



Arrangements for:

HNC Computer Aided Architectural Design and Technology

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HND Computer Aided Architectural Design and Technology

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1 Introduction

This is the Arrangement Document for the revised Group Awards of HNC and HND in Computer Aided Architectural Design and Technology (CAADT), which were validated in August 2007 (HNC) and August 2008 (HND) respectively. This document includes background information on the development of the Group Awards, their aims, guidance on access, details of the Group Award structures, and guidance on delivery.

These revised awards will replace the HNC and HND awards in Architectural Technology with CAD, which were validated in 2000 and 2002.

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

2 Rationale for the revision of the awards

2.1 Background to the development of this qualification

The predecessor awards of HNC and HND in Architectural Technology with CAD were developed by a single centre to meet the needs of local and national industry, which required capable and qualified Architectural Technicians/Technologists with the necessary skills to satisfy the growth in CAD centred solutions. These new skills emerged as a result of technological developments in both computer hardware and software, which in turn has resulted in the development of very powerful computer based draughting systems.

The awards have not been revised since 2002 although additional optional Units were added to the frameworks to reflect technological developments. There has been a steady increase in the number of entries for the awards since 2000.

The latest review of the awards has taken place to reflect:

- ◆ changes to SQA's Design Principles for Higher National qualifications
- ◆ SQA's HN Modernisation Programme which required all HN provision to be reviewed to ensure 'fitness for purpose'
- ◆ technological growth in hardware and software solutions within the industry
- ◆ the continued expansion of the role of the Architectural Technologist, now a Chartered Professional of the body the Chartered Institute of Architectural Technologists (CIAT),

The review provided the opportunity to:

- (a) review the course framework in full.
- (b) introduce new Units relevant to industry needs.
- (c) update existing Units.
- (d) remove obsolete Units and concepts.

To ensure that the revised qualifications are vocationally relevant and meet the needs of both industry and candidates, market research and consultation was carried out by the Qualifications Design Team (QDT) set up to oversee the development.

2.2 The consultation phase

The QDT carried out a number of consultation exercises during the development period with a range of groups within the context of Architectural Engineer Construction (AEC) environs. The table below details the stakeholder groups involved and methods of consultation.

Stakeholder	Method of consultation
Delivering centres	Meetings
Employers	Questionnaire and meetings
Higher Educational bodies	Meetings, e-mail and questionnaire
Candidates (current/former student groups)	E-mail, questionnaire and meetings
Professional bodies	Letter and e-mail
Computer Aided Design Forums	Email

2.2.1 Summary of consultation feedback

Stakeholder feedback was positive and confirmed a continued strong support for the awards. The general points to emerge from the consultation process were:

- ◆ there was a need and support for the HNC and HND awards from industry
- ◆ there was overall support of the content of the HNC and HND awards from industry
- ◆ the HNC and HND awards continue to provide successful candidates with a platform to progress towards professional status to Technician Member CIAT (TCIAT), Associate Member CIAT (ACIAT), full Member CIAT (MCIAT)
- ◆ there was an indication of support from a professional body in the Chartered Institute of Architectural Technologists and an invitation to pursue formal accreditation
- ◆ confirmation of a design centred approach to technical problems using a variety of CAD software as the most appropriate method for developing mandatory skills
- ◆ confirmation of the need to prepare candidates with a broad range of high-end CAD skills, including Building Information Modelling systems
- ◆ the award frameworks appeared balanced, coherent and relevant to progression of candidates' prospects
- ◆ the proposed frameworks provide for development of candidates' Core Skills in preparation for industrial practice
- ◆ there was support from Higher Education Institutes for the awards
- ◆ lecturers in Higher Education were supportive of the skills and knowledge included in the awards
- ◆ Higher Education Institutes considered the content of the awards to be valid and relevant
- ◆ articulation routes from the HND award to degree entry are available

Overall, employers were supportive of the skills and knowledge included in the Group Awards. The employers acknowledged that the Group Awards would provide a standard for recruitment, and that their employment needs would be met by the HNC and HND CAADT Awards. Consultation with employers also confirmed the relevance and importance of developing Core Skills.

2.2.2 Development process

The QDT modified the proposed award frameworks in light of the consultation process and new/revised Unit specifications were circulated to centre and employer stakeholders for further comment prior to validation.

3 Aims of the awards

The main aim of the HNC/HND CAADT Group Awards is to provide candidates with the opportunity to develop a high level of CAD knowledge and skills, underpinned by a firm grasp of technical design knowledge relevant to AEC industries. Candidates will develop knowledge and understanding of the design process and the stages of design where CAD skills can be exploited in the achievement of a desirable design solution, and the production of digital design solutions in the solving of technical problems for architecture and construction.

In addition, the HND CAADT award is specifically tailored at providing candidates with opportunities to gain knowledge and skills sets appropriate to more formal recognition as an Architectural Technician and to provide pathways with governing institutions, primarily CIAT, to formalise professional status and achieve recognition for academic achievement.

The aims of the Group Awards have been split into general aims and specific aims.

3.1 General aims of the HNC award

- 1 To develop knowledge, understanding and skills across a range of core Architectural CAD principles and technologies at Higher National level.
- 2 To develop a range of communication and information technology knowledge and skills relevant to the needs of Architectural CAD specialists.
- 3 To develop knowledge, understanding and skills in applying a structured approach to advanced Architectural CAD principles in the production of complex drawings.
- 4 To develop an ability to apply analysis and synthesis to the solution of Architectural CAD related problems.
- 5 To develop skills of study, research, analysis and resource management.
- 6 To develop skills of evaluation, organisation and problem solving.
- 7 To develop responsibility for individual learning and progression.
- 8 To develop skills, knowledge and motivation towards progression to Higher Education routes.
- 9 To enhance candidates' employment prospects.
- 10 To support candidates' continuing professional development and career development.

- 11 To enable progression within the SCQF (Scottish Credit and Qualifications Framework).
- 12 To develop learning and transferable skills, including Core Skills.
- 13 To develop and add to previously acquired transferable skills.

3.2 Specific aims of the HNC award

- 14 To prepare candidates for employment as Architectural Technicians in private or public practice, working with a range of associated professional disciplines.
- 15 To prepare candidates with a range of the most contemporary vocational skills, including the preparation, co-ordination and communication of technical information relevant to the Architectural industry, using the most advanced CAD and IT platforms available.
- 16 To provide candidates with underpinning knowledge and skills contributing to the efficient operation and management of architectural design projects through control of specified regulatory, quality or management standards.
- 17 To provide opportunities for candidates to achieve appropriate professional recognition, particularly, but not exclusively, with the Chartered Institute of Architectural Technology (CIAT).
18. To develop knowledge, understanding and skills in a range of core Architectural subjects at Higher National level.
- 19 To develop contextual computer-aided design knowledge, understanding and skills in the resolution of core Architectural and Construction design problems.
- 20 To develop key design knowledge and skills in the analysis, synthesis and resolution of architectural design problems.
- 21 To allow a degree of flexibility within subject specific disciplines, such as Building Services, History and Conservation, Construction Management.

3.3 General aims of the HND award

- 1 To develop knowledge, understanding and skills across a range of core Architectural CAD principles and technologies at Higher National level (SCQF 8) beyond those achieved within the HNC.
- 2 To develop a range of communication and information technology knowledge and skills relevant to the needs of Architectural CAD specialists beyond those achieved within the HNC.
- 3 To develop knowledge, understanding and skills in applying a structured approach to advanced Architectural CAD principles in the production of complex drawings, particularly as they apply to more sophisticated design projects relative to the professional activities of the qualified Architectural Technician.
- 4 To develop an ability to apply analysis and synthesis to the solution of Architectural CAD related problems, particularly as they apply to more sophisticated design projects relative to the professional activities of the qualified Architectural Technician.
- 5 To develop skills of study, research, analysis and resource management.
- 6 To develop skills of evaluation, organisation and problem solving.
- 7 To develop responsibility for individual learning and progression.
- 8 To develop skills, knowledge and motivation towards progression to Higher Education (HE) routes, and provide a formal pathway to HE.
- 9 To enhance candidates' employment prospects.

- 10 To support candidates' continuing professional development and career development.
- 11 To enable progression within the SCQF (Scottish Credit and Qualifications Framework).
- 12 To develop learning and transferable skills, including Core Skills.
- 13 To develop and add to previously acquired transferable skills.

3.4 Specific aims of the HND award

- 14 To prepare candidates for employment as Architectural Technicians in private or public practice, working with a range of associated professional disciplines.
- 15 To prepare candidates with a range of the most contemporary vocational skills, including the preparation, co-ordination and communication of technical information relevant to the Architectural industry, using the most advanced CAD and IT platforms available.
- 16 To provide candidates with underpinning knowledge and skills contributing to the efficient operation and management of architectural design projects through control of specified regulatory, quality or management standards.
- 17 To provide opportunities for candidates to achieve appropriate professional recognition, particularly, but not exclusively, with the Chartered Institute of Architectural Technology (CIAT).
- 18 To provide an award that, on successful completion, will allow candidates to progress to appropriate degree level (3rd year) programmes.
- 19 To develop knowledge, understanding and skills in a range of core Architectural subjects at Higher National level (SCQF 8).
- 20 To develop contextual computer-aided design knowledge, understanding and skills in the resolution of core Architectural and Construction design problems, beyond those achieved within the HNC.
- 21 To develop key design knowledge and skills in the analysis, synthesis and resolution of architectural design problems, beyond those achieved within the HNC.
- 22 To allow a degree of flexibility within subject specific disciplines, such as Building Services, History and Conservation, Construction Management.

3.5 Target groups

The HNC and HND CAADT Group Awards are suitable for a wide range of potential candidates including:

- ◆ School leavers
- ◆ Candidates studying related subject areas such as engineering, construction and design related disciplines at NC level
- ◆ Adult returners to education
- ◆ Candidates in employment who wish to enhance their career prospects
- ◆ People changing direction/seeking a career change
- ◆ Part-time candidates wishing to broaden skills and knowledge
- ◆ Candidates who wish to pursue a career in industries currently utilising the benefits of CAD technology as a CAD Technician, CAD Manager, Junior Designer, Designer, or Design Office Manager depending on experience

The HND CAADT 2nd year programme also provides for direct articulation routes for those candidates progressing successfully from the HNC CAADT award.

3.6 Employment opportunities

The HNC and HND CAADT Group Awards allow for progression into a wide range of employment pathways such as:

- ◆ Freelance opportunities as a designer
- ◆ Self-employment providing local architectural draughting and design services
- ◆ Employment as an Architectural Technician/Technologist
- ◆ Entrepreneurial opportunities in property development aspects of the industry

Typical paid employment areas include primary architectural industries, ie:

- ◆ Architectural practice
- ◆ Construction companies
- ◆ Surveying services
- ◆ Architectural support service companies

Opportunities also exist within secondary architecturally associated environments, such as those companies operating in:

- ◆ Multi-disciplinary services
- ◆ Structural Engineering
- ◆ Civil Engineering
- ◆ Geo-technical services
- ◆ Interior Design/Spatial Design
- ◆ Landscape/Topographical Design
- ◆ Urban Design
- ◆ Local Authorities (planning/building control)
- ◆ Architectural manufacturing
- ◆ Construction Project Management
- ◆ Architectural Conservation

4 Access to awards

4.1 Recommended access

As with all SQA qualifications, access to the awards will be at the discretion of the delivering centre. All prospective candidates should be treated fairly in regard to access and centres should ensure that there are no artificial barriers to entry.

Applicants will come from a wide variety of backgrounds and experiences - some without formal qualifications and those who may have experienced social exclusion. The access for these Group Awards is designed to encourage and support the social inclusion agenda by providing an entry route for applicants with traditional and non-traditional entry profiles.

Examples of appropriate entry requirements are given below — this is intended to provide guidance to centres. They are not exhaustive or mutually exclusive and may be considered in a variety of combinations.

4.2 Formal qualifications

Entry to HNC/1st year HND Computer Aided Architectural Design and Technology:

- ◆ Certificate in CAD (a SQA PDA level 7 award)
- ◆ An NC in a related Group Award, such as Craft and Design, Construction, Building or similar at SCQF level 5 or above with a cohesive group of no less than 10 NQ Units
- ◆ A cohesive group of NQ passes in related subjects such as Art, Design, Construction, Building Sciences, Building Technologies
- ◆ A group of Standard Grades (at Credit) including English, Graphical Communication, Craft and Design, or equivalent at SCQF level 5
- ◆ An HNC in a related discipline such as Art and Design, Construction, Building Technologies, or equivalent
- ◆ CAD qualifications from other awarding bodies
- ◆ A degree in an appropriate discipline such as any design based award in related disciplines including Product Design, Civil Engineering, Structural Engineering, Interior Design, or similar
- ◆ Applications from foreign nationals are welcome where they can show equivalence to the above categories

4.3 Entry to Year 2 HND

In order to achieve the HND in CAADT, candidates must gain 30 credits. While ideally full-time candidates should be encouraged to achieve 15 credits in each year, ie the 12 mandatory credits which make up the HNC plus three optional credits, wider access should be provided to cater for the needs of those, for example, who have achieved the HNC at day release or evening classes or in other colleges.

Normally candidates who achieve 12 HN credits (96 SCQF points) including all the HNC mandatory Units will gain direct access to the second year.

4.4 Core Skills

The recommended Core Skills entry profile is:

Core Skill	Entry SCQF level
Communication	5
Information Technology	5
Numeracy	5
Problem Solving	5
Working with Others	4

The opportunity to develop all Core Skills can be identified throughout the mandatory section of the Group Awards. This gives further support to candidates with non-traditional entry profiles to succeed at this level.

4.5 Work experience

Candidates with suitable relevant work experience may be accepted for entry provided the enrolling centre believes that they are likely to benefit from undertaking the award. In this subject-area it is common for candidates to already have some experience of CAD in industry, especially part-time candidates who may be supported by an employer.

4.6 English as an additional language

Where English is not the first language of a prospective candidate, it is recommended that the candidate possesses English for Speakers of Other Languages at an appropriate level. If using a test such IELTS or equivalent, an entry score of 5.5 or above would provide a sound linguistic basis for the candidate to attempt this level of course.

5 Awards structure

The awards have been designed in accordance with SQA’s design principles for HN Awards, ie:

- ◆ HNCs shall be designed to be at SCQF level 7 and shall comprise 96 SCQF credit points with at least 48 credit points at SCQF level 7. The HNC should include a mandatory section of at least 48 SCQF credit points and include one Graded Unit of 8 SCQF credit points at SCQF level 7.
- ◆ HNDs shall be designed to be at SCQF level 8 and shall comprise 240 SCQF credits points with at least 64 credit points at SCQF level 8. The HND should include a mandatory section of at least 96 SCQF credit points and include one Graded Unit of 8 SCQF credit points at SCQF level 7, plus 16 SCQF credit points of Graded Unit(s) at SCQF level 8.
- ◆ HNC and HND programmes shall incorporate opportunities for candidates to develop Core Skills to levels required by the occupations or progression pathways the HNs support.

5.1 Frameworks

5.1.1 HNC Computer Aided Architectural Design and Technology

To attain the Group Award of HNC Computer Aided Architectural Design and Technology candidates must achieve 12 HN (SQA) credits — 10 mandatory credits plus 2 optional credits.

Mandatory Units — 10 HN credits required

Unit title	Unit code	SCQF credit points	SQA credit value	SCQF level
Architectural CADT: Principles and Practice	F32A 34	16	2	7
Architectural CADT: Residential Design	F329 34	16	2	7
Architectural CADT: Construction Detailing	F3G5 34	8	1	7
CAD: User Systems	DW14 34	8	1	7
Architectural Professional Practice: Design Management	F39F 34	8	1	7
Architecture: Form, Order and Composition	F39H 34	16	2	7
Computer Aided Architectural Design and Technology: Graded Unit 1	F3SV 34	8	1	7

Optional Units — 2 HN credits required

Unit title	Unit code	SCQF credit points	SQA credit value	SCQF level
Statutory Control of Buildings	DW3W 34	8	1	7
Site Administration	DW4L 34	8	1	7
Personal Development Planning	DE3R 34	8	1	7
CAD: Visualisation, Rendering and Presentation	DW18 34	8	1	7
History of Architecture	F3SG 34	8	1	7
Computer Aided Architectural Design and Technology: Model Making	F39G 34	8	1	7
Building Measurement and Cost Studies	DW3X 34	8	1	7
Construction Site Surveying A	DW5H 34	8	1	7
Architectural CADT: Building Technologies	F3J5 34	8	1	7
Architectural CADT: Building Systems and Services	F3SH 34	8	1	7

5.1.2 HND Computer Aided Architectural Design and technology

To attain the Group Award of HND Computer Aided Architectural Design and Technology candidates must achieve 30 HN (SQA) credits — 23 mandatory credits plus 7 optional credits.

Mandatory Units — 23 HN credits required

Unit title	Unit code	SCQF credit points	SQA credit value	SCQF level
Architectural CADT: Principles and Practice	F32A 34	16	2	7
Architectural CADT: Residential Design	F329 34	16	2	7
Architecture: Form, Order and Composition	F39H 34	16	2	7
Architectural Professional Practice: Design Management	F39F 34	8	1	7
Statutory Control of Buildings	DW34 34	8	1	7
CAD: Visualisation, Rendering and Presentation	DW18 34	8	1	7
CAD: User Systems	DW14 34	8	1	7
Architectural CADT: Construction Detailing	F3G5 34	8	1	7
Computer Aided Architectural Design and Technology: Graded Unit 1	F3SV 34	8	1	7
Architectural CADT: Structural Design and Detailing	F4NJ 35	16	2	8
Architectural CADT: Commercial Building Systems	F4NH 35	16	2	8
Architectural CADT: Advanced Digital Media	F4NF 35	8	1	8
Energy Performance of Buildings	F32B 35	8	1	8
Conversion and Adaptation of Buildings	DW3T 35	8	1	8
Personal Development Planning	DE3R 34	8	1	7
Site Administration	DW4L 34	8	1	7
Computer Aided Architectural Design and Technology: Graded Unit 2	F52R 35	16	2	8
Mandatory credits			23	

Optional Units — 7 HN credits required

Unit title	Unit code	SCQF credit points	SQA credit value	SCQF level
Architectural CADT: Building Technologies	F3J5 34	8	1	7
Architectural CADT: Building Systems and Services	F35H 34	8	1	7
Construction Site Surveying A	DW5H 34	8	1	7
Computer Aided Architectural Design and Technology: Model Making	F39G 34	8	1	7
History of Architecture	F3SG 34	8	1	7
Building Measurement and Cost Studies	DW3X 34	8	1	7
Interior Design: Applied Practice	DX07 34	8	1	7
Architectural CADT: Animation	F4NG 35	8	1	8
Architectural CADT: Urban Design	F4NE 35	8	1	8
Architectural CADT: Landscape Design	F4TF 35	8	1	8
Building Maintenance Technology	DW52 34	8	1	7
Fire Safety in Buildings	DW4X 35	8	1	8
Construction Planning	DW4J 35	8	1	8
Photography: Architecture	DW7Y 35	8	1	8

Appendix 5 contains recommended optional Units for different study pathways.

5.2 Graded Units

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

Both Graded Units are project based Graded Units. This encourages candidates to demonstrate and develop transferable key skills to a level which will facilitate progress in education or industry.

5.3 Mapping information

HNC mapping

All Units satisfy the general aims of the award 1–13 and specific aims 14–17. The table below identifies where the individual Units match the additional specific aims of the award:

Unit title	Unit Code	Specific aims met
Architectural CADT: Principles and Practice	F32A 34	18, 19
Architectural CADT: Residential Design	F329 34	18, 19, 20
Architecture: Form, Order and Composition	F39H 34	18, 20
Architectural Professional Practice: Design Management	F39F 34	18, 20
CAD: User Systems	DW14 34	18, 19,
Architectural CADT: Construction Detailing	F3G5 34	18, 19,
Computer Aided Architectural Design and Technology: Graded Unit 1	F3SV 34	18, 19
Architectural CADT: Building Technologies	F3J5 34	19, 20, 21
Architectural CADT: Building Systems and Services	F3SH 34	19, 20, 21
History of Architecture	F3SG 34	20, 21
Computer Aided Architectural Design and Technology: Model Making	F39G 34	21
Site Administration	DW4L 34	21
CAD: Visualisation, Rendering and Presentation	DW18 34	19, 20
Building Measurement and Cost Studies	DW3X 34	21
Construction Site Surveying A	DW5H 34	21
Statutory Control of Buildings	DW3W 34	21
Personal Development and Planning	DE3R 34	14, 17

HND mapping

All Units satisfy the general aims of the award 1-13 and specific aims 14–18. The table below identifies where the individual Units match the remaining specific aims of the award.

Unit title	Unit code	Specific aims met
Architectural CADT: Principles and Practice	F32A 34	19, 20
Architectural CADT: Residential Design	F329 34	19, 20, 21
Architecture: Form, Order and Composition	F39H 34	19, 21
Architectural Professional Practice: Design Management	F39F 34	19, 21
CAD: User Systems	DW14 34	19, 20
Architectural CADT: Construction Detailing	F3G5 34	19, 20, 21
Computer Aided Architectural Design and Technology: Graded Unit 1	F3SV 34	19, 20, 21
Architectural CADT: Structural Design and Detailing	F4NJ 35	19, 20, 21
Architectural CADT: Commercial Building Systems	F4NH 35	19, 20, 21
Architectural CADT: Advanced Digital Media	F4NF 35	19, 20, 21
Conversion and Adaptation of Buildings	DW3T 35	21, 22
Energy Performance of Buildings	F32B 35	21, 22
Statutory Control of Buildings	DW34 34	22
CAD: Visualisation, Rendering and Presentation	DW18 34	19, 21
Site Administration	DW4L 34	22
Personal Development Planning	DE3R 34	22
Computer Aided Architectural Design and Technology: Graded Unit 2	F52R 35	19, 20, 21
Architectural CADT: Building Technologies	F35J 34	19, 21, 22
Architectural CADT: Building Systems and Services	F35H 34	19, 21, 22
History of Architecture	F3SG 34	21, 22
Computer Aided Architectural Design and Technology: Model Making	F39G 34	22
Building Measurement and Cost Studies	DW3X 34	22
Construction Site Surveying A	DW5H 34	22
Architectural CADT: Landscape Design	F4TF 35	19, 20, 21, 22
Architectural CADT: Animation	F4NG 35	19, 20, 21
Architectural CADT: Urban Design	F4NE 35	18, 20, 21
Construction Planning	DW4J 35	19, 22
Interior Design: Applied Practice	DX07 34	19, 20, 21, 22
Building Maintenance Technology	DW52 34	21, 22
Fire Safety in Buildings	DW4X 35	21, 22
Photography: Architecture	DW7Y 35	22

5.3.1 Mapping to National Occupational Standards

The standards for the architectural design and technology sector were taken into consideration during the development of the HNC and HND CAADT Group Awards. However, for Architectural Technology, the most appropriate skills set is the Occupational Standards determined by the Chartered Institute of Architectural Technologists (CIAT) for professional recognition as an Architectural Technician/Technologist and the awards have been mapped to these standards in Appendix 2.

The CIAT's criteria for professional recognition consists of 11 and 14 benchmarks for Technician and Technologist status respectively. CIAT routinely only offer full accreditation to university degree programmes, and whilst it is not the aim of these awards to meet these directly, mapping the knowledge and skills of the Group Awards against these, ensures that such knowledge and skills meets the needs of universities for articulation purposes, provides candidates with opportunities to match their skill sets against the occupational benchmarks, and prepares centres for future college level accreditation.

5.4 Articulation, professional recognition and credit transfer

5.4.1 Articulation to higher education

Centres are advised to pursue articulation arrangements for the progression of successful candidates to university, on a centre by centre basis.

Napier University has agreed, in principle, to accept candidates on to the third year of their BSc (Hons) Architectural Technology.

Other HEIs that have accepted successful HND CAADT candidates, in the past, on to a variety of courses include:

- ◆ University of the West of Scotland
- ◆ Glasgow Caledonian University
- ◆ Strathclyde University

The HND award delivers the most appropriate grouping of Units according to the candidate's needs and planned progression routes.

Candidates should be advised to liaise directly with the HEIs prior to application as Unit credits that count towards entry requirements can vary.

5.4.2 Credit transfer

Credit transfer can be given where there is broad equivalence between subject related content of the Unit (or combination of Units).

Candidates who are given credit transfer between predecessor HNC/HND Units and the new/revised HN Units must still satisfy all other conditions of award of the new principles HNC/HND including the mandatory Units and the correct number of credits at the correct SCQF level.

Several Units in the predecessor HND Architectural Technology with CAD (G72D 16) award are suitable for credit transfer to the new Units in the revised HND CAADT award. A credit transfer grid is included at Appendix 3, and provides information on credit transfer between the old and new awards. The credit transfer grid is designed to assist course tutors to assess the level of credit transfer from old to new Units. Given the evolving hardware and software considerations of the (old and) new awards, and the dynamic nature of the awards, a time limit of 3 years is to be used to measure the currency of old Units in respect of credit transfer arrangements.

Transition arrangements

It is anticipated that there will be occasions when candidates who have achieved the HNC Architectural Technology with CAD, will present themselves for the new HND. During this transition period, it will be permitted to move to the HND without the Unit *Computer Aided Architectural Design and Technology: Graded Unit 1* (F3SV 34). Candidates will, however, be expected to achieve 30 credits, including the Unit *Computer Aided Architectural Design and Technology: Graded Unit 2* (F52R 35).

Candidates progressing into the HND year 2, who have completed the old HNC award (G72C 15) are therefore assumed to have broad equivalence to the new HNC award (G90K15), with the same time limitations, and should be provided with direct entry to the 2nd year of the HND, in line with the credit transfer arrangements see Appendix 3. This will result in successful completion of the new HND award, with only one Grade awarded for the 2 credit HND Graded Unit at level 8.

Candidates may be given credit transfer between HNC/HND Units (developed using 1998 design rules) and the new HN Units (developed using 2003 design principles).

A candidate who is transferring, from an award in the same subject area, with a 12 credit HNC (or having completed the 15 credits necessary for the first part of a HND) should:

- ◆ be given opportunities to develop Core Skills
- ◆ be given credit for the Units achieved in the previous award
- ◆ achieve the mandatory Units in this award by credit transfer or normal study
- ◆ obtain the remaining SCQF credit points required at the SCQF level to gain the award (either by credit transfer or normal study)

A table listing credit transfer arrangements between the predecessor Units and the new/revised Units is given in Appendix 3. These arrangements have been agreed by an External Verifier.

6 Approaches to delivery and assessment

6.1 Context and content

The HNC and HND CAADT awards are designed to equip candidates with the knowledge, understanding and skills required for success in current and future employment within architectural industries and their associated disciplines.

All of the Units listed may be delivered as stand-alone qualifications. Alternatively, they may be included in a variety of Group Awards as mandatory or optional Units. Where they are delivered within a specified framework, eg HNC/HND Computer Aided Architectural Design and Technology, they constitute a coherent, attractive and very relevant programme designed as ‘fit for purpose’ to equip candidates with the knowledge and/or skills needed for today’s working environment or to progress to Higher Education.

The awards can be delivered in many different modes of attendance including full-time, part-time and flexible learning patterns.

6.2 Delivery and assessment

6.2.1 Modes of delivery

The structure of the awards allows for a high degree of flexibility in the delivery modes. The awards can be offered on a full-time standard, full-time fast track, day release, evening or flexible learning mode. In addition, it is also possible (and becoming increasingly popular) to offer the awards using a combination of modes. Such combination of study modes may enable candidates to complete the awards within a shorter time period. It may also be possible for centres to offer individual Units on an open learning or on-line basis especially if there is the possibility of home-based study of more factual based information.

If the awards are offered on a Distance Learning basis, the following methods of delivery can be employed to convey the information as required:

- ◆ Printed tutorials by post
- ◆ Electronic copy of the tutorials accessed by email or web
- ◆ Video tutorials accessed through a Virtual Learning Environment (VLE)

Checking the validity of the work submitted by distance learning candidates can be difficult. Possible solutions include speaking to candidates by telephone to ask key questions about the assessment, and gain an explanation of how the work was achieved. Where candidates are assessed on oral presentation, the submission of a video recording of the presentation or group meeting may be considered to be a satisfactory method of evidencing this element.

To ensure authentication of work, it is advisable for candidates to complete a log diary recording progress and tasks completed. There should be regular meetings between the tutor and candidate(s) to review progress and these meetings could be recorded.

Notwithstanding, there may be knowledge and skills requirements in individual Units requiring the candidate to visit the assessing centre for interview, oral assessment, examination or presentation. Centres should decide on the most effective medium for evidencing assessment requirements.

6.2.2 Sequence of delivery

Although centres can choose what order in which to teach the Units, an exemplar delivery schedule for the frameworks is provided in Appendix 4.

6.3 Assessment

The overall assessment strategy under the new design principles is to encourage a more holistic approach to assessment. The new HN Unit Specification places the emphasis on assessing the whole Outcome or a combination of Outcomes rather than on Performance Criteria. There is also the intention to reduce the assessment loading for both candidates and centres and the new Unit specifications allow the use of ‘sampling’ of knowledge and/or skills.

Centres should be encouraged to identify opportunities for integration of assessments across Units in the HNC and HND CAADT frameworks.

6.3.1 Assessment on demand opportunities

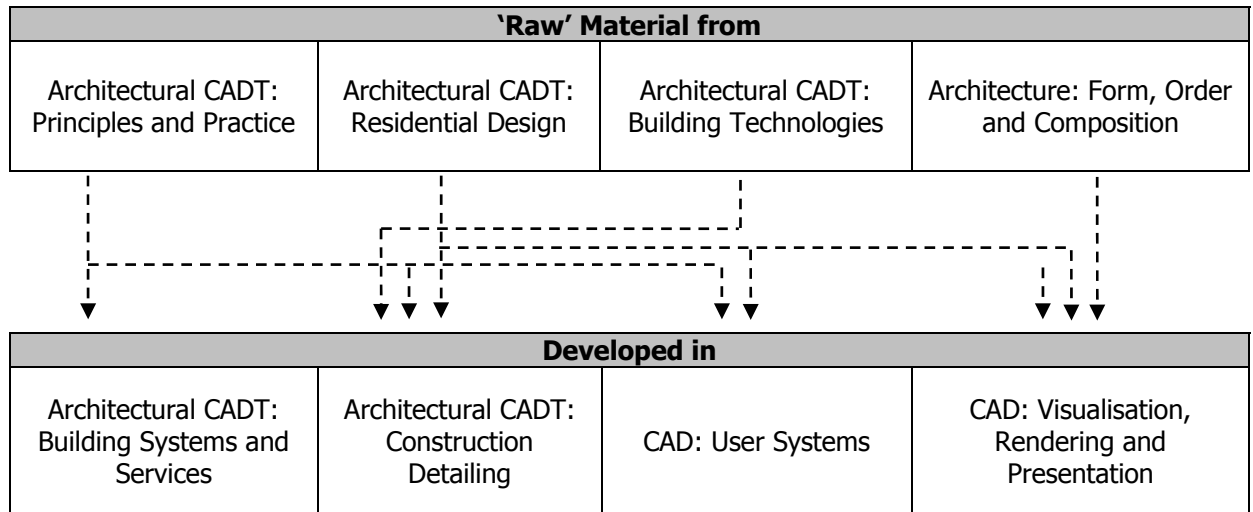
Individual candidates may be offered assessment on demand opportunities on a Unit by Unit basis. Candidates should provide evidence of prior learning or experience in the knowledge and skills of the Unit before attempting the assessment. Centres should ensure all Unit Evidence Requirements are met.

6.3.2 Assessment integration opportunities

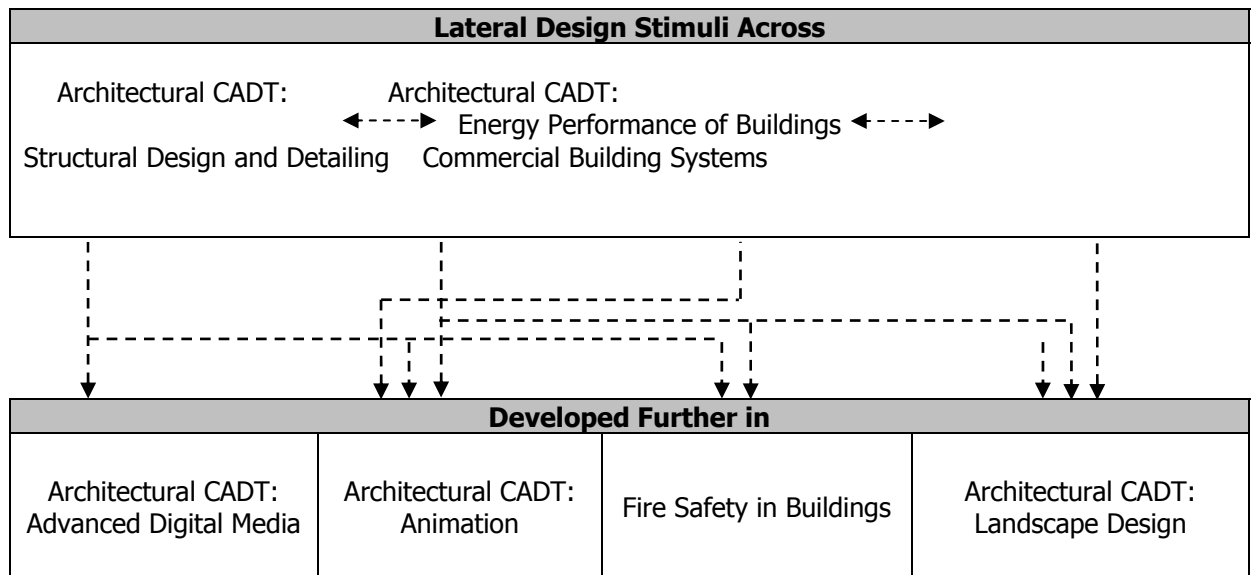
Individual centres are encouraged to integrate assessment opportunities where possible. There are elements within some Units where assessment integration occurs ‘naturally’, for example, the assessment evidence generated for the Unit *History of Architecture* could be used to generate, in part or whole, the assessment requirements for Outcome 2 of *Architecture: Form, Order and Composition*.

Individual centres are encouraged to maximise the opportunities to reduce the assessment burden, and to facilitate and expedite assessment gathering by focusing on the development of new, advanced and unique knowledge and skills. Where opportunities exist to integrate primary material across Unit topics, these should be taken. Prime examples of such opportunities exist in using the CAD details and models, and other graphic elements from the Units delivered early in the programme in later, or concurrent Units, and typical examples are indicated in the tables below.

Sequential Integration Examples HNC/HND Year 1



Lateral and Sequential Integration Examples HND Year 2



6.4 Graded Unit and timing of delivery

Individual Units contain advice regarding the Knowledge and/or Skills that a candidate may require to benefit from that Unit. This may influence the centre regarding the order of delivery of Units and the timing of the Graded Units. The Graded Units bring together many of the competences gained by the candidate while undertaking the individual mandatory Units. The Graded Units also reflect the award title. As the Graded Units draw heavily upon the Knowledge and/or Skills being gained within other Units, it is recommended that the delivery takes place after some or most of the supporting Units have been completed. It is generally accepted that the Graded Units would be delivered in the final semester or teaching block of the academic year.

However, centres are advised to distribute the Graded Unit assessments early enough to

allow candidates sufficient time to complete. Centres will manage this at their discretion.

6.5 Re-assessment

The way that centres manage re-assessment of candidates, is centre specific and will be subject to internal verification procedures. To ensure that the assessment process is as holistic as possible and that assessors are able to effectively judge candidates' performance in the Outcome or Unit as a whole, it may not always be possible to re-assess only those parts of the performance in which candidates have not satisfactorily demonstrated competence. Scenarios where candidates may need to undertake the whole assessment include:

- ◆ assessments which test knowledge and other cognitive skills and where it may not be possible to extract some of the items for re-assessment
- ◆ where parts of several Outcomes are involved
- ◆ where a project has been designed as an integrated assessment and where there is a requirement to complete the project as a single complex task

Candidates may require to do only part of an assessment, where their evidence has been generated over a period of time and/or a discrete part of the Unit, such as an Outcome, has been assessed originally.

There should normally be one, or in exceptional circumstances two, re-assessment opportunities. Please refer to *SQA's Guide to Assessment*, for details (www.sqa.org.uk)

6.6 Flexible/Open Learning

Information regarding open/flexible learning delivery is contained within each Unit specification. The introduction of 'sampling' within the assessment strategy means that more assessment may now be carried out in 'controlled conditions'. Due to the practical nature of the HNC and HND CAADT awards, it is envisaged that it will be difficult to offer many of the Units in an open learning format. However, this should not deter centres from looking at a flexible delivery plan that allows a widening of access to prospective candidates. Centres must have procedures in place to authenticate the work produced by candidates who do not undertake assessment within the centre. For more information on normal open learning arrangements, please refer to the *SQA Guide to Assessment and Quality Assurance of Open and Distance Learning* (www.sqa.org.uk).

The table below provides a list of Units within the frameworks which may provide Open Learning opportunities.

Open Learning opportunities

Unit code	Unit title
F32A 34	Architectural CADT: Principles and Practice
F329 34	Architectural CADT: Residential Design
F39F 34	Architectural Design Management: Professional Practice*
DW14 34	CAD: User Systems
F3G5 34	Architectural CADT: Construction Detailing
F3SV 34	Computer Aided Architectural Design and Technology: Graded Unit 1 (Project)
F3J5 34	Architectural CADT: Building Technologies
F3SH 34	Architectural CADT: Building Systems and Services
DW18 34	CAD: Visualisation, Rendering and Presentation
DW34 34	Statutory Control of Buildings
DE3R 34	Personal Development Planning
F4NJ 35	Architectural CADT: Structural Design and Detailing
F4NH 35	Architectural CADT: Commercial Building Systems
F4NF 35	Architectural CADT: Advanced Digital Media
F32B 35	Energy Performance of Buildings
F4NG 35	Architectural CADT: Animation
F52R 35	Computer Aided Architectural Design and Technology: Graded Unit 2 (Project)
F4NE 35	Architectural CADT: Urban Design
F4TF 35	Architectural CADT: Landscape Design
DW7Y 35	Photography: Architecture
DW4J 34	Construction Planning
DW4X 35	Fire Safety in Buildings

*including a requirement to attend the delivery centre for examination

6.7 Core Skills

Employers and higher education consider that, while advanced skills in technology will be fundamental to achievement, the analytical thinking, evaluation and review of complex problem solving are naturally occurring aspects of practical design activities. Similarly, sophisticated numerical and graphical competencies are a major component of computer-aided approaches in design and detailing for Architecture and Construction.

Core Skills are developed in the Group Awards formally through assessment or through signposting opportunities and all practical teaching and learning activities of the awards provide a context for developing and enhancing the five Core Skills to a significant level beyond those recommended at entry.

The opportunities for the development of Core Skills throughout the awards are identified in Appendix 1. This Signposting Guide focuses on indicating specific areas, which offer opportunities for skills development in the mandatory and optional Units.

The recommended Core Skills entry and exit profiles are:

Core Skill	Entry SCQF level	Development	Exit SCQF level (HND)
Communication	5	Signposted	6
Information Technology	5	Signposted	6
Numeracy	5	Signposted	6
Problem Solving	5	Signposted	6
Working with Others	4	Signposted	6

6.8 Resource requirements

Centres choosing to deliver the HNC and HND CAADT awards will require high-end computer hardware specifications and appropriate software packages.

7 General information for centres

Candidates with disabilities and/or additional support needs

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

Internal and external verification

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

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

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

8 General information for candidates

The awards of HNC and HND CAADT have been designed to meet the demands and requirements of today's modern working environment. They will provide you with the opportunity to develop skills and knowledge required for the specialist areas of employment in Architectural Engineer Construction (AEC) industries and their related disciplines.

You will develop a high level of Computer Aided Design (CAD) knowledge and skills which will be underpinned by technical design knowledge relevant to AEC industries. You will gain knowledge and skills of the design process and the stages of design where CAD can be exploited to achieve a desirable design solution and the production of digital design solutions to solve technical problems for architecture and construction.

The HNC consists of 12 SQA (HN) credits — 10 mandatory credits and 2 optional credits. The HND consists of 30 SQA (HN) credits — 23 mandatory credits and 7 optional credits. Both awards include a wide variety of options to ensure that provision can be made to match both local employer demands and provide opportunities for you to develop your individual abilities and interest. Many of the Unit assessments require research, design and application of your practical skills.

Both Group Awards contain Graded Units. There is one Graded Unit within the Group Award for the HNC CAADT, and two Graded Units within the Group Award for HND CAADT. These Graded Units are used to assess your ability to integrate and apply your knowledge and skills, and to demonstrate that you have achieved the principal aims of the Group Award. A single credit Graded Unit at SCQF level 7 will be assessed in the HNC award/year one of the HND and a 2-credit Graded Unit at SCQF level 8 will be assessed in year two of the HND. Both Graded Units are project based practical assignments. These are the only Units within the Group Awards which are graded.

You will also develop the Core Skills of *Communication, Numeracy, Information Technology, Problem Solving* and *Working with Others* throughout the delivery of the awards.

A range of employment opportunities may be available to you, on completion of your course, including:

- ◆ Freelance opportunities as a designer
- ◆ Self-employment providing local architectural draughting and design services
- ◆ Employment as an Architectural Technician/Technologist
- ◆ Entrepreneurial opportunities in property development aspects of the industry
- ◆ CAD Technician support roles
- ◆ Designer roles

Progression to Higher Education is also possible. You should liaise with the HEI prior to application as the Unit credits that count towards entry requirements may vary.

9 Glossary of terms

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

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

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

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

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

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

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

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

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

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

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

10 Appendices

Appendix 1: Core Skills signposting

Appendix 2: CIAT mapping

Appendix 3: Credit transfer arrangements

Appendix 4: Sample delivery schedules

Appendix 5: Optional Study Route Pathways

Appendix 1: Core Skills signposting

Unit code	Unit title	Communication			Numeracy		Information Technology	Problem Solving		Working with Others	
		Read	Write	Oral	Using Number	Using Graphical Information	Using Information Technology	Critical Thinking	Planning & Organising	Reviewing & Evaluation	Working with Others
F32A 34	Architectural CADT: Principles and Practice				✓	✓	✓	✓	✓	✓	
F329 34	Architectural CADT: Residential Design				✓	✓	✓				
F39F 34	Architectural Professional Practice: Design Management	✓	✓	✓							
F39H 34	Architecture: Form, Order and Composition	✓	✓	✓			✓	✓	✓	✓	✓
DW14 34	CAD: User Systems	✓	✓	✓	✓	✓	✓	✓	✓	✓	
F3G5 34	Architectural CADT: Construction Detailing	✓	✓	✓	✓	✓	✓	✓	✓	✓	
F3J5 34	Architectural CADT: Building Technologies	✓	✓	✓	✓	✓	✓	✓	✓	✓	
F3SH 34	Architectural CADT: Building Systems and Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DW4L 34	Site Administration	✓	✓	✓			✓				✓

Unit code	Unit title	Communication			Numeracy		Information Technology	Problem Solving			Working with Others
		Read	Write	Oral	Using Number	Using Graphical Information	Using Information Technology	Critical Thinking	Planning & Organising	Reviewing & Evaluation	Working with Others
F3SV 34	Computer Aided Architectural Design and Technology: Graded Unit 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	
F3SG 34	History of Architecture	✓	✓	✓	✓	✓					✓
F39G 34	Computer Aided Architectural Design and Technology: Model Making	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DW3X 34	Building Measurement and Cost Studies	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DW18 34	CAD: Visualisation, Rendering and Presentation	✓	✓	✓	✓	✓	✓				
DW5H 34	Construction Site Surveying A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DW3W 34	Statutory Control of Buildings	✓	✓		✓	✓	✓	✓	✓	✓	
DE3R 34	Personal Development and Planning	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F4NJ 35	Architectural CADT: Structural Design and Detailing	✓	✓		✓	✓	✓	✓	✓	✓	
F4NH 35	Architectural CADT: Commercial Building Systems	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Unit code	Unit title	Communication			Numeracy		Information Technology	Problem Solving			Working with Others
		Read	Write	Oral	Using Number	Using Graphical Information	Using Information Technology	Critical Thinking	Planning & Organising	Reviewing & Evaluation	Working with Others
F4NF 35	Architectural CADT: Advanced Digital Media	✓	✓	✓		✓	✓	✓	✓		
F32B 35	Energy Performance of Buildings	✓	✓		✓	✓	✓	✓	✓	✓	
DW3T 35	Conversion and Adaptation of Buildings	✓	✓		✓	✓	✓	✓	✓	✓	✓
F52R 35	Computer Aided Architectural Design and Technology: Graded Unit 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DX07 34	Interior Design: Applied Practice	✓	✓	✓	✓	✓	✓	✓	✓	✓	
F4NE 35	Architectural CADT: Urban Design	✓	✓	✓	✓	✓	✓	✓	✓	✓	
F4TF 35	Architectural CADT: Landscape Design			✓	✓	✓	✓	✓	✓	✓	
F4NG 35	Architectural CADT: Animation				✓	✓	✓				
DW52 34	Building Maintenance Technology	✓	✓		✓	✓	✓	✓	✓	✓	
DW4X 35	Fire Safety in Buildings	✓	✓			✓	✓	✓	✓	✓	

Unit code	Unit title	Communication			Numeracy		Information Technology	Problem Solving			Working with Others
		Read	Write	Oral	Using Number	Using Graphical Information	Using Information Technology	Critical Thinking	Planning & Organising	Reviewing & Evaluation	Working with Others
DW4J 35	Construction Planning	✓	✓		✓	✓	✓	✓	✓	✓	✓
DW7Y 35	Photography: Architecture	✓	✓		✓	✓	✓	✓	✓	✓	

Appendix 2: Mapping to CIAT Standards

	Performance Standard	Standard	Corresponding to Outcomes in HN Units:
A	Identify User Factors	A.1 Identify user factors A.2 Investigate development factors and likely problems	<ul style="list-style-type: none"> ◆ Architecture: Form, Order and Composition ◆ Architectural CADT: Residential Design ◆ Architectural Professional Practice: Design Management ◆ History of Architecture ◆ Architectural CADT: Structural Design and Detailing ◆ Architectural CADT: Commercial Building Systems ◆ Architectural CADT: Urban Design ◆ Conversion and Adaptation of Buildings ◆ Computer Aided Architectural Design and Technology: Graded Unit 1 ◆ Computer Aided Architectural Design and Technology: Graded Unit 2
B	Identify survey requirements and measure and prevent survey data	B.1 Identify survey requirements, data standards and outputs B.2 Observe and record measurements B.3 Check and present survey data	<ul style="list-style-type: none"> ◆ Building Measurement and Cost Studies ◆ Construction Site surveying A ◆ Architectural CADT: Landscape Design ◆ Architectural CADT: Urban Design ◆ Building Maintenance Technology ◆ Computer Aided Architectural Design and Technology: Graded Unit 1 ◆ Computer Aided Architectural Design and Technology: Graded Unit 2
C	Monitor health and safety in design <i>(nil academic exemption)</i>	C.1 Identify hazards and risks C.2 Check design choices to reduce health and safety risks	<ul style="list-style-type: none"> ◆ Architectural Professional Practice: Design Management ◆ Site Administration ◆ Computer Aided Architectural Design and Technology: Model Making ◆ Architectural CADT: Urban Design ◆ Fire Safety in Buildings

	Performance Standard	Standard	Corresponding to Outcomes in HN Units:
D	Confirm regulatory consent requirements and prepare applications	D.1 Identify regulatory requirements on development D.2 Identify statutory consent requirements and prepare applications	<ul style="list-style-type: none"> ◆ Architectural Professional Practice: Design Management ◆ Statutory Control of Buildings ◆ Fire Safety in Buildings ◆ Construction Planning ◆ Architectural CADT: Commercial Building Systems ◆ Energy Performance in Buildings ◆ Computer Aided Architectural Design and Technology: Graded Unit 1 ◆ Computer Aided Architectural Design and Technology: Graded Unit 2
E	Prepare and present design proposals	E.1 Prepare and present design proposals E.2 Provide information to agree detailed design E.3 Identify detailed design interactions and methods for maintaining design coherence	<ul style="list-style-type: none"> ◆ Architecture: Form, Order and Composition ◆ Architectural CADT: Principles and Practice ◆ Architectural CADT: Residential Design ◆ Architectural CADT: Building Technologies ◆ Architectural CADT: Construction Detailing ◆ Architectural CADT: Building Systems and Services ◆ CAD: Visualisation, Rendering and Presentation ◆ Computer Aided Architectural Design and Technology: Model Making ◆ Architectural CADT: Animation ◆ Photography: Architecture ◆ Architectural CADT: Landscape Design ◆ Interior Design: Applied Practice ◆ Computer Aided Architectural Design and Technology: Graded Unit 1 ◆ Computer Aided Architectural Design and Technology: Graded Unit 2

	Performance Standard	Standard	Corresponding to Outcomes in HN Units:
F	Identify, analyse and present detailed design solutions	F.1 Identify, analyse and record construction criteria and detailed design solutions F.2 Investigate, calculate, test and present detailed design solutions	<ul style="list-style-type: none"> ◆ Architectural CADT: Building Technologies ◆ Architectural CADT: Construction Detailing ◆ Architectural CADT: Building Systems and Services ◆ CAD: User Systems ◆ Architectural CADT: Structural Design and Detailing ◆ Architectural CADT: Commercial Building Systems ◆ Energy Performance of Buildings ◆ Computer Aided Architectural Design and Technology: Graded Unit 1 ◆ Computer Aided Architectural Design and Technology: Graded Unit 2
G	Control and evaluate design documents and information	G.1 Control document production G.2 Check and evaluate design information G.3 Prepare drawing and associated graphical information G.4 Prepare schedules G.5 Draft perspective technical specifications G.6 Organise technical information systems	<ul style="list-style-type: none"> ◆ Architectural CADT: Principles and Practice ◆ Architectural CADT: Residential Design ◆ Architectural CADT: Building Technologies ◆ Architectural CADT: Construction Detailing ◆ Architectural CADT: Building Systems and Services ◆ Architectural Professional Practice: Design Management ◆ CAD: User Systems ◆ Construction Planning ◆ Conversion and Adaptation of Buildings ◆ Computer Aided Architectural Design and Technology: Graded Unit 1 ◆ Computer Aided Architectural Design and Technology: Graded Unit 2
H	Obtain and check estimate, bid and tender enquiries and conclude contracts	H.1 Obtain estimates, bids and tenders H.2 Check estimates, bids and tenders	<ul style="list-style-type: none"> ◆ Architectural Professional Practice: Design Management ◆ Building Measurement and Cost Studies ◆ CAD: User Systems ◆ Construction Planning ◆ Building Maintenance Technology

	Performance Standard	Standard	Corresponding to Outcomes in HN Units:
I	Check and monitor construction quality and statutory compliance	I.1 Monitor construction work against agreed quality standards I.2 Monitor contract compliance with legal and statutory requirements	<ul style="list-style-type: none"> ◆ Architectural Professional Practice: Design Management ◆ Statutory Control of Buildings ◆ Site Administration ◆ Construction Planning ◆ Computer Aided Architectural Design and Technology: Graded Unit 1 ◆ Computer Aided Architectural Design and Technology: Graded Unit 2
J	Enhance working relationships and operate in a professional manner <i>(nil academic exemption)</i>	J.1 Make contributions to meetings J.2 Gain the trust and support of your manager J.3 Present technical information J.4 Identify and summarise problems and criteria for Solutions J.5 Contribute to the protection of client interests	<ul style="list-style-type: none"> ◆ Site Administration ◆ History of Architecture ◆ Computer Aided Architectural Design and Technology: Model Making ◆ Personal Development Planning
K	Undertake structured personal development <i>(nil academic exemption)</i>	K.1 Identify, record and analyse personal development aims and progress	<ul style="list-style-type: none"> ◆ Personal Development and Planning ◆ Computer Aided Architectural Design and Technology: Graded Unit 1 ◆ Computer Aided Architectural Design and Technology: Graded Unit 2

Note 1 Performance Standards C, J and K carry no academic exemption.

Corresponding Unit Outcomes provided for information only.

Appendix 3 (Part A): Credit transfer grid (old to new)

Old Unit title	Credit value	Transfer Articulation	New Unit title	Credit value
D4FW 04 Computer Aided Draughting	1	Subsumed partially by	F32A 34 Architectural CADT: Principles and Practice	2
D6AH 04 Intermediate CAD for Construction	1	Subsumed partially by	Candidates entering with 1 + 1	
D4G3 04 Computerised 3D Modelling	1	Subsumed partially by	(D4FW 04 or D6AH 04 plus D4G3 04 or D4JY 04 for full credit transfer)	
D4JY 04 Modelling with Solids	1	Subsumed partially by:		
D2J6 04/D9VA 04 Architectural CAD	2	Subsumed wholly by (full credit transfer)	F329 34 Architectural CADT: Residential Design	2
D603 04 Drawing and Design	1.5	Subsumed wholly by (full credit transfer)	F39H 34 Architecture: Form, Order and Composition	2
D5RM 04 History of Architecture	1	Subsumed partially by	Candidates entering with D60304 plus D5RM 04 for full credit transfer	
		Subsumed wholly by	F3SG 34 History of Architecture	1
A3J8 04 Architectural Procedures	2	Subsumed wholly by	F39F 34 Architectural Professional Practice: Design Management	1
			DW3W 34 Statutory Control of Buildings	1
		Subsumed partially by	Contributes to DW4J 35 Construction Planning *See Note 1	
A5ER 04 Communication 1	0.5	Nil credit transfer (Communication Core Skills signposted in variety of units)		
A71F 04 Data Exchange with CAD	1	Nil credit transfer		1
D5YX 04 Construction Technology 1	1	Subsumed wholly by	F3G5 34 Architectural CADT: Construction Detailing	1
D6AH 04 Intermediate CAD for Construction	1	Subsumed wholly by	F3G5 34 Architectural CADT: Construction Detailing	1

Old Unit title	Credit value	Transfer Articulation	New Unit title	Credit value
A71E 04 Shading and Rendering/ D9V8 04 Rendering Solid Models	1	Subsumed partially by	DW18 34 CAD: Visualisation, Rendering and Presentation (does not include Outcome 3 in new Unit)	1
D5T9 04 Mathematics for Construction Engineering	1	Nil credit transfer (no maths Unit in new framework)		
D69R 04 Architectural Design Project 2	1	Nil credit transfer		
D6AR 04 Site Administration	1	Subsumed wholly by	DW4L 34 Site Administration	1
		Subsumed partially by	Contributes to DW4J 35 Construction Planning *See Note 1	
		Nil credit transfer; new Unit	F3SV 34 Computer Aided Architectural Design and Technology: Graded Unit 1	1
		Nil credit transfer; new Unit	F3J5 34 Architectural CADT: Building Technologies	1
		Nil credit transfer; new Unit	F3SH 34 Architectural CAD: Building Systems and Services	
		Nil credit transfer; new Unit	DW3X 34 Building Measurement and Cost Studies	1
		Nil credit transfer; new Unit	F39G 34 Computer Aided Architectural Design and Technology: Model Making	1
		Nil credit transfer; new Unit	DE3R 34 Personal Development Planning	1
D5TH 04 Civil Engineering: Design and Detailing	2	Subsumed wholly by	Architectural CADT: Structural Design and Detailing	2
D5YY 04 Construction Technology 2	1	Subsumed wholly by	Architectural CADT: Urban Design	1
A699 04 Advanced Construction	2	Subsumed wholly by	Architectural CADT: Commercial Building Systems	2
D6A1 04 Building Materials: Selection and Deterioration	1	Subsumed wholly by	DW52 34 Building Maintenance Technology	1
D6AA 04 Design of Building Structures	1	Subsumed partially by	Contributes to DW3T 35 Conversion and Adaptation of Buildings *See Note 2	1
A71D 04 3D Graphics and Animation	2	Subsumed wholly by	Architectural CADT: Animation	1

Old Unit title	Credit value	Transfer Articulation	New Unit title	Credit value
D69P 04 Architectural Design Project 1	2	Nil credit transfer		
D2J8 04 Customised Programming for CAD	1	Nil credit transfer		
A697 04 Interior Design CAD 2	1	Nil credit transfer	New Interior Design Unit more robust	
A4WD 04 3D CAD Landscape Draughting	1	Nil credit transfer	New Landscape Design Unit more robust and at higher level (8)	
A5CR 04 Architectural Conservation Technology	1	Subsumed partially by	Contributes to DW4J 35 Conversion and Adaptation of Buildings * See Note 2	
D602 04 Construction Site Surveying	1.5	Subsumed wholly by	DW5H 34 Construction Site Surveying A	1
		Subsumed partially by	Contributes to DW3T 35 Conversion and Adaptation of Buildings * See Note 2	
A5CY 04 Building Contracts and Costs	1	Subsumed partially by	Contributes to DW4J 35 Construction Planning * See Note 1	
A60M 04 Sustainable Housing Design	1	Subsumed wholly by	F32B 35 Energy Performance of Buildings	1

Note 1 *The combination of elements from the Units A3J804 Architectural Procedures, D6AR 04 Site Administration and A5CY04 Building Contracts and Costs, are deemed to satisfy the credit transfer requirements for the achievement of the new Unit DW4J 35 Construction Planning.*

Note 2 *The combination of elements from the Units D6AA 04 Design of Building Structures, A5CR 04 Architectural Conservation Technology 1 and D602 04 Construction Site Surveying, are deemed to satisfy the credit transfer requirements for the achievement of the new Unit DW3T 35 Conversion and Adaptation of Buildings.*

Appendix 3 (Part B): Credit transfer grid (new to old)

New Units		Predecessor Units		Credit transfer conditions
Unit code	Unit title	Unit code	Unit title	
F32A 34	Architectural CADT: Principles and Practice	D4FW 04 D4G3 04 D4JY 04 D6AH 04	Computer Aided Draughting plus one from Computerised 3D Modelling Modelling with Solids Intermediate CAD for Constructions	Full
F329 34	Architectural CADT: Residential Design	D9VA 04	Architectural CAD (earlier Unit D2J6 04 also acceptable)	Full
F39H 34	Architecture: Form, Order and Composition	D603 04 D5RM 04	Drawing and Design plus History of Architecture	Full (Candidates entering with D603 04 only may achieve full credit transfer on successful completion of new History of Architecture Unit. Candidates entering with D5RM 04 may receive exemption from Outcome 2 of the new Unit.
F3SG 34	History of Architecture	D5RM 04	History of Architecture	Full
F39F 34	Architectural Professional Practice: Design Management	A3J8 04	Architectural Procedures	Full
DW3W 34	Statutory Control of Buildings	A3J8 04	Architectural Procedures	Full

New Units		Predecessor Units		Credit transfer conditions
Unit code	Unit title	Unit code	Unit title	
DW14 34	CAD: User Systems			Full when transferring onto new framework and in possession of old HNC award
F3JF 34	Architectural CADT: Building Technologies			Nil
F3G5 34	Architectural CADT: Construction Detailing	D5YX 04	Construction Technology 1: Domestic Construction	Full
DW18 34	CAD: Visualisation, Rendering and Presentation	D9V8 04	Rendering Solid Models or equivalent	Full
F3SV 34	Computer Aided Architectural Design and Technology: Graded Unit 1			Nil
DW4L 34	Site Administration	D6AR 04	Site Administration	Full
F3SG 34	Architectural CADT: Building Systems and Services			Nil
DWX 34	Building Measurement and Cost Studies			Nil
DW5H 34	Construction Site Surveying A			Nil
F39G 34	Computer Aided Architectural Design and Technology: Model Making			Nil
DE3R 34	Personal Development Planning			Nil
F4NJ 35	Architectural CADT: Structural Design and Detailing	D5TH 04	Civil Engineering: Design and Detailing, or equivalent (Structural Mechanics/Design)	Full
F4NH 35	Architectural CADT: Commercial Building Systems	A699 04	Advanced Construction	Full
F4NF 35	Architectural CADT: Advanced Digital Media			Nil
F32B 35	Energy Performance of Buildings	A60M 04	Sustainable Housing Design, or equivalent	Full

New Units		Predecessor Units		Credit transfer conditions
Unit code	Unit title	Unit code	Unit title	
DW3T 35	Conversion and Adaptation of Buildings	D602 04 A5CR 04 D6AA04	Satisfied by elements from a range of Units: need minimum of 2 from 3 from: Construction Site Surveying, or similar Architectural Conservation Technology 1 Design of Building Structures	Full
F52R 35	Computer Aided Architectural Design and Technology: Graded Unit 2			Nil
F4TF 35	Architectural CADT: Landscape Design			Nil
F4NE 35	Architectural CADT: Urban Design	D5YY 04	Construction Technology 2, or equivalent	Full
DX07 34	Interior Design: Applied Practice			Nil
F4NG 35	Architectural CADT: Animation	A71D 04	3D Graphics and Animation	Full
DW52 34	Building Maintenance Technology	D6A1 04	Building Materials: Selection and Deterioration, or equivalent	Full
DW4X 35	Fire Safety in Buildings			Nil
DW4J 35	Construction Planning	A3J8 04 D6AR 04 A5CY 04	Satisfied by elements from range of Units: need all of: Architectural Procedures Site Administration Building Contracts and Costs	Full
DW7Y 35	Photography: Architecture			Nil

Appendix 4: Sample timetables

HNC/HND Year 1 CAADT

Block 1

Unit code	Unit title	SQA credits	SCQF points
F32A 34	Architectural CADT: Principles and Practice	2	16
F39H 34	Architecture: Form, Order and Composition	2	-
DW14 34	CAD: User Systems	1	8
	Option	1	8

Block 2

Unit code	Unit title	SQA credits	SCQF points
F39H 34	Architecture: Form, Order and Composition (cont)	2	16
F329 34	Architectural CADT: Residential Design	2	16
F3G5 34	Architectural CADT: Construction Detailing	1	8
F39F 34	Architectural Professional Practice: Design Management	1	8

Block 3

Unit code	Unit title	SQA credits	SCQF points
F3SV 34	Computer Aided Architectural Design and Technology: Graded Unit 1	1	8
DW18 34	CAD: Visualisation, Rendering and Presentation	1	8
	Option	1	8
	Option	1	8
	Option	1	8

HND Year 2 CAADT

Block 1

Unit code	Unit title	SQA credits	SCQF points
F4NJ 35	Architectural CADT: Structural Design and Detailing	2	16
F4NF 35	Architectural CADT: Advanced Digital Media	1	8
DW4L 34	Site Administration	1	8
	Option	1	8
DE3R 34	Personal Development Planning	1	8

Block 2

Unit code	Unit title	SQA credits	SCQF points
F4NH 35	Architectural CADT: Commercial Building Systems	2	16
F32B 35	Energy Performance of Buildings	1	8
DW3T 35	Conversion and Adaptation of Buildings	1	8
	Option	1	8
DE3R 34	Personal Development Planning	1	8

Block 3

Unit code	Unit title	SQA credits	SCQF pPoints
F52R 35	Computer Aided Architectural Design and Technology: Graded Unit 2	2	16
	Option	1	8
	Option	1	8
DE3R 34	Personal Development Planning	1	8

Appendix 5: Optional Study Route Pathways

Individual delivering centres are advised that whilst any appropriately numbered (7) selection of Units from the optional list will satisfy the requirements of the HND, it is recommended they consider exit route pathways in determining the options to deliver. The following general recommendations may be useful in this respect.

Pathway 1



Exit post HND
directly to industry



best fit:
CIAT Technician
recognition



Option Set 1



Pathway 2



Articulation to
3rd year University



best fit:
University progression



Option Set 2



Pathway 3



Exit to self
employment
/freelance



best fit:
transferable skills



Option Set 3



Computer Aided Architectural Design and Technology: Model Making	Computer Aided Architectural Design and Technology: Model Making	Architectural CADT: Building Technologies
Building Measurement and Cost Studies	Architectural CADT: Animation	Interior Design: Applied Practice
Construction Site Surveying A	Building Maintenance Technology	Architectural CADT: Landscape Design
Architectural CADT: Building Technologies	Construction Planning	Architectural CADT: Building Systems and Services
Construction Planning	Architectural CADT: Urban Design	History of Architecture
Building Maintenance Technology	Building Measurement and Cost Studies	Building Measurement and Cost Studies
Architectural CADT: Urban Design	Architectural CADT: Building Technologies	Photography: Architecture