Group Award Specification for:

SQA Advanced Certificate in Computer Aided Architectural Design and Technology (SCQF level 7)

Group Award Code: GM9Y 47

SQA Advanced Diploma in Computer Aided Architectural Design and Technology (SCQF level 8)

Group Award Code: GM8X 48

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Acknowledgement

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

Further information

Call SQA's Customer Contact Centre on 44 (0) 141 500 5030 or 0345 0345 279 1000. Alternatively, complete our Centre Feedback Form.

History of changes

It is anticipated that changes will take place during the life of the qualification and this section will record these changes. Centres are advised to check SQA Connect 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
02	**Revision of Units** HR3N 48 Conversion and Adaptation of Buildings (finish date 31/07/2021) has been replaced by J53M 48 Conversion and Adaptation of Buildings (start date 01/08/2020. HR43 48 Fire Safety in Buildings (finish date 31/07/2021) has been replaced by J53K 48 Fire Safety in Buildings (start date 01/08/2020) for the Advanced Diploma framework only.	10/11/20

Contents

1 Introduction

This is the Arrangements Document for the Group Award(s) in SQA Advanced Certificate Business and SQA Advanced Diploma Business. This document includes background information on the Group Award, its aims, details of the Group Award structure, and guidance on delivery.

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

The SQA Advanced Certificate and SQA Advanced Diploma in Computer Aided Architectural Design and Technology qualifications 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 and/or professional qualifications.

The Computer Aided Architectural Design and Technology qualifications could be delivered on a full-time, part-time or day/block release basis.

The qualifications are aimed at learners wishing to pursue a career working in the construction sector as an Architectural Technician/Technologist, or wishing to upgrade and/or broaden their existing skills set. This could include:

- school leavers
- learners studying related subject areas such as engineering, construction and design related disciplines at NC level
- adult returners to education
- learners in employment who wish to enhance their career prospects
- people changing direction/seeking a career change
- part-time learners wishing to broaden skills and knowledge

Learners could also be employed as CAD: Technicians or Junior Designers within the construction and engineering sectors.

These qualifications continue to provide successful learners with a platform to progress towards professional status. Learners studying towards these qualifications may seek to become student members of the Chartered Institute of Architectural Technologists (CIAT). On completion of the award learners may choose to apply for Technician Member CIAT (TCIAT), Associate Member CIAT (ACIAT) or full Member CIAT (MCIAT).

2 Qualifications structure

2.1 Structure — SQA Advanced Certificate in Computer Aided Architectural Design and Technology

This SQA Advanced Certificate Group Award is made up of 12 SQA credits. It comprises 96 SCQF credit points of which 80 are at SCQF level 7 in the mandatory section including a Graded Unit of 8 SCQF credit points at SCQF level 7. The remaining 16 SCQF credit points required for the Group Award are to be selected from the optional section. A mapping of Core Skills development opportunities is available in Section 5.3.

4 code	2 code	Unit title	SCQF level	SCQF credit points	SQA credit
Mandatory Units					
HR6P	47	Architectural CADT: Principles and Practice	7	16	2
HR6M	47	Architectural CADT: Residential Design	7	16	2
HR70	47	Architectural CADT: Construction Detailing	7	8	1
HR7H	47	CAD: User Systems	7	8	1
HR6V	47	Architectural Professional Practice: Design Management	7	8	1
HR6Y	47	Architecture: Form, Order and Composition	7	16	2
HT89	47	Computer Aided Architectural Design and Technology: Graded Unit 1	7	8	1
Optional Units: 2 SQA Credits required (16 SCQF credit points)					
HR3T	47	Statutory Control of Buildings	7	8	1
HT88	47	Site Administration	7	8	1
HP6M	47	Personal Development Planning	7	8	1
HR6H	47	CAD: Visualisation, Rendering and Presentation	7	8	1
HR73	47	History of Architecture	7	8	1
HR6W	47	Computer Aided Architectural Design and Technology: Model Making	7	8	1
HR4D	47	Building Measurement and Cost Studies	7	8	1
HR48	47	Construction Site Surveying A	7	8	1
HR71	47	Architectural CADT: Building Technologies	7	8	1
HR75	47	Architectural CADT: Building Systems and Services	7	8	1

4 code	2 code	Unit title	SCQF level	SCQF credit points	SQA credit
Optional Units (continued)					
HR7L	47	Building Information Modelling (BIM): Residential Project	7	8	1
HR7N	47	Building Information Modelling (BIM): Principles	7	8	1
HR7T	48	CAD: Digital Collaboration Practices	8	16	2
HR7W	46	Autodesk Certified User: Revit	6	8	1

2.2 Structure — SQA Advanced Diploma in Computer Aided Architectural Design and Technology

This SQA Advanced Diploma Group Award is made up of 30 SQA Unit credits. It comprises 240 SCQF credit points of which 104 are at SCQF level 7 and 72 are at SCQF level 8 in the mandatory section. This includes a Graded Unit of 8 SCQF credit points at SCQF level 7 and a Graded Unit of 16 SCQF credit points at SCQF level 8. The remaining 64 SCQF credit points required for the Group Award are to be selected from the optional section. A mapping of Core Skills development opportunities is available in Section 5.3.

4 code	2 code	Unit title	SCQF level	SCQF credit points	SQA credit
Mandatory Units					
HR6P	47	Architectural CADT: Principles and Practice	7	16	2
HR6M	47	Architectural CADT: Residential Design	7	16	2
HR6Y	47	Architecture: Form, Order and Composition	7	16	2
HR6V	47	Architectural Professional Practice: Design Management	7	8	1
HR3T	47	Statutory Control of Buildings	7	8	1
HR6H	47	CAD: Visualisation, Rendering and Presentation	7	8	1
HR7H	47	CAD: User Systems	7	8	1
HR70	47	Architectural CADT: Construction Detailing	7	8	1
HT89	47	Computer Aided Architectural Design and Technology: Graded Unit 1	7	8	1
HR7D	48	Architectural CADT: Structural Design and Detailing	8	16	2
HR7C	48	Architectural CADT: Commercial Building Systems	8	16	2
HR78	48	Architectural CADT: Advanced Digital Media	8	8	1

SQA Advanced Certificate and Diploma

4 code	2 code	Unit title	SCQF level	SCQF credit points	SQA credit
HR7K	48	Building Information Modelling (BIM): Building Science	8	8	1
J53M	48*	Conversion and Adaptation of Buildings	8	8	1
HT88	47	Site Administration	7	8	1
HT8A	48	Computer Aided Architectural Design and Technology: Graded Unit 2	8	16	2
Optional Units: 8 SQA Credits required (64 SCQF credit points)					
HR71	47	Architectural CADT: Building Technologies	7	8	1
HR75	47	Architectural CADT: Building Systems and Services	7	8	1
HR48	47	Construction Site Surveying A	7	8	1
HR6W	47	Computer Aided Architectural Design and Technology: Model Making	7	8	1
HR73	47	History of Architecture	7	8	1
HR4D	47	Building Measurement and Cost Studies	7	8	1
HR6K	47	Interior Design: Applied Practice	7	8	1
HR7A	48	Architectural CADT: Animation	8	8	1
HR76	48	Architectural CADT: Urban Design	8	8	1
HR7F	48	Architectural CADT: Landscape Design	8	8	1
HR44	47	Building Maintenance Technology	7	8	1
J53K	48*	Fire Safety in Buildings	8	8	1
HP6M	47	Personal Development Planning	7	8	1
HR40	48	Construction Planning	8	8	1
HR7L	47	Building Information Modelling (BIM): Residential Project	7	8	1
HR7N	47	Building Information Modelling (BIM): Principles	7	8	1
HR7T	48	CAD: Digital Collaboration Practices	8	16	2
HR7W	46	Autodesk Certified User: Revit	6	8	1
HR7X	48	Autodesk Certified Professional: Revit Architecture	8	16	2

3 Aims of the qualifications

The main aim of the SQA Advanced Certificate and SQA Advanced Diploma CAADT Group Awards is to provide learners with the opportunity to develop a high level of CAD knowledge and skills, underpinned by a firm grasp of technical design knowledge relevant to Architectural Engineering and Construction (AEC) industries. Learners 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 SQA Advanced Diploma CAADT Group Award is specifically tailored at providing learners 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 qualifications have been split into general aims and specific aims.

3.1 General aims of the qualifications

1 To develop knowledge, understanding and skills across a range of core Architectural CAD principles and technologies at SQA Advanced 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, 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 routes.

9 To develop key skills for employability while building on previously acquired transferable skills which that could allow progression within the SCQF (Scottish Credit and Qualification Framework) or lead to employment.

10 To support learners' continuing professional development and career development.

3.2 Specific aims of the qualifications

11 To prepare learners for employment as Architectural Technicians in private or public practice, working with a range of associated professional disciplines.

12 To prepare learners 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.

13 To provide learners 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.

14 To provide opportunities for learners to achieve appropriate professional recognition, particularly, but not exclusively, with the Chartered Institute of Architectural Technology (CIAT).

15 To provide an award that, on successful completion, will allow learners to progress to appropriate degree-level programmes.

16 To provide learners with the opportunity to develop knowledge and skills in the use of Building Information Modelling (BIM).

17 To develop contextual computer-aided design knowledge, understanding and skills in the resolution of core Architectural and Construction design problems.

18 To allow a degree of flexibility within subject specific disciplines, such as Building Services, History and Conservation, Construction Management.

19 To provide learners with the opportunity to develop knowledge and skills in the process of design collaboration.

20 To provide an opportunity to achieve industry-recognised vendor qualifications.

3.3 Graded Units

There are two Computer Aided Architectural Design and Technology Graded Units:

Computer Aided Architectural Design and Technology: Graded Unit 1
1 SQA Credit 8 SCQF points at SCQF level 7

Computer Aided Architectural Design and Technology: Graded Unit 2
2 SQA Credits 16 SCQF points at SCQF level 8

Both *Graded Unit 1 and 2* are project based and are designed to test the knowledge and skills across the Units of the qualification within a context reflective of industry practice. The tasks are designed to assess the knowledge and skills gained from studying the mandatory Units within the framework. Learners are challenged to demonstrate that they can recall, apply and integrate the knowledge and skills gained during their studies.

Graded Unit 2, delivered in Year 2 of the SQA Advanced Diploma qualification will be broader and deeper in the assessment of knowledge and skills across the Units of the qualification.

Further to the development of technical knowledge and skills assessed in the Graded Units, the learners through the tasks set will further enhance and develop essential skills and attributes that are deemed desirable for employment. These essential skills should include planning and organising, working to deadlines and time management.

4 Recommended entry to the qualifications

Entry to the qualifications 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 by the Qualification Design Team 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:

Formal Qualifications considered suitable for access to the SQA Advanced Certificate or the SQA Advanced Diploma Year 1

Learners who enter with at least one of the following qualifications are likely to benefit more readily from the programme:

- NC or SQA Advanced Certificate in a related discipline. These could include but are not limited to the NC Computer Aided Design and Technology, NC Built Environment, NC in an Engineering discipline or SQA Advanced Certificate in Construction.
- At least one Higher level pass, with appropriate supporting passes at National 5 or equivalent in appropriate subjects. Desirably this would include Maths, English, Product Design, Graphic Communication and/or a Science subject.
- SVQ in Construction or Engineering related discipline.

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 qualification(s). Centres may wish to use Core Skills profiling to assist them in this process.

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.

Core Skill	Recommended SCQF entry profile	Associated assessment activities
Communication	5	Good communication skills will be required for learners doing these qualifications as they will need to research, analyse, report, and present technical data and documentation.
Numeracy	5	Good numerical skills will be required for learners doing these qualifications as they will need to a range of numerical skills for a range of draughting and design tasks. These tasks could include calculating dimensional geometry, tolerances, design calculations and costings.
Information and Communication Technology (ICT)	5	Good ICT skills are core to these qualifications. Learners will need a sound understanding of basic ICT as the foundation to use the systems to search online material for research purposes. Also, the creation of CAD, graphical and technical documentation for communication and presentation tasks.
Problem Solving	5	Critical thinking, planning and organisation, review and evaluation are fundamental to all elements of these qualifications. Learners will need to analyse and evaluate existing designs and or design briefs for the purpose of finding and/or creating a design solution.
Working with Others	4	Working as part of a team co-operatively is essential when progressing to industry. There are several opportunities throughout these qualifications for working with others to take place.

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.

5.1 Mapping of qualification aims to Units

Code	Unit title	Aims																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HR6P 47	Architectural CADT: Principles and Practice	X	X	X				X	X	X	X	X	X		X	X					
HR6M 47	Architectural CADT: Residential Design	X	X	X	X			X	X	X	X	X	X		X	X	X				
HR6Y 47	Architecture: Form, Order and Composition		X			X	X	X	X	X	X	X			X	X			X		
HR6V 47	Architectural Professional Practice: Design Management		X			X	X	X	X	X	X	X		X	X	X			X		
HR3T 47	Statutory Control of Buildings		X			X	X	X	X	X	X	X		X	X	X			X		
HR6H 47	CAD: Visualisation, Rendering and Presentation	X	X	X				X	X	X	X	X	X		X	X					
HR7H 47	CAD: User Systems	X	X					X	X	X	X	X	X		X	X					
HR70 47	Architectural CADT: Construction Detailing	X	X	X	X	X		X	X	X	X	X	X		X	X		X			
HT89 47	Computer Aided Architectural Design and Technology: Graded Unit 1	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		

SQA Advanced Certificate and Diploma

Code	Unit title	Aims																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HR7D 48	Architectural CADT: Structural Design and Detailing	X	X	X	X	X		X	X	X	X	X	X		X	X		X			
HR7C 48	Architectural CADT: Commercial Building Systems	X	X	X		X		X	X	X	X	X	X		X	X		X			
HR78 48	Architectural CADT: Advanced Digital Media	X	X	X		X		X	X	X	X	X	X		X	X		X			
HR3N 48	Conversion and Adaptation of Buildings	X	X	X	X	X		X	X	X	X	X		X	X	X		X	X		
HP6M 47HP6M 47	Personal Development Planning		X				X	X	X	X	X	X		X	X	X					
HT88 47	Site Administration		X			X	X	X	X	X	X	X		X	X	X					
HT8A 48	Computer Aided Architectural Design and Technology: Graded Unit 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
HR71 47	Architectural CADT: Building Technologies	X	X	X	X	X		X	X	X	X	X	X		X	X		X			
HR75 47	Architectural CADT: Building Systems and Services	X	X	X	X	X		X	X	X	X	X	X		X	X		X	X		
HR48 47	Construction Site Surveying A		X		X	X		X	X	X	X	X		X	X	X			X		

SQA Advanced Certificate and Diploma

Code	Unit title	Aims																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HR6W 47	Computer Aided Architectural Design and Technology: Model Making		X		X	X		X	X	X	X	X			X	X					
HR73 47	History of Architecture		X			X		X	X	X	X	X			X	X			X		
HR4D 47	Building Measurement and Cost Studies		X			X	X	X	X	X	X	X		X	X	X			X		
HR6K 47	Interior Design: Applied Practice	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X			
HR7A 48	Architectural CADT: Animation	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X			
HR76 48	Architectural CADT: Urban Design	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X			
HR7F 48	Architectural CADT: Landscape Design	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X			
HR44 47	Building Maintenance Technology					X	X	X	X	X	X	X		X	X	X			X		
HR43 48	Fire Safety in Buildings					X	X	X	X	X	X	X		X	X	X			X		
HR40 48	Construction Planning					X	X	X	X	X	X	X		X	X	X			X		

SQA Advanced Certificate and Diploma

Code	Unit title	Aims																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HR7K 48	Building Information Modelling (BIM): Building Science	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	
HR7L 47	Building Information Modelling (BIM): Residential Project	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	
HR7N 47	Building Information Modelling (BIM): Principles	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	
HR7T 48	CAD: Digital Collaboration Practices	X	X	X			X	X	X	X	X	X	X		X	X	X			X	
HR7W 46	Autodesk Certified User: Revit	X		X													X				X
HR7X 48	Autodesk Certified Professional: Revit Architecture	X		X													X				X

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

The following table provides an overview to the SQA Units within the SQA Advanced Awards and there links to relevant National Occupational Standard. The Units listed cover elements of the underpinning knowledge identified within the NOS.

Code	Unit title	National Occupational Standard																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HR6P 47	Architectural CADT: Principles and Practice																		X		
HR6M 47	Architectural CADT: Residential Design														X				X		
HR6Y 47	Architecture: Form, Order and Composition																				
HR6V 47	Architectural Professional Practice: Design Management	X	X		X	X	X	X													
HR3T 47	Statutory Control of Buildings	X	X		X	X	X	X		X											
HR6H 47	CAD: Visualisation, Rendering and Presentation																		X		
HR7H 47	CAD: User Systems																				
HR70 47	Architectural CADT: Construction Detailing										X		X						X		
HT89 47	Computer Aided Architectural Design and Technology: Graded Unit 1	X			X			X		X	X		X		X	X	X		X		
HR7D 48	Architectural CADT: Structural Design and Detailing	X											X		X				X		
HR7C 48	Architectural CADT: Commercial Building Systems	X											X		X				X		
HR78 48	Architectural CADT: Advanced Digital Media												X						X		

SQA Advanced Certificate and Diploma

Code	Unit title	National Occupational Standard																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HR3N 48	Conversion and Adaptation of Buildings	X		X	X	X	X	X			X								X		
HP6M 47	Personal Development Planning								X												
HT88 47	Site Administration		X		X			X													
HT8A 48	Computer Aided Architectural Design and Technology: Graded Unit 2							X		X	X		X		X	X	X		X		
HR71 47	Architectural CADT: Building Technologies	X									X		X		X				X		
HR75 47	Architectural CADT: Building Systems and Services	X								X	X		X		X				X		
HR48 47	Construction Site Surveying A			X	X																
HR6W 47	Computer Aided Architectural Design and Technology: Model Making																		X		
HR73 47	History of Architecture																				
HR4D 47	Building Measurement and Cost Studies	X		X	X			X													
HR6K 47	Interior Design: Applied Practice												X						X	X	
HR7A 48	Architectural CADT: Animation																		X		X
HR76 48	Architectural CADT: Urban Design										X		X						X		

SQA Advanced Certificate and Diploma

Code	Unit title	National Occupational Standard																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HR7F 48	Architectural CADT: Landscape Design										X		X						X		
HR44 47	Building Maintenance Technology	X	X	X	X						X						X				
HR43 48	Fire Safety in Buildings	X	X		X						X						X				
HR40 48	Construction Planning	X	X		X	X	X	X									X				
HR7K 48	Building Information Modelling (BIM): Building Science	X									X	X	X		X	X	X	X	X		
HR7L 47	Building Information Modelling (BIM): Residential Project	X				X		X		X	X	X	X		X	X	X	X	X		
HR7N 47	Building Information Modelling (BIM): Principles	X				X					X	X	X		X	X	X	X	X		
HR7T 48	CAD: Digital Collaboration Practices	X														X	X	X			

SQA Advanced Certificate and Diploma

National Occupational Standard					
No	**NOS title**		**No**	**NOS title**	
1	COSBEDMC03:	Develop and agree detailed design information in built environment design management	7	COSBEDMO18:	Control projects in built environment design management
2	COSBEDMC04:	Develop and maintain professional relationships and practice in built environment design management	8	COSBEDMO20:	Develop self and other people in built environment design management
3	COSBEDMO09:	Conduct condition surveys in built environment design management	9	COSBEDMO22:	Assess and confirm project energy sources and mechanisms in built environment design management
4	COSBEDMO13:	Manage project information and document requirements in built environment design management	10	COSBEDMO23:	Produce and recommend integrated conservation, repair and maintenance solutions in built environment design management
5	COSBEDMO14:	Prepare specifications in built environment design management	11	COSBEDMO25:	Manage project building information modelling protocols in built environment design management
6	COSBEDMO17:	Prepare and agree forms of contract in built environment design management	12	COSBEDO01:	Produce and recommend detailed design solutions in built environment design
13	COSBEDPC01:	Direct design projects in the built environment	17	COSBIMD34.3:	Obtain and evaluate project feedback information and make improvements in a Building Information Modelling environment
14	COSBIMB55.4:	Integrate the design of fabric, services and systems in a Building Information Modelling environment	18	PROFFI410:	Create designs using CA
15	COSBIMD21.2:	Develop a schedule of work in a Building Information Modelling environment	19	PROFFI411	Design solutions to meet technical and ergonomic requirements for kitchen, bedroom and bathroom design

National Occupational Standard				
No	**NOS title**		**No**	**NOS title**
16	COSBIMD34.1:	Provide information and guidance to support use and maintenance planning of works and installations in a Building Information Modelling environment	20	SKSANIM15: Render 3D animation

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
HR6P 47	Architectural CADT: Principles and Practice			S6	S6	S6	S6	S6	S6	S6		
HR6M 47	Architectural CADT: Residential Design			S6	S6	S6	S6	S6		S6		
HR6Y 47	Architecture: Form, Order and Composition	S6	S6			S6	S6	S6	S6	S6		
HR6V 47	Architectural Professional Practice: Design Management	S6	S6									
HR3T 47	Statutory Control of Buildings	S6	S6	S6	S6							
HR6H 47	CAD: Visualisation, Rendering and Presentation	S6	S6					S6	S6	S6	S6	S6
HR7H 47	CAD: User Systems	S6	S6	S6	S6	S6	S6					
HR70 47	Architectural CADT: Construction Detailing	S6	S6	S6	S6	S6	S6	S6	S6	S6		

E — Embedded Core Skills
S — Signposted Core Skills

SQA Advanced Certificate and Diploma

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
HT89 47	Computer Aided Architectural Design and Technology: Graded Unit 1	S6	S6	S6	S6	S6	S6	S6	S6	S6		
HR7D 48	Architectural CADT: Structural Design and Detailing			S6	S6	S6	S6	S6	S6	S6		
HR7C 48	Architectural CADT: Commercial Building Systems			S6	S6	S6	S6	S6	S6	S6		
HR78 48	Architectural CADT: Advanced Digital Media	S6	S6			S6	S6	S6	S6	S6		
HR3N 48	Conversion and Adaptation of Buildings	S6	S6	S6	S6	S6	S6	S6	S6	S6	S6	S6
HP6M 47	Personal Development Planning	S6	S6			S6	S6	S6	S6	S6		
HT88 47	Site Administration	S6	S6									

E — Embedded Core Skills
S — Signposted Core Skills

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
HT8A 48	Computer Aided Architectural Design and Technology: Graded Unit 2	S6	S6	S6	S6	S6	S6	S6	S6	S6		
HR71 47	Architectural CADT: Building Technologies			S6	S6	S6	S6	S6	S6	S6		
HR75 47	Architectural CADT: Building Systems and Services			S6	S6	S6	S6	S6	S6	S6		
HR48 47	Construction Site Surveying A	S6	S6	S6	S6			S6	S6	S6	S6	S6
HR6W 47	Computer Aided Architectural Design and Technology: Model Making	S6	S6	S6	S6	S6	S6	S6	S6	S6	S5	S5
HR73 47	History of Architecture	S6	S6			S6	S6				S6	S6
HR4D 47	Building Measurement and Cost Studies	S6	S6	S6	S6			S6				
HR6K 47	Interior Design: Applied Practice			S6	S6			S6	S6	S6		
HR7A 48	Architectural CADT: Animation	S6	S6			S6	S6	S6	S6	S6		

E — Embedded Core Skills
S — Signposted Core Skills

SQA Advanced Certificate and Diploma

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
HR76 48	Architectural CADT: Urban Design			S6	S6	S6	S6	S6	S6	S6		
HR7F 48	Architectural CADT: Landscape Design			S6	S6	S6	S6	S6	S6	S6		
HR44 47	Building Maintenance Technology	S6	S6					S6	S6	S6	S6	S6
HR43 48	Fire Safety in Buildings	S6	S6	S6	S6	S6	S6	S6	S6	S6		
HR40 48	Construction Planning	S6	S6	S6	S6	S6	S6	S6	S6	S6		
HR7K 48	Building Information Modelling (BIM): Building Science	S6	S6	S6	S6	S6	S6	S6	S6	S6		
HR7L 47	Building Information Modelling (BIM): Residential Project	S6	S6	S6	S6	S6	S6	S6	S6	S6		
HR7N 47	Building Information Modelling (BIM): Principles	S6	S6									
HR7T 48	CAD: Digital Collaboration Practices	S6	S6								S6	S6

E — Embedded Core Skills
S — Signposted Core Skills

5.4 Assessment Strategy for the qualifications

<table>
<tr><th colspan="2" rowspan="2">Unit</th><th colspan="5">Assessment</th></tr>
<tr><th>Outcome 1</th><th>Outcome 2</th><th>Outcome 3</th><th>Outcome 4</th><th>Outcome 5</th></tr>
<tr><td>HR6P 47</td><td>Architectural CADT: Principles and Practice</td><td>The explanation of architectural CAD drawing types for this Outcome is a closed-book assessment and must be supervised and held under controlled conditions.

Practical evidence for Outcome 1 should be generated under open-book supervised conditions.</td><td colspan="3">Outcomes 2, 3 and 4 could be delivered and assessed holistically with the creation of a continuing progressive assessment process. Each Outcome must be completed before moving to the next. This assessment could be in the form of a project-based activity with each Outcome identified as a milestone towards completion.</td><td></td></tr>
<tr><td>HR6M 47</td><td>Architectural CADT: Residential Design</td><td colspan="5">Outcomes 1, 2, 3, 4 and 5 could be delivered and assessed holistically with the creation of a continuing progressive assessment process. Each Outcome must be completed before moving to the next. This assessment could be in the form of a project-based activity with each Outcome identified as a milestone towards completion. Evidence should be generated under open-book supervised conditions.</td></tr>
<tr><td>HR6Y 47</td><td>Architecture: Form, Order and Composition</td><td>Written and/or oral recorded evidence generated under open-book supervised conditions.</td><td>Written and/or oral recorded evidence generated under open-book supervised conditions.</td><td colspan="2">Outcomes 3 and 4 could be delivered holistically. The open-book supervised assessment could be in the form of a project-based activity.</td><td></td></tr>
</table>

SQA Advanced Certificate and Diploma

Unit		Assessment				
		Outcome 1	**Outcome 2**	**Outcome 3**	**Outcome 4**	**Outcome 5**
HR6V 47	Architectural Professional Practice: Design Management	An integrated assessment approach for all Outcomes is recommended. This could consist of a closed-book examination, conducted under controlled, supervised conditions. Such an examination could contain a combination of short answer, restricted and extended response questions and an assessment time of no more than 3 hours should be sufficient for the learner to generate all evidence.				
HR3T 47	Statutory Control of Buildings	It is possible to assess learners either on an individual Outcome basis, combinations of Outcomes or by a single holistic assessment combining all Outcomes. The assessment paper/s should be composed of an appropriate balance of short answer, restricted response and structured questions. Assessment should be conducted under supervised, controlled conditions. A single assessment covering all Outcomes should not exceed 2 hours in duration. Learners must achieve all the minimum evidence specified for each Outcome in order to pass this Unit.				
HR6H 47	CAD: Visualisation, Rendering and Presentation	Outcomes 1, 2 and 3 could be delivered and assessed holistically with the creation of one integrated open-book supervised assessment. This assessment would be in the form of a project-based activity.				
HR7H 47	CAD: User Systems	Practical evidence with written and/or oral recorded element generated under open-book supervised conditions.	Practical evidence generated under open-book supervised conditions.	Practical evidence generated under open-book supervised conditions.	Practical evidence generated under open-book supervised conditions.	

SQA Advanced Certificate and Diploma

Unit		Assessment				
		Outcome 1	**Outcome 2**	**Outcome 3**	**Outcome 4**	**Outcome 5**
HR70 47	Architectural CADT: Construction Detailing	Assessment for this Unit could be delivered as individual assessment tasks or could be integrated into one single assessment covering all Outcomes. Different building types or project briefs could be used for separate Outcome tasks.				
HT89 47	Computer Aided Architectural Design and Technology: Graded Unit 1	Project based Graded Unit assessment.				
HR7D 48	Architectural CADT: Structural Design and Detailing	Assessment for this Unit could be delivered as individual assessment tasks or could be integrated into one single assessment covering all Outcomes.				
HR7C 48	Architectural CADT: Commercial Building Systems	Assessment for this Unit could be delivered as individual assessment events or could be integrated into one single assessment covering all Outcomes. Different building types or project briefs could be used for separate Outcome tasks. If assessment is conducted using an integrated approach, it is recommended that building project brief guidelines should be provided based on contemporary design in significant, specialist, commercial building types and a project-driven approach to the development of solutions adopted. Suitable building types could include, but not be limited to, commercial office buildings, colleges and universities, shopping malls, or other.				
HR78 48	Architectural CADT: Advanced Digital Media	Assessment for this Unit could be delivered as one single project-based assessment covering all four Outcomes. Industry practice should be reflected wherever possible, so learners should be encouraged to plan the visualisation of the designs thoroughly before commencing any practical activities for the assessments; this could be through the use of sketches, storyboards, a log or similar.				

Unit		Assessment				
		Outcome 1	**Outcome 2**	**Outcome 3**	**Outcome 4**	**Outcome 5**
HR3N 48	Conversion and Adaptation of Buildings	Where possible, a site/s should be selected which would allow group working and which include an existing building. All Outcomes should be assessed in relation to the site identified. Outcome 1 requires the development of a technical report on the condition of the existing building with recommendations for 'making good'. Outcome 2 is the preparation of drawings of the existing site, including the building, showing boundaries and existing features to identify design constraints and sketched proposals. Outcome 3 should provide outline scheme design drawings showing the proposed extension and/or adaptation including proposals for 'making good'. Outcome 4 requires the preparation of a part-set of working drawings with specifications and dimensions to show how the proposals could be implemented.				
HP6M 47	Personal Development Planning	The Unit should be assessed holistically. To achieve this a learner should create, maintain and present a portfolio of evidence — a personal development portfolio. The activities associated with the Unit should provide ample opportunities for learners to generate and gather the required evidence of achievement.				

Unit		Assessment				
		Outcome 1	**Outcome 2**	**Outcome 3**	**Outcome 4**	**Outcome 5**
HT88 47	Site Administration	Practical assessment supported with a Written or oral recorded report in open-book supervised conditions.	Written or oral recorded assessment in open-book supervised conditions.	Participation in a simulated formal meeting. Learners will be required to produce an individual record of this meeting in the form of minutes and an agenda. Visual evidence should also be collected for this assessment by ensuring a recording is made of the meeting.	The assessment for this Outcome will be generated by a task which contains a mixture of short answer, restricted response and structured questions. The assessment should be conducted under closed-book conditions	
HT8A 48	Computer Aided Architectural Design and Technology: Graded Unit 2	Project-based Graded Unit assessment.				
HR71 47	Architectural CADT: Building Technologies	Assessment for this Unit could be delivered by assessment events on an Outcome-by-Outcome basis, or by combining elements of Outcomes, or by one single holistic assessment covering all Outcomes. If assessment is conducted using a holistic approach, it is recommended that a project-driven approach to the development of solutions is used by centres.				
HR75 47	Architectural CADT: Building Systems and Services	Assessment for this Unit could be delivered by assessment events on an Outcome by-Outcome basis, or by combining elements of Outcomes, or by one single holistic assessment covering all Outcomes. If assessment is conducted using a holistic approach, it is recommended that a project-driven approach to the development of solutions is used by centres.				

<table>
<tr><th colspan="2" rowspan="2">Unit</th><th colspan="5">Assessment</th></tr>
<tr><th>Outcome 1</th><th>Outcome 2</th><th>Outcome 3</th><th>Outcome 4</th><th>Outcome 5</th></tr>
<tr><td>HR48 47</td><td>Construction Site Surveying A</td><td colspan="4">It is possible to assess learners on an individual Outcome basis, or by combinations of Outcomes. Assessment should be conducted under supervised conditions. The assessment(s) of Outcome 1 should consist of an appropriate balance of short answer, restricted response and structured questions in open-book format. The assessment of Outcomes 2, 3 and 4 involves practical field surveys in groups with subsequent work done individually.</td><td></td></tr>
<tr><td>HR6W 47</td><td>Computer Aided Architectural Design and Technology: Model Making</td><td colspan="3">Outcomes 1 and 2 require evidence of practical competence and explanatory evidence, while Outcome 3 is a practical assignment. Outcomes 2 and 3 could be assessed individually, or if the same modelling details are developed, the modelling tasks for both these Outcomes could be assessed using one integrated assessment project. All Outcomes should be conducted under controlled, supervised conditions.</td><td></td><td></td></tr>
<tr><td>HR73 47</td><td>History of Architecture</td><td colspan="2">Both Outcomes require a documented response and a practical task. There are opportunities for a combined assessment across the practical assignments for both Outcomes, and individual centres may choose to exploit these opportunities as centre demands dictate. Much of the evidence required in the production of the assessments could be generated by learners beyond the normal confines of the centre.</td><td></td><td></td><td></td></tr>
<tr><td>HR4D 47</td><td>Building Measurement and Cost Studies</td><td>Written or oral recorded evidence generated open-book supervised conditions.</td><td colspan="2">The assessment for Outcomes 2 and 3 could be combined. Written and/or oral recorded evidence generated under open-book supervised conditions.</td><td></td><td></td></tr>
</table>

Unit		Assessment				
		Outcome 1	**Outcome 2**	**Outcome 3**	**Outcome 4**	**Outcome 5**
HR6K 47	Interior Design: Applied Practice	Outcomes 1, 2 and 3 could be delivered and assessed holistically with the creation of a continuing progressive assessment process. Each Outcome must be completed before moving to the next. This assessment could be in the form of a project-based activity with each Outcome identified as a milestone towards completion.				
HR7A 48	Architectural CADT: Animation	Assessment for this Unit could be delivered as one single project-based assessment covering both Outcomes. Industry practice should be reflected wherever possible, such as: learners should be encouraged to plan the visualisation of the designs thoroughly before commencing any practical activities for the assessments, this could be through the use of sketches, storyboards, a log or similar.				
HR76 48	Architectural CADT: Urban Design	A suitable brief for a modestly sized, urban development project could be provided at the outset of assessment activity, and used throughout all assessment tasks. Assessment for this Unit could be delivered as individual assessment events or could be integrated into one single assessment covering all Outcomes. If assessment is conducted using an integrated approach, it is recommended that the solutions reached and presented be in the form of a holistic portfolio of CAD details and graphics, with clear recommendations. This approach would match very closely to industry practice. Learners should produce the Evidence Requirements using CAD packages and supported by fully annotated and referenced drawings.				

Unit		Assessment				
		Outcome 1	**Outcome 2**	**Outcome 3**	**Outcome 4**	**Outcome 5**
HR7F 48	Architectural CADT: Landscape Design	A suitable brief for a modest landscaping project could be provided by the assessor at the outset of assessment activity, and used throughout all assessment tasks. Assessment for this Unit could be delivered as individual assessment events or could be integrated into one single assessment covering all Outcomes. If assessment is conducted using an integrated approach, it is recommended that the solutions reached and presented be in the form of a holistic portfolio of CAD details and graphics, with clear recommendations. This approach would match very closely to industry practice. Learners should produce the Evidence Requirements using CAD packages and supported by fully annotated and referenced drawings.				
HR44 47	Building Maintenance Technology	Written or oral recorded evidence generated under open-book supervised conditions.	Written or oral recorded evidence generated under open-book conditions.			
HR43 48	Fire Safety in Buildings	It is possible to assess learners either on an individual Outcome basis, combinations of Outcomes or by a single holistic assessment combining all Outcomes. The assessment paper/s could be composed of an appropriate balance of short answer, restricted response and structured questions. Assessment should be conducted under supervised, controlled conditions. A single assessment covering all Outcomes should not exceed 3 hours in duration.				

SQA Advanced Certificate and Diploma

Unit		Assessment				
		Outcome 1	**Outcome 2**	**Outcome 3**	**Outcome 4**	**Outcome 5**
HR40 48	Construction Planning	There are three Outcomes of which the first will assess the learners knowledge and understanding of the techniques used to programme construction projects. Outcome 2 will develop and build on what has been achieved in the first Outcome and utilise project management software to prepare programmes and schedules, while Outcome 3 will be assessed by preparation of a method statement for a "small" construction project. SQA Advanced Unit (HR40 48): Construction Planning 1. It is possible to assess learners either on an individual Outcome basis, combinations of Outcomes or by a single holistic assessment combining all Outcomes. The assessment paper/s should be composed of an appropriate balance of short answer, restricted response and structured questions. Assessment should be conducted under supervised controlled conditions. A single assessment covering all Outcomes should not exceed three hours in duration.				
HR7K 48	Building Information Modelling (BIM): Building Science	Assessment for this Unit could be undertaken as a case study to analyse a building, in terms of energy usage and to make recommendations for improvements in energy efficiency. Assessment for this Unit requires learners to use industry-standard software, to analyse a building in terms of its energy performance. The final output will be a report to a client, thus all assessments are inter-related and sequential in nature, in that the activities and results from one Outcome are integrated and progressed in the subsequent Outcome assessment. Evidence for all Outcomes will be generated under controlled, supervised open-book conditions. Learners will be allowed access to course material, textbooks, the internet and the Help files associated to the software used. All evidence must be generated during the assessment period.				

Unit		Assessment				
		Outcome 1	**Outcome 2**	**Outcome 3**	**Outcome 4**	**Outcome 5**
HR7L 47	Building Information Modelling (BIM): Residential Project	Assessment for this Unit could be undertaken holistically as a design project, using BIM procedures to progress the model from the design stage, to the project planning and costing stages. Although the Unit could be assessed holistically, it is recommended there should be four formal assessment events, corresponding to the four Outcomes, to be taken by learners at agreed points, determined by the lecturer. Evidence for all Outcomes will be generated under controlled, supervised open-book conditions. Learners will be allowed access to course material, text books, the internet and the Help files associated to the software used. All evidence must be generated during the assessment period and all attributable material must be referenced using a recognised referencing system.				
HR7N 47	Building Information Modelling (BIM): Principles	All Outcomes could be assessed by means of a series of short answers to structured questions, a formal report or a presentation addressing all components of the knowledge and/or skills. Use of a case study would allow centres to integrate all Outcomes into a whole or combination of Outcomes. Assessments should be carried out in supervised, controlled, open-book conditions. Learners should be allowed to refer to relevant course material. There may be opportunity for investigations to be conducted by groups, however any individual work produced for assessment should be authenticated through Turnitin or similar resources.				

Unit		Assessment				
		Outcome 1	**Outcome 2**	**Outcome 3**	**Outcome 4**	**Outcome 5**
HR7T 48	CAD: Digital Collaboration Practices	Outcome 1 could be assessed by means of a series of short answers to structured questions, a formal report or a presentation addressing all components of the knowledge and/or skills. Evidence should be generated under controlled, supervised open-book conditions.	Use of a case study would allow centres to integrate Outcomes 2, 3 and 4 into a whole or combination of Outcomes. Assessments should be carried out in controlled, supervised, open-book conditions. Learners should be allowed to refer to relevant course material as well as current standards such as British Standards/Publicly Available Standards. There may be opportunity for investigations to be conducted by groups, however any individual written or presented work produced for assessment should be authenticated.			

6 Guidance on approaches to delivery and assessment

The SQA Advanced Certificate and SQA Advanced Diploma in Computer Aided Architectural Design and Technology qualifications aim to give learners the opportunity to develop industry-relevant CAD skills and knowledge of the design process related to the AEC sector. Learners who choose to study these qualifications would be aiming to become Architectural Technicians/Technologists with high-end CAD skills

Each of the qualifications has relevant Unit specifications that provide detailed guidance for the Evidence Requirements and assessment procedures for each assessment event. Where possible and appropriate, integrated assessments should be used to provide a more holistic approach to assessing the learners. Suggestion as to where integration of assessment could be achieved is given in Section 5.4: Assessment Strategy for the qualifications.

Assessment Support Packs (ASPs) have been produced for mandatory Units. Centres can use the ASPs for assessment purposes as long as they are kept secure. Centres may use the ASPs as a guide and/or template for producing locally devised assessments.

The following section gives suggested sequence of Unit delivery for the SQA Advanced Certificate and SQA Advanced Diploma.

6.1 Sequencing/integration of Units

SQA Advanced Certificate/Diploma Year 1 Computer Aided Architectural Design and Technology					
Suggested sequencing of delivery					
Semester 1			**Semester 2**		
Unit code	**Unit title**	**SQA credit**	**Unit Code**	**Unit title**	**SQA credit**
HR7H 47	CAD: User Systems	1	HR6H 47	CAD: Visualisation, Rendering and Presentation	1
HR6P 47	Architectural CADT: Principles and Practice	2	HR6W 47	Computer Aided Architectural Design and Technology: Model Making	1
HR6M 47	Architectural CADT: Residential Design	2	HR75 47	Architectural CADT: Building Systems and Services	1
HR6Y 47	Architecture: Form, Order and Composition	2	HR3T 47	Statutory Control of Buildings	1
			HR6V 47	Architectural Professional Practice: Design Management	1
			HT89 47	Computer Aided Architectural Design and Technology: Graded Unit 1	1
			HR71 47	Architectural CADT: Building Technologies	1
			HR70 47	Architectural CADT: Construction Detailing	1
	Total SQA Credits	**7**		**Total SQA Credits**	**8**

SQA Advanced Diploma Year 2 Computer Aided Architectural Design and Technology					
Suggested sequencing of delivery					
Semester 1			**Semester 2**		
Unit code	**Unit title**	**SQA credit**	**Unit code**	**Unit title**	**SQA credit**
HP6M 47	Personal Development Planning	1	HT8A 48	Computer Aided Architectural Design and Technology: Graded Unit 2	2
HR3N 48	Conversion and Adaptation of Buildings	1	HR78 48	Architectural CADT: Advanced Digital Media	1
HR7K 48	Building Information Modelling (BIM): Building Science 1	1	HR7A 48	Architectural CADT: Animation	1
HR7C 48	Architectural CADT: Commercial Building Systems	2	HT88 47	Site Administration	1
HR7D 48	Architectural CADT: Structural Design and Detailing	2	HR73 47	History of Architecture	1
HR7F 48	Architectural CADT: Landscape Design	1	HR6K 47	Interior Design: Applied Practice	1
	Total SQA Credits	**8**		**Total SQA Credits**	**7**

6.2 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.

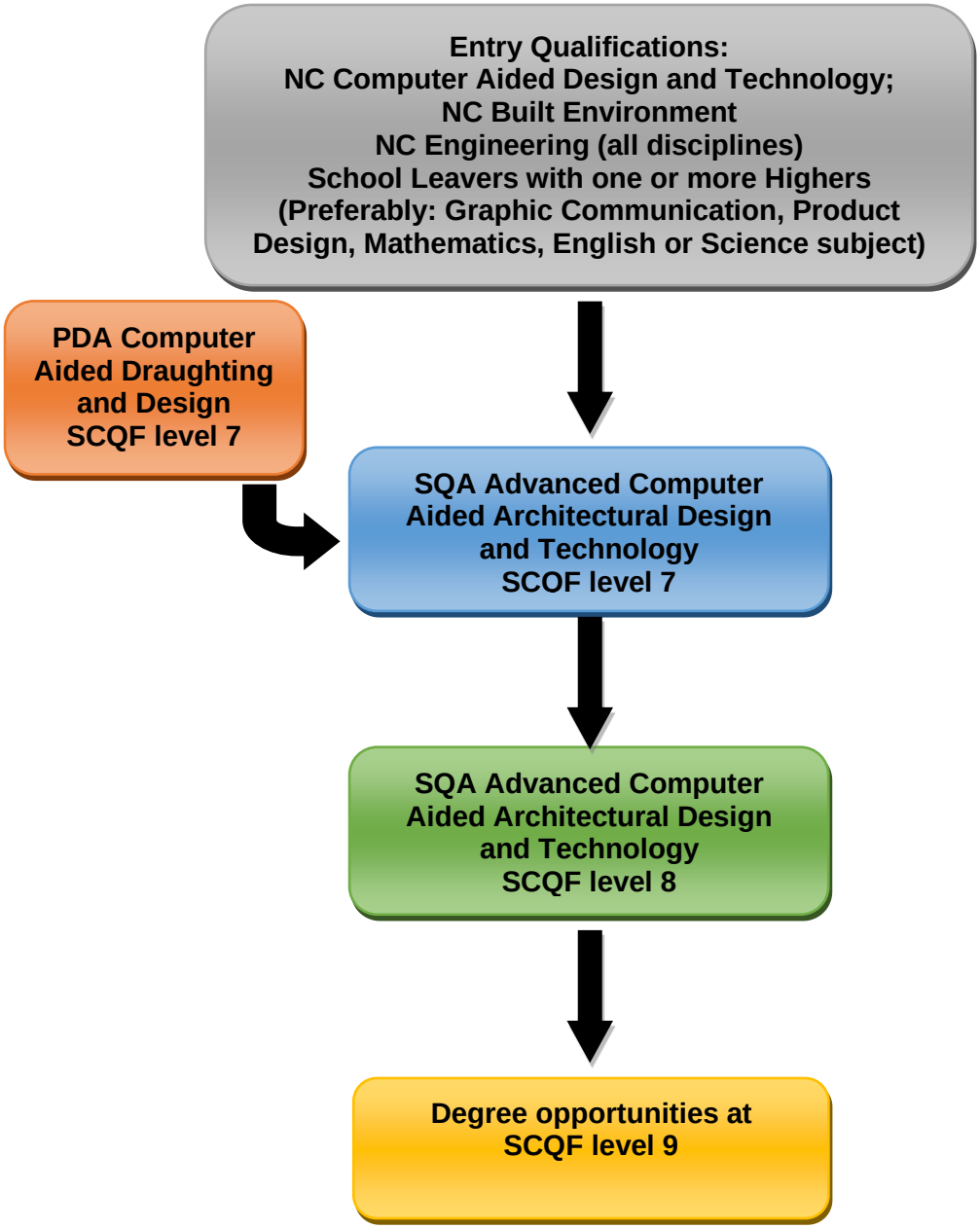
The recognition of prior learning may **not** be used as a method of assessing in the following types of Units and assessments:

- SQA Advanced 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.

6.2.1 Articulation and/or progression



There are opportunities to progress from SQA Advanced Diploma to University. At present, those students who successfully complete the SQA Advanced Diploma progress onto the following degree programmes:

- BSc (Hons) Architectural Technology (Entry Year 3) University of Highlands and Islands (Inverness)
- BSc (Hons) Engineering Management (Entry Year 2) Napier University

6.2.2 Professional recognition

The SQA Advanced Diploma qualifications in Computer Aided Architectural Design and Technology have been developed to facilitate the career progression of the learners to achieve professional status in the future. While studying on the awards, learners can apply to become student members of the Chartered Institute of Architectural Technologists (CIAT). On completion of the award, learners can apply to become Technician Member CIAT (TCIAT), Associate Member CIAT (ACIAT) or full Member CIAT (MCIAT).

As with most professional bodies, CIAT provide recognition of SQA Advanced Certificate and SQA Advanced Diploma awards against their educational requirements for membership. Professional body membership requires a combination of the educational base and verification of professional experience.

6.3 Opportunities for e-assessment

E-assessment may be appropriate for some elements in these qualifications. 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 **http://www.sqa.org.uk/sqa/68835.5665.html**.

6.4 Support materials

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

6.5 Resource requirements

Staff involved in the delivery of these qualifications should be suitably qualified and skilled in the use of advanced level CAD for architectural design, and to have good IT skills.

Centres delivering these qualifications would be required to have a high-specification CAD facility with powerful CAD hardware and up-to-date industry CAD, animation and graphic design software. In addition, peripheral devices such as printers, and large-scale plotters should be readily available. Access to appropriate office-based software for word processing, spreadsheets and databases is essential for delivery of the qualifications.

Access to the internet is essential for research purposes throughout the course, as well as, the delivery of the following Unit:

HR7T 48 *CAD: Digital Collaboration Practices*

It is recommended that appropriate journals, books, standards and e-books are sourced to support the learning and teaching process.

The Autodesk vendor qualifications that are embedded within the qualifications are accessed via Certiport online system. Any centre choosing to deliver the Autodesk Certified User or professional vendor qualifications as part of the framework will require access to Certiport online. Costs for sitting the online exams can be requested through the Certiport website and this is done on a centre-by-centre basis. Delivering centres are responsible for acquiring, setting-up and accessing system and online tests.

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.

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 SQA Advanced 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. SQA Advanced Certificates and SQA Advanced Diplomas are available at SCQF levels 7 and 8 respectively. SQA Advanced 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.

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 SQA Advanced Certificate and SQA Advanced Diploma in Computer Aided Architectural Design and Technology have been developed to give you the opportunity to acquire the practical skills and underpinning knowledge of architectural technology, as well as the use of CAD for the production of 3-dimensional (3D) architectural models and 2-dimensional (2D) drawings. The course delivery is mainly based in a classroom using industry-standard CAD technology.

Before commencing the course you should have an interest in architectural technology, building design, CAD, and design technology. A general level of IT skills would be beneficial, and good English and mathematics skills are desirable. Learners who have studied Graphic Communication and/or Product Design at school would see this course as a natural progression route.

The course aims to develop practical architectural CAD skills through the use of tutor led tutorials, projects and design activities. On occasion you may be required to work as part of a team to solve design problems and provide a suitable solution. You will be required to write/oral record and present researched information across most Units of the award.

Specific tasks will include the use of a CAD system to produce 2D drawings (site, location, floorplans and elevations), 3D architectural CAD models, 3D animated building walkthroughs, and technical illustrations. Other tasks that you may be asked to do could include, the production of physical prototypes (produced by hand and 3D printed), creation of hand drawn sketches, using mathematics skills to solve design problems and presenting final design solutions using traditional and technological processes.

On completion of the SQA Advanced Certificate you will have achieved 12 credits that can be used towards progressing onto the SQA Advanced Diploma. Progression from one award to the next should be seamless. On completion of the SQA Advanced Diploma award you may choose to progress onto a course of study at University or into industry.

The SQA Advanced Certificate and SQA Advanced Diploma awards are aimed at learners who want to start or change their career and have a desire to move into building design as Architectural Technicians/Technologists. Employment opportunities also exist within the Architectural Engineering and Construction (AEC) sectors as CAD Technician and Junior Designers.

Individuals, who are studying towards the SQA Advanced Diploma award and are interested in progressing to professional status, may choose to register as student members of the Chartered Institute of Architectural Technologists (CIAT). On completion of the award, learners can apply to become Technician Member CIAT (TCIAT), Associate Member CIAT (ACIAT) or full Member CIAT (MCIAT).