the profile for an SGA are given in the specification.

Named SGAs are grouped together into 16 broad areas or 'SGA families'. Each named SGA has a detailed specification which includes a *specific* section which lists the courses and units from which the candidate must choose to complete the SGA. In some named SGAs there may also be an open section to indicate other qualifications which can contribute credits. Other sections give information on hierarchical sequences, substitution, double-counting and guidance on programme choice.

The SGA families are:

Art and Design	Hairdressing and Beauty Services
Arts	Hospitality
Business	Land and Environment
Care	Performing Arts
Communication and Media	Science
Computing and Information Technology	Sport and Leisure
Construction	Technology
Engineering	Travel and Tourism

Proposals from centres, for the addition of National Courses and National Units to a named SGA or the development of a new named SGA, need to follow validation procedures designed to ensure that such proposals meet the relevant criteria. Validation guidelines are being issued by SQA in early 2000.

The general SGA has no specific requirements beyond those relating to the number and level of National Courses and National Units to be completed and the achievement of a set core skills profile. At Access 2 and 3 the SGA is made up of a coherent programme of National Units and National Clusters. At Intermediate 1 the SGA is made up of a coherent programme of National Courses, National Clusters and National Units. Thus there is no external assessment at Access 2 and Access 3 but there is at Intermediate 1.

At Intermediate 2 and Higher, the general SGA is made up of National Courses and National Units. Proposed routes to the general SGA must show coherence related to progression for a particular purpose. At these levels the proposed routes have to be submitted to SQA for authorisation. This only applies to levels where there are also named awards. The general SGA at Advanced Higher does not have any named awards and thus no authorisation is required.

External assessments are important in SGAs. All external assessments are associated with National Courses. The value of the external assessment is that it requires the candidate to pull together the knowledge and skills of the component units of the National Course. SGA specifications may include question-paper based National Courses and/or project-based National Courses.

A set number of National Courses is needed to gain an SGA. This number depends on the level of the SGA.

## Minimum requirements to gain SGAs

The following table outlines the minimum requirements for all named and general SGAs. It also outlines the minimum core skills requirements for general SGAs. Named SGAs may require core skills to be achieved at higher levels. Please refer to the appropriate SGA specification for details.

<b>Advanced Higher (AH)</b>	<b>Higher (H)</b>	<b>Intermediate 2 (Int 2)</b>	<b>Intermediate 1 (Int 1)</b>
3 courses (AH) <i>plus</i> 8 credits (H) <i>plus</i> 3 core skills (H) 2 core skills (Int 2)	3 courses (H) <i>plus</i> 8 credits (Int 2) <i>plus</i> 5 core skills (Int 2)	2 courses (Int 2) <i>plus</i> 8 credits (Int 1) <i>plus</i> 5 core skills (Int 1)	2 courses (Int 1) <i>plus</i> 8 credits (Acc 3) <i>plus</i> 5 core skills (Int 1)
<b>Total 20 credits</b>	<b>Total 20 credits</b>	<b>Total 16 credits</b>	<b>Total 16 credits</b>

<b>Access 3 (Acc 3) Single Award</b>	<b>Access 3 (Acc 3) Double Award</b>	<b>Access 3(Acc 3) Triple Award</b>
2 clusters/coherent groupings (Acc 3) <i>plus</i> 6 credits (Acc 2) <i>plus</i> 5 core skills (Acc 2)	3 clusters/coherent groupings (Acc 3) <i>plus</i> 3 credits (Acc 3) <i>plus</i> 6 credits (Acc 2) <i>plus</i> 5 core skills (Acc 2)	4 clusters/coherent groupings (Acc 3) <i>plus</i> 6 credits (Acc 3) <i>plus</i> 6 credits (Acc 2) <i>plus</i> 5 core skills (Acc 2)
<b>Total 12 credits</b>	<b>Total 18 credits</b>	<b>Total 24 credits</b>

<b>Access 2 (Acc 2) Single Award</b>	<b>Access 2 (Acc 2) Double Award</b>	<b>Access 2 (Acc 2) Triple Award</b>
1 cluster/coherent grouping (Acc 2) <i>plus</i> 6 credits (Acc 2) <i>plus</i> 5 core skills (Acc 2)	2 clusters/coherent groupings (Acc 2) <i>plus</i> 8 credits (Acc 2) <i>plus</i> 5 core skills (Acc 2)	3 clusters/coherent groupings (Acc 2) <i>plus</i> 9 credits (Acc 2) <i>plus</i> 5 core skills (Acc 2)
<b>Total 9 credits</b>	<b>Total 14 credits</b>	<b>Total 18 credits</b>

Note: Each National Course contributes 4 credits. Each National Cluster or coherent grouping contributes 3 credits.

## Summary of requirements

### SGA in Land and Environment at Intermediate 2

#### National Courses and Units required\*

*2 National Courses (8 credits) at Intermediate 2 from:*

Amenity Horticulture  
Biology  
Crop Establishment  
Fish Husbandry  
Forest Industry  
Forestry Practice  
Investigating Fish Rearing Systems  
Investigating the Natural Environment  
Livestock Production  
Managing Environmental Resources  
Plant Propagation

**plus**

*1 mandatory National Unit (1 credit):*  
Sustainable Development in Practice (Int 2)

**plus**

*7 credits at minimum of Intermediate 1*

**Total 16 credits**

#### Core Skills required\*

*The above must include or cover:*  
5 core skills at Intermediate 1

\*See SGA specification for details.

## SGA in Land and Environment at Intermediate 2

The SGA in Land and Environment at Intermediate 2 contains the following courses that could contribute to the external assessment of the qualification.

Details on the structure and course assessments for the National Courses with examinations are in the National Course Specifications within the arrangements documents.

Details on the structure of other National Courses are listed overleaf. Detailed Specifications for the course assessments will be published separately and centres will be advised of their availability.

In addition, a further course has been proposed and may be developed at a later date.

### Summary of National Courses

SGA Code: G5AR 11

Course no	Course Name	External Assessment
<i>2 National Courses from:</i>		
C02P 11	Amenity Horticulture	Practical Assignment
C007 11	Biology	Examination
C02R 11	Crop Establishment	Practical Assignment
C02S 11	Fish Husbandry	Practical Assignment
C02T 11	Forest Industry	Extended Case Study
C02V 11	Forestry Practice	Practical Assignment
C02W 11	Investigating Fish Rearing Systems	Practical Assignment
C02X 11	Investigating the Natural Environment	Investigation
C02Y 11	Livestock Production	Practical Assignment
C055 11	Managing Environmental Resources	Examination
C03A 11	Plant Propagation	Practical Assignment

## Structure of new National Courses

Course Name	Unit Name	Credit	Unit no
Amenity Horticulture	Soft Landscaping: Trees and Shrubs	1	D892 11
	<i>plus two from:</i>		
	Introduction to Lawn Care	1	D0MV 11 (88238)
	Soft Landscaping: General Plantings	1	D894 11
	Soft Landscaping: Herbaceous Perennials	1	D89311
	Soft Landscaping: Specialist Plantings	1	D895 11
Crop Establishment	Fertilisers: Quantity and Application	1	D0ND 11 (98051)
	Crop Establishment	1	D22X 11
	Soils – Structure and Function	0.5	D29F 11
	Plant Protection Procedures: Pest and Disease Control	0.5	D0NJ 11 (98164)
	Plant Protection Procedures: Weed Control	0.5	D0NL 11 (98174)
Fish Husbandry	Fish Farming: Fish Husbandry	2	D849 11
	Fish Farming: Water Supply	1	D854 11
Forest Industry	Forest Industry in Britain: An Introduction	1	D868 11
	Silvicultural Practice in British Forestry: An Introduction	1	D867 11
	Timber Produce	1	D899 11
Forestry Practice	Forest Weeding and Cleaning Using Hand Tools	1	D857 11
	Tree Planting	1	D2LH 11
	Tree Identification	1	D2LG 11

## Structure of new National Courses

Course Name	Unit Name	Credit	Unit no
Investigating Fish Rearing Systems	Fish Farming: Fish Farm Equipment	1	D846 11
	Fish Farming: Fish Farm Structures	1	D847 11
	Fish Farming: Live Fish Handling	1	D848 11
Investigating the Natural Environment	Investigating Animal Wildlife	1	D870 11
	Plant Identification	1	D879 11
	<i>plus</i> Option 1: Landscape Assessment	1	D872 11
	<i>or</i> Option 2: Physical Landscape of Scotland	1	D0S5 11 (3270022)
Livestock Production	Livestock Feeding	1	D0P8 11 (1180240)
	Livestock Health and Hygiene	1	D0P6 11 (1180210)
	Livestock Reproduction	1	D0P7 11 (1180230)
Plant Propagation	Vegetative Propagation	1	D908 11
	Plant Propagation from Seed	1	D882 11
	Bedding Plant Production	1	D836 11

## Summary of requirements

### **SGA in Land and Environment at Higher**

#### **National Courses and Units required\***

*3 National Courses (12 credits) at Higher from:*

Biology

Interpreting the Natural Environment

Managing Environmental Resources

Natural Environment

**plus**

*8 credits at minimum of Intermediate 2*

**Total 20 credits**

#### **Core skills required\***

*The above must include or cover:*

5 core skills at Intermediate 2

\*See SGA specification for details.

## SGA in Land and Environment at Higher

The SGA in Land and Environment at Higher contains the following courses that could contribute to the external assessment of the qualification.

Details on the structure and course assessments for the National Courses with examinations are in the National Course Specifications within the arrangements documents.

Details on the structure of other National Courses are listed overleaf. Detailed Specifications for the course assessments will be published separately and centres will be advised of their availability.

In addition, further courses have also been proposed and may be developed at a later date. These courses are likely to cover similar areas to those now covered in the SGA at Intermediate 2.

### Summary of National Courses

SGA Code: G5AR 12

Course no	Course Name	External Assessment
<i>3 National Courses from:</i>		
C007 12	Biology	Examination
C03B 12	Interpreting the Natural Environment	Practical Assignment
C055 12	Managing Environmental Resources	Examination
C03C 12	Natural Environment	Practical Assignment

## Structure of new National Courses

Course Name	Unit Name	Credit	Unit no
Interpreting the Natural Environment	Countryside Interpretation	1	D838 12
	The Ecology of Scotland	1	D879 12
	<i>plus</i> Option 1:		
	Roles and Responsibilities within Group Business Activity	1	D0VM 12 (6110115)
	<i>or</i> Option 2:		
	Work Experience	1	D01M 12
Natural Environment	Habitat Assessment	1	D859 12
	Plant Identification	1	D879 12
	Principles of Conservation	1	D886 12



# Assessment of project-based National Courses

**B**

## Overview

All project-based National Courses use **one** of the following assessment instruments or *project types* to externally assess candidates' evidence of attainment:

- Investigation
- Practical Assignment
- Extended Case Study

Each of these assessment instruments requires candidates to produce specified items of evidence relating to the planning, development and evaluation of their work.

The most appropriate of the three assessment instruments has been chosen for each project-based National Course. The format of the assessment instruments is similar for all three approaches. Each is based on a general specification providing candidates with some information, which they then build on to develop the project. However the Investigation, Practical Assignment and Extended Case Study are different in terms of the main areas of ability targeted by each and the way in which each approach allows candidates to apply skills, knowledge and understanding.

Projects can generate substantial amounts of candidate evidence and can focus on the depth of candidates' achievements. It may not be possible for all project specifications to cover all unit Outcomes; however a minimum of two thirds of the total Outcomes in the project-based National Course will be covered by each project and the specifications will assess any Outcomes that are identified as critical elements of the National Course.

SQA is committed to making external assessment of National Courses as flexible as possible, commensurate with maintaining national standards. SQA will try to fit assessment to the needs of centres, wherever possible. Investigations and Extended Case Studies can be sent in at any time to SQA and we will deal with the assessment on a monthly basis. For Practical Assignments, the two completion months will be December and May. However, if these months prove difficult for centres to operate, then they are advised to contact SQA directly for further guidance.

## Duration of assessment

All National Courses comprise units totalling 120 hours. This is usually three 40 hour units, but combinations of units with different sizes and credit values can be used. The design of each Course also includes an additional 40 hours to be used for:

- induction
- support
- consolidation and integration of learning
- remediation
- extension of the range of teaching and learning approaches
- preparation for external assessment

With project-based National Courses the induction and the preparation for external assessment should focus on preparing candidates for project work, by ensuring they have the skills required to carry out the project. This should take approximately 10 hours, leaving the remaining time for candidates to carry out the project work and produce their assessment evidence. This means that the time allowed for the completion of Course assessments in project-based National Courses is approximately 30 hours of supervised time, with any additional work carried out in candidates' own time.

## **Authentication and candidate supervision**

Although all National Courses are externally assessed, centres are responsible for managing the arrangements leading up to external assessment. For project-based National Courses this means responsibility for organising the production of candidates' project evidence and then presenting or submitting the evidence to SQA for external assessment.

Project-based National Courses must generate reliable assessment decisions. It is important therefore to ensure that evidence arising from projects can be authenticated as candidates' own work.

The following means of authentication apply:

- candidates working on National Course projects carry out most of the work within the centre in a supervised environment. They are provided with guidance to develop general skills relating to project work and guidance specifically aimed at their own project. They are encouraged to seek feedback from their teacher/tutor on the quality of their work.
- candidates use log books or equivalent to plan work and record progress. Teachers/lecturers question candidates on the nature of their work as it progresses.
- candidates produce a proportion of their work partly within supervised environments and partly within centre-invigilated conditions. For the write-up activities candidates are allowed access to prescribed resources. Where candidates are allowed to bring one A4 side of notes which they have prepared themselves, this must be submitted along with the project. Time allocations for the write-up activities are stated for each session, and these tend to be generous. Centres are responsible for making the accommodation arrangements to ensure that the conditions of assessment are not breached. SQA will provide centres with information on this type of arrangement.
- where candidates are working on group projects, they are allowed to collaborate but they should each have an identifiable part of the project to work on.
- candidates sign their work off as their own and teachers/lecturers sign a declaration stating that, to the best of their knowledge, candidate work submitted to SQA for external assessment is the work of the candidate in question.

In any one situation, a selection of these authenticating devices could be used. Guidance on methods of authentication for open learning candidates will be available from SQA's forthcoming publication on assessment and quality assurance of open and distance learning (autumn 2000).

Information relating to authentication is provided in the assessment specification for each project-based National Course.

## **Re-submission of National Course Project Work**

Candidates working on project-based National Course external assessments should be provided with on-going guidance and support from teachers/lecturers throughout their projects. The evidence arising from the projects which centres submit to SQA for external assessment should be familiar to the teachers/lecturers and therefore should be closely aligned with the course estimates centres provide to SQA. Information on estimates is provided in Section C.

While SQA cannot provide detailed feedback on an individual candidate's work, it will be possible, for a charge, to provide feedback in the form of a report to the centre on the general standard of candidate evidence submitted for external assessment for the project-based National Courses in that session.

Where candidates are unsuccessful in the external assessment, or achieve grades lower than those centres had expected them to attain, teachers/lecturers should be able to advise the candidates on why this has occurred. There are two options open to centres:

- if there is a similar project-based National Course at the level below, candidates who narrowly fail will automatically be awarded a grade C at that level. Centres would still have the right to appeal for a higher grade at that (lower) level or an award at the level at which candidates were entered.
- for all other candidates who fail, they are able to try and improve the original project and re-submit the evidence.

The forthcoming SQA publication on the use of National Assessment Bank instruments in generating evidence for estimates and assessment appeals, while mainly referring to question paper based National Courses, refers briefly to project-based National Courses.



# Marking and grading project-based National Courses

## The marking and grading system

The assessment evidence for project-based National Courses is marked externally by SQA.

The total mark for the project is 200. This reflects the comparative size or weight of these projects when compared to projects embedded in National Courses which are largely question paper based. It also allows Markers to discriminate between levels of performance in each stage of the project.

These marks will be allocated to assessment evidence from the three project stages as follows:

Project Stage	Assessment Evidence	Mark Allocation
Planning	Plan of action	40
Developing	<p><i>Practical Assignment:</i> Evidence arising from the hands-on practical activity and from documenting the underpinning processes involved</p> <p><i>Investigation:</i> the investigation report</p> <p><i>Extended Case Study:</i> the research-based report the case study report</p>	120
Evaluating	(Extended) evaluation report	40

To underpin this assessment system there are criteria to which marks are pegged, against which the candidate evidence from each of the three project stages is assessed. The use of such 'peg-marks' linked to criteria, allows for the aggregation of the various parts of an assessment which do not necessarily have the same weighting in the overall grade.

A pass-mark and grade boundaries will be applied to the aggregated mark, converted to a percentage mark, to arrive at an overall grade for the candidate, as indicated in the table below:

% Mark range	Grade	Band (for estimates)
85 – 100	A (upper)	1
70 – 84	A (lower)	2
65 – 69	B (upper)	3
60 – 64	B (lower)	4
55 – 59	C (upper)	5
50 – 54	C (lower)	6
45 – 49	Fail (near miss)	7
40 – 44	Fail	8
Less than 40	Fail	9

Although it is possible for candidates to be given bands 7, 8 and 9 which are described as “fails”, no such categories will appear on candidates’ certificates. This information should help centres agree estimates of candidate performance and provide feedback to candidates for remediation purposes.

The criteria against which candidate evidence in each subject/occupational area is to be assessed are included in the national project specifications.

All National Courses are subject to external marking. External Markers, Visiting Examiners and Moderators will be trained by SQA to apply national standards. As candidate evidence becomes available exemplars will be issued to centres as guidance.

For each National Course the evidence which candidates must produce will be specified by SQA in the nationally set project specification. Candidates, in consultation with their teacher/lecturer will, in turn, contextualise the generic specification to fit their interests, personal strengths and available resources. It is important that the assessment standards applied are truly national, and equivalent to other National Courses at the same level.

## **Estimates and appeals**

Although these project-based National Courses are externally assessed by SQA Markers or Visiting Examiners, candidates will benefit from estimate grades based on accurate internal assessment of their projects, ie the grade assessors judge a candidate should be awarded, based on all the available evidence. The processes for deciding an estimate grade are similar to the processes the external assessors, ie Marker or Visiting Examiner use for the final assessment. The main benefit of an estimate to an individual candidate is that an appeal can be submitted against an external decision where the estimate given the candidate was at grade C or better. An appeal will not normally be considered for candidates for whom no estimate has been received. The SQA will provide a form for submission of estimates.

For the internal marking process for estimates, internal assessors are expected to:

- compare candidate evidence arising from each stage of the project to the criteria outlined in the assessment specification in section F of this document and decide on the mark band which most accurately describes it
- decide on a particular mark for the candidate, within that broad mark range for each stage, depending on how marginal was the decision
- maintain a brief record of why a certain mark was given for each of the three project stages (for internal moderation purposes)
- follow the internal moderation processes within their centre (See the following section on internal moderation)
- aggregate the internally moderated marks for each candidate. That gives a total mark out of 200
- divide that total mark by 2 to give a percentage
- convert the overall % mark for each candidate into an estimate band using the table on page C1
- provide estimates as bands

The internal moderator oversees:

- the internal moderation process to ensure consistency of judgement or *reliability of assessment decisions* (for guidance see *Guide to Assessment and Quality Assurance*, SQA June 1999). This process will vary according to the nature of the evidence and the number of assessors. It is likely to involve agreement trials and/or Marker standardisation. The internal moderator should be a specialist in the subject. It may be helpful in the first few years of these project-based National Courses to do a cross-subject moderation of samples of like parts such as the plans of action, conclusions, summaries and evaluation reports. Such additional cross-subject internal moderation is however not mandatory.
- a consideration of whether, in some cases, candidates with similar overall marks/bands have been fairly treated. For example, some candidates may have produced more fully integrated projects than others. This may lead to a reconsideration of marking of the individual components for some candidates.
- finalisation of estimate grades and submission of candidate evidence. A form will be available for this purpose.

### **Submitting candidate evidence to SQA**

Specific information on this part of the process will be circulated to centres. Where materials have to be sent to SQA for marking you will be provided with any necessary packaging materials.

The following **must** be sent in to SQA for each of the projects:

*Investigation*: the complete work of each candidate, ie

- plan of action
- investigation report
- the part written up under centre-invigilated conditions, ie the conclusions, summary and evaluation report

*Practical Assignment*: part of the work of each candidate, ie

- plan of action
- if there is any underpinning evidence or evidence generated during the hands-on practical work, which is transportable, then this would also be sent to SQA for external marking. The specifications for Practical Assignments will indicate which type of evidence is suitable for each Practical Assignment.
- the part written up under centre-invigilated conditions, ie the extended evaluation report

*Extended Case Study*: the complete work of each candidate, ie

- plan of action
- research-based report and case study report
- part written up under centre-invigilated conditions, ie the conclusions, recommendations and evaluation report

Note: In addition, centres will be expected to submit all notes used by candidates during write-up sessions.



# Project-based National Courses in Land and Environment

All of the project-based National Courses for Land and Environment at Higher and Intermediate 2 are externally assessed by one of the following:

- Investigation
- Extended Case Study
- Practical Assignment

## Investigation: an overview

The Investigation is designed to emphasise skills related to research, analysis and reporting. Candidates are given a choice of topics and are expected to demonstrate attainment relating to:

- selecting a topic for investigation
- identifying issues for research
- selecting/devising and using research techniques
- collating, interpreting and analysing data
- presenting findings
- drawing up conclusions and summary
- evaluating the findings and conclusions (through feedback)

Evidence requirements are:

- a plan of action
- an Investigation report
- evidence showing evaluation of the Investigation

We expect most candidate evidence to be in a written format. Given the diverse nature of SGA families and the corresponding project-based National Courses, we are asking subject/occupational specialists to outline the most appropriate and effective way of presenting evidence of attainment. Some written Investigation reports may contain tables, charts and diagrams which convey a lot of useful information to the reader in a very succinct way, thereby reducing the number of words. We are looking for good quality evidence, presented in an appropriate way for the subject/occupational area. Information about the precise evidence requirements for each stage of the Investigation is contained within the nationally devised Investigation specifications.

## Assessment Arrangements for Investigations at Higher

Planning	
Evidence/word count:	Plan of action. 500 words <i>or</i> equivalent
Method of authentication:	Supervised
Conditions of external assessment:	Externally assessed by SQA

Developing	
Evidence:	A Written Investigation report 2500-3000 words <i>or</i> equivalent  <i>plus</i> B Written conclusions and summary 1000 words <i>or</i> equivalent
Method of authentication:	A Supervised B Centre-invigilated – Up to 2 hours
Conditions of external assessment:	Externally assessed by SQA

Evaluating	
Evidence/word count:	Evaluation report 500 words <i>or</i> equivalent
Method of authentication:	Centre-invigilated Up to 1 hour 30 minutes
Conditions of external assessment:	Externally assessed by SQA

## Assessment Arrangements for Investigations at Intermediate 2

Planning	
Evidence/word count:	Plan of action. 500 words <i>or</i> equivalent
Method of authentication:	Supervised
Conditions of external assessment:	Externally assessed by SQA

Developing	
Evidence:	A Written Investigation report 1500-2000 words <i>or</i> equivalent  <i>plus</i> B Written conclusions and summary 500 words <i>or</i> equivalent
Method of authentication:	A Supervised B Centre-invigilated – Up to 2 hours
Conditions of external assessment:	Externally assessed by SQA

Evaluating	
Evidence/word count:	Evaluation report 500 words <i>or</i> equivalent
Method of authentication:	Centre-invigilated Up to 1 hour 30 minutes
Conditions of external assessment:	Externally assessed by SQA

Note: The difference between Higher and Intermediate 2 Investigations does not lie solely in word counts for written evidence but relates to the level of units covered in the course and in the scope of the Investigation set for each course.

In some cases, words may be substituted by other oral/aural, graphical and/or visual evidence. Please refer to the completed Investigation specification for each course for precise details.

It is important that candidates know they will be penalised for submitting evidence that significantly exceeds the stated word count.

## The Three Stages of the Investigation

As illustrated in the summary tables, the three stages of the Investigation for project-based National Courses at Higher and Intermediate 2 are:

- planning
- developing
- evaluating

### Planning

For the Investigation, the piece of evidence arising from the planning stage of the project is the *plan of action*.

The plan of action should be 500 words or *equivalent* in length. The Investigation specification contains details of evidence other than words which is permissible. The plan of action should be produced in a supervised environment although candidates may carry out the preparation beforehand. Candidates may communicate with each other when producing their plans of action but each plan must be tailored to the candidate's own project and the action points should relate to the work to be carried out by the individual candidate.

The assessment specifications contain a degree of choice in terms of the way the Investigation is taken forward by the candidate. The Investigation offers a choice of centrally devised topics to investigate. Candidates may investigate one of these topics or an alternative topic of their own choosing. If they choose to do the latter their plans of action must be sent to SQA in advance of the other evidence, with a copy kept in the centre, to allow an early check that the topic will generate an Investigation of the level of demand required for National Courses at that level in the subject area.

### Developing

The item of evidence from the Investigation is the Investigation report. The Investigation report should be in written form and between 3500 and 4000 words (this includes 1000 words for the written conclusions and summary) or equivalent in length at Higher and between 2000 and 2500 words (this includes 500 words for the written conclusions and summary) or equivalent in length at Intermediate 2. Candidates whose work significantly exceeds the stated word count will be penalised. The body of the Investigation report should be written up in supervised time. The conclusions and a summary of the report should be written up in centre-invigilated conditions, towards the latter part of the 40 hours.

Candidates should be allowed up to 2 hours to produce the summary and conclusions for the report. They should be allowed to take one side of an A4 page of notes, which they have prepared, into the room with them, as well as any diagrams or appendices they have prepared to include with the report. They should not be allowed to take the report or a draft of the conclusions and summary into the room with them. The centre has the responsibility for ensuring that the notes brought in are the candidate's own work.

For the write-up activity the accommodation should be arranged to reflect centre-invigilated conditions and candidates should not be allowed to communicate with each other in any way.

## **Evaluating**

The piece of evidence arising from the evaluation stage of the Investigation is the evaluation report. The evaluation report should be 500 words, or equivalent, in length for Investigations at Higher and Intermediate 2. Candidates whose work significantly exceeds the stated word count will be penalised. The report should be produced in centre-invigilated conditions although candidates may carry out the preparation beforehand.

Candidates should be allowed up to 1 hour 30 minutes to produce the evaluation report. Candidates should be allowed to take one side of an A4 page of notes which they have prepared, into the room with them. They should not be allowed to take a draft of the evaluation report into the room with them. The centre has the responsibility for ensuring that the notes brought in are the candidate's own work.

For this activity the accommodation should be arranged to reflect centre-invigilated conditions and candidates should not be allowed to communicate with each other in any way.

## **Extended Case Study: an overview**

The Extended Case Study concerns the comparison and resolution of at least two situations in a simulated or real-life environment. Candidates must respond to an outline scenario provided to carry out research about particular cases of their own choice, analyse and compare the situations and recommend appropriate action for both cases. An Extended Case Study is designed to emphasise skills related to interpretation, decision-making and action-planning. Candidates are expected to demonstrate attainment relating to:

- interpreting the scenario
- identifying and researching cases in a contemporary environment
- consulting relevant individuals, organisations and agencies
- analysing the case study situations
- recommending action
- evaluating the analysis and recommendations (through feedback)

Evidence requirements are:

- a plan of action
- a research-based report
- a case study report
- evidence showing evaluation of the case study

We expect most candidate evidence to be in a written format. Given the diverse nature of SGA families and the corresponding project-based National Courses, we are asking subject/occupational specialists to outline the most appropriate and effective way of presenting evidence of attainment. Some written research-based and case study reports may contain tables, charts and diagrams which convey a lot of useful information to the reader in a very succinct way, thereby reducing the number of words. We are looking for good quality evidence, presented in an appropriate way for the subject/occupational area. Information about the precise evidence requirements for each stage of the Extended Case Study is contained within the nationally devised Extended Case Study specifications.

## Assessment Arrangements for Extended Case Studies at Higher

Planning	
Evidence/word count:	Plan of action. 500 words <i>or</i> equivalent
Method of authentication:	Supervised
Conditions of external assessment:	Externally assessed by SQA

Developing	
Evidence:	<p>A Written research-based report 1000-1500 words <i>or</i> equivalent</p> <p style="text-align: center;"><b><i>plus</i></b></p> <p>B Written Case Study report 1500 words <i>or</i> equivalent</p> <p style="text-align: center;"><b><i>plus</i></b></p> <p>C Written conclusions and recommendations 1000 words <i>or</i> equivalent</p>
Method of authentication:	<p>A Supervised</p> <p>B Supervised</p> <p>C Centre-invigilated – Up to 2 hours</p>
Conditions of external assessment:	Externally assessed by SQA

Evaluating	
Evidence/word count:	Evaluation report 500 words <i>or</i> equivalent
Method of authentication:	Centre-invigilated Up to 1 hour 30 minutes
Conditions of external assessment:	Externally assessed by SQA

## Assessment Arrangements for Extended Case Studies at Intermediate 2

Planning	
Evidence/word count:	Plan of action. 500 words <i>or</i> equivalent
Method of authentication:	Supervised
Conditions of external assessment:	Externally assessed by SQA

Developing	
Evidence:	<p>A Written research-based report 500-1000 words <i>or</i> equivalent</p> <p style="text-align: center;"><i>plus</i></p> <p>B Written case study report 1000 words <i>or</i> equivalent</p> <p style="text-align: center;"><i>plus</i></p> <p>C Written conclusions and recommendations 500 words <i>or</i> equivalent</p>
Method of authentication:	<p>A Supervised</p> <p>B Supervised</p> <p>C Centre-invigilated – Up to 2 hours</p>
Conditions of external assessment:	Externally assessed by SQA

Evaluating	
Evidence/word count:	Evaluation report 500 words <i>or</i> equivalent
Method of authentication:	Centre-invigilated Up to 1 hour 30 minutes
Conditions of external assessment:	Externally assessed by SQA

Note: The difference between Higher and Intermediate 2 Extended Case Studies does not lie solely in word counts for written evidence but relates to the level of units covered in the course and in the scope of the Extended Case Study set for each course.

In some cases, words may be substituted by other oral/aural, graphical and/or visual evidence. Please refer to the completed Extended Case Study specification for each course for precise details.

It is important that candidates know they will be penalised for submitting evidence that significantly exceeds the stated word count.

## The Three Stages of the Extended Case Study

As illustrated in the summary tables, the three stages of the Extended Case Study for project-based National Courses at Higher and Intermediate 2 are:

- planning
- developing
- evaluating

### Planning

For the Extended Case Study, the piece of evidence arising from the planning stage of the project is the *plan of action*.

The plan of action should be 500 words or equivalent in length. The Extended Case Study specification contains details of evidence other than words which is permissible. The plan of action should be produced in a supervised environment although candidates may carry out the preparation beforehand. Candidates may communicate with each other when producing their plans of action but each plan must be tailored to the candidate's own project and the action points should relate to the work to be carried out by the individual candidate.

The assessment specifications contain a degree of choice in terms of the way the project is taken forward by the candidate. The Extended Case Study offers a choice of scenarios. Candidates select a scenario and identify related cases.

### Developing

The main items of evidence from the Extended Case Study are the research-based report and the case study report. The research-based report should be in written form or equivalent and be between 1000 and 1500 words in length at Higher and between 500 and 1000 words in length at Intermediate 2. Candidates whose work significantly exceeds the stated word count will be penalised. The research-based report should be written up in supervised conditions over a period of time agreed between the candidate and the teacher/tutor.

The case study report, which includes conclusions and recommendations, should be in written form and 2500 words or equivalent in length at Higher and 1500 words, including conclusions and recommendations, or equivalent in length at Intermediate 2. Candidates whose work significantly exceeds the stated word count will be penalised. Candidates should be allowed to see the case study scenario at the outset of the course. The write-up of the conclusions and recommendations for the case study should take place towards the latter part of the 40 hours in centre-invigilated conditions.

Candidates should be allowed up to 2 hours to write up the case study conclusions and recommendations. They should be allowed to take one side of an A4 page of notes which they have prepared, into the room with them, as well as any diagrams or appendices they have prepared to include with the conclusions and recommendations. They should not be allowed to take a draft of the

report into the room with them. The centre has the responsibility for ensuring that the notes brought in are the candidate's own work.

For the write-up activity the accommodation should be arranged to reflect centre-invigilated conditions and candidates should not be allowed to communicate with each other in any way.

## **Evaluating**

The piece of evidence arising from the evaluation stage of the Extended Case Study is the evaluation report. The evaluation report should be 500 words, or equivalent, in length for Extended Case Studies at Higher and Intermediate 2. Candidates whose work significantly exceeds the stated word count will be penalised. The report should be produced in centre-invigilated conditions although candidates may carry out the preparation beforehand.

Candidates should be allowed up to 1 hour 30 minutes to produce the evaluation report. Candidates should be allowed to take one side of an A4 page of notes which they have prepared, into the room with them. They should not be allowed to take a draft of the evaluation report into the room with them. The centre has the responsibility for ensuring that the notes brought in are the candidate's own work.

For this activity the accommodation should be arranged to reflect centre-invigilated conditions and candidates should not be allowed to communicate with each other in any way.

## **Practical Assignment: an overview**

The Practical Assignment is not concerned exclusively with practical activity, but is designed to emphasise skills relating to the application of practical skills, and related knowledge and understanding, to a situation that involves task management. Candidates are provided with a brief and are expected to demonstrate attainment relating to:

- interpreting the brief
- gathering information to clarify the brief
- deciding on a product, or activity/event, or performance to develop
- selecting and managing materials/resources
- producing the product, or organising the activity/event or delivering the performance
- evaluating the product or activity/event or performance (through feedback)

Evidence requirements are:

- a plan of action
- evidence of a product or an organised activity/event or a performance
- evidence which documents the processes which underpin the practical hands-on activity
- evidence showing an extended evaluation of the Practical Assignment

Candidates undertaking a Practical Assignment are required to generate evidence of the hands-on practical activity along with written evidence of planning and evaluating the Practical Assignment. They are also required to generate evidence which documents the underpinning processes associated with the hands-on practical activity. Information about the precise evidence requirements for each stage of the project is contained within each of the nationally devised Practical Assignment specifications.

## Assessment Arrangements for Practical Assignments at Higher

Planning	
Evidence/word count:	Plan of action. 500 words <i>or</i> equivalent
Method of authentication:	Supervised
Conditions of external assessment:	Externally assessed by SQA

Developing	
Evidence:	<p><i>Transportable evidence, eg:</i></p> <ul style="list-style-type: none"> <li>▪ portfolios</li> <li>▪ log-books</li> <li>▪ products</li> <li>▪ artefacts</li> </ul> <p><i>Non-transportable evidence, eg:</i></p> <ul style="list-style-type: none"> <li>▪ ephemeral performance, process or product-related evidence</li> <li>▪ products</li> <li>▪ artefacts</li> </ul>
Method of authentication:	Supervised
Conditions of external assessment:	<p><i>Transportable evidence:</i> Centres will be advised by SQA. Could be externally assessed <i>or</i> subject to visiting examination</p> <p><i>Non-transportable evidence:</i> Either subject to visiting examination <i>or</i> internally assessed and subject to intensive assessment moderation</p>

Evaluating	
Evidence/word count:	Extended evaluation report <i>or</i> equivalent – including summary. 1000 words <i>or</i> equivalent
Method of authentication:	Centre-invigilated Normally 2 hours (up to 3 hours if necessary)
Conditions of external assessment:	Externally assessed by SQA

## Assessment Arrangements for Practical Assignments at Intermediate 2

Planning	
Evidence/word count:	Plan of action. 500 words <i>or</i> equivalent
Method of authentication:	Supervised
Conditions of external assessment:	Externally assessed by SQA

Developing	
Evidence:	<p><i>Transportable evidence, eg:</i></p> <ul style="list-style-type: none"> <li>▪ portfolios</li> <li>▪ log-books</li> <li>▪ products</li> <li>▪ artefacts</li> </ul> <p><i>Non-transportable evidence, eg:</i></p> <ul style="list-style-type: none"> <li>▪ ephemeral performance, process or product-related evidence</li> <li>▪ products</li> <li>▪ artefacts</li> </ul>
Method of authentication:	Supervised
Conditions of external assessment:	<p><i>Transportable evidence:</i> Centres will be advised by SQA. Could be externally assessed <i>or</i> subject to visiting examination</p> <p><i>Non-transportable evidence:</i> Either subject to visiting examination <i>or</i> internally assessed and subject to intensive assessment moderation</p>

Evaluating	
Evidence/word count:	Evaluation report. 500 words <i>or</i> equivalent
Method of authentication:	Centre-invigilated. Up to 1 hour 30 minutes
Conditions of external assessment:	Externally assessed by SQA

Note: The difference between Higher and Intermediate 2 Practical Assignments does not lie solely in word counts for written evidence but relates to the level of the units covered in the Course and in the scope of the Practical Assignment set for each Course.

In some cases, words may be substituted with other oral/aural, graphical and/or visual evidence. Please refer to the completed Practical Assignment specifications for each Course for precise details.

It is important that candidates know that they will be penalised for submitting evidence that significantly exceeds the stated word count.

## The Three Stages of the Practical Assignment

As illustrated in the summary tables, the three stages of the Practical Assignment for project-based National Courses at Higher and Intermediate 2 are:

- planning
- developing
- evaluating

### Planning

For the Practical Assignment, the piece of evidence arising from the planning stage of the project is the *plan of action*.

The plan of action should be 500 words or equivalent in length. The Practical Assignment specification contains details of evidence other than words which is permissible. The plan of action should be produced in a supervised environment although candidates may carry out the preparation beforehand. Candidates may communicate with each other when producing their plans of action but each plan must be tailored to the candidate's own project and the action points should relate to the work to be carried out by the individual candidate. The work should be the candidate's own.

The assessment specifications contain a degree of choice in terms of the way the project is taken forward by the candidate. The Practical Assignment offers either a selection of products or activities/events or performances to develop or provides a general brief that allows candidates a degree of flexibility.

### Developing

For Practical Assignments, candidates are expected to provide evidence that testifies to the quality of the product, or activities/event or performance. Normally, the hands-on practical activity will comprise only part of the total Practical Assignment. This may be a performance or a demonstration of process-skills, eg the production of bulky or ephemeral/fragile products; skill demonstrations; work using machines. Whatever it is, the individual Practical Assignment specification provides detailed information.

The remainder of the evidence will document the processes which underpin the practical work and could take one or more of such forms as a log-book, a portfolio of sketches/mini-investigations or mini-case studies, a file of correspondence, a report on a survey or on mini-research undertaken.

The balance between the practical hands-on activity and the underpinning process evidence will vary depending on the type of Practical Assignment undertaken. If the marks allocated to the †hands-on part of the development stage of the Practical Assignment is 40% or more of the marks available for the development stage, ie 48 or more out of 120 and evidence generated is not transportable, then SQA will normally deploy a Visiting Examiner.

If the marks allocated for the hands on practical activity is less than 40% of the marks available for the development stage, then exceptionally, the practical hands-on part will be assessed by assessors in centres and subject to intensive assessment moderation by SQA (normally, every centre will be visited by a Moderator). More information about marking is available in Section C.

If a Visiting Examiner is deployed, he or she will have seen - and may have marked - the parts already sent in to SQA. If considered necessary these parts will be brought to the centre again to help the Visiting Examiner arrive at a final decision on each candidate. Centres will be sent details about the Visiting Examiner's visit before it takes place. Centres should however note that final assessment decisions are external to the assessors in centres. An external decision can only be overturned at appeal.

## Evaluating

The piece of evidence arising from the evaluation stage of the Practical Assignment is the evaluation report. The extended evaluation report should be 1000 words or equivalent for Practical Assignments at Higher and 500 words or equivalent at Intermediate 2. Practical Assignment specifications will supply further details. Candidates may carry out the preparation beforehand.

Candidates undertaking a Practical Assignment at Higher and therefore required to complete an extended evaluation (including a summary) should be allowed up to 3 hours. This is a generous time allowance and some candidates may require considerably less time - 2 hours should generally be sufficient. Candidates completing an evaluation of the Practical Assignment at Intermediate 2 should be allowed up to 1 hour 30 minutes.

Candidates should be allowed to take one side of an A4 page of notes which they have prepared, into the room with them. They should not be allowed to take a draft of the evaluation report into the room with them. The centre has the responsibility for ensuring that the notes brought in are the candidate's own work. For this activity the accommodation should be arranged to reflect centre-invigilated conditions and candidates should not be allowed to communicate with each other in any way.

†It is possible that even for the hands-on part, video evidence may be acceptable. If this is the case, then visiting examination or internal assessment subject to assessment moderation will be replaced with external marking by SQA.



# Core Skills

## General Information

This section provides general information on core skills. The information applies to all National Courses.

Achievement of core skills is a requirement of all SGAs. Candidates must achieve the following core skills at the appropriate level for the qualification:

- Communication
- Numeracy
- Problem Solving
- Information Technology
- Working With Others

Some of the five mandatory core skills are sub-divided into core skills components. Candidates will be able to achieve the core skills and components either by gaining discrete core skills units or by attaining National Courses, National Units or Standard Grades that give automatic certification of the core skills.

Where the core skills units are used the assessment of the core skill proceeds on the basis of normal Unit assessment and the standard quality assurance procedures apply. Where the core skill is assessed within another qualification it is assessed as a natural part of that qualification and the certification of the core skill is automatic. In both circumstances a computer-generated core skills profile is used to certificate the achievement of core skills and their components.

Achievement of core skills through Course assessment can happen in one or both of the following ways:

*Internal assessment* – where course units have been audited and found to cover a core skill component, attainment of the course units allows automatic certification of the core skill component.

*External assessment* – where course assessments have been designed to also assess core skill components, attainment of the course assessment allows automatic certification of the core skill component.

All National Courses have been, or will be, scrutinised to validate any claims for automatic certification of core skills, either through achievement of course units or through success in external course assessment.

Information on core skills can be found in *Automatic Certification of Core Skills in National Qualifications* (SQA, Sept 1999).



## Assessment Specifications



This section will be issued as a separate addition to this publication. Centres will be advised of availability.