



Group Award Specification for: HNCs and HNDs in Built Environment

GJ5P 15	HNC Built Environment
GJ5N 15	HNC Architectural Technology
GJ5F 15	HNC Construction Management
GJ5D 15	HNC Building Surveying
GJ5G 15	HNC Quantity Surveying
GJ5H 16	HND Architectural Technology
GJ5L 16	HND Construction Management
GJ5J 16	HND Building Surveying
GJ5M 16	HND Quantity Surveying

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History of changes

It is anticipated that changes will take place during the life of the qualification and this section will record these changes. This document is the latest version and incorporates the changes summarised below. Centres are advised to check SQA's APS Navigator to confirm they are using the up to date qualification structure.

NOTE: Where a Unit is revised by another Unit:

- ◆ No new centres may be approved to offer the Unit which has been revised.
- ◆ Centres should only enter candidates for the Unit which has been revised where they are expected to complete the Unit before its finish date.

Version number	Description	Date
10	Addition of Optional Unit: H726 34 Building Measurement and Cost Studies has been added as an optional unit to the HNC Quantity Surveying (GJ5G 15)	12/06/24
09	Addition of Optional Unit: The unit 'J50R 35 Conversion and Adaptation of Buildings' has been added as an optional unit to the HNC Architectural Technology (GJ5N 15) framework.	20/10/23
08	Addition of Optional Unit: J50P 34 Architectural Procedures added as an Optional Unit to the HNC and HND framework for Construction Management.	29/08/23
07	Minor amends made throughout the document to correct typos.	15/08/22
06	<p>Addition of Optional Units : HE2G 34 – Building Information Modelling (BIM): Principles added as Optional unit to the Frameworks for:</p> <p>GJ5P 15 - HNC Built Environment GJ5N 15 - HNC Architectural Technology GJ5F 15 - HNC Construction Management GJ5D 15 - HNC Building Surveying GJ5G 15 - HNC Quantity Surveying</p> <p>HE2G 34 – Building Information Modelling (BIM): Principles and HE2H 35 – CAD: Digital Collaboration Practices added as Optional units to the Frameworks for:</p> <p>GJ5H 16 - HND Architectural Technology GJ5L 16 - HND Construction Management GJ5J 16 - HND Building Surveying GJ5M 16 - HND Quantity Surveying</p>	17/08/2021
05	Addition of unit: J50L 34 - Environmental Design added to the HND Architectural Technology (GJ5H 16) framework as an alternative to DW5H 34 - Construction Site Surveying A'.	
04	Revision of Units: H72G 35 Standard Forms of Construction Contract (finish date 31/07/2021) has been re- placed by J50J 35 Construction Contracts: Conditions and Procedures (start date 01/08/2020).	

Version number	Description	Date
	<p>DW53 34 Construction Materials and Specification (finish date 31/07/2021) has been replaced by J50K 34 Construction Materials and Specification (start date 01/08/2020).</p> <p>DW4E 34 Health and Safety in Construction (finish date 31/07/2021) has been replaced by J50M 34 Health and Safety in Construction (start date 01/08/2020).</p> <p>H725 34 Architectural Procedures (finish date 31/07/2021) has been replaced by J50P 34 Architectural Procedures (start date 01/08/2020).</p> <p>DW4X 35 Fire Safety in Buildings (finish date 31/07/2021) has been replaced by J50N 35 Fire Safety in Buildings (start date 01/08/2020).</p> <p>DW3T 35 Conversion and Adaptation of Buildings (finish date 31/07/2021) has been replaced by J50R 35 Conversion and Adaptation of Buildings (start date 01/08/2020)</p>	04/11/20
03	Addition to Unit in optional section H9PW 33 Mathematics for the Built Environment for HNC Built Environment, HNC Architectural Technology, HNC Building Surveying, HNC Construction Management, HNC Quantity Surveying.	21/10/15
02	Additional unit <i>H72F 34 Site Administration</i> added to optional section of the framework.	22/01/15

Contents

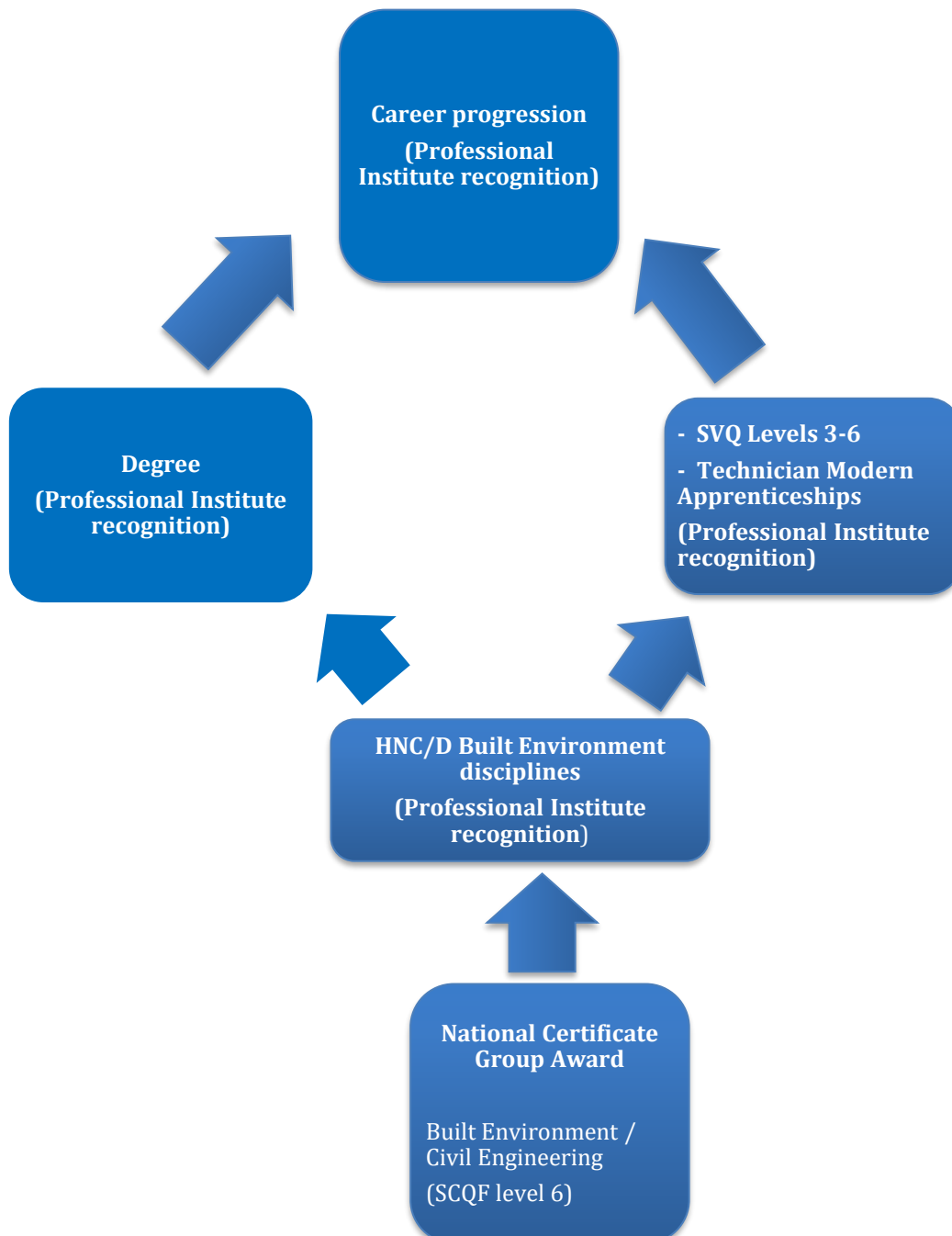
1	Introduction	1
2	Qualifications structure	3
2.1	HNC Built Environment.....	3
2.2	HNC and HND Architectural Technology	4
2.2.1	HNC Architectural Technology	4
2.2.2	HND Architectural Technology	6
2.3	HNC and HND Building Surveying.....	8
2.3.1	HNC Building Surveying	8
2.3.2	HND Building Surveying	9
2.4	HNC and HND Construction Management	11
2.4.1	HNC Construction Management	11
2.4.2	HND Construction Management	13
2.5	HNC and HND Quantity Surveying	15
2.5.1	HNC Quantity Surveying	15
2.5.2	HND Quantity Surveying	17
3	Aims of the qualifications.....	19
3.1	Aims of Built Environment	19
3.2	Aims of HNC and HND Architectural Technology	20
3.3	Aims of HNC and HND Building Surveying.....	22
3.4	Aims of HNC and HND Construction Management.....	24
3.5	Aims of HNC and HND Quantity Surveying	26
3.6	Graded Units	27
4	Recommended entry to the qualifications	28
4.1	Core Skills entry profile.....	29
5	Additional benefits of the qualification in meeting employer needs	30
5.1	Mapping of qualification aims to Units	31
5.2	Mapping of National Occupational Standards (NOS) and/or trade body standards	41
5.3	Mapping of Core Skills development opportunities across the qualifications.....	43
5.4	Assessment Strategy for the qualifications	48
6	Guidance on approaches to delivery and assessment.....	62
6.1	Sequencing/integration of Units.....	62
6.2	Delivery	63
6.3	Assessment.....	63
6.4	Recognition of Prior Learning	64
6.4.1	Articulation and/or progression	65
6.4.2	Professional recognition.....	66
6.4.3	Transitional Arrangements.....	66
6.4.4	Credit transfer	67
6.5	Opportunities for e-assessment.....	69
6.6	Support materials	69
6.7	Resource requirements	69
7	General information for centres	70
8	Glossary of terms	70
9	General information for learners.....	73

1 Introduction

This document was previously known as the Arrangements document. The purpose of this document is to:

- ◆ assist centres to implement, deliver and manage the qualification
- ◆ provide a guide for new staff involved in offering the qualification
- ◆ inform Course managers, teaching staff, assessors, learners, employers and HEIs of the aims and purpose of the qualification
- ◆ provide details of the range of learners the qualification is suitable for and progression opportunities

Progression opportunities exist as below:



This is the Group Award specification for the revised Group Awards in the Built Environment suite, which were validated in February 2014. This document contains the aims, guidance on access, details of Group Award Structure/s and guidance on delivery.

Built Environment embraces Architectural Technology, Construction Management, Building Surveying and Quantity Surveying disciplines.

The Qualifications Design Team (QDT) was created to manage the development process in consultation with employers, Professional Institutes, higher education colleagues and further education partners.

The qualification profiles fulfil the requirements of employers in a continuously evolving industry by including Units which embrace traditional as well as modern methods of construction, technical communications skills, sustainability and building performance. Learners entering straight from school have the opportunity to enhance problem solving, numeracy, communication and manual and computer-aided construction drawing skills up to SCQF level 8 Units with specialist content.

In the design programmes the qualifications are balanced between employer needs and the requirement to provide learners with the opportunity to maximise their educational attainment. The qualifications are designed as discrete, specialised qualifications to equip learners with the knowledge skills and understanding required for employment or progression to further academic and/or professional qualifications.

Currently, the HNC awards are embedded in the Modern Apprenticeship in Construction frameworks for Scotland at level 3, Technical Occupations. The HND awards are embedded in the Modern Apprenticeship in Construction frameworks for Scotland at level 4, Technical Occupations. They relate directly to an array of National Occupational Standards embraced in the range of SVQs defined in the Modern Apprenticeships.

2 Qualifications structure

2.1 HNC Built Environment

4 code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
Mandatory Units (10 credits required)					
DW3R	34	Architectural Design Sketching and Drawing	1	8	7
H726	34*	Building Measurement and Cost Studies	1	8	7
DW4H	34	Building Science	1	8	7
DW4P	33	Building Services: An Introduction	1	8	6
J50K	34*	Construction Materials and Specification	1	8	7
DW5H	34	Construction Site Surveying A	1	8	7
DW54	33	Construction Technology: Domestic Construction	1	8	6
H72A	34	Construction Technology: Substructure	1	8	7
H72D	35	Sustainability and Modern Methods of Construction	1	8	8
H72R	34	Built Environment: Graded Unit 1	1	8	7
Mandatory Option (1 credit needed)					
DW1E	34	CAD: 2D I	1	8	7
DW12	34	CAD: 2D II	1	8	7
Optional Units (1 credit needed)					
J50M	34*	Health and Safety in Construction	1	8	7
H728	34	Construction Industry Fundamentals	1	8	7
H72L	33	Mathematics for Construction	1	8	6
H72C	35	Scottish Law for Construction	1	8	8
DW45	34	Structural Mechanics	1	8	7
H9PW	33	Mathematics for the Built Environment	1	8	6
HE2G	34*	Building Information Modelling (BIM): Principles	1	8	7

This Group Award is made up of 12 SQA Unit credits.

It comprises 96 SCQF credit points.

16 are at level 6, 64 are at SCQF level 7 and 8 are at SCQF level 8 in the mandatory section.

A further 8 SCQF credit points are required to be achieved from the selection of Units at SCQF level 6, level 7 and level 8 in the optional section.

2.2 HNC and HND Architectural Technology

2.2.1 HNC Architectural Technology

4 code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
Mandatory Units (9 credits required)					
DW3R	34	Architectural Design Sketching and Drawing	1	8	7
J50P	34*	Architectural Procedures	1	8	7
H727	35	Building Services in Large Buildings	1	8	8
J50K	34*	Construction Materials and Specification	1	8	7
H72A	34	Construction Technology: Substructure	1	8	7
H729	34	Construction Technology: Industrial/Commercial Superstructure	1	8	7
DW3V	34	Design of Building Structures	1	8	7
DW3W	34	Statutory Control of Buildings	1	8	7
H72S	34	Architectural Technology: Graded Unit 1	1	8	7
Mandatory option (minimum 1 credit required)					
DW1E	34	CAD: 2D I	1	8	7
DW12	34	CAD: 2D II	1	8	7
Optional Units (minimum 2 credits required)					
H726	34	Building Measurement and Cost Studies	1	8	7
DW4P	33	Building Services: An Introduction	1	8	6
DW4M	35	Building Services: Heating, Lighting and Acoustics	1	8	8
DW54	33	Construction Technology: Domestic Construction	1	8	6
H728	34	Construction Industry Fundamentals	1	8	7
DW4H	34	Building Science	1	8	7
J50M	34*	Health and Safety in Construction	1	8	7
H72L	33	Mathematics for Construction	1	8	6
DE3R	34	Personal Development Planning	1	8	7
DW4G	34	Quality in Construction	1	8	7
H72C	35	Scottish Law for Construction	1	8	8
H72F	34	Site Administration	1	8	7
J50J	35*	Construction Contracts: Conditions and Procedures	1	8	8
DW45	34	Structural Mechanics	1	8	7
H72D	35	Sustainability and Modern Methods of Construction	1	8	8
H9PW	33	Mathematics for the Built Environment	1	8	6
HE2G	34*	Building Information Modelling (BIM): Principles	1	8	7
J50R	35*	Conversion and Adaptation of Buildings	1	8	8

*Refer to History of Changes Table

This Group Award is made up of 12 SQA Unit credits.

It comprises 96 SCQF credit points.

72 are at SCQF level 7 and 8 are at SCQF level 8 in the mandatory section.

A further 16 SCQF credit points are required to be achieved from the selection of Units at SCQF level 6, level 7 and level 8 in the optional section.

2.2.2 HND Architectural Technology

4 code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
Mandatory Units (24 credits required)					
DW3R	34	Architectural Design Sketching and Drawing	1	8	7
F4MY	34	Architecture: Influences on the Development of Scottish Architecture	1	8	7
J50P	34*	Architectural Procedures	1	8	7
H726	34	Building Measurement and Cost Studies	1	8	7
DW4H	34	Building Science	1	8	7
DW4P	33	Building Services: An Introduction	1	8	6
H727	35	Building Services in Large Buildings	1	8	8
H728	34	Construction Industry Fundamentals	1	8	7
J50K	34*	Construction Materials and Specification	1	8	7
DW5H OR J50L	34 34*	Construction Site Surveying A OR Environmental Design	1 1	8 8	7 7
DW54	33	Construction Technology: Domestic Construction	1	8	6
H72A	34	Construction Technology: Substructure	1	8	7
H729	34	Construction Technology: Industrial/Commercial Superstructure	1	8	7
DW56	35	Construction Technology: Specialist Systems	1	8	8
J50R	35*	Conversion and Adaptation of Buildings	1	8	8
DW3V	34	Design of Building Structures	1	8	7
J50N	35*	Fire Safety in Buildings	1	8	8
H72C	35	Scottish Law for Construction	1	8	8
DW3W	34	Statutory Control of Buildings	1	8	7
J50J	35*	Construction Contracts: Conditions and Procedures	1	8	8
DW45	34	Structural Mechanics	1	8	7
H72D	35	Sustainability and Modern Methods of Construction	1	8	8
H72T	35	Architectural Technology: Graded Unit 2	2	16	8
Mandatory Option (1 credit required)					
H72S	34	Architectural Technology: Graded Unit 1	1	8	7
H72R	34	Built Environment: Graded Unit 1	1	8	7
Mandatory Option (minimum 1 credit required)					
DW1E	34	CAD: 2D I	1	8	7
DW12	34	CAD: 2D II	1	8	7
Mandatory Option (minimum 1 credit required)					
H72L	33	Mathematics for Construction	1	8	6
H9PW	33	Mathematics for the Built Environment	1	8	6

HND Architectural Technology (cont)

4 code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
Optional Units (minimum 3 credits required)					
DW52	34	Building Maintenance Technology	1	8	7
DW4M	35	Building Services: Heating, Lighting and Acoustics	1	8	8
DW1D	34	CAD: Architectural 1	1	8	7
DW4J	35	Construction Planning	1	8	8
J50M	34*	Health and Safety in Construction	1	8	7
DW4G	34	Quality in Construction	1	8	7
F1YK	34	Renewable Energy Systems: Microgeneration Systems	1	8	7
DG6E	34	Work Role Effectiveness (2003)	3	24	7
DW13	34	CAD: 3D Modelling	2	16	7
DE3R	34	Personal Development Planning	1	8	7
H72F	34	Site Administration	1	8	7
HE2G	34*	Building Information Modelling (BIM): Principles	1	8	7
HE2H	35*	CAD: Digital Collaboration Practices	2	16	8

This Group Award is made up of 30 SQA Unit credits.

It comprises 240 SCQF credit points.

24 are at SCQF level 6, 120 are at SCQF level 7 and 72 are at SCQF level 8 in the mandatory section.

A further 24 SCQF credit points are required to be achieved from the selection of Units at SCQF level 7 and level 8 in the optional section.

2.3 HNC and HND Building Surveying

2.3.1 HNC Building Surveying

4 code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
Mandatory Units (8 credits required)					
DW52	34	Building Maintenance Technology	1	8	7
DW50	34	Building Inspection	1	8	7
H727	35	Building Services in Large Buildings	1	8	8
J50K	34*	Construction Materials and Specification	1	8	7
H729	34	Construction Technology: Industrial/Commercial Superstructure	1	8	7
H72A	34	Construction Technology: Substructure	1	8	7
H726	34	Building Measurement and Cost Studies	1	8	7
H72V	34	Building Surveying: Graded Unit 1	1	8	7
Mandatory Option (1 credit required)					
DW1E	34	CAD: 2D I	1	8	7
DW12	34	CAD: 2D II	1	8	7
Optional Units (3 credits required)					
DW4P	33	Building Services: An Introduction	1	8	6
DW51	34	Building Maintenance Management	1	8	7
DW5H	34	Construction Site Surveying A	1	8	7
DW54	33	Construction Technology: Domestic Construction	1	8	6
DW56	35	Construction Technology: Specialist Systems	1	8	8
J50R	35*	Conversion and Adaptation of Buildings	1	8	8
DW4H	34	Building Science	1	8	7
DW4V	35	Facilities Management: Operational and Support Services	1	8	8
J50M	34*	Health and Safety in Construction	1	8	7
H72L	33	Mathematics for Construction	1	6	8
DE3R	34	Personal Development Planning	1	8	7
DW3L	34	Quantitative Building Studies: Floors and Roofs	1	8	7
DW3W	34	Statutory Control of Buildings	1	8	7
DW45	34	Structural Mechanics	1	8	7
H9PW	33	Mathematics for the Built Environment	1	8	6
HE2G	34*	Building Information Modelling (BIM): Principles	1	8	7

This Group Award is made up of 12 SQA Unit credits.

It comprises 96 SCQF credit points.

64 are at SCQF level 7 and 8 are at SCQF level 8 in the mandatory section.

A further 24 SCQF credit points are required to be achieved from the selection of Units at SCQF level 6, level 7 and level 8 in the optional section.

2.3.2 HND Building Surveying

4 Code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
Mandatory Units (24 credits required)					
DW3R	34	Architectural Design Sketching and Drawing	1	8	7
DW50	34	Building Inspection	1	8	7
DW52	34	Building Maintenance Technology	1	8	7
H726	34	Building Measurement and Cost Studies	1	8	7
DW4P	33	Building Services: An Introduction	1	8	6
H727	35	Building Services in Large Buildings	1	8	8
DW4M	35	Building Services: Heating, Lighting and Acoustics	1	8	8
H728	34	Construction Industry Fundamentals	1	8	7
J50K	34*	Construction Materials and Specification	1	8	7
DW5H	34	Construction Site Surveying A	1	8	7
DW54	33	Construction Technology: Domestic Construction	1	8	6
H729	34	Construction Technology: Industrial/Commercial Superstructure	1	8	7
H72A	34	Construction Technology: Substructure	1	8	7
J50R	35*	Conversion and Adaptation of Buildings	1	8	8
DW4H	34	Building Science	1	8	7
DW45	34	Structural Mechanics	1	8	7
J50N	35*	Fire Safety in Buildings	1	8	8
DW3L	34	Quantitative Building Studies: Floors and Roofs	1	8	7
H72C	35	Scottish Law for Construction	1	8	7
DW3W	34	Statutory Control of Buildings	1	8	7
DW40	35	Surveying Historic Buildings	1	8	8
H72D	35	Sustainability and Modern Methods of Construction	1	8	8
H72Y	35	Building Surveying: Graded Unit 2	2	16	8
Mandatory Option (1 credit required)					
DW1E	34	CAD: 2D I	1	8	7
DW12	34	CAD: 2D II	1	8	7
Mandatory Option (1 credit required)					
H72V	34	Building Surveying: Graded Unit 1	1	8	7
H72R	34	Built Environment: Graded Unit 1	1	8	7
Mandatory Option (1 credit required)					
H72L	33	Mathematics for Construction	1	8	6
H9PW	33	Mathematics for the Built Environment	1	8	6

HND Building Surveying (cont)

4 Code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
Optional Units (minimum 3 credits required)					
J50P	34*	Architectural Procedures	1	8	7
DW51	34	Building Maintenance Management	1	8	7
DW4N	35	Building Services: Ventilation, Air Conditioning and Refrigeration	1	8	8
DW13	34	CAD: 3D Modelling	2	16	7
DW1D	34	CAD: Architectural 1	1	8	7
DW56	35	Construction Technology: Specialist Systems	1	8	8
DW3H	34	Estimating	1	8	7
DW4V	35	Facilities Management: Operational and Support Services	1	8	8
J50M	34*	Health and Safety in Construction	1	8	7
DE3R	34	Personal Development Planning	1	8	7
DW3M	34	Quantitative Building Studies: Substructure and Drainage	1	8	7
J50J	35*	Construction Contracts: Conditions and Procedures	1	8	8
DW3V	34	Design of Building Structures	1	8	7
DG6E	34	Work Role Effectiveness (2003)	3	24	7
DW4J	35	Construction Planning	1	8	8
DW3G	35	Economics and the Built Environment	1	8	8
DW4W	35	Facilities Management: Property Services	1	8	8
DW4Y	35	Facilities Resource Planning and Contract Management	1	8	8
DW3J	35	Financial Studies for the Construction Industry	1	8	8
DW4K	35	Human Resource Management in Construction	1	8	8
DW43	35	Managing Construction Organisations	1	8	8
DW4G	34	Quality in Construction	1	8	7
F1YK	34	Renewable Energy Systems: Microgeneration Systems	1	8	7
HE2G	34*	Building Information Modelling (BIM): Principles	1	8	7
HE2H	35*	CAD: Digital Collaboration Practices	2	16	8

This Group Award is made up of 30 SQA Unit credits.

It comprises 240 SCQF credit points.

24 are at SCQF level 6, 128 are at SCQF level 7 and 64 are at SCQF level 8 in the mandatory section.

A further 24 SCQF credit points are required to be achieved from the selection of Units at SCQF level 7 and level 8 in the optional section.

2.4 HNC and HND Construction Management

2.4.1 HNC Construction Management

4 code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
Mandatory Units (9 credits required)					
H727	35	Building Services in Large Buildings	1	8	8
J50K	34*	Construction Materials and Specification	1	8	7
DW5H	34	Construction Site Surveying A	1	8	7
H72A	34	Construction Technology: Substructure	1	8	7
H729	34	Construction Technology: Industrial/Commercial Superstructure	1	8	7
H72F	34	Site Administration	1	8	7
J50J	35*	Construction Contracts: Conditions and Procedures	1	8	8
J50M	34*	Health and Safety in Construction	1	8	7
H730	34	Construction Management: Graded Unit 1	1	8	7
Mandatory option (1 credit required)					
DW1E	34	CAD: 2D I	1	8	7
DW12	34	CAD: 2D II	1	8	7
Optional Units (2 credits required)					
DW3R	34	Architectural Design Sketching and Drawing	1	8	7
H726	34	Building Measurement and Cost Studies	1	8	7
DW4P	33	Building Services: An Introduction	1	8	6
H728	34	Construction Industry Fundamentals	1	8	7
DW4J	35	Construction Planning	1	8	8
DW54	33	Construction Technology: Domestic Construction	1	8	6
DW4H	34	Building Science	1	8	7
DW3H	34	Estimating	1	8	7
DW3J	35	Financial Studies for the Construction Industry	1	8	8
DW4K	35	Human Resource Management in Construction	1	8	8
DW43	35	Managing Construction Organisations	1	8	8
H72L	33	Mathematics for Construction	1	8	6
DE3R	34	Personal Development Planning	1	8	7
DW3M	34	Quantitative Building Studies: Substructure and Drainage	1	8	7
DW4G	34	Quality in Construction	1	8	7
F1YK	34	Renewable Energy Systems: Microgeneration Systems	1	8	7
H72C	35	Scottish Law for Construction	1	8	8
DW45	34	Structural Mechanics	1	8	7
H72D	35	Sustainability and Modern Methods of Construction	1	8	8
H9PW	33	Mathematics for the Built Environment	1	8	6

HE2G	34*	Building Information Modelling (BIM): Principles	1	8	7
J50P	34*	Architectural Procedures	1	8	7

This Group Award is made up of 12 SQA Unit credits.

It comprises 96 SCQF credit points.

64 are at SCQF level 7 and 16 are at SCQF level 8 in the mandatory section.

A further 16 SCQF credit points are required to be achieved from the selection of Units at SCQF level 6, SCQF level 7 and level 8 in the optional section.

2.4.2 HND Construction Management

4 code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
Mandatory Units (25 credits required)					
DW3R	34	Architectural Design Sketching and Drawing	1	8	7
H726	34	Building Measurement and Cost Studies	1	8	7
DW4P	33	Building Services: An Introduction	1	8	6
H727	35	Building Services in Large Buildings	1	8	8
H728	34	Construction Industry Fundamentals	1	8	7
J50K	34*	Construction Materials and Specification	1	8	7
DW4J	35	Construction Planning	1	8	8
DW5H	34	Construction Site Surveying A	1	8	7
DW5J	34	Construction Site Surveying B	1	8	7
DW54	33	Construction Technology: Domestic Construction	1	8	6
H72A	34	Construction Technology: Substructure	1	8	7
H729	34	Construction Technology: Industrial/Commercial Superstructure	1	8	7
DW3G	35	Economics and the Built Environment	1	8	8
DW4H	34	Building Science	1	8	7
J50M	34*	Health and Safety in Construction	1	8	7
DW4K	35	Human Resource Management in Construction	1	8	8
DW43	35	Managing Construction Organisations	1	8	8
DW4G	34	Quality in Construction	1	8	7
H72C	35	Scottish Law for Construction	1	8	8
H72F	34	Site Administration	1	8	7
DW3W	34	Statutory Control of Buildings	1	8	7
J50J	35*	Construction Contracts: Conditions and Procedures	1	8	8
H72D	35	Sustainability and Modern Methods of Construction	1	8	8
H731	35	Construction Management: Graded Unit 2	2	16	8
Mandatory Option (1 credit required)					
DW1E	34	CAD: 2D I	1	8	7
DW12	34	CAD: 2D II	1	8	7
Mandatory Option (1 credit required)					
H72R	34	Built Environment: Graded Unit 1	1	8	7
H730	34	Construction Management: Graded Unit 1	1	8	7
Mandatory Option (1 credit required)					
H72L	33	Mathematics for Construction	1	8	6
H9PW	33	Mathematics for the Built Environment	1	8	6

HND Construction Management (cont)

Optional Units (2 credits required)					
DW50	34	Building Inspection	1	8	7
DW56	35	Construction Technology: Specialist Systems	1	8	8
DW3V	34	Design of Building Structures	1	8	7
DW3H	34	Estimating	1	8	7
DW3J	35	Financial Studies for the Construction Industry	1	8	8
DE3R	34	Personal Development Planning	1	8	7
DW3M	34	Quantitative Building Studies: Substructure and Drainage	1	8	7
F1YK	34	Renewable Energy Systems: Microgeneration Systems	1	8	7
DW45	34	Structural Mechanics	1	8	7
DG6E	34	Work Role Effectiveness (2003)	3	24	7
HE2G	34*	Building Information Modelling (BIM): Principles	1	8	7
HE2H	35*	CAD: Digital Collaboration Practices	2	16	8
J50P	34*	Architectural Procedures	1	8	7

This Group Award is made up of 30 SQA Unit credits.

It comprises 240 SCQF credit points.

24 are at SCQF level 6, 120 are at SCQF level 7 and 80 are at SCQF level 8 in the mandatory section.

A further 16 SCQF credit points are required to be achieved from the selection of Units at SCQF level 6, level 7 and level 8 in the optional section.

2.5 HNC and HND Quantity Surveying

2.5.1 HNC Quantity Surveying

4 code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
Mandatory Units (9 credits required)					
H727	35	Building Services in Large Buildings	1	8	8
J50K	34*	Construction Materials and Specification	1	8	7
H72A	34	Construction Technology: Substructure	1	8	7
H729	34	Construction Technology: Industrial/Commercial Superstructure	1	8	7
DW3H	34	Estimating	1	8	7
DW3L	34	Quantitative Building Studies: Floors and Roofs	1	8	7
DW3M	34	Quantitative Building Studies: Substructures and Drainage	1	8	7
J50J	35*	Construction Contracts: Conditions and Procedures	1	8	8
H732	34	Quantity Surveying: Graded Unit 1	1	8	7
Mandatory option (1 credit required)					
DW1E	34	CAD: 2D I	1	8	7
DW12	34	CAD: 2D II	1	8	7
Optional Units (2 credits required)					
DW4P	33	Building Services: An Introduction	1	8	6
H728	34	Construction Industry Fundamentals	1	8	7
DW54	33	Construction Technology: Domestic Construction	1	8	6
DW4H	34	Building Science	1	8	7
DW3J	35	Financial Studies for the Construction Industry	1	8	8
J50M	34*	Health and Safety in Construction	1	8	7
H72L	33	Mathematics for Construction	1	8	6
DE3R	34	Personal Development Planning	1	8	7
DW3Y	35	Quantity Surveying Practice	1	8	8
F1YK	34	Renewable Energy Systems: Microgeneration Systems	1	8	7
H72F	34	Site Administration	1	8	7
H72D	35	Sustainability and Modern Methods of Construction	1	8	8
H72C	35	Scottish Law for Construction	1	8	8
H9PW	33	Mathematics for the Built Environment	1	8	6
HE2G	34*	Building Information Modelling (BIM): Principles	1	8	7
H726	34	Building Measurement and Cost Studies	1	8	7

This Group Award is made up of 12 SQA Unit credits.

It comprises 96 SCQF credit points.

64 are at SCQF level 7 and 16 are at SCQF level 8 in the mandatory section.

A further 16 SCQF credit points are required to be achieved from the selection of Units at SCQF level 6, SCQF level 7 and level 8 in the optional section.

2.5.2 HND Quantity Surveying

4 code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
Mandatory Units (23 credits required)					
DW3R	34	Architectural Design Sketching and Drawing	1	8	7
H726	34	Building Measurement and Cost Studies	1	8	7
DW4P	33	Building Services: An Introduction	1	8	6
H727	35	Building Services in Large Buildings	1	8	8
H728	34	Construction Industry Fundamentals	1	8	7
J50K	34*	Construction Materials and Specification	1	8	7
DW5H	34	Construction Site Surveying A	1	8	7
DW54	33	Construction Technology: Domestic Construction	1	8	6
H72A	34	Construction Technology: Substructure	1	8	7
H729	34	Construction Technology: Industrial/Commercial Superstructure	1	8	7
DW3G	35	Economics and the Built Environment	1	8	8
DW4H	34	Environmental Building Science	1	8	7
DW3H	34	Estimating	1	8	7
DW3J	35	Financial Studies for the Construction Industry	1	8	8
DW3L	34	Quantitative Building Studies: Floors and Roofs	1	8	7
DW3M	34	Quantitative Building Studies: Substructure and Drainage	1	8	7
DW3Y	35	Quantity Surveying Practice	1	8	8
H72C	35	Scottish Law for Construction	1	8	8
J50J	35*	Construction Contracts: Conditions and Procedures	1	8	8
DW3W	34	Statutory Control of Buildings	1	8	7
H72D	35	Sustainability and Modern Methods of Construction	1	8	8
H733	35	Quantity Surveying: Graded Unit 2	2	16	8
Mandatory Option (1 credit required)					
DW1E	34	CAD: 2D I	1	8	7
DW12	34	CAD: 2D II	1	8	7
Mandatory Option (1 credit required)					
H72R	34	Built Environment: Graded Unit 1	1	8	7
H732	34	Quantity Surveying: Graded Unit 1	1	8	7
Mandatory Option (1 credit required)					
H72L	33	Mathematics for Construction	1	8	6
H9PW	33	Mathematics for the Built Environment	1	8	6

HND Quantity Surveying (cont)

4 code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
Optional Units (4 credits required)					
DW4J	35	Construction Planning	1	8	8
DW56	35	Construction Technology: Specialist Systems	1	8	8
J50M	34*	Health and Safety in Construction	1	8	7
DW4K	35	Human Resource Management in Construction	1	8	8
DE3R	34	Personal Development Planning	1	8	7
DW4G	34	Quality in Construction	1	8	7
DW3K	34	Quantitative Building Studies: Building Services	1	8	7
F1YK	34	Renewable Energy Systems: Microgeneration Systems	1	8	7
H72F	34	Site Administration	1	8	7
DW45	34	Structural Mechanics	1	8	7
DG6E	34	Work Role Effectiveness (2003)	3	24	7
HE2G	34*	Building Information Modelling (BIM): Principles	1	8	7
HE2H	35*	CAD: Digital Collaboration Practices	2	16	8

This Group Award is made up of 30 SQA Unit credits.

It comprises 240 SCQF credit points.

24 are at SCQF level 6, 112 are at SCQF level 7 and 72 are at SCQF level 8 in the mandatory section.

A further 32 SCQF credit points are required to be achieved from the selection of Units at SCQF level 7 and level 8 in the optional section.

3 Aims of the qualifications

3.1 Aims of Built Environment

Target learner group

The HNC programme is suitable for a wide range of learners including:

- ◆ school leavers
- ◆ learners progressing from a lower level award in construction or a closely related discipline
- ◆ adult returners to education
- ◆ learners in employment who wish to enhance their career prospects
- ◆ Modern Apprentices

General aims — to develop:

- ◆ skills of study, research and analysis
- ◆ ability to define and solve problems
- ◆ transferable skills
- ◆ ability to be flexible and work cooperatively with others
- ◆ responsibility for own learning
- ◆ planning, organisational and review/evaluation skills
- ◆ technical skills — broadening and deepening
- ◆ oral, written and pictorial communication skills
- ◆ numerical and ICT skills
- ◆ resource management ability
- ◆ flexibility, knowledge, skills and motivation as a basis for progression to graduate and postgraduate studies

Principle aims:

- 1 Prepare learners for employment as technicians, and supervisors in the mainstream construction industry with a range of employers including Architects, Contractors, Building Control, Housing Associations and other property responsibilities.
- 2 Provide learners with a range of basic contemporary vocational skills utilising modern equipment and techniques available for surveying, setting out, construction drawing and correct use of building materials thus enabling learners to make an immediate contribution in employment in the Built Environment sector.
- 3 Provide a choice of optional Units that will allow learners to develop in other areas relevant to future employment or progression via an HND in one of the Built Environment disciplines or higher education.
- 4 Provide learners with a range of skills to support learning in the SVQ 3 and SVQ 4 Construction: Technical Modern Apprenticeship Frameworks.
- 5 Enable learners to achieve appropriate professional body recognition, in particular but not exclusively, the Chartered Institute of Building.

3.2 Aims of HNC and HND Architectural Technology

Architectural Technicians are employed in private practice and work with Architects, Surveyors, Interior Designers and Architectural Technologists. They can also be employed by specialist design/build contractors, local authorities and larger organisations to provide in-house design/drafting services.

Specific skills include:

- ◆ preparing design proposals using CAD and traditional methods
- ◆ contributing to the detailed design process and co-ordinating detailed design information
- ◆ preparing specifications for construction work
- ◆ preparing drawings, plans and documents for statutory approvals
- ◆ contribute to design stage risk assessment
- ◆ collating and organising technical information
- ◆ contributing to meetings and document preparation

Investigating technical information and factors that affect developments, including:

- ◆ user needs
- ◆ site and building surveys
- ◆ regulatory requirements
- ◆ preparing regulatory applications

The HNC programme is suitable for a wide range of learners including:

- ◆ school leavers
- ◆ learners progressing from a lower level award in Architectural Technology or a closely related discipline
- ◆ adult returners to education
- ◆ learners in employment who wish to enhance their career prospects

The HND programme is suitable for a wide range of learners including:

- ◆ school leavers
- ◆ learners progressing from an HNC in Architectural Technology or HNC Built Environment or a closely related discipline
- ◆ adult returners to education
- ◆ learners in employment who wish to enhance their career prospects

The Principle aims are to:

HNC

- 1 Prepare learners for employment as Architectural Technicians in private practice working with Architects, Surveyors, Interior Designers and Architectural Technologists in specialist design/build contractors, local authorities and larger organisations with in-house design/drafting services.
- 2 Provide learners with a range of basic contemporary vocational skills including the preparation, co-ordination and communication of technical information including drawings, graphical information, reports and schedules, contributing to meeting relevant statutory regulations and controlling projects by monitoring agreed quality standards and obtaining, recording and organising information.
- 3 Provide a choice of optional Units that will allow learners to develop in other areas relevant to future employment or progression via an HND in Architectural Technology or higher education.
- 4 Provide learners with a range of skills to support learning in the SVQ 3 and SVQ 4 Construction: Technical Modern Apprenticeship Frameworks.
- 5 Enable learners to achieve appropriate professional body recognition, in particular but not exclusively, the Chartered Institute of Architectural Technology.

HND

- 6 Prepare learners for employment as senior Architectural Technicians in private practice working with Architects, Surveyors, Interior Designers and Architectural Technologists in specialist design/build contractors, local authorities and larger organisations with in-house design/drafting services.
- 7 Provide learners with a range of contemporary vocational skills including the preparation, co-ordination and communication of technical information including drawings, graphical information, reports and schedules, contributing to meeting relevant statutory regulations and controlling projects by monitoring agreed quality standards and obtaining, recording and organising information.
- 8 Provide a choice of optional Units that will allow learners to develop in other areas relevant to future employment or progression via higher education.
- 9 Provide learners with a range of skills to support learning in the SVQ 4 Construction: Technical Modern Apprenticeship Frameworks.
- 10 Enable learners to achieve appropriate professional body recognition, in particular but not exclusively, the Chartered Institute of Architectural Technology.

3.3 Aims of HNC and HND Building Surveying

Building surveyors provide professional advice on property and construction for commercial companies and consultants, central and local government, and private individuals.

The HNC and HND contribute significantly to learners' education and personal development in promoting core and transferable skills important for future employment within the construction and other industries. The development of competencies in this vocational context will improve generic skills in communication, presentation of technical information and working with others.

The HNC programme is suitable for a wide range of learners including:

- ◆ school leavers
- ◆ learners progressing from a lower level award in Building Surveying or a closely related discipline
- ◆ adult returners to education
- ◆ learners in employment who wish to enhance their career prospects

The HND programme is suitable for a wide range of learners including:

- ◆ school leavers
- ◆ learners progressing from an HNC Building Surveying or HNC Built Environment or a closely related discipline
- ◆ adult returners to education
- ◆ learners in employment who wish to enhance their career prospects

General aims — to develop:

- ◆ skills of study, research and analysis
- ◆ ability to define and solve problems
- ◆ transferable skills
- ◆ ability to be flexible and work cooperatively with others
- ◆ responsibility for own learning
- ◆ planning, organisational and review/evaluation skills
- ◆ technical skills — broadening and deepening
- ◆ oral, written and pictorial communication skills
- ◆ numerical and ICT skills
- ◆ resource management ability
- ◆ flexibility, knowledge, skills and motivation as a basis for progression to graduate and postgraduate study.

The Principle aims are to:

HNC

- 1 Prepare learners for employment as technical surveyors providing professional advice on property and construction for commercial companies and consultants, central and local government, and private individuals.
- 2 Provide learners with a range of basic contemporary vocational skills including preparation of drawings, specification writing, land surveying, surveying historic buildings, maintenance schedules, etc, contributing significantly to learners' education and personal development in promoting core and transferable skills important for future employment within the construction and other industries.
- 3 Provide a choice of optional Units that will allow learners to develop in other areas relevant to future employment or progression via an HND in Building Surveying or higher education.
- 4 Provide learners with a range of skills to support learning in the SVQ 3 and SVQ 4 Construction: Technical Modern Apprenticeship Frameworks.
- 5 Enable learners to achieve appropriate professional body recognition, in particular but not exclusively, the Royal Institute of Chartered Surveyors.

HND

- 6 Prepare learners for employment as senior technical surveyors providing professional advice on property and construction for commercial companies and consultants, central and local government, and private individuals.
- 7 Provide learners with a range of contemporary vocational skills including preparation of drawings, specification writing, land surveying, surveying historic buildings, maintenance schedules, etc, contributing significantly to learners' education and personal development in promoting core and transferable skills important for future employment within the construction and other industries.
- 8 Provide a choice of optional Units that will allow learners to develop in other areas relevant to future employment or progression via higher education.
- 9 Provide learners with a range of skills to support learning in the SVQ 4 Construction: Technical Modern Apprenticeship Frameworks.
- 10 Enable learners to achieve appropriate professional body recognition, in particular but not exclusively, the Royal Institute of Chartered Surveyors.

3.4 Aims of HNC and HND Construction Management

Construction carried out under modern procurement systems must of necessity, bring many different types of organisation together, perhaps from different countries, in constructing buildings of ever increasing complexity. Effective participation in, and management of, this process requires an understanding of group dynamics and the effect of different management styles and organisation structures on the planning and execution of construction projects.

Because of the wide diversity in both scale and output of companies working within the industry the Units chosen for inclusion in the new framework focus on those key knowledge and skills required by a technician employed in a construction management role. The HNC/HND frameworks cover management principles, including a specialist core embracing the management of construction organisations and human resources, together with basic construction planning and elements of site administration.

A mixture of technology, contracts, law, financial and information technology supports the four generic management Units. These awards aim to produce desirable qualifications with graduates capable of employment within and across the whole spectrum of organisations engaged in construction.

Target learner group

The HNC programmes are suitable for a wide range of learners including:

- ◆ school leavers
- ◆ learners progressing from a lower level award in Construction or a closely related discipline
- ◆ adult returners to education
- ◆ learners in employment who wish to enhance their career prospects

The HND programme is suitable for a wide range of learners including:

- ◆ school leavers
- ◆ learners progressing from an HNC Built Environment, Construction Management or a closely related discipline
- ◆ adult returners to education
- ◆ learners in employment who wish to enhance their career prospects

General aims — to develop:

- ◆ skills of study, research and analysis
- ◆ ability to define and solve problems
- ◆ transferable skills
- ◆ ability to be flexible and work cooperatively with others
- ◆ responsibility for own learning
- ◆ planning, organisational and review/evaluation skills
- ◆ technical skills- broadening and deepening
- ◆ oral, written and pictorial communication skills
- ◆ numerical and ICT skills
- ◆ resource management ability
- ◆ flexibility, knowledge, skills and motivation as a basis for progression to graduate and postgraduate studies

Principle aims are to:

HNC

- 1 Prepare learners for employment as construction project officers involving coordination of many different types of organisation, perhaps from different countries, in constructing buildings of ever increasing complexity under modern procurement systems.
- 2 Provide learners with a range of basic contemporary vocational skills embracing the management of construction organisations and human resources, together with construction, technology, contracts, law, financial and information technology, planning and elements of site administration.
- 3 Provide a choice of optional Units that will allow learners to develop in other areas relevant to future employment or progression via an HND in Construction Management or higher education.
- 4 Provide learners with a range of skills to support learning in the SVQ 3 and SVQ 4 Construction: Technical Modern Apprenticeship Frameworks.
- 5 Enable learners to achieve appropriate professional body recognition, in particular but not exclusively, the Chartered Institute of Building.

HND

- 6 Prepare learners for employment in the management of construction projects involving coordination of many different types of organisation, perhaps from different countries, in constructing buildings of ever increasing complexity under modern procurement systems.
- 7 Provide learners with a range of contemporary vocational skills embracing the management of construction organisations and human resources, together with construction, technology, contracts, law, financial and information technology, planning and elements of site administration.
- 8 Provide a choice of optional Units that will allow learners to develop in other areas relevant to future employment or progression via higher education.
- 9 Provide learners with a range of skills to support learning in the SVQ 4 Construction: Technical Modern Apprenticeship Frameworks.
- 10 Enable learners to achieve appropriate professional body recognition, in particular but not exclusively, the Chartered Institute of Building.

3.5 Aims of HNC and HND Quantity Surveying

The HNC and HND in Quantity Surveying are well-established routes towards the Tech RICS award as part of a Degree route to RICS membership or as qualifications in their own right. Quantity Surveying firms and Construction companies have used these routes to train their technicians in technology, estimating cost planning, financial studies and measurement and the new awards will continue to serve these ever expanding groups.

These awards have been updated from the existing HNC and HND Quantity Surveying Awards, to meet the current and future needs of the construction industry and are part of the Built Environment suite of awards.

The Higher National Certificate and Higher National Diploma have long been recognised as providing a broad spectrum of knowledge necessary for a diverse range of future employment opportunities.

The HNC programmes are suitable for a wide range of learners including:

- ◆ school leavers
- ◆ learners progressing from a lower level award in Construction or a closely related discipline
- ◆ adult returners to education
- ◆ learners in employment who wish to enhance their career prospects

The HND programme is suitable for a wide range of learners including:

- ◆ school leavers
- ◆ learners progressing from a Quantity Surveying or a closely related discipline
- ◆ adult returners to education
- ◆ learners in employment who wish to enhance their career prospects

General aims — to develop:

- ◆ skills of study, research and analysis
- ◆ ability to define and solve problems
- ◆ transferable skills
- ◆ ability to be flexible and work cooperatively with others
- ◆ responsibility for own learning
- ◆ planning, organisational and review/evaluation skills
- ◆ technical skills- broadening and deepening
- ◆ oral, written and pictorial communication skills
- ◆ numerical and ICT skills
- ◆ resource management ability
- ◆ flexibility, knowledge, skills and motivation as a basis for progression to graduate and postgraduate studies

The Principle aims are to:

HNC

- 1 Prepare learners for employment as technicians in private quantity surveying practices and construction organisations.
- 2 Provide learners with a range of basic contemporary vocational skills embracing technology, estimating cost planning, financial studies and measurement.
- 3 Provide a choice of optional Units that will allow learners to develop in other areas relevant to future employment or progression via an HND in Quantity Surveying or higher education.
- 4 Provide learners with a range of skills to support learning in the SVQ 3 and SVQ 4 Construction: Technical Modern Apprenticeship Frameworks.
- 5 Enable learners to aspire to appropriate professional body recognition, in particular but not exclusively, the Royal Institute of Chartered Surveyors, as 'Tech RICS'.

HND

- 6 Prepare learners for employment as senior technicians in private quantity surveying practices and construction organisations.
- 7 Provide learners with a range of contemporary vocational skills embracing technology, estimating cost planning, financial studies and measurement.
- 8 Provide a choice of optional Units that will allow learners to develop in other areas relevant to future employment or progression via higher education.
- 9 Provide learners with a range of skills to support learning in the SVQ 4 Construction: Technical Modern Apprenticeship Frameworks.
- 10 Enable learners to aspire to appropriate professional body recognition, in particular but not exclusively, the Royal Institute of Chartered Surveyors, as 'Tech RICS'.

3.6 Graded Units

There are nine Graded Units in the framework:

<i>HNC Built Environment</i>	1 credit Unit of	8 points at SCQF level 7
<i>HNC Architectural Technology</i>	1 credit Unit of	8 points at SCQF level 7
<i>HNC Construction Management</i>	1 credit Unit of	8 points at SCQF level 7
<i>HNC Quantity Surveying</i>	1 credit Unit of	8 points at SCQF level 7
<i>HNC Building Surveying</i>	1 credit Unit of	8 points at SCQF level 7
<i>HND Architectural Technology</i>	2 credit Units of	16 points at SCQF level 8
<i>HND Construction Management</i>	2 credit Units of	16 points at SCQF level 8
<i>HND Quantity Surveying</i>	2 credit Units of	16 points at SCQF level 8
<i>HND Building Surveying</i>	2 credit Units of	16 points at SCQF level 8

The *HNC Built Environment: Graded Unit 1* is interchangeable with the *Graded Unit 1* for the HNCs in *Architectural Technology*, *Construction Management*, *Quantity Surveying* or *Building Surveying*.

The Graded Units are designed to test knowledge and skills across the Units of the award in the context of a typical work related activity.

Where learners are progressing from HNC to HND the *HND Graded Unit 2* might be an extension, in depth or breadth, of the *HNC Graded Unit 1*.

The Graded Unit is designed as a project-based case study. The structure and tasks are drawn from the constituent mandatory Units in the Group Award and are designed to assess the learner's ability to retain and integrate the knowledge and skills gained in the study of the award.

The subject and design of the case study reflect actual industry practice therefore offering the learner valuable, relevant and realistic experience which is transferrable to both employment and educational situations.

In addition, the case study will allow the learner to develop a variety of supplementary skills and attributes which enhance life skills and the educational experience. Such skills tied to enterprise, employability, sustainable development and citizenship are deemed essential to success in learning, life and work.

4 Recommended entry to the qualifications

Entry to this qualification is at the discretion of the centre. The following information on prior knowledge, skills, experience or qualifications that provide suitable preparation for this qualification has been provided as guidance only.

Learners would benefit from having attained the skills, knowledge and understanding required by one or more of the following or equivalent qualifications and/or experience:

Access to HNC Qualifications

Higher National programmes are intended primarily for people who are in, or plan to enter employment. Learners who enter with at least one of the following qualifications are likely to benefit more readily from the programme:

- ◆ an NC or HNC in a related discipline
- ◆ at least one Higher level pass, with appropriate supporting passes at Standard Grade Credit/National level 5 in appropriate subjects, which should include science and/or technology
- ◆ an SVQ in Construction or a related discipline
- ◆ those with other entry qualifications who demonstrate a realistic chance of success
- ◆ a craft qualification combined with appropriate further study, prior to, or in parallel with, the HNC programme

Access to HND Qualifications

Higher National programmes are intended primarily for people who are in, or plan to enter employment. Learners who enter with at least one of the following qualifications are likely to benefit more readily from the programme:

- 1 an HNC in Built Environment or related discipline.
- 2 at least one Higher level pass, with appropriate supporting passes at Standard Grade Credit/National level 5 in appropriate subjects, which should include mathematics and science and/or technology.
- 3 an SVQ in Construction or a related discipline.
- 4 those with other entry qualifications who demonstrate a realistic chance of success.

Work Experience

Mature learners with suitable relevant work experience may be accepted for entry, or advanced entry; provided the enrolling centre believes that the learner is likely to benefit from undertaking the awards. Centres may wish to use Core Skills profiling to assist them in this process.

Accreditation of Prior Experiential Learning (APEL)

Learners may be granted Accreditation of Prior Experiential Learning (APEL) in respect of underpinning knowledge previously gained or skills developed in relevant employment. Such APEL might allow a learner entry to, or advanced entry in, an HNC or HND. All such decisions should be referred to a Moderator.

Access during transition between current and new awards

During the period of transition from existing qualifications to the new HNCs and HND learners might be eligible for credit transfer. Such eligibility is discussed further in Section 6.4.4.

4.1 Core Skills entry profile

The Core Skill entry profile provides a summary of the associated assessment activities that exemplify why a particular level has been recommended for this qualification. The information should be used to identify if additional learning support needs to be put in place for learners whose Core Skills profile is below the recommended entry level or whether learners should be encouraged to do an alternative level or learning programme.

For this reason the level stated should be reflective of the main focus of the qualification which is likely to require a certain level of ability in one or two of the Core Skills. Learners will naturally use and develop aspects of all five Core Skills as they work through the Units making up the qualification through teaching and learning approaches which require to be mapped in the next section.

Applied problem solving, including creative thinking and on-going evaluation of proposed and actual design solutions are essential elements in all Built Environment activities. There are also ample opportunities within the award to develop key numerical and graphical competencies in the context of applied knowledge and skills. The focus in the award on technology as a current industry tool in the design process ensures sound competence and understanding of its applications and uses. Access to technology, with appropriate support systems, is available at all centres for reference, research and the production and presentation of accurate written and graphic materials. As learners undertake the award, formative activities will replicate group problem solving approaches using the communication techniques required in the industry today.

Awareness and development of Core Skills is also incorporated into the award by the fact that learners, supported by assessors, have to take responsibility for their own learning programmes and produce and present a project.

The Qualifications Design Team has agreed, therefore, that the delivery of mandatory and optional Units should provide many opportunities for tailoring relevant elements of the Core Skills to the specific demands of the vocational area.

Core Skill	Recommended SCQF entry profile	Associated assessment activities
Communication	Int 2 (5)	Research, analysis, report preparation and presentation.
Numeracy	Int 1 (4)	Numerical and graphical exploration and presentation of elements of design, surveying and measurement.
Information and Communication Technology (ICT)	Int 2 (5)	Accessing information for base research purposes. Assimilation and analysis of research information. Creation of graphical and narrative materials for presentation purposes.
Problem Solving	Int 2 (5)	Critical thinking, planning and organisation, review and evaluation are fundamental to all elements of these qualifications
Working with Others	Int 1 (4)	Co-operatively, as part of a team in practical situations.

5 Additional benefits of the qualification in meeting employer needs

This qualification was designed to meet a specific purpose and what follows are details on how that purpose has been met through mapping of the Units to the aims of the qualification. Through meeting the aims, additional value has been achieved by linking the Unit standards with those defined in National Occupational Standards and/or trade/professional body requirements. In addition, significant opportunities exist for learners to develop the more generic skill, known as Core Skills through doing this qualification.

Study of each of these qualifications will allow the learner to develop a variety of supplementary skills and attributes which enhance life skills and the educational experience. Such skills tied to enterprise, employability, sustainable development and citizenship are deemed essential to success in learning, life and work. They should be nurtured wherever possible. The wide range of work to be completed within the qualifications will provide the learner with opportunity to reflect upon collateral soft skills found, for example, in career development, developing self-confidence, team working, inter-dependence, problem solving, understanding rights and responsibilities, etc.

5.1 Mapping of qualification aims to Units

HNC Built Environment

Code		Unit title	Aims				
			1	2	3	4	5
DW3R	34	Architectural Design Sketching and Drawing	X	X	X	X	X
H726	34	Building Measurement and Cost Studies	X	X	X	X	X
DW4H	34	Building Science	X	X	X	X	X
DW4P	33	Building Services: An Introduction	X	X	X	X	X
DW53	34	Construction Materials and Specification	X	X	X	X	X
DW5H	34	Construction Site Surveying A	X	X	X	X	X
DW54	33	Construction Technology: Domestic Construction	X	X	X	X	X
H72A	34	Construction Technology: Substructure	X	X	X	X	X
H72D	35	Sustainability and Modern Methods of Construction	X	X	X	X	X
DW1E	34	CAD: 2D I	X	X	X	X	X
DW12	34	CAD: 2D II	X	X	X	X	X
DW4E	34	Health and Safety in Construction	X	X	X	X	X
H728	34	Construction Industry Fundamentals	X	X	X	X	X
H72L	33	Mathematics for Construction	X	X	X	X	X
H9PW	33	Mathematics for the Built Environment	X	X	X	X	X
H72C	35	Scottish Law for Construction	X	X	X	X	X
DW45	34	Structural Mechanics	X	X	X	X	X

HNC and HND Architectural Technology

Code		Unit title	Aims									
			1	2	3	4	5	6	7	8	9	10
DW3R	34	Architectural Design Sketching and Drawing	X	X		X	X	X	X		X	X
F4MY	34	Architecture: Influences on the Development of Scottish Architecture	X	X		X	X	X	X		X	X
H725	34	Architectural Procedures	X	X		X	X	X	X		X	X
H726	34	Building Measurement and Cost Studies	X	X	X	X	X	X	X		X	X
DW4H	34	Building Science	X	X	X	X	X	X	X		X	X
DW4P	33	Building Services: An Introduction	X	X	X	X	X	X	X		X	X
H727	35	Building Services in Large Buildings	X	X		X	X	X	X		X	X
H728	34	Construction Industry Fundamentals	X	X	X	X	X	X	X		X	X
DW53	34	Construction Materials and Specification	X	X		X	X	X	X		X	X
DW5H	34	Construction Site Surveying A	X			X	X	X	X		X	X
DW54	33	Construction Technology: Domestic Construction	X	X	X	X	X	X	X		X	X
H72A	34	Construction Technology: Substructure	X	X		X	X	X	X		X	X
H729	34	Construction Technology: Industrial/Commercial Superstructure	X	X		X	X	X	X		X	X
DW56	35	Construction Technology: Specialist Systems	X	X		X	X	X	X		X	X
DW3T	35	Conversion and Adaptation of Buildings	X	X		X	X	X	X		X	X
DW3V	34	Design of Building Structures	X	X		X	X	X	X		X	X
DW4X	35	Fire Safety in Buildings	X	X		X	X	X	X		X	X

Code		Unit title	Aims										
			1	2	3	4	5	6	7	8	9	10	
H72L	33	Mathematics for Construction	X	X	X	X	X	X	X	X		X	X
H9PW	33	Mathematics for the Built Environment	X	X	X	X	X	X	X	X		X	X
H72C	35	Scottish Law for Construction	X	X	X	X	X	X	X	X		X	X
DW3W	34	Statutory Control of Buildings	X	X		X	X	X	X	X		X	X
H72G	35	Standard Forms of Construction Contracts	X	X	X	X	X	X	X	X		X	X
DW45	34	Structural Mechanics	X	X	X	X	X	X	X	X		X	X
H72D	35	Sustainability and Modern Methods of Construction	X	X	X	X	X	X	X	X		X	X
DW1E	34	CAD: 2D I	X	X		X	X	X	X	X		X	X
DW12	34	CAD: 2D II	X	X		X	X	X	X	X		X	X
DW52	34	Building Maintenance Technology	X	X		X	X	X	X	X	X		X
DW4M	35	Building Services: Heating, Lighting and Acoustics	X	X	X	X	X	X	X	X	X		X
DW1D	34	CAD Architectural 1	X	X		X	X	X	X	X	X		X
DW4J	35	Construction Planning	X	X		X	X	X	X	X	X		X
DW4E	34	Health and Safety in Construction	X	X	X	X	X	X	X	X	X		X
DW4G	34	Quality in Construction	X	X	X	X	X	X	X	X	X		X
F1YK	34	Renewable Energy Systems: Microregeneration Systems	X	X		X	X	X	X	X	X		X
DG6E	34	Work Role Effectiveness (2003)	X	X		X	X	X	X	X	X		X
DW13	34	CAD: 3D Modelling	X	X		X	X	X	X	X	X		X
DE3R	34	Personal Development Planning	X	X	X	X	X	X	X	X	X		X
H72F	34	Site Administration	X	X	X	X	X	X	X	X	X		X

HNC and HND Building Surveying

Code		Unit title	Aims									
			1	2	3	4	5	6	7	8	9	10
DW3R	34	Architectural Design Sketching and Drawing	X	X		X	X	X	X		X	X
DW50	34	Building Inspection	X	X		X	X	X	X		X	X
DW52	34	Building Maintenance Technology	X	X		X	X	X	X		X	X
H726	34	Building Measurement and Cost Studies	X	X		X	X	X	X		X	X
DW4P	33	Building Services: An Introduction	X	X	X	X	X	X	X		X	X
H727	35	Building Services in Large Buildings	X	X		X	X	X	X		X	X
DW4M	35	Building Services: Heating, Lighting and Acoustics	X	X		X	X	X	X		X	X
H728	34	Construction Industry Fundamentals	X	X		X	X	X	X		X	X
DW53	34	Construction Materials and Specification	X	X		X	X	X	X		X	X
DW5H	34	Construction Site Surveying A	X	X	X	X	X	X	X		X	X
DW54	33	Construction Technology: Domestic Construction	X	X	X	X	X	X	X		X	X
H729	34	Construction Technology: Industrial/Commercial Superstructure	X	X		X	X	X	X		X	X
H72A	34	Construction Technology: Substructure	X	X		X	X	X	X		X	X
DW3T	35	Conversion and Adaptation of Buildings	X	X	X	X	X	X	X		X	X
DW4H	34	Building Science	X	X	X	X	X	X	X		X	X
DW45	34	Structural Mechanics	X	X	X	X	X	X	X		X	X
DW4X	35	Fire Safety in Buildings		X		X	X	X	X		X	X
H72L	33	Mathematics for Construction	X	X	X	X	X	X	X		X	X
H9PW	33	Mathematics for the Built Environment	X	X	X	X	X	X	X		X	X

Code		Unit title	Aims									
			1	2	3	4	5	6	7	8	9	10
Code		Unit title	Aims									
			1	2	3	4	5	6	7	8	9	10
DW3L	34	Quantitative Building Studies: Floors and Roofs	X	X	X	X	X	X	X		X	X
H72C	35	Scottish Law for Construction	X	X		X	X	X	X		X	X
DW3W	34	Statutory Control of Buildings	X	X	X	X	X	X	X		X	X
DW40	35	Surveying Historic Buildings	X	X		X	X	X	X		X	X
H72D	35	Sustainability and Modern Methods of Construction	X	X		X	X	X	X		X	X
DW1E	34	CAD: 2D1	X	X		X	X	X	X		X	X
DW12	34	CAD: 2D II	X	X		X	X	X	X		X	X
H725	34	Architectural Procedures	X	X		X	X	X	X	X		X
DW51	34	Building Maintenance Management	X	X	X	X	X	X	X	X		X
DW4N	35	Building Services: Ventilation, Air Conditioning and Refrigeration	X	X		X	X	X	X	X		X
DW13	34	CAD: 3D Modelling	X	X		X	X	X	X	X		X
DW1D	34	CAD: Architectural 1	X	X		X	X	X	X	X		X
DW56	35	Construction Technology: Specialist Systems	X	X	X	X	X	X	X	X		X
DW3H	34	Estimating				X	X	X	X	X		X
DW4V	35	Facilities Management: Operational and Support Services	X	X	X	X	X	X	X	X		X
DW4E	34	Health and Safety in Construction	X	X	X	X	X	X	X	X		X
DE3R	34	Personal Development Planning	X	X	X	X	X	X	X	X		X
DW3M	34	Quantitative Building Studies: Substructures and Drainage	X	X		X	X	X	X	X		X
H72G	35	Standard Forms of Construction Contract	X	X		X	X	X	X	X		X
DW3V	34	Design of Building Structures	X	X		X	X	X	X	X		X
DG6E	34	Work Role Effectiveness (2003)	X	X		X	X	X	X	X		X
DW4J	35	Construction Planning	X	X		X	X	X	X	X		X

Code		Unit title	Aims									
			1	2	3	4	5	6	7	8	9	10
Code		Unit title	Aims									
			1	2	3	4	5	6	7	8	9	10
DW3G	35	Economics and the Built Environment	X	X		X	X	X	X	X		X
DW4W	35	Facilities Management: Property Services	X	X		X	X	X	X	X		X
DW4Y	35	Facilities Resource Planning and Construction Management	X	X		X	X	X	X	X		X
DW3J	35	Financial Studies for the Construction Industry	X	X		X	X	X	X	X		X
DW4K	35	Human Resource Management in Construction	X	X		X	X	X	X	X		X
DW43	35	Managing Construction Organisations	X	X		X	X	X	X	X		X
DW4G	34	Quality in Construction	X	X		X	X	X	X	X		X
F1YK	34	Renewable Energy Systems: Microgeneration Systems	X	X		X	X	X	X	X		X

HNC and HND Construction Management

Code		Unit title	Aims									
			1	2	3	4	5	6	7	8	9	10
DW3R	34	Architectural Design Sketching and Drawing	X	X	X	X	X	X	X		X	X
H726	34	Building Measurement and Cost Studies	X	X	X	X	X	X	X		X	X
DW4P	33	Building Services: An Introduction	X	X	X	X	X	X	X		X	X
H727	35	Building Services in Large Buildings	X	X		X	X	X	X		X	X
H728	34	Construction Industry Fundamentals	X	X	X	X	X	X	X		X	X
DW53	34	Construction Materials and Specification	X	X		X	X	X	X		X	X
DW4J	35	Construction Planning	X	X	X	X	X	X	X		X	X
DW5H	34	Construction Site Surveying A	X	X		X	X	X	X		X	X
DW5J	34	Construction Site Surveying B	X	X		X	X	X	X		X	X
DW54	33	Construction Technology: Domestic Construction	X	X	X	X	X	X	X		X	X
H72A	34	Construction Technology: Substructure	X	X		X	X	X	X		X	X
H729	34	Construction Technology: Industrial/Commercial Superstructure	X	X		X	X	X	X		X	X
DW3G	35	Economics and the Built Environment	X	X		X	X	X	X		X	X
DW4H	34	Building Science	X	X	X	X	X	X	X		X	X
DW4E	34	Health and Safety in Construction	X	X		X	X	X	X		X	X
DW4K	35	Human Resource Management in Construction	X	X	X	X	X	X	X		X	X
DW43	35	Managing Construction Organisations	X	X	X	X	X	X	X		X	X
H72L	33	Mathematics for Construction	X	X	X	X	X	X	X		X	X

Code		Unit title	Aims									
			1	2	3	4	5	6	7	8	9	10
H9PW	33	Mathematics for the Built Environment	X	X	X	X	X	X	X		X	X
DW4G	34	Quality in Construction	X	X	X	X	X	X	X		X	X
H72C	35	Scottish Law for Construction	X	X	X	X	X	X	X		X	X
H72F	34	Site Administration	X	X		X	X	X	X		X	X
DW3W	34	Statutory Control of Buildings	X	X		X	X	X	X		X	X
H72G	35	Standard Forms of Construction Contracts	X	X		X	X	X	X		X	X
H72D	35	Sustainability and Modern Methods of Construction	X	X	X	X	X	X	X		X	X
DW1E	34	CAD: 2D I	X	X		X	X	X	X		X	X
DW12	34	CAD: 2D II	X	X		X	X	X	X		X	X
DW50	34	Building Inspection	X	X		X	X	X	X	X		X
DW56	35	Construction Technology: Specialist Systems	X	X		X	X	X	X	X		X
DW3V	34	Design of Building Structures	X	X		X	X	X	X	X		X
DW3H	34	Estimating	X	X	X	X	X	X	X	X		X
DW3J	35	Financial Studies for the Construction Industry	X	X	X	X	X	X	X	X		X
DE3R	34	Personal Development Planning	X	X	X	X	X	X	X	X		X
DW3M	34	Quantitative Building Studies: Substructure and Drainage	X	X	X	X	X	X	X	X		X
F1YK	34	Renewable Energy Systems: Microgeneration Systems	X	X	X	X	X	X	X	X		X
DW45	34	Structural Mechanics	X	X	X	X	X	X	X	X		X
DG6E	34	Work Role Effectiveness (2003)	X	X		X	X	X	X	X		X

HNC and HND Quantity Surveying

Code		Unit title	Aims									
			1	2	3	4	5	6	7	8	9	10
DW3R	34	Architectural Design Sketching and Drawing	X	X		X	X	X	X		X	X
H726	34	Building Measurement and Cost Studies	X	X		X	X	X	X		X	X
DW4P	33	Building Services: An Introduction	X	X	X	X	X	X	X		X	X
H727	35	Building Services in Large Buildings	X	X		X	X	X	X		X	X
H728	34	Construction Industry Fundamentals	X	X	X	X	X	X	X		X	X
DW53	34	Construction Materials and Specification	X	X		X	X	X	X		X	X
DW5H	34	Construction Site Surveying A	X	X		X	X	X	X		X	X
DW54	33	Construction Technology: Domestic Construction	X	X	X	X	X	X	X		X	X
DW57	34	Construction Technology: Substructure	X	X		X	X	X	X		X	X
DW55	34	Construction Technology: Ind./Comm. Superstructure	X	X		X	X	X	X		X	X
DW3G	35	Economics and the Built Environment	X	X		X	X	X	X		X	X
DW4H	34	Building Science	X	X	X	X	X	X	X		X	X
DW3H	34	Estimating	X	X		X	X	X	X		X	X
DW3J	35	Financial Studies for the Construction Industry	X	X	X	X	X	X	X		X	X
DW4F	33	Mathematics for Construction	X	X		X	X	X	X		X	X
DW3L	34	Quantitative Building Studies: Floors and Roofs	X	X		X	X	X	X		X	X
DW3M	34	Quantitative Building Studies:: Substructure and Drainage	X	X		X	X	X	X		X	X
DW3Y	35	Quantity Surveying Practice	X	X	X	X	X	X	X		X	X

Code		Unit title	Aims									
			1	2	3	4	5	6	7	8	9	10
DW42	35	Scottish Law for Construction	X	X	X	X	X	X	X		X	X
DW3N	35	Standard Forms of Construction Contracts	X	X		X	X	X	X		X	X
DW3W	34	Statutory Control of Buildings	X	X		X	X	X	X		X	X
H72D	35	Sustainability and Modern Methods of Construction	X	X	X	X	X	X	X		X	X
DW1E	34	CAD: 2D I	X	X		X	X	X	X		X	X
DW12	34	CAD: 2D II	X	X		X	X	X	X		X	X
DW4J	35	Construction Planning	X	X		X	X	X	X	X		X
DW56	35	Construction Technology: Specialist Systems	X	X		X	X	X	X	X		X
DW4E	34	Health and Safety in Construction	X	X	X	X	X	X	X	X		X
DW4K	35	Human Resource Management in Construction	X	X		X	X	X	X	X		X
DE3R	34	Personal Development Planning	X	X	X	X	X	X	X	X		X
DW4G	34	Quality in Construction	X	X		X	X	X	X	X		X
DW3K	34	Quantitative Building Studies: Building Services	X	X		X	X	X	X	X		X
F1YK	34	Renewable Energy Systems: Microgeneration Systems	X	X	X	X	X	X	X	X		X
DW4L	34	Site Administration	X	X		X	X	X	X	X		X
DW45	34	Structural Mechanics	X	X		X	X	X	X	X		X
DG6E	34	Work Role Effectiveness (2003)	X	X		X	X	X	X	X		X

5.2 Mapping of National Occupational Standards (NOS) and/or trade body standards

Qualification title and code	Scottish Vocational Qualifications incorporating National Occupational Standards	
HNC Built Environment HNC Architectural Technology HNC Construction Management HNC Building Surveying HNC Quantity Surveying	GJ1C 23	SVQ 3 Construction Site Supervision (Construction): Building and Civil Engineering
	GC2A 23	SVQ 3 Construction Contracting Operations: Estimating
	GJ1D 23	SVQ 3 Construction Site Supervision (Construction): Highways Maintenance and Repair
	GC2F 23	SVQ 3 Construction Site Supervision: Residential Development
	GC29 23	SVQ 3 Construction Contracting Operations: Buying
	GC2E 23	SVQ 3 Construction Contracting Operations: Surveying
	G95L 23	SVQ 3 Construction Contracting Operations: Site Technical Support
	GC2D 23	SVQ 3 Construction Contracting Operations: Planning
	GC2C 23	SVQ 3 Construction Contracting Operations: General
	GJ18 23	SVQ 3 Built Environment Design
	GF5N 23	SVQ 3 Occupational Work Supervision (Construction)
	GC70 23	SVQ 4 Controlling Lifting Operations: Planning Lifts (Construction)
	GC71 23	SVQ 3 Controlling Lifting Operations: Supervising Lifts (Construction)

Qualification title and code	Scottish Vocational Qualifications incorporating National Occupational Standards	
HND Architectural Technology HND Construction Management HND Building Surveying HND Quantity Surveying	GJ1C 24	SVQ 4 Built Environment Design
	GC4K 24	SVQ 4 Construction Contracting Operations: Buying
	GC4L 24	SVQ 4 Construction Contracting Operations: Estimating
	GC4M 24	SVQ 4 Construction Contracting Operations: General
	GC4N 24	SVQ 4 Construction Contracting Operations: Planning
	GC4P 24	SVQ 4 Construction Contracting Operations: Surveying
	GJ19 24	SVQ 4 Construction Site Management (Construction): Building and Civil Engineering
	GJ1A 24	SVQ 4 Construction Site Management (Construction): Highways Maintenance and Repair
	GH0K 24	SVQ 4 Controlling Lifting Operations: Planning Lifts (Construction)
GC2G 24	SVQ 4 Construction Site Management: Residential Development	

Each Scottish Vocational Qualification (SVQ) identified in the above table contains a range of National Occupational Standards (NOS) that are specific to the discipline/vocational area to which the SVQ applies. In turn, the Higher National Certificate and Diploma Qualifications supply the broad-based underpinning knowledge for each SVQ and relate directly to the constituent National Occupational Standards.

5.3 Mapping of Core Skills development opportunities across the qualifications

Unit code	Unit title	Communication		Numeracy		ICT		Problem Solving			Working with Others	
		Written	Oral	Using Number	Using Graphical Information	Accessing Information	Providing/Creating Information	Critical Thinking	Planning and Organising	Reviewing and Evaluating	Working Co-operatively with Others	Reviewing Co-operative Contribution
DW3R 34	Architectural Design Sketching and Drawing			X	X			X	X	X	X	x
F4MY 34	Architecture: Influences on the Development of Scottish Architecture	X				X	X					
H725 34	Architectural Procedures			X	X			X	X	X		
DW50 34	Building Inspection	X				X	X	X	X	X		
DW51 34	Building Maintenance Management	X		X	X	X	X	X	X	X		
DW52 34	Building Maintenance Technology			X	X			X	X	X		
H726 34	Building Measurement and Cost Studies			X	X			X	X	X		
DW4H 34	Building Science			X	X			X	X	X		
DW4P 33	Building Services: An Introduction			X	X			X	X	X		
H727 35	Building Services in Large Buildings			X	X			X	X	X		
DW4M 35	Building Services: Heating, Lighting and Acoustics			X	X			X	X	X		
DW4N 35	Building Services: Ventilation, Air conditioning and Refrigeration			X	X			X	X	X		

Unit code	Unit title	Communication		Numeracy		ICT		Problem Solving			Working with Others	
		Written	Oral	Using Number	Using Graphical Information	Accessing Information	Providing/Creating Information	Critical Thinking	Planning and Organising	Reviewing and Evaluating	Working Co-operatively with Others	Reviewing Co-operative Contribution
DW1E 34	CAD: 2D I			X	X	X	X	X	X	X		
DW12 34	CAD: 2D II			X	X	X	X	X	X	X		
DW13 34	CAD: 3D Modelling			X	X	X	X	X	X	X		
DW1D 34	CAD: Architectural 1			X	X	X	X	X	X	X	X	X
H728 34	Construction Industry Fundamentals											
DW53 34	Construction Materials and Specification	X		X	X	X	X	X	X	X		
DW4J 35	Construction Planning	X		X	X	X	X	X	X	X		
DW5H 34	Construction Site Surveying A	X		X	X	X	X	X	X	X	X	X
DW5J 34	Construction Site Surveying B	X		X	X	X	X	X	X	x	X	X
DW54 33	Construction Technology: Domestic Construction			X	X	X	X	X	X	X	X	X
H729 34	Construction Technology: Industrial/Commercial Superstructure			X	X	X	X	X	X	X		
DW56 35	Construction Technology: Specialist Systems			X	X	X	X	X	X	X		
H72A 34	Construction Technology: Substructure			X	X	X	X	X	X	X		
DW3T 35	Conversion and Adaptation of Buildings			X	X			X	X	X		
DW3V 34	Design of Building Structures			X	X			X	X	X		

Unit code	Unit title	Communication		Numeracy		ICT		Problem Solving			Working with Others	
		Written	Oral	Using Number	Using Graphical Information	Accessing Information	Providing/Creating Information	Critical Thinking	Planning and Organising	Reviewing and Evaluating	Working Co-operatively with Others	Reviewing Co-operative Contribution
DW3G 35	Economics and the Built Environment			X	X			X	X	X		
DW3H 34	Estimating			X	X			X	X	X		
DW4V 35	Facilities Management: Operational and Support Services		X	X	X	X	X	X	X	X	X	X
DW4W 35	Facilities Management: Property Services			X	X			X	X	X		
DW4Y 35	Facilities Resource Planning and Contract Management	X		X	X	X	X	X	X	X	X	X
DW3J 35	Financial Studies for the Construction Industry			X	X	X	X	X	X	X		
DW4X 35	Fire Safety in Buildings	X		X	X	X	X	X	X	X	X	X
DW4E 34	Health and Safety in Construction											
H72S 34	Architectural Technology: Graded Unit 1	X	X	X	X	X	X	X	X	X	X	X
H72V 34	Building Surveying: Graded Unit 1	X	X	X	X	X	X	X	X	X	X	X
H72R 34	Built Environment: Graded Unit 1	X	X	X	X	X	X	X	X	X	X	X
H730 34	Construction Management: Graded Unit 1	X	X	X	X	X	X	X	X	X	X	X
H732 34	Quantity Surveying: Graded Unit 1	X	X	X	X	X	X	X	X	X	X	X

Unit code	Unit title	Communication		Numeracy		ICT		Problem Solving			Working with Others	
		Written	Oral	Using Number	Using Graphical Information	Accessing Information	Providing/Creating Information	Critical Thinking	Planning and Organising	Reviewing and Evaluating	Working Co-operatively with Others	Reviewing Co-operative Contribution
H72T 35	Architectural Technology: Graded Unit 2	X	X	X	X	X	X	X	X	X	X	X
H72Y 35	Building Surveying: Graded Unit 2	X	X	X	X	X	X	X	X	X	X	X
H731 35	Construction Management: Graded Unit 2	X	X	X	X	X	X	X	X	X	X	X
H733 35	Quantity Surveying: Graded Unit 2	X	X	X	X	X	X	X	X	X	X	X
DW4K 35	Human Resource Management in Construction	X	X	X				X	X	X	X	X
DW43 35	Managing Construction Organisations	X	X	X	X	X	X				X	X
H72L 33	Mathematics for Construction			X	X			X	X	X		
H9PW 33	Mathematics for the Built Environment			X	X			X	X	X		
DE3R 34	Personal Development Planning (DE3R 34)		X					X	X	X	X	X
DW4G 34	Quality in Construction			X	X			X	X	X		
DW3K 34	Quantitative Building Studies: Building Services			X	X			X	X	X		
DW3L 34	Quantitative Building Studies: Floors and Roofs		X	X	X			X	X	X		
DW3M 34	Quantitative Building Studies: Substructure and Drainage			X	X			X	X	X		

Unit code	Unit title	Communication		Numeracy		ICT		Problem Solving			Working with Others	
		Written	Oral	Using Number	Using Graphical Information	Accessing Information	Providing/Creating Information	Critical Thinking	Planning and Organising	Reviewing and Evaluating	Working Co-operatively with Others	Reviewing Co-operative Contribution
DW3Y 35	Quantity Surveying Practice	X	X	X	X			X	X	X		
F1YK 34	Renewable Energy Systems: Microgeneration Systems											
H72C 35	Scottish Law for Construction	X						X	X	X		
H72F 34	Site Administration			X		X	X				X	X
H72G 35	Standard Forms of Construction Contracts	X	X	X	X	X	X					
DW3W 34	Statutory Control of Buildings			X		X	X					
DW45 34	Structural Mechanics			X	X			X	X	X		
DW40 35	Surveying Historic Buildings	X		X	X			X	X	X	X	X
H72D 35	Sustainability and Modern Methods of Construction											
DG6E 34	Work Role Effectiveness (2003)	X	X					X	X	X	X	X

5.4 Assessment Strategy for the qualifications

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Architectural Design Sketching and Drawing	Freehand graphical assignment in open-book, supervised conditions. Sketches produced as natural products of teaching and learning processes.	Freehand graphical assignment in open-book, supervised conditions. Sketches produced as natural products of teaching and learning processes.	Short answer and/or restricted-response questions under closed-book, supervised conditions of 60 minutes duration maximum.		
Architecture: Influences on the Development of Scottish Architecture	Report or extended essay with portfolio of evidence produced as a product of research and review.	Report or extended essay with portfolio of evidence produced as a product of research and review.			
Architectural Procedures	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all four Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Building Inspection	Outcomes 1, 2, and 3 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all three Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Building Maintenance Management	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response, graphical-response and extended-response questions. Alternatively, all four Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions.				
Building Maintenance Technology	Restricted and extended-response questions under closed-book, supervised conditions of 90 minutes duration.	Practical assignment/case study in open-book, supervised conditions. Sketches and reports produced for subject building.			
Building Measurement and Cost Studies	Practical assignment/case study in open-book, supervised conditions of 90 minutes duration.	Restricted and extended-response questions under closed-book, supervised conditions of 90 minutes duration.			
Building Services: Introduction	Outcomes 1, 2, 3, 4 and 5 may be assessed on an individual basis in open-book conditions with a balance of short answer, restricted-response, graphical-response and extended-response questions. Alternatively, all five Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions.				
Building Services in Large Buildings	Outcomes 1, 2, 3, 4 and 5 may be assessed on an individual basis in open-book conditions with a balance of short answer, restricted-response, graphical-response and extended-response questions. Alternatively, all five Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions.				

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Building Services: Heating, Lighting and Acoustics	Outcomes 1, 2 and 3 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all three Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Building Services: Ventilation, Air-conditioning & Refrigeration	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all four Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 2 hours duration.				
CAD 2-D 1	Graphical assignment in open-book, supervised conditions. Drawings produced as natural products of teaching and learning processes.				
CAD 2-D2	Outcomes 1, 2 and 3 may be assessed under controlled, supervised conditions.				
CAD: 3-D Modelling	Graphical assignment in open-book, supervised conditions. Drawings produced as natural products of teaching and learning processes.				
CAD: Architectural 1	Graphical assignment in open-book, supervised conditions. Drawings produced as natural products of teaching and learning processes.				
Construction Industry Fundamentals	An assessment paper covering Outcomes 1, 3 and 4 should be taken as a single closed-book assessment lasting 1.5 hours and carried out under supervised, controlled conditions. Short answer, restricted response and structured questions.			Outcome 2; evidence for the Knowledge and/or Skills in this Outcome will be generated by the participation in a simulated formal meeting.	

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Construction Materials and Specification	Short answer and/or restricted-response questions under closed-book, supervised conditions of 45 minutes duration.	Series of practical laboratory tasks combined with written reports undertaken in controlled, supervised conditions.	Restricted-response and/or structured questions under closed-book, supervised conditions of 90 minutes duration.		
Construction Planning	Outcomes 1, 2, and 3 may be assessed on an individual basis in controlled supervised conditions in a computer suite with appropriate software, with a balance of short answer, restricted-response, graphical-response and extended-response questions. Alternatively, all three Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions.				
Construction Site Surveying A	Short answer and/or restricted-response questions under open-book, supervised conditions of 60 minutes duration.	Evidence for Outcomes 2, 3 and 4 is produced in open-book, supervised conditions. The learner will actively participate in practical survey fieldwork events as part of a team and will produce appropriate documentation and drawings to confirm the survey elements.			
Construction Site Surveying B	Evidence for Outcomes 1, 2 and 3 is produced in open-book, supervised conditions. The learner will actively participate in practical survey fieldwork events as part of a team and will produce appropriate documentation and drawings to confirm the survey elements.				

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Construction Technology: Domestic Construction	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response, extended-response and graphical questions. Alternatively, all four Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Construction Technology: Indust/Comm Superstructure	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response, extended-response and graphical questions. Alternatively, all four Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Construction Technology: Specialist Systems	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response, extended-response and graphical questions. Alternatively, all four Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Construction Technology: Substructure	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response, extended-response and graphical questions. Alternatively, all four Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Conversion and Adaptation of Buildings	All Outcomes should be assessed in a single, integrated case study. A significant part of the project can be without close supervision although the assessor may provide guidance and support. While time constraints are relaxed, project work must be carried out within an agreed, set time frame, with pre-determined sanctions in operation when deadlines are not met.				
Design of Building Structures	Short answer and/or restricted-response and graphical questions under closed-book, supervised conditions.	Short answer and/or restricted-response questions under closed-book, supervised conditions.	Short answer and/or restricted-response and graphical questions under closed-book, supervised conditions.		
Economics and the Built Environment	Outcomes 1, 2, 3, 4 and 5 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response, extended-response and graphical questions. Alternatively, all five Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 2 hours duration.				
Environmental Building Science	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response, graphical-response and extended-response questions. Alternatively, all four Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions.				
Estimating	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all four Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Facilities Management: Operational and Support Services	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all four Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Facilities Management: Property Services	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all four Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Facilities Resource Planning and Contract Management	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all four Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Financial Studies for the Construction Industry	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all four Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Fire Safety in Buildings	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all four Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Health and Safety in Construction	Outcomes 1, 2 and 3 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all three Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
HNC Architectural Technology: Graded Unit 1	All Outcomes should be assessed in a single, integrated case study. A significant part of the project can be without close supervision although the assessor may provide guidance and support. While time constraints are relaxed, project work must be carried out within an agreed, set time frame, with pre-determined sanctions in operation when deadlines are not met.				
HNC Building Surveying: Graded Unit 1	All Outcomes should be assessed in a single, integrated case study. A significant part of the project can be without close supervision although the assessor may provide guidance and support. While time constraints are relaxed, project work must be carried out within an agreed, set time frame, with pre-determined sanctions in operation when deadlines are not met.				
HNC Built Environment: Graded Unit 1	All Outcomes should be assessed in a single, integrated case study. A significant part of the project can be without close supervision although the assessor may provide guidance and support. While time constraints are relaxed, project work must be carried out within an agreed, set time frame, with pre-determined sanctions in operation when deadlines are not met.				

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
HNC Construction Management: Graded Unit 1	All Outcomes should be assessed in a single, integrated case study. A significant part of the project can be without close supervision although the assessor may provide guidance and support. While time constraints are relaxed, project work must be carried out within an agreed, set time frame, with pre-determined sanctions in operation when deadlines are not met.				
HNC Quantity Surveying: Graded Unit 1	All Outcomes should be assessed in a single, integrated case study. A significant part of the project can be without close supervision although the assessor may provide guidance and support. While time constraints are relaxed, project work must be carried out within an agreed, set time frame, with pre-determined sanctions in operation when deadlines are not met.				
HND Architectural Technology: Graded Unit 2	All Outcomes should be assessed in a single, integrated case study. A significant part of the project can be without close supervision although the assessor may provide guidance and support. While time constraints are relaxed, project work must be carried out within an agreed, set time frame, with pre-determined sanctions in operation when deadlines are not met.				
HND Building Surveying: Graded Unit 2	All Outcomes should be assessed in a single, integrated case study. A significant part of the project can be without close supervision although the assessor may provide guidance and support. While time constraints are relaxed, project work must be carried out within an agreed, set time frame, with pre-determined sanctions in operation when deadlines are not met.				

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
HND Construction Management: Graded Unit 2	All Outcomes should be assessed in a single, integrated case study. A significant part of the project can be without close supervision although the assessor may provide guidance and support. While time constraints are relaxed, project work must be carried out within an agreed, set time frame, with pre-determined sanctions in operation when deadlines are not met.				
HND Quantity Surveying: Graded Unit 2	All Outcomes should be assessed in a single, integrated case study. A significant part of the project can be without close supervision although the assessor may provide guidance and support. While time constraints are relaxed, project work must be carried out within an agreed, set time frame, with pre-determined sanctions in operation when deadlines are not met.				
Human Resource Management in Construction	Assessment takes the form of a case study in which the learners work in small groups. All evidence is produced in controlled and supervised conditions.	Assessment takes the form of a case study in which the learners work in small groups. All evidence is produced in controlled and supervised conditions.	Restricted-response or structured questions under open-book, supervised conditions of 60 minutes duration maximum.		

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Managing Construction Organisations	Outcomes 1, 2 and 3 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all three Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Mathematics for Construction/Mathematics for the Built Environment	Outcomes 1, 2 and 3 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all three Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 1 hour duration.				
Personal Development Planning (DE3R 34)	All Outcomes should be assessed as an integrated case study by the production of a personal development portfolio. A significant part of the evidence can be produced without close supervision although the assessor may provide guidance and support. While time constraints are relaxed, project work must be carried out within an agreed, set time frame, with pre-determined sanctions in operation when deadlines are not met.				
Quality in Construction	Outcomes 1, 2 and 3 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all three Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Quantitative Building Studies: Building Services	Outcomes 1, 2 and 3 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all three Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Quantitative Building Studies: Floors and Roofs	Outcomes 1, 2 and 3 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all three Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Quantitative Building Studies: Substructure and Drainage	Outcomes 1, 2 and 3 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all three Outcomes may be assessed as a single, integrated assessment event in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Quantity Surveying Practice	Short answer and/or restricted-response questions under open-book, supervised conditions of 90 minutes duration.		Short answer and/or restricted-response questions under open-book, supervised conditions of 90 minutes duration.		
Scottish Law for Construction	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all four Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Site Administration	Assessment takes the form of a case study. All evidence is produced in controlled and supervised conditions.	Assessment takes the form of a case study. All evidence is produced in controlled and supervised conditions.	Assessment takes the form of a case study in which the learners work in small groups. All evidence is produced in controlled and supervised conditions.	Restricted-response and structured questions under open-book, supervised conditions of 60 minutes duration.	
Standard Forms of Construction Contract	Restricted-response or structured questions under open-book, supervised conditions of 45 minutes duration maximum.	Restricted-response or structured questions under open-book, supervised conditions of 45 minutes duration maximum.	Restricted-response or structured questions under open-book, supervised conditions of 45 minutes duration maximum.	Restricted-response or structured questions under open-book, supervised conditions of 45 minutes duration maximum.	
Statutory Control of Buildings	Short answer and/or restricted-response questions under open-book, supervised conditions of 60 minutes duration.	Short answer and/or restricted-response questions under open-book, supervised conditions of 60 minutes duration.	Short answer and/or restricted-response questions under open-book, supervised conditions of 60 minutes duration.		

Unit	Assessment				
	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5
Structural Mechanics	Outcomes 1, 2, 3 and 4 may be assessed on an individual basis in closed-book conditions with a balance of short answer, restricted-response and extended-response questions. Alternatively, all four Outcomes may be assessed as a case study in a final, end-of-Unit assessment under similar conditions of maximum 3 hours duration.				
Surveying Historic Buildings	Both Outcomes should be assessed in a single, integrated case study. A significant part of the project can be without close supervision although the assessor may provide guidance and support. While time constraints are relaxed, project work must be carried out within an agreed, set time frame.				
Sustainability and Modern Methods of Construction	Outcomes 1, 2, 3 and 4 should be conducted under closed-book conditions but may incorporate material specified by the centre and produced by the learner over the period of delivery, for example, research and investigation portfolio. Questions should be structured to give learners the opportunity to give short and extended responses.				
Work Role Effectiveness (DG6E 34)	Practical assignment involving personal appraisal, evaluation and development aims. While time constraints are relaxed, project work must be carried out within an agreed, set time frame, with pre-determined sanctions in operation when deadlines are not met.				

6 Guidance on approaches to delivery and assessment

6.1 Sequencing/integration of Units

There are many driving forces which determine a full-time delivery programme for any qualification such as, accommodation, staff availability and materials and equipment. The following tables indicate a suggested delivery programme for a typical HND qualification over a two-year, full-time, two-semester Session.

Higher National Diploma in Architectural Technology	
Suggested Delivery for a full-time, FIRST YEAR Programme	
Semester 1	Semester 2
Construction Technology: Domestic Construction	Architectural Design Sketching and Drawing
Building Services: An Introduction	Building Measurement and Cost Studies
Construction Materials and Specification	Construction Site Surveying A
Building Science	Construction Technology: Substructure
Sustainability and Modern Methods of Construction	Structural Mechanics
CAD: 2D I/ CAD: 2D II	Architecture: Influences on the Development of Scottish Architecture
Health and Safety in Construction	HNC Built Environment: Graded Unit 1
Mathematics for Construction/Mathematics for the Built Environment	

Higher National Diploma in Architectural Technology	
Suggested Delivery for a full-time, SECOND YEAR Programme	
Semester 1	Semester 2
Design of Building Structures	Construction Technology: Specialist Systems
Building Services in Large Buildings	Architectural Procedures
Construction Industry Fundamentals	Statutory Control of Buildings
Construction Technology: Industrial/Commercial Superstructure	Standard Forms of Construction Contracts
Scottish Law for Construction	Fire Safety in Buildings
CAD Architectural 1 or other optional Unit	Architectural Technology: Graded Unit 2
Quality in Construction or other optional Unit	
Personal Development Planning or other optional Unit	

6.2 Delivery

The structure of the qualifications allows for a high degree of flexibility in the delivery mode. The awards could be offered on full-time, block-release, day release or evening modes. A distance learning delivery mode is possible providing adequate materials, tutorial support and assessment facilities exist. Combination of delivery modes is also a possibility. Such combined modes of study may enable learners to complete the awards within a shorter time period.

There are many opportunities for integrative delivery of Units within each of the awards. Teaching and learning for mathematics and science Units could be integrated with technology Units, and assessment should be encouraged to be within the application of technology Units. Graded Units provide the opportunity for integration of knowledge and skills across the Units in an award. Supporting Notes with each Unit identify specific opportunities for integration with other Units.

Centres will define which order Units are undertaken based on learner recruitment patterns, mode of delivery, resource issues and logical progression dictated by topic and Unit content.

Provided that adequate material and tutorial expertise existed these awards could be delivered by Open/Distance learning as well as on an online basis. Centre devised supervision agreements should detail controlled conditions to ensure authenticity of evidence.

The awards lend themselves to a wide range of delivery mechanisms including case studies, formal teaching, tutorial, group work, laboratory/practical work and, where appropriate, work based learning. Centres should develop clear delivery and assessment strategies taking into account the efficacy of teaching, learning, and the use of resources, modes of attendance and the need for a rigorous but not excessively demanding assessment regime.

6.3 Assessment

The assessment strategy is designed to ensure an appropriate level of rigour whilst not imposing excessive demands on centres or learners.

The new design principles for HN awards encourage a more holistic approach to assessment and this has been adopted in this award. The new HN specification places the emphasis on assessing the whole Outcome or a combination of Outcomes rather than on individual Performance Criteria. There is also the intention to reduce the assessment loading for both learners and centres and Unit definitions allow the use of 'sampling' of Knowledge and/or Skills where appropriate.

Each Unit Descriptor includes guidance on delivery and assessment and, where appropriate, any relationship with delivery and assessment of other Units. Requirements for knowledge, skills, sampling, evidence and conduct of assessments is provided for each Outcome in the Unit. Opportunities for integrative assessment across Units is provided and it is generally recommended that topics such as mathematics and fluid mechanics are assessed within Units which apply fundamental theory to practical applications. Assessment guidance includes a variety of conditions including open/closed-book, case study, etc.

Exemplar assessment instruments are available for all mandatory Units and optional Units. The exemplar provides guidance on content, conduct, evidence required and marking and grading. Centres are expected to use these exemplars as templates when producing further assessment instruments.

6.4 Recognition of Prior Learning

SQA recognises that learners gain knowledge and skills acquired through formal, non-formal and informal learning contexts.

In some instances, a full Group Award may be achieved through the recognition of prior learning. However, it is unlikely that a learner would have the appropriate prior learning and experience to meet all the requirements of a full Group Award.

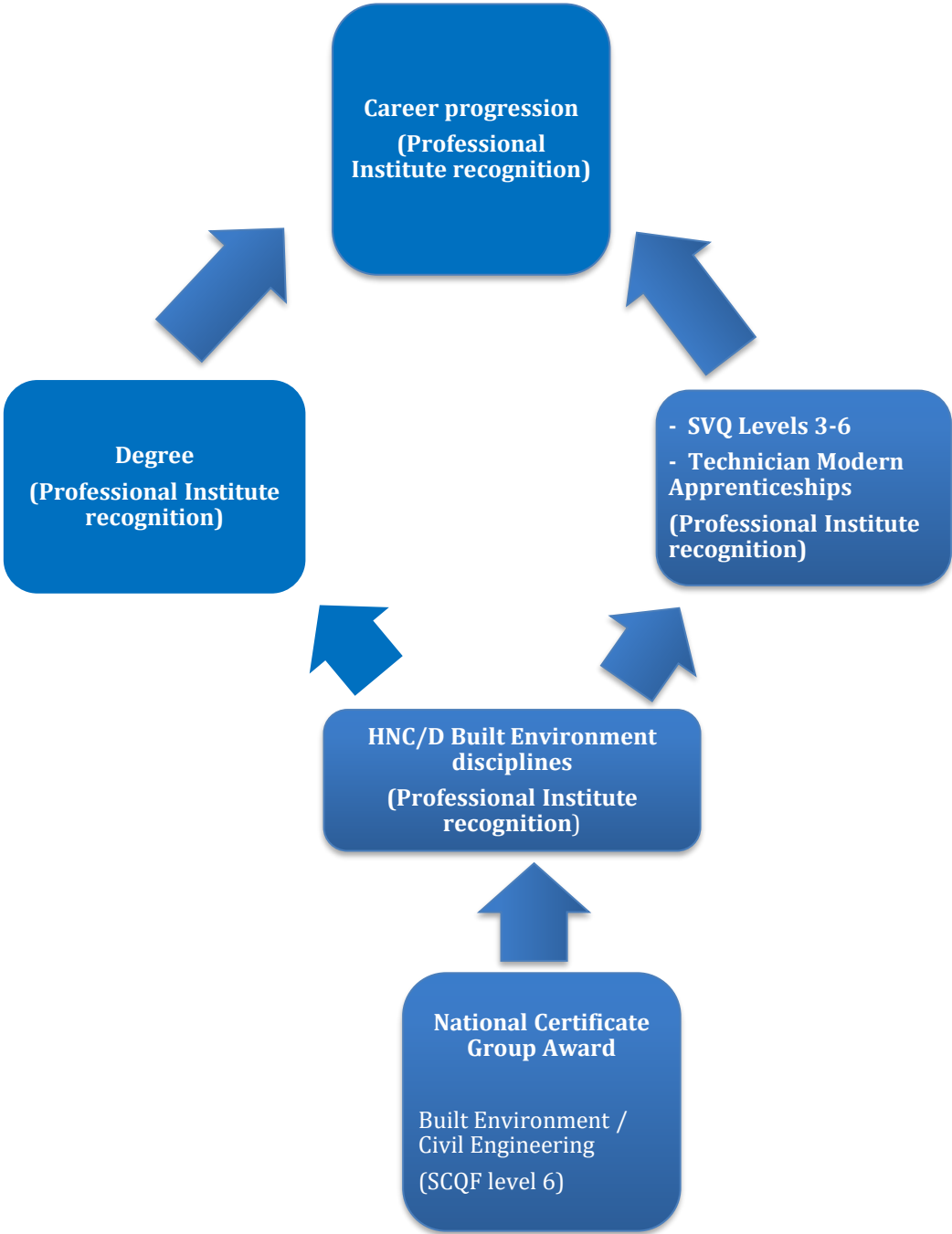
The recognition of prior learning may **not** be used as a method of assessing in the following types of Units and assessments:

- ◆ HN Graded Units
- ◆ Course and/or external assessments
- ◆ Other integrative assessment Units (which may or not be graded)
- ◆ Certain types of assessment instruments where the standard may be compromised by not using the same assessment method outlined in the Unit
- ◆ Where there is an existing requirement for a licence to practice
- ◆ Where there are specific health and safety requirements
- ◆ Where there are regulatory, professional or other statutory requirements
- ◆ Where otherwise specified in an Assessment Strategy

More information and guidance on the *Recognition of Prior Learning* (RPL) may be found on our website www.sqa.org.uk.

The following sub-sections outline how existing SQA Unit(s) may contribute to this Group Award. Additionally, they also outline how this Group Award may be recognised for professional and articulation purposes.

6.4.1 Articulation and/or progression



6.4.2 Professional recognition

The Higher National qualifications in the Built Environment have been developed with both career progression and professional development in mind. It is essential that students gain the maximum benefit from their programme of study.

The major professional bodies related to the range of built environment disciplines covered by these awards are:

Architectural Technology: Chartered Institute of Architectural Technologists (CIAT)

Building/Quantity Surveying: Royal Institution of Chartered Surveyors (RICS)

Construction Management: Chartered Institute of Building (CIOB)

Most professional bodies provide broad recognition of HNC and HND awards against their educational requirements for membership. Some professional bodies accredit individual courses at colleges and universities. Professional body membership requires a combination of the educational base and verification of professional experience.

CIAT is the lead qualifying body for Architectural Technology. The required level of academic qualification for the function of the Architectural Technician is an HNC with appropriate experiential learning or the full-time HND followed by structured and evidenced experiential learning. These are recognised routes towards TCIAT and access routes to degree programmes which lead to MCIAT.

CIOB has a wide ranging membership portfolio. In addition to Built Environment and Construction Management learners, those working in other construction disciplines, including those above, are eligible to apply for CIOB.

The HNC and HND awards in Quantity Surveying and Building Surveying are well-established routes towards the Tech RICS award and as part of a Degree route to RICS membership or as qualifications in their own right. There is no reason to believe that these awards will not receive continuing recognition from RICS as an educational base.

The awards are also recognised as underpinning knowledge to appropriate SVQ/NVQ qualifications at levels 3 and 4.

6.4.3 Transitional Arrangements

It is recommended that learners who are in the process of completing one of the predecessor awards finish it rather than switching to the new, revised award. However, there may be occasions when it is not possible for learners to complete the existing award, eg where they were unable to complete their studies due to ill health or difficulties with funding or employment and where the centre has progressed to offer the new award and only one or two Units need to be completed. In these cases it is recommended that the suggested credit transfer arrangements given in Section 6.4.4 be considered.

6.4.4 Credit transfer

All Units apart from the ones tabled below allow for Automatic Credit Transfer.

Current Unit Code	Current Unit Title	New Unit Code	New Unit Title	Credit Transfer
DW3P 34	Architectural Procedures and Design	H725 34	Architectural Procedures	There is no automatic credit transfer.
DW3X 34	Building Measurement and Cost Studies	H726 34	Building Measurement and Cost Studies	There is no automatic credit transfer.
DW4R 35	Building Services in Large Buildings	H727 35	Building Services in Large Buildings	There is no automatic credit transfer.
DW59 34	Civil Engineering Contract and Project Management A	H72H 34	Civil Engineering Contract and Project Management A	There is no automatic credit transfer.
DW5A 35	Civil Engineering Contract and Project Management B	H72J 35	Civil Engineering Contract and Project Management B	There is no automatic credit transfer.
		H728 34	Construction Industry Fundamentals	There is no automatic credit transfer.
DW55 34	Construction Technology: Industrial/Commercial Superstructure	H729 34	Construction Technology: Industrial/Commercial Superstructure	There is no automatic credit transfer.
DW57 34	Construction Technology: Substructure	H72A 34	Construction Technology: Substructure	There is no automatic credit transfer.
DW4F 33	Mathematics for Construction	H72L 33/H9PW 33	Mathematics for Construction/Mathematics for the Built Environment	There is no automatic credit transfer.
DW5P 35	Public Health Engineering	H72B 35	Public Health Engineering	There is no automatic credit transfer.
DW5E 35	Reinforced Concrete Design and Detailing	H72E 35	Reinforced Concrete Design and Detailing	There is no automatic credit transfer.
DW42 35	Scottish Law for Construction	H72C 35	Scottish Law for Construction	There is no automatic credit transfer.

				credit transfer.
DW4L 34	Site Administration	H72F 34	Site Administration	There is no automatic credit transfer.
DW3N 35	Standard forms of Construction Contracts	H72G 35	Standard Forms of Construction Contract	There is no automatic credit transfer.
		H72D 35	Sustainability and Modern Methods of Construction	There is no automatic credit transfer.

6.5 Opportunities for e-assessment

E-assessment may be appropriate for some elements in these Awards. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence.

The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

6.6 Support materials

A list of existing ASPs is available to view on SQA's website.

6.7 Resource requirements

Much of the content of these HN qualifications can be delivered in a traditional academic learning and teaching environment. However, certain Units demand specialist resources and equipment to ensure proper coverage of vocational and technical content.

DW53 34 *Construction Materials and Specification*

Access to a materials testing laboratory would be required along with an appropriate selection of construction materials to ensure the Outcomes of the 'Materials' Units could be met.

DW5H 34 *Construction Site Surveying A*

Construction Site Surveying A requires an array of land surveying equipment in sufficient quantity to permit learners to operate in small groups and in turn, contribute to the group dynamic.

DW1E 34 *Computer Aided Drafting 2D I*
DW12 34 *Computer Aided Drafting 2D II*
DW1D 34 *CAD Architectural 1*
DW13 34 *CAD 3D Modelling*

Access to a computer suite is essential. A selection of software is required, to allow word-processing and CAD activities. Internet access is essential to enhance research activities.

Each discipline has specific requirements in terms of documents, texts, IT software and hardware that are required to support the learning processes. Examples are: Scottish Building Standards: Technical Handbooks, Standard Methods of Measurement and contract planning programmes.

Investment in a selection of appropriate, construction-specific texts and journals would be essential to provide a comprehensive and balanced resource pool which, in turn, would ensure a broad and effective learning environment for the learner.

7 General information for centres

Equality and inclusion

The Unit specifications making up this Group Award have been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners will be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

Internal and external verification

All instruments of assessment used within this/these qualification(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* (www.sqa.org.uk/GuideToAssessment).

8 Glossary of terms

Embedded Core Skills: is where the assessment evidence for the Unit also includes full evidence for complete Core Skill or Core Skill components. A learner successfully completing the Unit will be automatically certificated for the Core Skill. (This depends on the Unit having been successfully audited and validated for Core Skills certification.)

Finish date: The end of a Group Award's lapsing period is known as the finish date. After the finish date, the Group Award will no longer be live and the following applies:

- ◆ learners may not be entered for the Group Award
- ◆ the Group Award will continue to exist only as an archive record on the Awards Processing System (APS)

Graded Unit: Graded Units assess learners' 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 learners to retain and adapt their skills and knowledge. (**Note to writer:** delete if not applicable to product type)

Lapsing date: When a Group Award is entered into its lapsing period, the following will apply:

- ◆ the Group Award will be deleted from the relevant catalogue
- ◆ the Group Award specification will remain until the qualification reaches its finish date at which point it will be removed from SQA's website and archived
- ◆ no new centres may be approved to offer the Group Award
- ◆ centres should only enter learners whom they expect to complete the Group Award during the defined lapsing period

SQA credit value: The credit value allocated to a Unit gives an indication of the contribution the Unit makes to an SQA Group Award. An SQA credit value of 1 given to an SQA Unit represents approximately 40 hours of programmed learning, teaching and assessment.

SCQF: The Scottish Credit and Qualification Framework (SCQF) provides the national common framework for describing all relevant programmes of learning and qualifications in Scotland. SCQF terminology is used throughout this guide to refer to credits and levels. For further information on the SCQF visit the SCQF website at www.scqf.org.uk.

SCQF credit points: SCQF credit points provide a means of describing and comparing the amount of learning that is required to complete a qualification at a given level of the Framework. One National Unit credit is equivalent to 6 SCQF credit points. One National Unit credit at Advanced Higher and one Higher National Unit credit (irrespective of level) is equivalent to 8 SCQF credit points.

SCQF levels: The level a qualification is assigned within the framework is an indication of how hard it is to achieve. The SCQF covers 12 levels of learning. HNCs and HNDs are available at SCQF levels 7 and 8 respectively. Higher National Units will normally be at levels 6–9 and Graded Units will be at level 7 and 8. National Qualification Group Awards are available at SCQF levels 2–6 and will normally be made up of National Units which are available from SCQF levels 2–7.

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

Signposted Core Skills: refers to opportunities to develop Core Skills arise in learning and teaching but are not automatically certificated.

Qualification Design Team: The QDT works in conjunction with a Qualification Manager/Development Manager to steer the development of the National Certificate/National Progression Award 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.

Acknowledgement

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of this qualification.

9 General information for learners

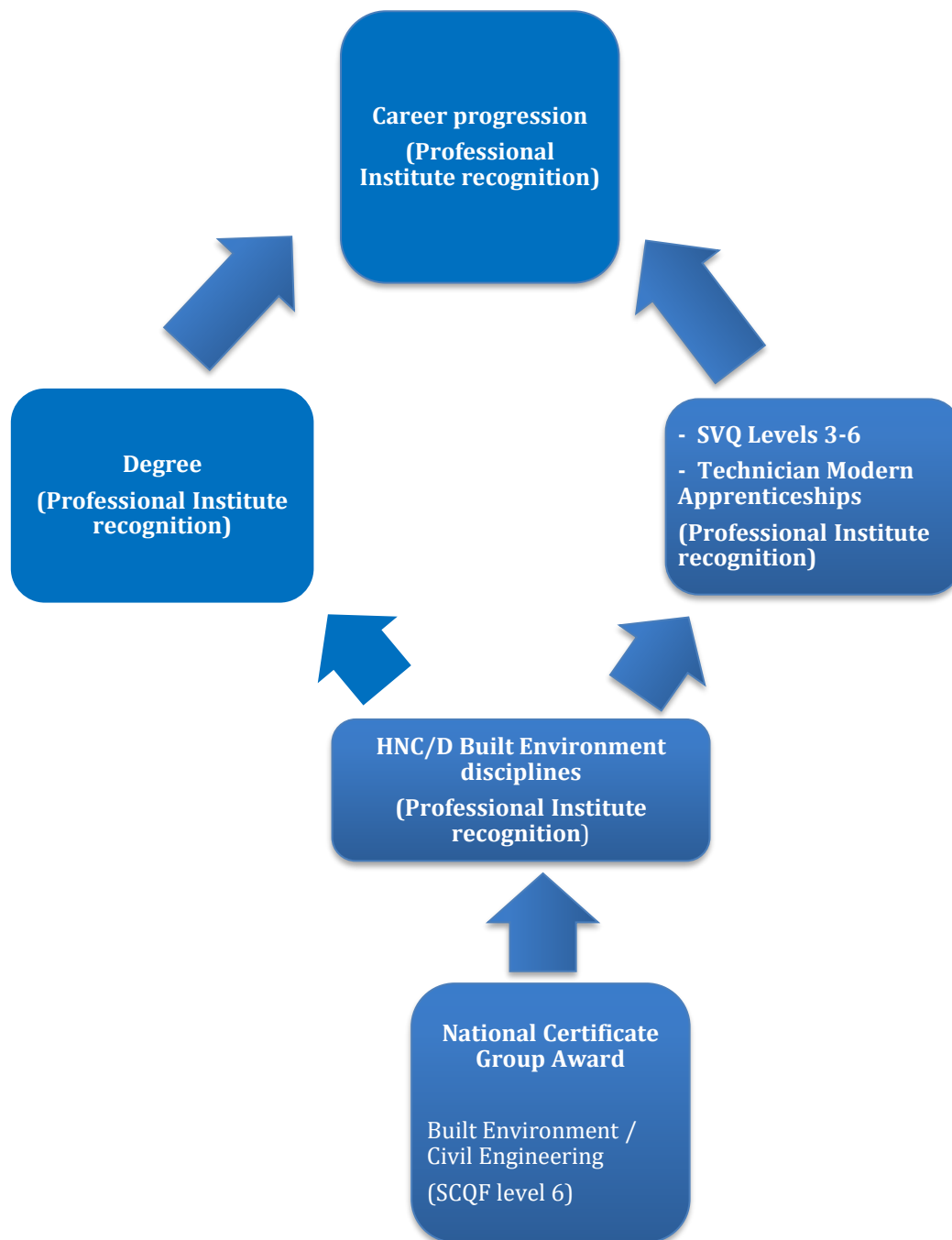
This section will help you decide whether this is the qualification for you by explaining what the qualification is about, what you should know or be able to do before you start, what you will need to do during the qualification and opportunities for further learning and employment.

The Higher National Certificates and Diplomas in the Built Environment disciplines are mainly a knowledge-based qualifications which require you to spend the majority of your time in a classroom location as well as participating in local site visits, research and fieldwork.

The HN Certificates and Diplomas in the various disciplines are designed to equip you with the knowledge, understanding and skills to allow you to gain employment in the construction industry, eg:

Architectural Technician
Construction Technician
Materials Technician
Quantity Surveying Technician
Land Surveyor
Buyer
Planner
Estimator

all at trainee or technician level, or to progress to a higher level qualification.



Each Higher National Certificate requires you to achieve a minimum of 12 credits by completion of all mandatory Units and the required number of optional Units. You may of course, undertake additional Units (credits) to add to your portfolio and these also will be credited to you in your certification.

Each National Diploma requires you to achieve a minimum of 30 credits by completion of all mandatory Units and the required number of optional Units. You may of course, undertake additional Units (credits) to add to your portfolio and these also will be credited to you in your certification.

If you wish to investigate career opportunities in the construction industry, you can contact Construction Skills at www.citb.org.uk