



## **Arrangements for:**

**HNC Arboriculture and Urban Forestry**

**Group Award Code: G93L 15**

**and**

**HND Arboriculture and Urban Forestry**

**Group Award Code: G93M 16**

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## **Acknowledgement**

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of Higher National qualifications.



# Contents

1	Introduction.....	1
2	Rationale for the revision of the awards .....	1
2.1	Background and rationale.....	1
2.2	Market research and consultation.....	2
3	Aims of the awards .....	3
3.1	General aims of the awards .....	3
3.2	Specific aims of the awards.....	4
3.3	Target groups.....	5
3.4	Employment opportunities .....	5
3.5	Articulation.....	5
4	Access to awards.....	8
4.1	Formal qualifications.....	8
4.2	Entry to Year 2 HND.....	8
4.3	Work experience.....	8
4.4	English as an additional language .....	8
4.5	Access criteria guideline table.....	9
5	Awards structure.....	10
5.1	Framework.....	10
5.1.1	Graded Units.....	12
5.1.2	Core Skills Entry and Exit profiles.....	12
5.2	Mapping Information .....	13
5.2.1	Mapping to National Occupational Standards.....	15
5.3	Articulation, professional recognition and credit transfer .....	15
6	Approaches to delivery and assessment.....	15
6.1	Content and context.....	15
6.2	Delivery and assessment.....	16
6.3	Assessment .....	16
6.4	Open and Distance Learning .....	17
6.5	Resource requirements .....	17
7	General information for centres .....	17
8	General information for candidates .....	17
9	Glossary of terms .....	18
10	Appendices .....	19
	Appendix 1: Core Skills Signposting .....	20
	Appendix 2: Mapping to National Occupational Standards.....	30
	Appendix 3: Suggested credit transfer information.....	32
	Appendix 4: Suggested delivery schedule.....	34
	Appendix 5: Educational progression .....	35
	Appendix 6: Curriculum maps .....	36
	Appendix 7: Mapping table.....	38

# 1 Introduction

This is the Arrangement Document for the revised Group Awards of HNC and HND Arboriculture and Urban Forestry which were validated in June 2008. This document includes: background information on the development of the Group Awards, their aims, guidance on access, details of the Group Award structures, and guidance on delivery.

These revised awards will replace the current HNC and HND in Arboriculture and Urban Forestry which were introduced in 1996.

The new qualifications are designed to equip candidates with the knowledge, understanding and practical skills required for success in current and future employment or progression to further academic qualifications.

## 2 Rationale for the revision of the awards

### 2.1 Background and rationale

The current single centre awards of HNC and HND in Arboriculture and Urban Forestry introduced in 1996 have, to date, met the needs of industry. However, the content of the awards required updating to reflect changes within the industry and incorporate more practical skills.

The new awards will meet the needs of the growing sector of forestry and arboriculture by supplying the specific niche markets of arborists and tree officers as well as opening up wider employment opportunities within the land-based sector and beyond.

The awards are based on practical exercises to build up climbing competencies, knowledge, understanding and analysis skills for the working environments as well as research and evaluative skills for management. This means that much of the learning is through practical exercises relevant to the work situation.

In the main, the HNC is delivered over one year on a full-time basis and the HND over two years on a full time basis, although both awards could be delivered on a part-time or flexible basis. Both awards are designed to prepare candidates for a career in Arboriculture and Urban Forestry either as a supervisor, an entrepreneur or in management, working for an established company, a local authority, or as an arboriculture contracting entrepreneur. The HND qualification is designed to allow candidates to articulate to the UHI BSc Sustainable Forest Management and also to articulate to a number of universities in the UK and overseas at an appropriate level and type of qualification. The qualifications also allow articulation to membership of the Institute of Chartered Foresters (ICF) at the appropriate level.

Past evidence indicates approximately 70% of candidates currently choose to articulate to the 3rd year of the UHI BSc Sustainable Forest Management programme, and 30% choose to enter the Arboriculture and Urban Forestry management sector of employment, or other Arboriculture and Urban Forestry related careers.

## 2.2 Market research and consultation

To ensure that the new qualifications were vocationally relevant and met the needs of both candidates and industry, detailed market research was carried out by the Qualifications Design Team (QDT) set up to oversee the development. A variety of stakeholders were consulted on:

- ◆ the proposed course structure
- ◆ employment needs
- ◆ articulation to degree courses

Consultation details are summarised in the following table:

Stakeholder	Method of consultation
Candidates (existing and former)	<ul style="list-style-type: none"> <li>◆ E-mail</li> <li>◆ Postal questionnaires</li> <li>◆ Interviews</li> </ul>
Industry (private, public, voluntary sector)	<ul style="list-style-type: none"> <li>◆ E-mail</li> <li>◆ Postal questionnaires</li> <li>◆ Interviews</li> </ul>
Higher Education	<ul style="list-style-type: none"> <li>◆ Postal questionnaires</li> </ul>

Feedback from consultation

Stakeholder	Feedback
Candidates	<ul style="list-style-type: none"> <li>◆ Satisfaction with structure of awards, emphasis and general relevance for employment and progression to degree courses.</li> <li>◆ Inclusion of more practical content would improve course.</li> <li>◆ Queried relevance of Managing Human Resources and Communication within current course structure.</li> </ul>
Industry	<ul style="list-style-type: none"> <li>◆ Common area of competency relevant to awards were identified as: silviculture, amenity tree management, tree surveys, evaluation of trees, work planning, work supervision, practical arboriculture, tree disease, urban forestry and urban wildlife.</li> <li>◆ Confirmation on importance of all Core Skills.</li> <li>◆ Content of awards reflects traditional skills and environmental and social skills required by those working in the forestry industry.</li> <li>◆ Prepared to employ candidates with HNC/HND awards.</li> </ul>
Higher Education	<ul style="list-style-type: none"> <li>◆ No formal feedback received. Individual colleges and universities set their own admission policies in respect of their degree programmes.</li> </ul>

The market research confirmed that there was strong support for the title and design of the awards, that they reflected the needs of the industry and candidates, and would enable progression to degree courses.

The Forestry Advisory Committee was also an active participant in the design and structure of the revised awards.

### **3 Aims of the awards**

The HNC will provide candidates with underpinning arboriculture knowledge to prepare them for the role of supervisor, while the HND focuses on the managerial aspects of arboriculture and the wider aspects of management associated with this, ie woodland policy, design, recreation and land use.

The overall aims of the HN programmes are to produce highly motivated candidates with the necessary vocational skills, knowledge and ability to progress to employment and further study opportunities. In addition the subject area seeks to:

- ◆ provide the people working and seeking work within these associated industries with opportunities to access a range of high-quality courses that provide choice, flexibility and accessibility
- ◆ offer courses relevant to the needs of individuals and employers.
- ◆ ensure candidates develop knowledge and understanding and a range of skills that will contribute to their personal development as well as facilitating progression in employment and/or further study.
- ◆ both qualifications follow the main thrust of all advanced qualifications by concentrating on the ability to demonstrate competences. Both qualifications provide a degree of choice for candidates and enable them to pursue a range of different employment opportunities within the Arboriculture industry, higher education through entry to BSc Sustainable Forest Management or other courses and gain 7 out of 8 points towards full membership of the industry's professional body the Institute of Chartered Foresters (ICF) for HND graduates. The 8th point is gained through professional work experience over 2 years.
- ◆ both qualifications provide flexibility in giving candidates opportunities to delay or accelerate academic or career directions. For example, HNC candidates can articulate with the HND qualification in a logical and easy manner. Equally, HND candidates can terminate their course at the end of the first year and obtain a HNC qualification.

#### **3.1 General aims of the awards**

The general aims for both the HNC and HND in Arboriculture and Urban Forestry are to:

- ◆ reflect the needs of the Arboriculture and Urban Forestry sector, addressing the practical and theoretical skills required by the sector while responding to the changing needs of the arboricultural sector
- ◆ provide a comprehensive qualification which will enhance the employment opportunities of candidates within the arboricultural and urban forest sector

- ◆ provide career development for those within the industry by providing underpinning knowledge

In addition the HND Arboriculture and Urban Forestry will:

- ◆ provide access to higher education through articulation with the BSc Sustainable Forest Management developed for the UHI Millennium Institute

### **3.2 Specific aims of the awards**

#### **HNC in Arboriculture and Urban Forestry**

The specific aims of the HNC award are to enable candidates to:

- 1 understand the principles of arboriculture and urban forestry and be able to carry out practical tree work.
- 2 understand the principles of supervision and carry out supervisory tasks.
- 3 understand the principles of tree evaluation and management and carry out tree evaluation.
- 4 use communication and ICT skills.

#### **HND Arboriculture and Urban Forestry**

The specific aims of the HND award are to enable candidates to:

- 5 understand and evaluate the principles of silviculture in relation to arboriculture.
- 6 understand and evaluate arboriculture and urban forestry policy.
- 7 evaluate the principles of supervision and review supervisory activities.
- 8 understand and evaluate the principles of tree evaluation and management.
- 9 evaluate the principles of management.
- 10 understand measurement techniques and evaluate woodland design in relation to land and woodland use.
- 11 understand and evaluate ecology and conservation principles in an arboriculture and urban forestry context.
- 12 use communication and ICT skills.
- 13 evaluate the public and social aspects of arboriculture and woodland management in the UK and Europe.
- 14 evaluate the economic and financial aspects of the arboriculture and forest industry.



### 3.3 Target groups

These awards are suitable for a wide range of candidates including:

- ◆ school leavers who wish to follow a career as supervisors and managers in the arboricultural and urban forestry industries
- ◆ existing practitioners in the industry who wish to upskill
- ◆ candidates wishing to become self-employed or start up a small enterprise within arboriculture/forestry

### 3.4 Employment opportunities

The arboriculture industry is a stable and growing part of the urban and rural economy. Arboricultural services are required by local authorities and utility companies to maintain, manage and plan woodlands and to meet the needs of the social and conservation uses of woodland. Candidates may gain employment as:

- ◆ Arborists
- ◆ Tree officers
- ◆ Land-based sector officers

### 3.5 Articulation

These awards will support progression into the Inverness College UHI degree BSc Sustainable Forest Management, enable candidates to articulate to other Higher Education Institutions and to secure progression to professional body qualifications. The sector professional body for Arboriculture and Urban Forestry is the Institute of Chartered Foresters and they support the awards by giving 6 points and 7 points respectively for the HNC and HND towards full membership of their institution. This leaves one point for HND candidates to gain from a project submission and 2 years' work experience.

Currently there are no formal articulation arrangements with specific HE institutions. However, discussions are ongoing with HE institutions regarding articulation.

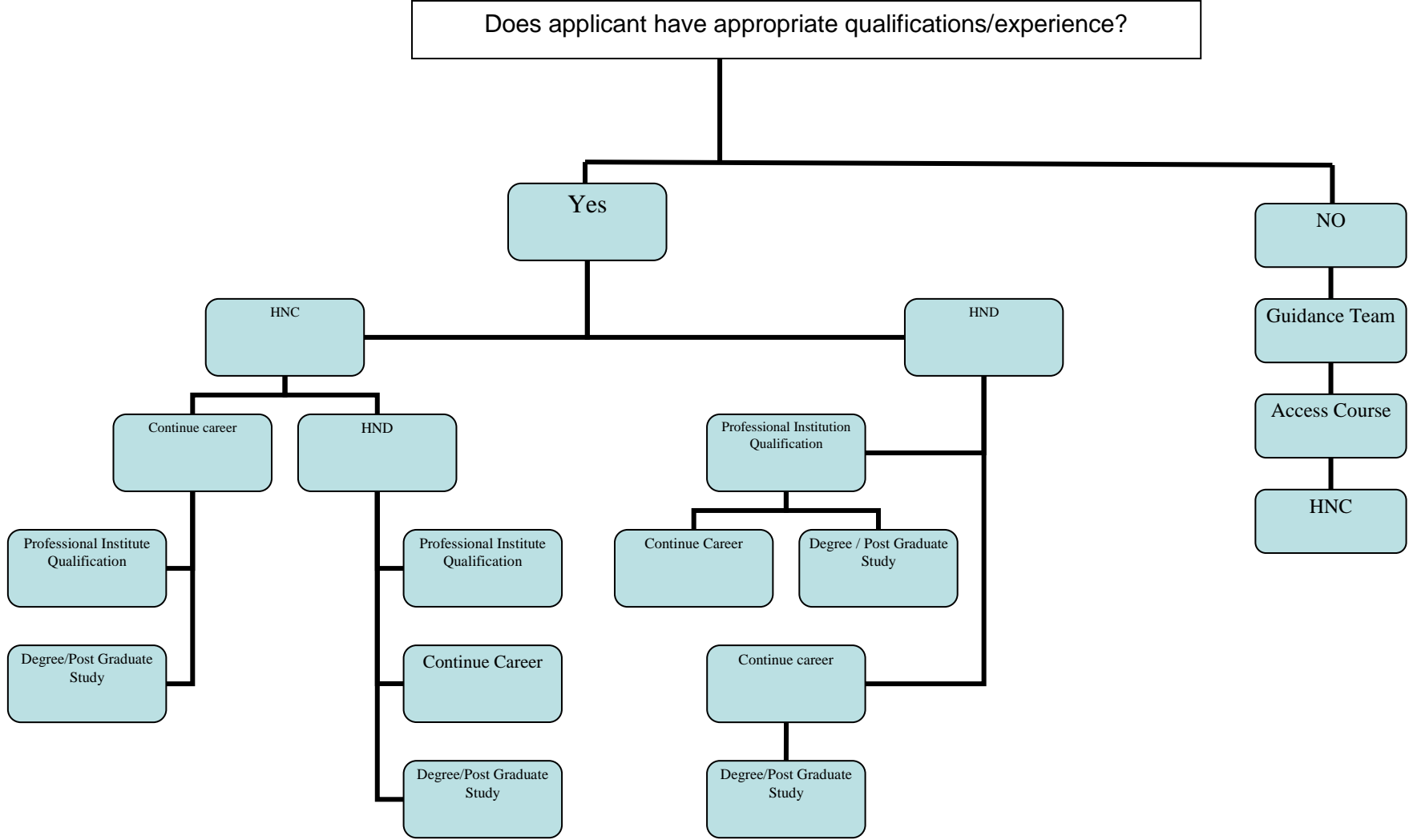
HE institutions which accepted the previous HNC/HND Arboriculture and Urban Forestry graduates include:

<b>HEI</b>	<b>Course and Entry point</b>
Inverness College	Sustainable Forest Management
University of Aberdeen	Forest Conservation Forest Science Forestry Year 2 entry for HND graduates
University of Cumbria	Forestry and Woodland Management Forestry Top Up Year 3 entry for HND graduates
University of Bangor	Forestry Conservation and Forest Ecosystems Year 2 entry for HND graduates

Candidates are advised to liaise directly with the HE establishments prior to each year's intake of candidates as Unit credits that count towards entry requirements can vary. The flow chart on the following pages gives possible articulation routes.

# Articulation Flow Chart

**Diagram 1**



## 4 Access to awards

As with all SQA qualifications, access to the awards will be at the discretion of the centre and is possible by various routes. The following recommendations are for guidance only.

### 4.1 Formal qualifications

Examples of appropriate formal entry qualifications are specified below. They are not exhaustive or mutually exclusive and may be offered in a variety of combinations.

#### HNC:

- ◆ One Higher at grade C or above or equivalent
- ◆ Successful completion of relevant further education one year programme or equivalent
- ◆ Any other relevant Scottish Group Award at Intermediate 2 or Higher
- ◆ Completion of a relevant Skills for Work (SfW) or Scottish Progression Award (SPA) coupled with one Higher
- ◆ Relevant SVQ level 2 or 3 Modern Apprenticeship
- ◆ Different combinations of relevant National Qualifications, Vocational Qualifications and equivalent qualifications from other awarding bodies may also be acceptable, as would suitable vendor qualifications at an appropriate level

#### HND (year 1):

- ◆ Two/three Highers at grade C or above or equivalent
- ◆ Completion of a relevant Skills for Work (SfW) or Scottish Progression Award (SPA) coupled with three Highers
- ◆ Relevant SVQ level 2 or 3 Modern Apprenticeship
- ◆ Different combinations of relevant National Qualifications, Vocational Qualifications and equivalent qualifications from other awarding bodies may also be acceptable, as would suitable vendor qualifications at an appropriate level

### 4.2 Entry to Year 2 HND

In order to achieve the HND Arboriculture and Urban Forestry candidates must gain 30 SQA credits. Ideally full-time candidates should be encouraged to achieve 15 credits in each year of the award. Wider access should be provided to cater for the needs of those, for example, who have achieved the HNC at day release or evening classes or in other colleges. Candidates would therefore be expected to have a minimum of 12 credits on entry to year 2 and these would include the HNC Arboriculture and Urban Forestry mandatory Units.

### 4.3 Work experience

Candidates with suitable relevant work experience may be accepted for entry provided the enrolling centre believes that the candidate is likely to benefit from undertaking the award.

### 4.4 English as an additional language

For candidates where English is not their first language it is recommended that they possess English for Speakers of Other Languages (ESOL) level 5 or a score of 5.5 in International English Language Testing System (IELTS). Inverness College provides ESOL classes for such candidates and also prepares candidates for the Cambridge exams if they wish this certificate.

#### 4.5 Access criteria guideline table

Access criteria	HNC	HND Yr 1	HND Yr 2
One Higher	X		
Two/three Highers		X	
One year relevant FE programme award	X		
Mature student	X		
Mature student with relevant experience	X	X	
Relevant HNC or equivalent from another institution			X
Relevant SVQ level 2 or 3 or Modern Apprenticeship	X	X	
Relevant Vocational Pathways award + one Higher	X		
Relevant Vocational Pathways award + three Highers	X	X	
CPD/Part-time study	X	X	X

## 5 Awards structure

Both awards have been designed in accordance with SQA's design principles for HN awards.

- ◆ HNC shall be designed to be at SCQF level 7 and shall comprise 96 SCQF credit points with at least 48 credit points at SCQF level 7. This should include a mandatory section of at least 48 SCQF credit points and include one Graded Unit of 8 SCQF credit points at SCQF level 7.
- ◆ HNDs shall be designed to be at SCQF level 8 and shall comprise 240 SCQF credit points with at least 64 SCQF credit points at SCQF level 8. This should include a mandatory section of at least 96 SCQF credit points and include one Graded Unit of 8 SCQF credit points at SCQF level 7, plus 16 SCQF credit points of Graded Unit(s) at SCQF level 8.

### 5.1 Framework

**HNC Arboriculture and Urban Forestry — 12 credits required (10 mandatory + 2 optional)**

Unit title	Code	SCQF credit points	SCQF level	SQA credit value
<b><i>Mandatory Units</i></b>				
Arboriculture Practice	F3YA 34	16	7	2
Arboriculture: Amenity Tree Management	F3YB 34	16	7	2
Employment and Health and Safety Legislation for the Land Based Industries	F0VP 34	8	7	1
Forest Science	HX5M 35*	16	8	2
Work Supervision Practice	F409 34	8	7	1
Selection and Management of Machinery for Land Based Industries	D4PE 34	8	7	1
Arboriculture and Urban Forestry: Graded Unit 1	F4SF 34	8	7	1
		<b>80</b>		<b>10</b>
<b><i>Optional Units (2 credits required)</i></b>				
Soil Management	F21V 34	8	7	1
Forestry: Arboricultural Operations	F3YN 34	8	7	1
Communication: Analysing and Presenting Complex Communication	DE3N 34*	8	7	1
<b>or</b>				
Communication: Practical Skills	D77G 34*	8	7	1
Forestry: Woody Plant Biology	F405 34	8	7	1
Urban Woodlands and Green Space	F407 35	8	8	1
Woodland Nursery Production	F408 34	8	7	1
Information Technology Software Applications 1	D75X 34	8	7	1

\*Refer to History of Changes for revision details.

**HND Arboriculture and Urban Forestry — 30 credits required (25 mandatory + 5 optional)**

Unit title	Code	SCQF credit points	SCQF level	SQA credit value
<b><i>Mandatory Units</i></b>				
Arboriculture Practice	F3YA 34	16	7	2
Arboriculture: Amenity Tree Management	F3YB 34	16	7	2
Employment and Health and Safety Legislation for the Land Based Industries	F0VP 34	8	7	1
Forest Science	HX5M 35*	16	8	2
Work Supervision Practice	F409 34	8	7	1
Selection and Management of Machinery for Land Based Industries	D4PE 34	8	7	1
Managing Sites for Biodiversity	DN62 34	16	7	2
Forestry: Woody Plant Biology	F405 34	8	7	1
Urban Woodlands and Green Space	F407 35	8	8	1
Forestry: Woodland Ecology	F403 35	8	8	1
Forestry: Forest Policy and Law	F3YT 35	8	8	1
Forestry and Other Land Use	F3YJ 35	8	8	1
Establishment of Woodland	F3YC 34	16	7	2
Soil Management	F21V 34	8	7	1
Job Costing and Business Calculations	F03K 33	8	6	1
Forestry: Forest Design	F3YR 35	8	8	1
Getting Started in Business	DK2K 34*	8	7	1
Arboriculture and Urban Forestry: Graded Unit 1	F4SF 34	8	7	1
Arboriculture and Urban Forestry: Graded Unit 2	F4SG 35	16	8	2
		200		<b>25</b>
<b><i>Optional Group 1 (from 1 to 3 credits required)</i></b>				
Forestry: Use of Computer in Forest Management	F401 35	8	8	1
Forestry in Europe	F3YK 35	8	8	1
Forestry: Woodland Management Planning	F404 35	8	8	1
<b><i>Optional Group 2 (from 2 to 4 credits required)</i></b>				
Information Technology Software Applications 1	D75X 34	8	7	1
Woodland Nursery Production	F408 34	8	7	1
Communication: Analysing and Presenting Complex Communication	DE3N 34*	8	7	1
or				
Communication Practical Skills	D77G 34*	8	7	1
Forestry: Arboricultural Operations	F3YN 34	8	7	1
Forestry Operations: Work Programming	F3YM 34	12	7	1.5
Forestry: Land Measurement	F406 34	12	7	1.5

\*Refer to History of Changes for revision details.

### 5.1.1 Graded Units

The purpose of the Graded Units is to assess the candidate's ability to integrate and apply the knowledge and/or skills gained in the individual Units to demonstrate that they have achieved the principle aims of the Group Award and to grade the candidate's achievement. The Graded Unit(s) will be assessed and a grade of A, B or C will be awarded to each of the Graded Units.

Candidates will undertake a one credit HN Graded Unit (8 SCQF credit points) at level 7 in HNC award. In the HND award candidates will undertake a one credit HN Graded Unit (8 SCQF credit points) at level 7 in the first year and a two credit HN Graded Unit (16 SCQF credit points) at level 8 in the second year.

#### Graded Unit 1

This Unit will be project based and will take the form of a case study. It will cover a range of skills achieved through studying the mandatory Units of the award.

#### Graded Unit 2

This Unit will be project based and will take the form of a practical assignment. This will ensure that both the practical elements and the underpinning knowledge aspects are integrated.

### 5.1.2 Core Skills Entry and Exit profiles

The recommended Core Skills entry and exit profiles for HNC are:

Core Skill	Entry SCQF level	Exit SCQF level
Communication	4	5
Working With Others	4	5
Problem Solving	4	5
IT	4	5
Numeracy	4	5

At HND level there will be further development and consolidation of Core Skills.

The recommended Core Skills entry and exit profiles for HND are:

Core Skill	Entry SCQF level	Exit SCQF level
Communication	5	6
Working with Others	5	6
Problem Solving	5	6
IT	5	5
Numeracy	5	6

A Core Skills signposting guide is given in Appendix 1\*. Details of recommended Core Skills exit levels, by Unit, are also given in this Appendix.



## 5.2 Mapping Information

The tables below show how the individual Units map to the aims of the awards.

### HNC Arboriculture and Urban Forestry

Unit title	Unit code	Aims
Arboriculture Practice	F3YA 34	1, 3, 4
Arboriculture: Amenity Tree Management	F3YB 34	1, 3, 4
Employment and Health and Safety Legislation for the Land Based Industries	F0VP 34	1, 2, 3, 4
Forestry: Forest Science	F3YW 34	1, 4
Work Supervision Practice	F409 34	1, 2, 4
Selection and Management of Machinery for Land Based Industries	D4PE 34	1, 2, 3, 4
Arboriculture and Urban Forestry: Graded Unit 1	F4SF 34	1, 3, 4
Soil Management	F21V 34	1, 3, 4
Forestry Woodland Management Planning	F404 35	1, 3, 4
Communication: Analysing and Presenting Complex Communication	DE3N 34	4
<b>or</b>		
Communication Practical Skills	D77G 34	4
Forestry: Woody Plant Biology	F405 34	1, 4
Urban Woodlands and Green Space	F407 35	1, 3, 4, 13
Woodland Nursery Production	F408 34	1, 3, 4
Information Technology Software Applications 1	D75X 34	4

## HND Arboriculture and Urban Forestry

Unit title	Unit code	Aims
Arboriculture Practice	F3YA 34	1, 3, 4, 5, 8, 11, 12
Arboriculture: Amenity Tree Management	F3YB 34	1, 3, 4, 5, 8, 9, 10, 11, 12
Employment and Health and Safety Legislation for the Land Based Industries	F0VP 34	1, 2, 3, 4, 12
Forestry: Forest Science	F3YW 34	1, 4, 5, 12
Work Supervision Practice	F409 34	1, 2, 4, 5, 7, 12
Selection and Management of Machinery for Land Based Industries	D4PE 34	1, 2, 3, 4, 5, 8, 12
Managing Sites for Biodiversity	DN62 34	3, 4, 5, 8, 11, 12, 13
Forestry: Woody Plant Biology	F405 34	1, 4, 5, 11, 12
Urban Woodlands and Green Space	F407 35	1, 3, 4, 5, 6, 12, 13
Woodland Ecology	F403 35	1, 4, 11, 12
Forestry: Forest Policy and Law	F3YT 35	4, 6, 12, 14
Establishment of Woodland	F3YC 34	1, 4, 5, 12
Forestry and Other Land Use	F3YJ 35	4, 6, 12, 14
Soil Management	F21V 34	1, 3, 4, 5, 8, 12
Job Costing and Business Calculations	F03K 33	4, 7, 12, 14
Forestry: Forest Design	F3YR 35	1, 3, 4, 5, 10, 12
Getting Started in Business	DK2K 34	4, 6, 7, 9, 12, 14
Arboriculture and Urban Forestry: Graded Unit 1	F4SF 34	1, 3, 4, 5, 9, 12, 13
Arboriculture and Urban Forestry: Graded Unit 2	F4SG 35	1, 3, 4, 5, 6, 8, 10, 11, 12, 13, 14
Communication: Analysing and Presenting Complex Communication	DE3N 34	4, 12
<b>or</b>		

<b>Unit title</b>	<b>Unit code</b>	<b>Aims</b>
Communication Practical Skills	D77G 34	4, 12
Forestry Operations: Work Programming	F3YM 34	2, 4, 7, 12
Information Technology Software Applications 1	D75X 34	4, 12
Woodland Nursery Production	F408 34	1, 3, 4, 5, 12
Forestry: Land Measurement	F406 34	4, 10, 12
Forestry: Woodland Management Planning	F404 35	1, 3, 4, 5, 11, 12
Forestry: Use of Computers in Forest Management	F401 35	4, 10, 12
Forestry in Europe	F3YK 35	1, 4, 5, 6, 12, 13

### **5.2.1 Mapping to National Occupational Standards**

Lantra is the Sector Skills Council responsible for the National Occupational Standards (NOS) in this vocational area. The HN Units have been mapped to the NOS for Treeworks and Trees and Timber Management. Details of this mapping exercise are given in Appendix 2.

### **5.3 Articulation, professional recognition and credit transfer**

Articulation details to degree courses are given in Section 3.5. A diagram showing the Scottish School of Forestry's Education Progression is given in Appendix 7.

The awards are also given professional recognition by the Institute of Chartered Foresters. Details of mapping for ICF accreditation are given in Appendix 3.

Details of suggested credit transfer arrangements from old Units to new Units is given in Appendix 4.

## **6 Approaches to delivery and assessment**

### **6.1 Content and context**

The HNC and HND Arboriculture and Urban Forestry are designed for candidates wishing to gain employment in a wide range of Arboriculture and Urban Forestry related careers - for example, in forest establishment, harvesting, timber marketing, conservation and estate management in both the state and private sectors of the industry.

The Group Awards will develop candidates practical, interpersonal and social skills and prepare candidates for progression to a range of further programmes of study either in HE or to gain professional qualifications. The majority of the awards will be delivered in practical environments.

## 6.2 Delivery and assessment

The Units across both Group Awards have been sequenced to allow the candidates to progress from a basic initial understanding of concepts, processes and organisations relating to Arboriculture and Urban Forestry, to a greater understanding both in the depth and breadth of forest management. In particular, the HND Award places increased emphasis on providing the opportunity to apply the theory by developing skills in research, analysis and planning.

With this in mind, the Graded Unit assessments take the form of a case study project for the HNC and a management plan practical assignment project for the HND. For the HNC award it is recommended that the mandatory Units (other than the Graded Unit) delivering introductory knowledge and skills in Arboriculture and Urban Forestry are delivered in the first/second phase of the programme where possible.

For the HND award it is recommended the double credit Graded Unit be delivered sufficiently early through the second year to allow candidates sufficient time to complete and to benefit from the HNC Units and the HND management Units offered early in the HND year.

It may be beneficial if IT optional Units are delivered early so that the IT skills gained can be used throughout the programme.

A suggested Delivery Schedule is given in Appendix 4.

## 6.3 Assessment

The new HN Design Principles place a great emphasis on an integrative approach to delivery and assessment. There are integration opportunities within these Group Awards for the following Units:

Unit title	Unit title
<b>Integrates with</b> →	
Forestry: Forest Science	Forestry: Woody Plant Biology Establishment of Woodlands
Arboriculture Practice	Work Supervision Practice
Forestry: Use of Computers in Forest Management	Forestry: Land Measurement Forestry and Other Land Use Forestry: Forest Design

There may be other such opportunities depending on the option choices taken.

Graded Units have been introduced in both Group Awards in line with the HN design principles. As well as encapsulating the key aims of the Group Awards, these bring with them a level of integration and synthesis not featured in the current Group Awards.

Summative assessments throughout the awards have been reduced in line with the design principles. These assessments meet most of the criteria of the Core Skills signposting but some Core Skills elements may not be covered in these assessments. Formative assessments are also used to assess Core Skills and embedded into the Units of the framework.

## 6.4 Open and Distance Learning

The awards may be delivered by open and distance learning methods, provided that adequate preparations are made. Additional planning and resources may be needed for candidate support and assessment.

## 6.5 Resource requirements

Centres delivering the awards will require increased availability and use of IT equipment including SmartBoards, digital projectors, networked computers and VLEs. There will be a need for increasing the use of advanced technological aids for tree measurement and tree condition surveys including Picus tomography and laser hypsometers. Staff delivering the programme will require to be trained in the use of educational technology and the use of digital measurement and survey equipment including data interpretation.

# 7 General information for centres

### Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* ([www.sqa.org.uk](http://www.sqa.org.uk)).

### Internal and external verification

All instruments of assessment used within this/these Group Award(s) should be internally verified, using the appropriate policy within the centre and the guidelines set by SQA.

External verification will be carried out by SQA to ensure that internal assessment is within the national guidelines for these qualifications.

Further information on internal and external verification can be found in *SQA's Guide to Assessment and Quality Assurance for Colleges of Further Education* ([www.sqa.org.uk](http://www.sqa.org.uk)).

# 8 General information for candidates

### General Information for candidates

The HNC and HND in Arboriculture and Urban Forestry reflect the needs of the Arboriculture and Urban Forestry sector. These qualifications have been designed to give you the skills and knowledge required for employment within the Arboriculture and Urban Forestry sector.

The applied and practical nature of the courses will develop your Core Skills - *Communication* and *IT, Problem Solving, Numeracy* and *Working with Others* — as well as your supervisory management skills in tree care and tree management including establishment of woodlands, amenity tree management, selection and management of machinery and urban forestry which are essential skills and technical knowledge necessary for an arboriculture and urban forestry manager.

As an applied course, assessment may be integrated. Your studies will include both theory and practice and assessment will be mainly project based with some open and closed-book assessment along with practical elements.

The Graded Units are designed to provide evidence that you have achieved the principal aims of the award undertaken. The Graded Units contain essential elements of the mandatory Units from each of the Group Awards.

To achieve the HNC Group Award you must successfully complete 12 credits. The HND award consists of 30 credits.

Successful HNC candidates may enter industry as a tree surgeon's assistant or a team supervisor. If you complete the HND award you will emerge with a management qualification which will enable you to work within the industry as a tree officer or become self-employed.

Alternatively, you could use the HND qualification to articulate to the BSc Sustainable Forest Management programme at Inverness College UHI. The HND may also allow articulation to other HE qualifications offered within Great Britain.

## 9 Glossary of terms

**SCQF:** This stands for the Scottish Credit and Qualification Framework, which is a new way of speaking about qualifications and how they inter-relate. We use SCQF terminology throughout this guide to refer to credits and levels. For further information on the SCQF visit the SCQF website at [www.scqf.org.uk](http://www.scqf.org.uk)

**SCQF credit points:** One HN credit is equivalent to 8 SCQF credit points. This applies to all HN Units, irrespective of their level.

**SCQF levels:** The SCQF covers 12 levels of learning. HN Units will normally be at levels 6–9. Graded Units will be at level 7 and 8.

**Subject Unit:** Subject Units contain vocational/subject content and are designed to test a specific set of knowledge and skills.

**Graded Unit:** Graded Units assess candidates' ability to integrate what they have learned while working towards the Units of the Group Award. Their purpose is to add value to the Group Award, making it more than the sum of its parts, and to encourage candidates to retain and adapt their skills and knowledge.

**Dedicated Unit to cover Core Skills:** This is a non-subject Unit that is written to cover one or more particular Core Skills.

**Embedded Core Skills:** This is where the development of a Core Skill is incorporated into the Unit and where the Unit assessment also covers the requirements of Core Skill assessment at a particular level.

**Signposted Core Skills:** This refers to the opportunities to develop a particular Core Skill at a specified level that lie outwith automatic certification.

**Qualification Design Team:** The QDT works in conjunction with a Qualification Manager/Development Manager to steer the development of the HNC/HND from its inception/revision through to validation. The group is made up of key stakeholders representing the interests of centres, employers, universities and other relevant organisations.

**Consortium-devised HNCs and HNDs** are those developments or revisions undertaken by a group of centres in partnership with SQA.

**Specialist single centre and specialist collaborative devised HNCs and HNDs** are those developments or revisions led by a single centre or small group of centres who provide knowledge and skills in a specialist area. Like consortium-devised HNCs and HNDs, these developments or revisions will also be supported by SQA.

## 10 Appendices

- Appendix 1: Core Skills signposting
- Appendix 2: Mapping to National Occupational Standards
- Appendix 3: Credit transfer information
- Appendix 4: Suggested delivery schedule
- Appendix 5: Educational progression
- Appendix 6: Curriculum maps
- Appendix 7: Mapping table
- Appendix 8: Assessment Exemplars

## Appendix 1: Core Skills Signposting

The specific opportunities to develop Core Skills in individual Units are shown in the following tables:

### 1 Communication (SCQF level 6)

#### 1.1 Written Communication (Reading)

##### Read and understand complex written communication

- a Identify and summarise significant information, ideas and supporting detail.
- b Evaluate effectiveness in meeting purpose and needs of readership.

Unit	Knowledge and Skills/Evidence	a	b
Arboriculture: Amenity Tree Management	Using written skills to communicate an understanding of tree management and the evaluation of information.	*	*
Graded Unit 2	Using written skills to communicate an understanding management planning and evaluation of information.	*	*
Forestry: Forest Design	Using written skills to communicate an understanding of the role forest and woodland design and the practical concepts.	*	*
Forestry: Forest Policy and Law	Using written skills to communicate how forest policy and law influence the industry at a local and national level. Using essay and project instruments.	*	*
Forestry and Other Land Use	Using written skills to communicate how forestry and other land uses integrate together in the rural economy and landscape.	*	*



## 1.2 Written Communication (Writing)

### Produce well-structured written communication on complex topics

- a Present essential ideas/information in a logical and effective order.
- b Use a structure which takes account of purpose/links points for clarity and impact.
- c Use conventions which are effective adapted for audience.
- d Use accurate spelling, punctuation, sentence structures.
- e Vary sentence structure, paragraphing, vocabulary to suit purpose and target audience.

Unit	Knowledge/Skills/Evidence	a	b	c	d	e
Forestry: Forest Design	Using written skills to communicate an understanding of the role forest and woodland design and the practical concepts.	*	*	*	*	*
Forestry: Forest Policy and Law	Using written skills to communicate how forest policy and law influence the industry at a local and national level. Using essay and project instruments.	*	*	*	*	*
Forestry and Other Land Use	Using written skills to communicate how forestry and other land uses integrate together in the rural economy and landscape.	*	*	*	*	*

### 1.3 Oral Communication

#### Produce and respond to oral communication on a complex topic

- a Use vocabulary and a range of spoken language structures consistently and effectively with appropriate formality.
- b Convey all essential ideas/information/opinions accurately and coherently with appropriate varied emphasis.
- c Structure to take full account of purpose and audience.
- d Take account of situation and audience during delivery.
- e Respond to others taking account of their contribution.

Unit	Knowledge/Skills/Evidence	a	b	c	d	e
Forestry: Forest Policy and Law	Using oral skills to communicate how forest policy and law influence the industry at a local and national level. Using short presentation to the class as the instrument	*	*	*	*	*
Forestry and Other Land Use	Using oral skills to communicate how forestry and other land uses integrate together in the rural economy and landscape by means of a short presentation.	*	*	*	*	*
Work Supervision Practice	Using oral skills to communicate in the organisation and supervising with others on a work task.	*	*	*	*	*
Teaching and Learning for all Units will involve on-going discussion with and presentation to a range of people, analysing and evaluating relevant and related information. Personal interviews with and guidance from assessors will support verbal exploration of complex issues and problem solving approaches.						

## 2 Using Information Technology (SCQF level 5)

### Use an IT system effectively and responsibly to process a range of information

- a Make effective and responsible use of the range of IT equipment in everyday use.
- b Carry out straightforward processing in two types of software application.
- c Carry out complex processes to use one further application in depth.
- d Integrate different types of data in a piece of work.
- e Carry out two searches to extract and present relevant information from electronic data sources.

Unit	Knowledge/Skills/Evidence	a	b	c	d	e
Forestry: Use of Computers in Forest Management	Applying IT skills to interpret and communicate information from electronic sources namely GIS and spreadsheets	*	*	*	*	*
Forestry: Land Measurement	General IT use for project compilation using word processing and tables, plus introduction to use of GIS and GPS.		*	*	*	*

Internet research on current forestry/arboriculture issues, events and practice will provide essential underpinning knowledge for the award. Security, consideration and the managing of any technical problems will be a routine aspect of research, records of information and good practice. Professional presentation of all materials will involve access to and use of technology.

### 3 Numeracy (SCQF level 5)

#### 3.1 Skill component — Using Number

##### Apply a wide range of numerical skills

- a Work confidently with a numerical concept.
- b Decide on the numerical operations to be carried out.
- c Carry out complex calculations or a number of sustained calculations.

Unit	Knowledge/Skills/Evidence	a	b	c
Forestry: Use of Computers in Forest Management	Applying numeracy skills to display and calculate financial and or management planning data.	*	*	*
Forestry: Land Measurement	Applying numeracy skills to land measurement/surveying project.	*	*	*

## Numeracy (SCQF level 5)

### 3.2 Skill component — Using Graphical Information

#### Interpret and communicate graphical information in everyday and generalised contexts

- a Interpret information from tables, graphs, charts or diagrams.
- b Select an appropriate form of tables, graphs, charts, diagrams and communicate information in that form.

<b>Unit</b>	<b>Knowledge/Skills/Evidence</b>	<b>a</b>	<b>b</b>
Forestry: Use of Computers in Forest Management	Applying numeracy skills to display and calculate financial and or management planning data.	*	*

## 4 Problem Solving (SCQF level 6)

### 4.1 Critical Thinking

- ◆ Analyse a complex situation or issue

### 4.2 Planning and Organising

- ◆ Plan organise and complete a complex task

### 4.3 Reviewing and Evaluating

- ◆ Review and evaluate a complex problem solving activity

Unit	Knowledge/Skills/Evidence	CT	PO	RE
Arboriculture Practice	Use of critical thinking and problem to plan and execute safe and competent tree climbing exercises	*	*	
Work Supervision Practice	Using critical thinking, planning and organising and review and evaluation in relation to the planning and execution of a work supervision task.	*	*	*
Forestry: Forest Design	Using critical thinking and problem solving to evaluate the landscape of an area and produce a landscape plan. Review and evaluate the result.	*	*	*
Forestry: Forest Policy and Law	Using critical thinking to develop an understanding of forest policy and law in relation to the industry at a local and national level. Using essay and grant application project instruments	*	*	
Forestry and Other Land Use	Using critical thinking and problem solving to understand and evaluate how forestry and other land uses integrate together in the rural economy and landscape.	*	*	*

All elements of the Core Skill will be critical to the award which involves throughout an analytical and evaluative approach to problem solving. Analysis, strategic planning and implementation of a range of practical activities which require skills in communication, co-operation and negotiation with others is integral, and evaluative activities on an on-going basis.

## 5 Working with Others (SCQF ILevel 6)

### 5.1 Work with others in a group to analyse, plan and complete an activity

- a Analyse the activity and identify component tasks and roles.
- b Agree allocation of activities taking account of group strengths and weaknesses.
- c Support co-operative working.
- d Evaluate and draw conclusions about own contribution, justifying with evidence.

Unit	Knowledge/Skills/Evidence	a	b	c	d
Arboriculture Practice	Work with others to plan and organise oneself for practical climbing operations.	*	*	*	
Work Supervision Practice	Work with others to plan, organise, execute, review and evaluation the planning and execution of a work supervision task.	*	*	*	*
Forestry: Forest Science	Working with others as a team to complete an activity to collect field data for project submission.	*	*	*	
Establishment of Woodland	Working with others to complete an activity to collect field data for project submission.	*	*	*	
All elements of the Core Skill will be critical to achievement of the award. Working in an organisation requires an understanding of motivation, negotiation and persuasion, as well as an analytical and evaluative approach to working with a range of others.					

## Recommended Core Skill Exit level by Unit

Unit title	Unit code	Comms — Writing — reading and understanding	Comms — produce written comms	Comms — Oral comms — Listening and talking	IT	Numeracy — Numbers	Numeracy — Graphical	Problem Solving — Critical Thinking	Problem Solving — Planning and Organising	Problem Solving — Reviewing and Evaluating	Working with Others
Forestry: Woody Plant Biology	F405 34	5	5	5							
Arboriculture Practice	F3YA 34		5					5	5		5
Arboriculture: Amenity Tree Management	F3YB 34	5	5					5	5	5	
Urban Woodlands and Green Space	F407 35	6	6					6		6	
Employment and Health and Safety Legislation for the Land Based Industries	F0VP 34		5	5				5	5		
Arboriculture and Urban Forestry: Graded Unit 1	F4SF 34	5	5	5			5	5	5	5	
Forestry: Forest Science	F3YW 34		5	5				5			5
Work Supervision Practice	F409 34		5					5	5	5	5
Communication: Analysing and Presenting Complex Communication or Communication: Practical Skills	DE3N 34 D77G 34	5	5	5							
Selection and Management of Machinery for Land Based Industries	D4PE 34	5	5					5			
Soil Management	F21V 34	5	5					5			
Woodland Nursery Production	F408 34		5	5				5		5	5
Forestry: Woodland Management Planning	F404 35		5								
Information Technology Software Applications 1	D75X 34				5	5	5				



Unit title	Unit code	Comms — Writing — reading and understanding	Comms — produce written comms	Comms — Oral comms — Listening and talking	IT	Numeracy — Numbers	Numeracy — Graphical	Problem Solving — Critical Thinking	Problem Solving — Planning and Organising	Problem Solving — Reviewing and Evaluating	Working with Others
Managing Sites for Biodiversity	DN62 34	5	6					6	6	6	
Forestry: Woodland Ecology	F403 35	6	6					6			
Forestry: Forest Policy and Law	F3YT 35	5	5					6			
Forestry and Other Land Use	F3YJ 35	6	6	6	5			6		6	
Forestry Operations: Work Programming	F3YM 34	5	5		5	5	5	5	5		
Establishment of Woodland	F3YC 34	5	5	5				5	5		5
Forestry: Land Measurement	F406 34		5		5	5		5	5		5
Job Costing and Business Calculations	F03K 33	5	5		5	5	5	5			
Arboriculture and Urban Forestry: Graded Unit 2	F4SG 35	6	6		5	5	5	6	6	6	5
Forestry: Forest Design	F4YR 35		6		5	5		6	6	6	
Getting Started in Business	DK2K 34	6	6			5		6	6		
Forestry: Use of Computers in Forest Management	F401 35				6	6	6				
Forestry in Europe	F3YK 35	6		6	5		5	6			

## **Appendix 2: Mapping to National Occupational Standards**

### **Mapping to Lantra National Occupational Standards**

#### **Lantra Sector Skills**

#### **National Occupational Standards December 2005**

#### **Treeworks**

**and**

#### **Trees and Timber Management**

### **Mapping Exercise to HNC/HND Arboriculture and Urban Forestry**

## HNC/HND Arboriculture and Urban Forestry

Unit title	Unit code	Treeworks	Trees and Timber Management
Forestry: Woody Plant Biology	F405 34	T22	
Arboriculture Practice	F3YA 34	T26, T28, T34	CU106
Arboriculture: Amenity Tree Management	F3YB 34	T22, CU78, CU80	T37, T38, T41, T43, CU83, CU147
Urban Woodlands and Green Space	F407 35	CU88	T42, CU147
Employment and Health and Safety Legislation for the Land Based Industries	F0VP 34	CU3, CU3, A	T38, T39, CU106
Forestry: Forest Science	F3YW 34	T3	CU91
Work Supervision Practice	F409 34	T26, T28, T22	T44, T45, CU97, CU106
Communication: Analysing and Presenting Complex Communication or Communication: Practical Skills	DE3N 34 D77G 34		
Selection and Management of Machinery for Land Based Industries	D4PE 34		T44
Soil Management	F21V 34		
Forestry: Woodland Management Planning	F404 35	T3	T40, CU82, CU91, CU147
Woodland Nursery Production	F408 34	CU76, T3	CU147, CU82
Information Technology Software Applications 1	D75X 34		
Arboriculture and Urban Forestry: Graded Unit 1	F4SF 34	T22, CU78	T37, T38, T41, T43, CU83, CU91, CU147
Managing Sites for Biodiversity	DN62 34	CU88	CU82
Forestry: Woodland Ecology	F403 35	CU88	CU91
Forestry: Forest Policy and Law	F3YT 35		T41, CU99
Forestry and Other Land Use	F3YJ 35		
Forestry Operations: Work Programming	F3YM 34		T44, CU97
Establishment of Woodland	F3YC 34	T3, CU76	T38, T40, CU82, CU91, CU147
Forestry: Land Measurement	F406 34		CU91
Job Costing and Business Calculations	F03K 33		T44, CU96, CU97
Forestry: Forest Design	F3YR 35		T40
Getting Started in Business	DK2K 34		CU96, CU99, CU108
Forestry: Use of Computers in Forest Management	F401 35		
Forestry in Europe	F3YK 35		
Arboriculture and Urban Forestry: Graded Unit 2	F4SG 35	CU78, CU88	T37, T44, T45, CU83, CU91, CU96, CU99

### Appendix 3: Suggested credit transfer information

New Unit title	New Unit code	Old Unit title	Old Unit code	Credit transfer conditions
Forestry: Woody Plant Biology	F405 34	Horticultural Biology	D46H 04	Full credit transfer
Arboriculture Practice	F3YA 34	Arboriculture	A1M4 04	Full credit transfer
Arboricultural: Amenity Tree Management	F3YB 34	Amenity Tree Management	D44V 04	Full credit transfer
Urban Woodlands and Green Space	F407 35	Urban Forestry	D4CA 04	Full credit transfer
Employment and Health and Safety Legislation for the Land Based Industries	F0VP 34	Employment and Health and Safety Legislation for Land Based Industries	A4S9 04	Full credit transfer
Arboriculture and Urban Forestry: Graded Unit 1	F4SF 34	Evaluation of Trees in Amenity Sites	A4BR 04	n/a
Forestry: Forest Science	F3YW 34	Forest Science	D4BN 04	Full credit transfer
Work Supervision Practice	F409 34	Supervision and Management	A0HN 04	Full credit transfer
Communications: Analysing and Presenting Complex Communication <b>or</b> Communication: Practical Skills	DE3N 34 D77G 34	Communication: Selecting and Presenting Complex Communication	A0X9 04	
Selection and Management of Machinery for Land Based Industries	D4PE 34	Selection and Management of Machinery		Full credit transfer
Soil Management	F21V 34	Soil Management and Assessment	D7TD 34	Full credit transfer
Forestry: Woodland Management Planning	F404 35	Woodland Operations	D4CC 04	Full credit transfer
Woodland Nursery Production	F408 34	Forest Nursery Production	D4BH 04	Full credit transfer
Information Technology Software Applications 1	D75X 34	Information Technology Applications 1	A6AM 34	Full credit transfer

<b>New Unit title</b>	<b>New Unit code</b>	<b>Old Unit title</b>	<b>Old Unit code</b>	<b>Credit transfer conditions</b>
Managing Sites for Biodiversity	DN62 34	Managing Sites for Nature Conservation	D4PK 04	Full credit transfer
Forestry: Woodland Ecology	F403 35	Forestry: Woodland Ecology	D4C3 03	Full credit transfer
Forestry: Forest Policy and Law	F3YT 35	Forestry: Economic Policy and Legislation	D4BV 04	Full credit transfer
Forestry and Other Land Use	F3YJ 35	Forestry: Conservation and Land Use	D4BT 04	Full credit transfer
Forestry Operations: Work Programming	F3YM 34	Forestry Operations: Work Programming	D4C7 04	Full credit transfer
Establishment of Woodland	F3YC 34	Silviculture	D4C8 04	Full credit transfer
Forestry: Land Measurement	F406 34	Forestry: Land Measurement	D4C0 04	Full credit transfer
Job Costing and Business Calculations	F03K 33	Cost Estimating and Introduction to Contract Procedures for Landscape Work	A4	Full credit transfer
Arboriculture and Urban Forestry: Graded Unit 2	F4SG 35	Forest Planning and Management: Forest Plans		N/A
Forestry: Forest Design	F3YR 35	Landscape Design Appreciation	D52L 04	Full credit transfer
Getting Started in Business	DK2K 34	Forestry: Business Planning		Full credit transfer
Forestry: Use of Computers in Forest Management	F401 35	Use of Computers in Forest Management		Full credit transfer
Forestry in Europe	F3YK 35	European Forestry	D4BC 04	Full credit transfer

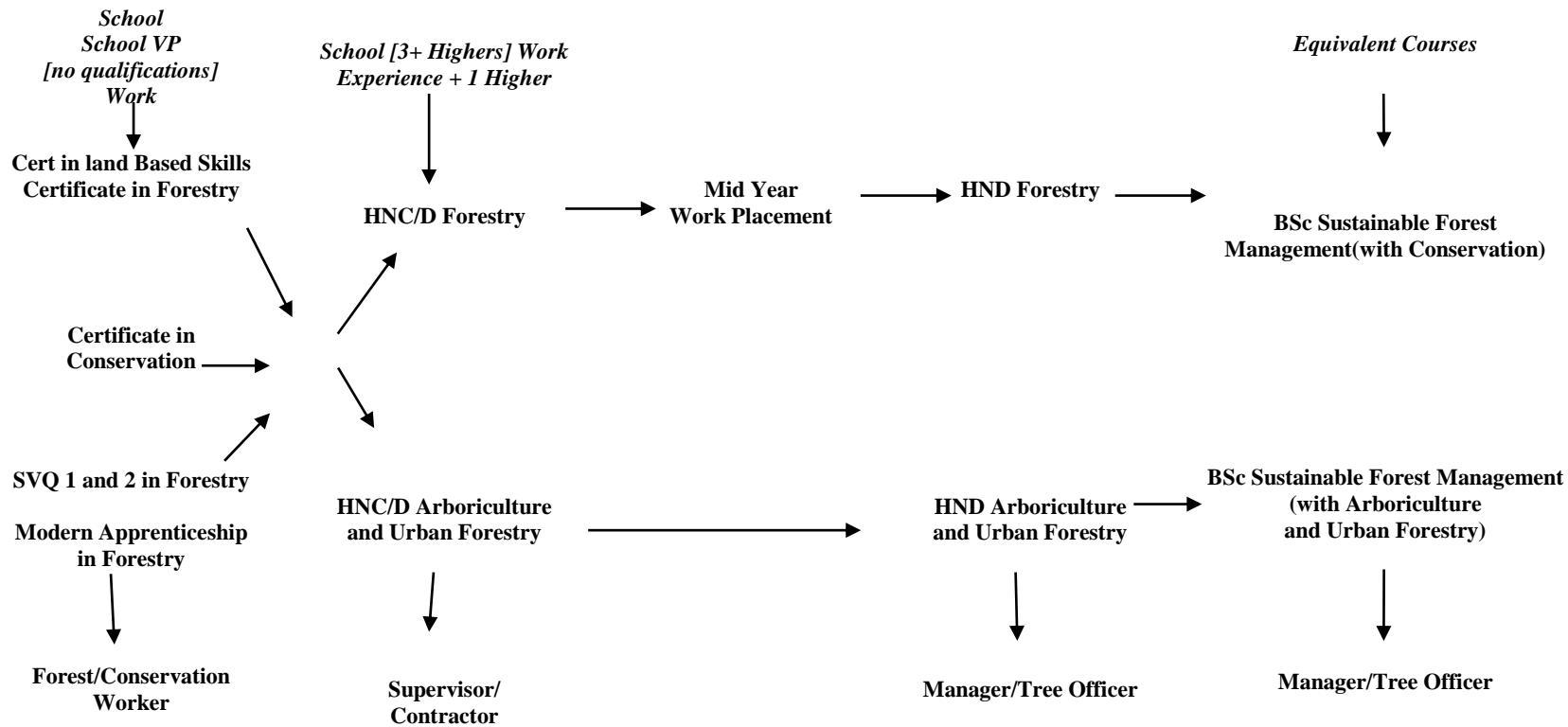
**The above suggested credit transfer arrangements are at the centres discretion and subject the centres own internal procedures and to External Verification by SQA.**

## Appendix 4: Suggested delivery schedule

Unit title	Unit code	Year	Phase	Mandatory (M)/Optional (O)	Credit
Forestry: Woody Plant Biology	F3YA 34	1	2	M	1
Arboriculture Practice	F3YB 34	1	1/2	M	2
Arboricultural: Amenity Tree Management	F3YB 34	1	1/2	M	2
Urban Woodlands and Green Space	F407 35	1	2	M	1
Employment and Health and Safety Legislation for the Land Based Industries	F0VP 34	1	2	M	1
Forestry: Forest Science	F3YW 34	1	1	M	2
Work Supervision Practice	F409 34	1	3	M	1
Communication: Analysing and Presenting Complex Communication <b>or</b> Communication: Practical Skills	DE3N 34 D77G 34	1	1	O	1
Selection and Management of Machinery for Land Based Industries	D4PE 34	1	3	M	1
Soil Management	F21V 34	1	2	M	1
Forestry: Woodland Management Planning	F404 35	1	1	O	1
Woodland Nursery Production	F408 34	1	3	O	1
Information Technology Software Applications 1	D75X 34	1	2	O	1
Arboriculture and Urban Forestry: Graded Unit 1	F4SF 34	1	2/3	M	1
<b>HND 2nd year</b>					
Managing Sites for Biodiversity	DN62 34	2	3	M	2
Forestry: Woodland Ecology	F403 35	2	2/3	M	1
Forestry: Forest Policy and Law	F3YT 35	2	1	M	1
Forestry and Other Land Use	F3YJ 35	2	2	M	1
Forestry Operations: Work Programming	F3YM 34	2	3	O	1.5
Establishment of Woodland	F3YC 34	2	1	M	2
Forestry: Land Measurement	F406 34	2	2	O	1.5
Job Costing and Business Calculations	F03K 33	2	3	M	1
Forestry: Forest Design	F3YR 35	2	1	M	1
Getting Started in Business	DK2K 34	2	3	M	1
Forestry: Use of Computers in Forest Management	F401 35	2	3	O	1
Forestry in Europe	F3YK 35	2	3	O	1
Arboriculture and Urban Forestry: Graded Unit 2	F4SG 35	2	2/3	M	2

## Appendix 5: Educational progression

### Scottish School of Forestry



## Appendix 6: Curriculum maps

### Programme outcomes

#### A Knowledge and Understanding:

- A1 Have a knowledge and understanding of fundamental concepts relating to forestry and arboriculture sustainable management.
- A2 Have a general knowledge and understanding of the forestry and arboriculture industry.
- A3 Have a detailed knowledge and understanding of the practices associated with forestry and arboriculture and forestry and conservation management.
- A4 Have a knowledge and understanding of the specialist practical aspects of forestry and arboriculture and forestry management.
- A5 Have a knowledge and understanding of the business and public relations aspects of forestry and arboriculture and forestry and conservation management.
- A6 Have a knowledge and understanding of the economic and social and environmental impact of forestry and forestry and conservation management.

#### B Intellectual skills learning Outcomes

##### Generic Skills:

- B1 Apply the skills needed for academic study and enquiry.
- B2 Evaluate, research various forms of evidence and information.
- B3 Synthesise relevant information from a variety of sources to gain a coherent understanding of theory and practice.
- B4 Apply strategies for appropriate selection of relevant information from a variety of sources.
- B5 Utilise problem solving skills.
- B6 Effectively use and apply the knowledge and skills acquired in a variety of general and specific situations.



## **C Subject practical skills learning Outcomes**

- C1 Undertake competent and safe working practices relevant to forestry practice and forestry and conservation management.
- C2 Assist in the management of forests on an industrial placement.
- C3 Assist in the management of operations on an industrial placement.
- C4 Assist in the management of personnel on an industrial placement.
- C5 Assist in the financial planning associated with a forest and arboriculture enterprise.

## **D Transferable skills learning Outcomes**

### **Communication, Numeracy, IT, Problem-Solving and Working with Others**

- D1 Candidates will be able to develop oral and written communication skills throughout the Units and during practical placements.
- D2 Candidates will be able to develop numeracy skills throughout the Units.
- D3 Candidates will be able to use a variety of IT packages including word processing, spreadsheets and Internet searches.
- D4 Candidates will develop their problem-solving skills throughout the Units/modules and especially on work placement.
- D5 Candidates will develop their skills associated with Working with Others during their work placement and through specific Units where teamwork is essential.
- D6 Manage time and prioritise workloads effectively.

## Appendix 7: Mapping table

### Curriculum Map — HNC/HND Arboriculture and Urban Forestry

Category	Unit title	Unit code	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	D6
Year 1	Forestry: Woody Plant Biology	F405 34	X																						
	Arboriculture Practice	F3YA 34	X		X	X							X	X	X				X					X	X
	Forestry: Forest Science	F3YW 34	X		X	X			X	X	X	X		X							X	X		X	X
	Arboricultural: Amenity Tree Management	F3YB 34	X		X	X								X		X									
	Urban Woodlands and Green Space	F407 35		X	X	X		X	X	X	X	X											X		
	Employment and Health and Safety Legislation for Land Based Industries	F0YP 34																							
	Evaluation of Trees in Amenity Sites				X	X					X			X									X	X	
	Supervision Practice		X		X					X												X		X	X
	IT Applications 1				X		X			X			X	X	X	X	X		X					X	X
	Woodland Nursery Production												X	X								X	X		
	Woodland Operations		X	X	X							X	X		X										
	Selection and Management of Machinery		X								X			X											
	Communication	DE3N 34 or D77G 34		X		X					X		X			X					X				
Year 2	Soil Management	F21V 34													X										
	Forestry: Woodland Ecology	F403 35	X						X	X	X	X		X									X	X	
	Managing Sites for Biodiversity	DN62 34	X		X	X		X		X	X	X	X	X									X		
	Planning for Urban Wildlife Promotion		X		X			X		X															
	Forestry: Forest Policy and Law	F3YT 35		X	X		X	X		X	X	X	X	X	X		X				X	X	X		
	Forest Management and Planning		X	X	X	X		X	X	X	X	X	X	X	X		X		X		X	X	X	X	X
	Work Programming for Forest Operations		X	X	X				X	X	X		X	X							X	X	X		X
	Forestry and Other Land Use	F3YJ 35	X	X					X	X	X	X	X	X									X		X
	Establishment of Woodland	F3YC 34	X						X	X		X	X	X	X							X	X	X	
	Forestry: Land Measurement	F406 34					X				X		X	X	X						X		X	X	X
	Cost Estimating and Introduction to Contract			X	X								X	X											
	Getting Started in Business	DK2K 34	X													X									
	Forestry: Forest Design	F3YR 35	X				X								X	X					X				
	Forestry in Europe	F3YK 35				X						X	X	X									X		
	Use of Computers in Forest Management							X														X			