



## **Group Award Specification for:**

**National Progression Award (NPA): Building Services Engineering at SCQF level 5**

**Group Award Code: GEH5 45**

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# 1. Introduction

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, candidates, employers and higher education institutes (HEIs) of the aims and purpose of the qualification.
- Provide details of the range of candidates the qualification is suitable for and progression opportunities.

This is the group award specification for the revised National Progression Award (NPA): Building Services Engineering at SCQF level 5, which was validated in December 2025. The Building Services Engineering (BSE) Sector comprises the industries of Plumbing, Electrotechnical, Heating and Ventilation and Refrigeration and Air Conditioning. The BSE Sector is represented by the Standards Setting Organisation (SSO) SummitSkills, who work on behalf of employers in the BSE Sector to implement National Occupational Standards (NOS) into national qualification frameworks and the development of modern apprenticeships.

This award is not designed to train people to full industrial competence. Rather the award seeks to lead the candidates towards a better understanding of the knowledge and skills requirements associated with each of the BSE industries. There is an emphasis on developing the pre-vocational and employability skills normally taught to an apprentice at the very early stages of timeserving and these basic skills will be very attractive to employers. Candidates can then build on these skills when working towards achieving a Scottish Vocational Qualification (SVQ) relevant to their interest and capabilities and allow them to follow the optional path of interest as they decide on their future career opportunities.

This National Progression Award is suitable for a wide range of candidates including:

- S5 and S6 candidates.
- School leavers.
- Progression candidates, for example Skills for Work (SfW).

- Adults returning to education.
- Employed candidates who wish to enhance their career prospects.
- Unemployed candidates who wish to enhance their job prospects.

Candidates who complete the NPA may go on to apply for an Apprenticeship as an Air Conditioning Engineer; Domestic Plumber; Ductwork Installer; Gas Fitter; Heating Installer; Industrial and Commercial Plumber; Installation Electrician; Maintenance Electrician; Refrigeration Engineer; Service and Maintenance Engineer. Candidates may also go on to higher levels of education, for example the National Certificate (NC) or Higher National Certificate (HNC).

## **1.1 Rationale**

The BSE Sector is acutely aware of the demographic issues facing Scotland whereby the working population is ageing and there are (relatively) too few young people to replace them.

It is recognised that many youngsters miss the opportunity to enter the BSE Sector because they simply don't know about it at the crucial decision-making points of their lives. All young people will have an awareness of the Construction Sector and many will consider it as a viable career option. However, evidence suggests that young people are not aware of the BSE Sector or the many opportunities it affords for development and progression to the professional levels.

In order to address this situation a SfW qualification had been developed to make the 14 to 16 age group aware of the BSE Sector and to allow them the opportunity to develop some basic knowledge and skills relevant to the industries and is based on National Occupational Standards (NOS). Environmental aspects are covered at the appropriate level and are likely to be attractive to the target population.

The NPA was developed to provide a bridge between the school age group (catered for by the new Skills for Work qualification) and the full apprenticeship and is based on National Occupational Standards (NOS). It is only the full apprenticeship which confers full industrial competence on the individual. Environmental aspects, and

associated technology, are covered at the appropriate level and are likely to be attractive to the target population and potential employers.

These awards are not designed to train people to full industrial competence. The SfW and the NPA are aimed at those who do not necessarily have any prior experience or knowledge of the BSE Sector and are therefore classed as 'new entrants'.

Candidates can then build on the skills, knowledge and employability skills gained when working towards an SVQ (which does confer full industrial competence), should they wish to do so.

More generally, the BSE Sector will make a crucial contribution to the achievement of the Scottish Government 2020 Energy targets and clearly this can only happen through appropriately qualified people. Areas such as microgeneration and renewables are within the BSE footprint. It is anticipated that these areas in particular will raise the BSE Sector profile over the next 10 to 15 years and that those working in the sector must be appropriately qualified and skilled.

Ultimately, this could have created negative delivery issues for Qualifications Scotland Approved Centres who had historically taught Plumbing and Electrotechnical units through a combined delivery of trade disciplines aligned with the National Progression Award in Construction.

In order to ensure that Qualifications Scotland Approved Centres can deliver these subjects as part of their pre-employment programmes it was necessary to amend the current structure of the National Progression Award (NPA) in Building Services Engineering at SCQF level 5.

Feedback from Qualifications Scotland representatives and stakeholders suggested that obstacles were present with the existing practical units, FT80 11 and FT81 11, to several Qualifications Scotland centres who were not as equipped as the larger Colleges to deliver the full portfolio of skills required. Heating and Ventilation and Refrigeration and Air Conditioning Qualifications Scotland centres are minimal in numbers and it was logical that any proposed changes to a revised National Progression Award in Building Services Engineering at SCQF level 5 were fit for purpose for all centres. The revised National Progression Award in Building Services Engineering at SCQF level 5 can be achieved through the mandatory route within a

notional design length of 300 hours at 7.5 National Unit credits (45 SCQF credit points at SCQF level 5).

The specific aims of the proposed qualification would still focus on a balanced delivery and assessment of trade disciplines on the BSE Sector, with those centres who could not wholly provide a Realistic Working Environment given the opportunity to undertake theory units in Heating and Ventilation and/or Refrigeration and Air Conditioning — mandatory optional routes. Furthermore, a Health and Safety unit has been developed because of the importance of the subject in relation to SVQ Level 3 Modern Apprenticeships in the BSE Sector. This ensures candidates grasp a level of knowledge in this area, fundamentally enhancing personal progression. Modern Apprentices in the BSE Sector are subject to legislation regarding Health and Safety within their technical competencies. Candidates have to be prepared for Construction Safety where a license is required for an operative to work on a Construction Development. All trades in the BSE Sector would be sub-contractors on Construction Developments and candidates would require proving competency for Health and Safety prior to commencing work. This new unit would focus on safe systems of work and risk assessment where evidence would be attributed to all practical units — FT7X 11, FT7Y 11, FT80 11 and FT81 11.

Mandatory optional units in Heating and Ventilation and Refrigeration and Air Conditioning have been produced where candidates can select existing practical units or new Theory units where centres are limited on practical delivery within these two subject areas. Theoretical concepts of both technical areas are covered in part in specific and generic environmental units of all SVQ Level 3 BSE qualifications.

## 2. Qualification structure

The group award is made up of 7.5 Qualifications Scotland unit credits. It comprises 57 SCQF credit points at SCQF level 5, of which 33 are mandatory and 24 are optional. Candidates require a minimum of 12 points from two technical areas.

### 2.1 Structure

To achieve the group award candidates require 7.5 unit credits at SCQF level 5 (45 SCQF credit points).

**Mandatory units: All units must be taken:**

4 code	2 code	Unit title	Qualifications Scotland credit	SCQF credit points	SCQF level
FT82	11	Building Services Engineering: Energy and the Environment	1	6	5
FT83	11	Building Services Engineering: Systems, Roles, Responsibilities and Procedures	1	6	5
FT84	11	Building Services Engineering: Science	1	6	5
HF2E	45	Building Services Engineering: Health and Safety	0.5	3	5

**Mandatory optional units: A minimum of two units:**

<b>4 code</b>	<b>2 code</b>	<b>Unit title</b>	<b>Qualifications Scotland credit</b>	<b>SCQF credit points</b>	<b>SCQF level</b>
FT7X	11	Building Services Engineering: Basic Electrical Installation Operations	1	6	5
FT7Y	11	Building Services Engineering: Basic Plumbing Operations	1	6	5
FT80	11	Building Services Engineering: Basic Heating and Ventilation Operations	1	6	5
FT81	11	Building Services Engineering: Basic Refrigeration and Air Conditioning Operations	1	6	5

**Candidates must choose one Route.**

**Route 1: Plumbing Pathway**

**Optional units: Two units must be taken:**

<b>4 code</b>	<b>2 code</b>	<b>Unit title</b>	<b>Qualifications Scotland credit</b>	<b>SCQF credit points</b>	<b>SCQF level</b>
F1L7	11	Hot and Cold-Water Systems: An Introduction	1	6	5
F1L9	11	Install and Connect Domestic Plumbing Appliances: An Introduction	1	6	5

## Route 2: Electrical Pathway

Optional units: Two units must be taken:

4 code	2 code	Unit title	Qualifications Scotland credit	SCQF credit points	SCQF level
F5FX	11	Installation of Conduit Systems	1	6	5
D9AH	11	Basic Electrical Installation Skills	1	6	5

## Route 3: HVRAC Pathway

Optional units: Any two of the three units must be taken:

4 code	2 code	Unit title	Qualifications Scotland credit	SCQF credit points	SCQF level
HF2F	45	Building Services Engineering: Basic Heating and Ventilation Principles	1	6	5
HF2D	45	Building Services Engineering: Basic Refrigeration and Air Conditioning Principles	1	6	5
HF2G	45	Building Services Engineering: Service and Maintenance of Building Services Appliances	1	6	5

### **3. Aims of the qualification**

The principal aim of the National Progression Award in Building Services Engineering is to provide opportunities for candidates to experience a variety of trade disciplines and occupations within the BSE Sector, while still enjoying the benefits of close contact with their training and/or education provider.

The National Progressional Award provides candidates with an opportunity to sample the three sectors: Plumbing, Electrical, and HVRAC by completing mandatory units for each sector. This will enable candidates to then choose which Route they wish to pursue to achieve the qualification, and therefore in their career.

This group award is a vocational qualification which provides practical opportunities for developing real skills that are valid and relevant in the BSE Sector. The National Progression Award in Building Services Engineering is flexible and is designed to offer candidates experience of a wide range of skills and practices across the group award mandatory and optional units. This will help candidates to make an informed choice about the most appropriate career option for them in the BSE Sector in the following trade disciplines:

- Electrotechnical
- Plumbing
- Heating and Ventilation
- Refrigeration and Air Conditioning
- Service and Maintenance

#### **3.1 General aims of the qualification**

This group award aims to offer candidates the opportunity to improve their employability prospects within the BSE Sector by developing candidates’:

1. Practical knowledge and skills.
2. Ability to solve problems.
3. Transferable skills.

4. Ability to take responsibility for their own learning.
5. Awareness of sustainability and environmental measures in BSE.
6. Employment and behavioural skills.
7. Understanding of Health and Safety in the BSE Sector.
8. Planning and organisational skills.
9. Oral, written and communication skills.
10. Numerical and graphical skills.
11. Flexibility, knowledge, skills and motivation as a basis for progression.

### **3.2 Specific aims of the qualification**

The group award will provide:

12. Practical and relevant skills in a safety-conscious context.
13. Technical skills and knowledge required across each of the BSE industries.
  - The BSE industries (Plumbing; Heating and Ventilating; Air Conditioning and Refrigeration; Electrotechnical).
14. Progression opportunities for those who achieve the NPA.
15. The ability to make an immediate contribution in employment in the working environment.

## **4. Recommended entry to the qualification**

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

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

- Candidates would benefit from having attained one or more qualifications at SCQF level 4.

### **4.1 Core Skills entry profile**

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

There is no other automatic certification of Core Skills or Core Skills components for this group award. Opportunities for developing other aspects of Core Skills are highlighted in the Support Notes for this group award.

<b>Core Skill</b>	<b>Recommended SCQF entry profile</b>	<b>Associated assessment activities</b>
Communication	4	Candidates will be assessed on providing evidence of oral and written communication skills and using a range of verbal and non-verbal communication techniques which will enhance their employability prospects, particularly within the practical unit context.
Numeracy	4	The ability to interpret, calculate, apply and communicate numerical and graphical information accurately is integral to achievement of all practical units and occupational mandatory units.
Information and Communication Technology (ICT)	4	The ability to interpret, apply and communicate information is essential if candidates will be taking part in theoretical activity which includes interactive board technology and participation in online assessment.

<b>Core Skill</b>	<b>Recommended SCQF entry profile</b>	<b>Associated assessment activities</b>
Problem Solving	4	<p>Across all units, candidates will identify problems coherent in the BSE Sector and will devise solutions to a range of issues in practical situations.</p> <p>Candidates will apply knowledge gained to resolve these issues, while maintaining a key focus on sustainability and health and safety in the BSE Sector.</p>
Working with Others	4	<p>Small group or pair working is integral to the delivery of this Core Skill. Practical work may involve formative assessment tasks in which candidates develop team working skills essential to the BSE Sector.</p>

## **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 candidates to develop the more generic skill, known as Core Skills through doing this qualification.

## 5.1 Mapping of qualification aims to units

**Note:** For details of the aims, see section [3.1 General aims of the qualification](#) and section [3.2 Specific aims of the qualification](#).

Unit code	Unit title	General aims	Specific aims
FT82 11	Building Services Engineering: Energy and the Environment	2, 3, 4, 5, 6, 8, 9, 10, 11	12, 13, 14, 15
FT83 11	Building Services Engineering: Systems, Roles, Responsibilities and Procedures	2, 3, 4, 6, 7, 8, 9, 10, 11	12, 13, 14, 15
FT84 11	Building Services Engineering: Science	1, 2, 3, 4, 6, 8, 9, 10, 11	13, 14, 15
HF2E 45	Building Services Engineering: Health and Safety	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	12, 13, 14, 15
FT7X 11	Building Services Engineering: Basic Electrical Installation Operations	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	12, 13, 14, 15
FT7Y 11	Building Services Engineering: Basic Plumbing Operations	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	12, 13, 14, 15
FT80 11	Building Services Engineering: Basic Heating and Ventilation Operations	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	12, 13, 14, 15
FT81 11	Building Services Engineering: Basic Refrigeration and Air Conditioning Operations	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	12, 13, 14, 15
F1L7 11	Hot and Cold-Water Systems: An Introduction	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	13, 14, 15
F1L9 11	Install and Connect Domestic Plumbing Appliances: An Introduction	1, 2, 3, 5, 6, 7, 8, 9, 10, 11	13, 14, 15
F5FX 11	Installation of Conduit Systems	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	12, 13, 14, 15
D9AH 11	Basic Electrical Installation Skills	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	12, 13, 14, 15

<b>Unit code</b>	<b>Unit title</b>	<b>General aims</b>	<b>Specific aims</b>
HF2F 45	Building Services Engineering: Basic Heating and Ventilation Principles	1, 2, 3, 4, 6, 8, 9, 10, 11	13, 14, 15
HF2D 45	Building Services Engineering: Basic Refrigeration and Air Conditioning Principles	1, 2, 3, 4, 6, 8, 9, 10, 11	13, 14, 15
HF2G 45	Building Services Engineering: Service and Maintenance of Building Services Appliances	1, 2, 3, 4, 6, 8, 9, 10, 11	13, 14, 15

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

Unit code	Unit title	National Occupational Standards (NOS) code
FT82 11	Building Services Engineering: Energy and the Environment	F8XJ 04
FT83 11	Building Services Engineering: Systems, Roles, Responsibilities and Procedures	BSEBSE02
FT84 11	Building Services Engineering: Science	BSEBSE04, BSEPH04, BSEHV04, BSERAC08
HF2E 45	Building Services Engineering: Health and Safety	BSEBSE01
FT7X 11	Building Services Engineering: Basic Electrical Installation Operations	BSEBSE04
FT7Y 11	Building Services Engineering: Basic Plumbing Operations	BSEPH04
FT80 11	Building Services Engineering: Basic Heating and Ventilation Operations	BSEHV04
FT81 11	Building Services Engineering: Basic Refrigeration and Air Conditioning Operations	BSERAC08
F1L7 11	Hot and Cold-Water Systems: An Introduction	BSEPH04
F1L9 11	Install and Connect Domestic Plumbing Appliances: An Introduction	BSEPH04
F5FX 11	Installation of Conduit Systems	BSEBSE04

<b>Unit code</b>	<b>Unit title</b>	<b>National Occupational Standards (NOS) code</b>
D9AH 11	Basic Electrical Installation Skills	BSEBSE04
HF2F 45	Building Services Engineering: Basic Heating and Ventilation Principles	BSEHV04
HF2D 45	Building Services Engineering: Basic Refrigeration and Air Conditioning Principles	BSERAC08
HF2G 45	Building Services Engineering: Service and Maintenance of Building Services Appliances	BSEHV04

### 5.3 Mapping of Core Skills development opportunities across the qualifications

**Core Skill Communication components:** Written (Reading), Written (Writing), Oral

Unit code	Unit title	Communication components
FT82 11	Building Services Engineering: Energy and the Environment	Not applicable.
FT83 11	Building Services Engineering: Systems, Roles, Responsibilities and Procedures	Written (Reading) Written (Writing) Oral
FT84 11	Building Services Engineering: Science	Not applicable.
HF2E 45	Building Services Engineering: Health and Safety	Not applicable.
FT7X 11	Building Services Engineering: Basic Electrical Installation Operations	Not applicable.
FT7Y 11	Building Services Engineering: Basic Plumbing Operations	Not applicable.
FT80 11	Building Services Engineering: Basic Heating and Ventilation Operations	Not applicable.
FT81 11	Building Services Engineering: Basic Refrigeration and Air Conditioning Operations	Not applicable.
F1L7 11	Hot and Cold-Water Systems: An Introduction	Not applicable.
F1L9 11	Install and Connect Domestic Plumbing Appliances: An Introduction	Not applicable.
F5FX 11	Installation of Conduit Systems	Not applicable.
D9AH 11	Basic Electrical Installation Skills	Not applicable.

<b>Unit code</b>	<b>Unit title</b>	<b>Communication components</b>
HF2F 45	Building Services Engineering: Basic Heating and Ventilation Principles	Not applicable.
HF2D 45	Building Services Engineering: Basic Refrigeration and Air Conditioning Principles	Not applicable.
HF2G 45	Building Services Engineering: Service and Maintenance of Building Services Appliances	Not applicable.

**Core Skill Numeracy components:** Using Number, Using Graphical Information

<b>Unit code</b>	<b>Unit title</b>	<b>Numeracy components</b>
FT82 11	Building Services Engineering: Energy and the Environment	Not applicable.
FT83 11	Building Services Engineering: Systems, Roles, Responsibilities and Procedures	Not applicable.
FT84 11	Building Services Engineering: Science	Using Number Using Graphical Information
HF2E 45	Building Services Engineering: Health and Safety	Not applicable.
FT7X 11	Building Services Engineering: Basic Electrical Installation Operations	Not applicable.
FT7Y 11	Building Services Engineering: Basic Plumbing Operations	Not applicable.
FT80 11	Building Services Engineering: Basic Heating and Ventilation Operations	Not applicable.
FT81 11	Building Services Engineering: Basic Refrigeration and Air Conditioning Operations	Not applicable.
F1L7 11	Hot and Cold-Water Systems: An Introduction	Not applicable.
F1L9 11	Install and Connect Domestic Plumbing Appliances: An Introduction	Not applicable.
F5FX 11	Installation of Conduit Systems	Using Number Using Graphical Information
D9AH 11	Basic Electrical Installation Skills	Not applicable.
HF2F 45	Building Services Engineering: Basic Heating and Ventilation Principles	Not applicable.

<b>Unit code</b>	<b>Unit title</b>	<b>Numeracy components</b>
HF2D 45	Building Services Engineering: Basic Refrigeration and Air Conditioning Principles	Not applicable.
HF2G 45	Building Services Engineering: Service and Maintenance of Building Services Appliances	Not applicable.

**Core Skill Information and Communication Technology (ICT) components:**

Accessing Information, Providing and/or Creating Information

<b>Unit code</b>	<b>Unit title</b>	<b>Information and Communication Technology (ICT) components</b>
FT82 11	Building Services Engineering: Energy and the Environment	Not applicable.
FT83 11	Building Services Engineering: Systems, Roles, Responsibilities and Procedures	Not applicable.
FT84 11	Building Services Engineering: Science	Not applicable.
HF2E 45	Building Services Engineering: Health and Safety	Not applicable.
FT7X 11	Building Services Engineering: Basic Electrical Installation Operations	Not applicable.
FT7Y 11	Building Services Engineering: Basic Plumbing Operations	Not applicable.
FT80 11	Building Services Engineering: Basic Heating and Ventilation Operations	Not applicable.
FT81 11	Building Services Engineering: Basic Refrigeration and Air Conditioning Operations	Not applicable.
F1L7 11	Hot and Cold-Water Systems: An Introduction	Not applicable.
F1L9 11	Install and Connect Domestic Plumbing Appliances: An Introduction	Not applicable.
F5FX 11	Installation of Conduit Systems	Not applicable.
D9AH 11	Basic Electrical Installation Skills	Not applicable.
HF2F 45	Building Services Engineering: Basic Heating and Ventilation Principles	Not applicable.

<b>Unit code</b>	<b>Unit title</b>	<b>Information and Communication Technology (ICT) components</b>
HF2D 45	Building Services Engineering: Basic Refrigeration and Air Conditioning Principles	Not applicable.
HF2G 45	Building Services Engineering: Service and Maintenance of Building Services Appliances	Not applicable.

**Core Skill Problem Solving components:** Critical Thinking, Planning and Organising, Reviewing and Evaluating

<b>Unit code</b>	<b>Unit title</b>	<b>Problem Solving components</b>
FT82 11	Building Services Engineering: Energy and the Environment	Not applicable.
FT83 11	Building Services Engineering: Systems, Roles, Responsibilities and Procedures	Not applicable.
FT84 11	Building Services Engineering: Science	Not applicable.
HF2E 45	Building Services Engineering: Health and Safety	Not applicable.
FT7X 11	Building Services Engineering: Basic Electrical Installation Operations	Not applicable.
FT7Y 11	Building Services Engineering: Basic Plumbing Operations	Critical Thinking Planning and Organising Reviewing and Evaluating
FT80 11	Building Services Engineering: Basic Heating and Ventilation Operations	Critical Thinking Planning and Organising Reviewing and Evaluating
FT81 11	Building Services Engineering: Basic Refrigeration and Air Conditioning Operations	Critical Thinking Planning and Organising Reviewing and Evaluating
F1L7 11	Hot and Cold-Water Systems: An Introduction	Not applicable.
F1L9 11	Install and Connect Domestic Plumbing Appliances: An Introduction	Not applicable.

<b>Unit code</b>	<b>Unit title</b>	<b>Problem Solving components</b>
F5FX 11	Installation of Conduit Systems	Critical Thinking Planning and Organising Reviewing and Evaluating
D9AH 11	Basic Electrical Installation Skills	Not applicable.
HF2F 45	Building Services Engineering: Basic Heating and Ventilation Principles	Not applicable.
HF2D 45	Building Services Engineering: Basic Refrigeration and Air Conditioning Principles	Not applicable.
HF2G 45	Building Services Engineering: Service and Maintenance of Building Services Appliances	Not applicable.

**Core Skill Working with Others components:** Working Co-operatively with Others, Reviewing Co-operative Contribution

<b>Unit code</b>	<b>Unit title</b>	<b>Working with Others components</b>
FT82 11	Building Services Engineering: Energy and the Environment	Not applicable.
FT83 11	Building Services Engineering: Systems, Roles, Responsibilities and Procedures	Not applicable.
FT84 11	Building Services Engineering: Science	Not applicable.
HF2E 45	Building Services Engineering: Health and Safety	Not applicable.
FT7X 11	Building Services Engineering: Basic Electrical Installation Operations	Not applicable.
FT7Y 11	Building Services Engineering: Basic Plumbing Operations	Not applicable.
FT80 11	Building Services Engineering: Basic Heating and Ventilation Operations	Not applicable.
FT81 11	Building Services Engineering: Basic Refrigeration and Air Conditioning Operations	Not applicable.
F1L7 11	Hot and Cold-Water Systems: An Introduction	Not applicable.
F1L9 11	Install and Connect Domestic Plumbing Appliances: An Introduction	Not applicable.
F5FX 11	Installation of Conduit Systems	Not applicable.
D9AH 11	Basic Electrical Installation Skills	Not applicable.
HF2F 45	Building Services Engineering: Basic Heating and Ventilation Principles	Not applicable.
HF2D 45	Building Services Engineering: Basic Refrigeration and Air Conditioning Principles	Not applicable.

<b>Unit code</b>	<b>Unit title</b>	<b>Working with Others components</b>
HF2G 45	Building Services Engineering: Service and Maintenance of Building Services Appliances	Not applicable.

## 5.4 Assessment strategy for the qualifications

Mandatory units and optional units which are theoretical can be assessed in open and/or closed-book conditions, project or knowledge based multiple-choice assessments or assignment approaches can be utilised. The use of e-assessment should be encouraged for knowledge based multiple-choice assessments and assignments.

Practical outcomes will be assessed according to the requirements of unit descriptors. Centres should develop assessor observation checklists for all practical outcomes where risk assessment and Health and Safety should be incorporated within the BSE Sector trade disciplines.

Sequencing and Integration of units is mentioned further in the group award specification.

<b>Unit title</b>	<b>Assessment: Outcome 1</b>	<b>Assessment: Outcome 2</b>	<b>Assessment: Outcome 3</b>	<b>Assessment: Outcome 4</b>	<b>Assessment: Outcome 5</b>
BSE: Energy and the Environment	OB Question Paper	OB Question Paper	Not applicable	Not applicable	Not applicable
BSE: Systems, Roles, Responsibilities and Procedures	OB Question Paper	OB Question Paper	OB Question Paper	OB Question Paper	Not applicable
BSE: Science	OB Question Paper	OB Question Paper	OB Question Paper	OB Question Paper	Not applicable
BSE: Health and Safety	OB Question Paper	OB Question Paper	Not applicable	Not applicable	Not applicable

<b>Unit title</b>	<b>Assessment: Outcome 1</b>	<b>Assessment: Outcome 2</b>	<b>Assessment: Outcome 3</b>	<b>Assessment: Outcome 4</b>	<b>Assessment: Outcome 5</b>
BSE: Basic Electrical Installation Operations	Matching exercise	Matching exercise	OB Question Paper	Practical exercise	Reflective Account
BSE: Basic Plumbing Operations	Matching exercise	Matching exercise	OB Question Paper	Practical exercise	Reflective Account
BSE: Basic Heating and Ventilation Operations	Matching exercise	Graphical exercise	Practical exercise	Reflective Account	Not applicable
BSE: Basic Refrigeration and Air Conditioning Operations	Matching exercise	Graphical exercise	Practical exercise	Reflective Account	Not applicable
Hot and Cold-Water Systems	Graphical exercise	Matching exercise	OB Question Paper	Not applicable	Not applicable
Install and Connect Domestic Plumbing Appliances	Graphical exercise	Practical exercise	Practical exercise	Practical exercise	Not applicable
Installation of Conduit Systems	Matching exercise	Practical exercise	Practical exercise	Not applicable	Not applicable
Basic Electrical Installation Skills	Graphical exercise	Practical exercise	Not applicable	Not applicable	Not applicable

<b>Unit title</b>	<b>Assessment: Outcome 1</b>	<b>Assessment: Outcome 2</b>	<b>Assessment: Outcome 3</b>	<b>Assessment: Outcome 4</b>	<b>Assessment: Outcome 5</b>
BSE: Basic Heating and Ventilation Principles	OB Question Paper	OB Question Paper	OB Question Paper	Not applicable	Not applicable
BSE: Basic Refrigeration and Air Conditioning Principles	OB Question Paper	OB Question Paper	OB Question Paper	Not applicable	Not applicable
BSE: Service and Maintenance of Building Services Appliances	Matching exercise	Matching exercise	Not applicable	Not applicable	Not applicable

## **6. Guidance on approaches to delivery and assessment**

The award has been designed to equip candidates with the knowledge, understanding and skills required for success in employment or further study and/or training within the Scottish BSE Sector. It is mainly aimed at those who are interested in pursuing a career in one of the BSE Sector industries but would welcome the opportunity to identify which of the BSE industries is most appropriate to their own skills and career aspirations.

The National Progressional Award provides candidates with an opportunity to sample the three sectors: Plumbing, Electrical, and HVRAC by completing mandatory units for each sector. This will enable candidates to then choose which Route they wish to pursue to achieve the qualification.

This award is not designed to train people to full industrial competence. Rather the award seeks to lead the candidates towards a better understanding of the knowledge and skills requirements associated with each of the BSE industries. There is an emphasis on developing the pre-vocational and employability skills normally taught to an apprentice at the very early stages of timeserving and these basic skills will be very attractive to employers. Candidates can then build on these skills when working towards achieving an SVQ relevant to their interest and capabilities.

The award is designed to allow the candidate to develop an understanding of the BSE Sector, the type of work that goes on in the industries within it and the types of career opportunities presented by each of these industries. The award is also designed to underline the importance of safety, legislation, Codes of Practice and procedures in the workplace. The award also allows the candidate to understand the technical (or applied science) nature of the work that takes place within the BSE Sector and develop the understanding of the concept of energy sources in terms of their carbon 'footprint'.

The programme should be delivered in the context of familiarisation with terminology, basic concepts and working practices and disciplines, including Health and Safety

and Sustainability. It is intended that the new NPA at SCQF level 5 will develop a deep appreciation of topics based on accepted BSE Sector practices.

Candidates may go on to apply for an Apprenticeship as an Air Conditioning Engineer; Domestic Plumber; Ductwork Installer; Gas Fitter; Heating Installer; Industrial and Commercial Plumber; Installation Electrician; Maintenance Electrician; Refrigeration Engineer; Service and Maintenance Engineer. Candidates may also go on to higher levels of education, for example the NC or HNC.

## **Delivery**

The National Progression Award is primarily, but not exclusively, designed to be delivered in a college environment. This is mainly due to the level of the award, the requirement for realistic workplaces and the level of occupational expertise that will be required of the delivery staff.

The award could be offered on a full-time, part-time, block-release, day-release or evening basis. Combination of delivery is also a possibility. Such combined study may enable candidates to complete the award within a shorter time period.

There are opportunities for integrated delivery of units within the award. Teaching and Learning for the Energy and the Environment Unit could be integrated across the industry specific units. The unit specifications will identify specific opportunities for integration with other units. Similarly, there is the opportunity to integrate assessment across the industry specific units.

It is recognised that the award focuses on the development of candidate knowledge and skills associated with the BSE industries. The Health and Safety component is built into each unit as appropriate.

There may be opportunities for the introduction of e-learning during the teaching and delivery of the award. The learning and assessments of the knowledge-based outcomes can be conducted either by using e-learning methods (this could also be used for teaching) or else by traditional teaching techniques. For example, formal assessments may make use of information technology (IT) systems and facilities

when available, or alternatively can also use the standard mode of supervising candidates during classroom paper-based assignments.

It is also recognised that health and safety considerations and the age profile of candidates may present a challenge to centres. However, in order that the quality and integrity of assessments are maintained, centres are reminded that all practical assessments should take place in a realistic working or training environment with appropriate use of simulation where health and safety considerations are key. In addition, appropriate levels of supervision should be always applied.

The award is also suitable for those returning to work or transferring from other sectors and could be delivered on a full-time or part-time basis. Similarly, flexible delivery of the NC and HNC ensures that both current and future BSE Sector employees can be accommodated.

## **Assessment**

The assessments should be designed to ensure an appropriate level of rigour whilst not imposing excessive demands on candidates. The design principles for the award encourage a holistic approach to assessment, and this has been adopted in each unit specification for the award.

An integrated approach to assessment across the outcomes in this unit, and relevant others, is suggested. It is recommended that Building Services Engineering: Health and Safety is delivered and assessed before any other units are undertaken. In addition, the project-based approach may be used to gather evidence of candidate achievement. Centres may also wish to develop the employability skills of the candidates through role-play techniques where appropriate.

Throughout all units, emphasis should be placed where appropriate on the application of Health and Safety. Safe working practices should be looked at in accordance with current safety codes of practice and regulations.

The assessments should be challenging and meaningful, but nonetheless still achievable for all candidates who are prepared to work to gain the award. They are designed to familiarise candidates with a culture of attainment where assessments

will challenge them, but do not put unreasonable obstacles between them and real achievement.

For all NPA Units, assessment is based primarily on assessment of practical activities and supported by knowledge testing where appropriate. Integrated assessment is encouraged.

## **6.1 Sequencing and/or integration of units**

An integrated approach to delivery and assessment of these units is essential. Assessment should be carried out in a holistic way as evidence will be generated for the mandatory and optional units collectively.

There is no preferred sequence of delivery for the mandatory practical units; however, early delivery and assessment of the following unit will develop the candidates' knowledge and safety awareness when undertaking mandatory practical unit:

- Building Services Engineering: Health and Safety

A project-based approach can be carried out for the following units thereafter:

- Building Services Engineering: Energy and the Environment
- Building Services Engineering: Systems, Roles, Responsibilities and Procedures
- Building Services Engineering: Science

## **6.2 Recognition of prior learning**

Qualifications Scotland recognises that candidates 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 candidate would have the appropriate prior learning and experience to meet all the requirements of a full group award.

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

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

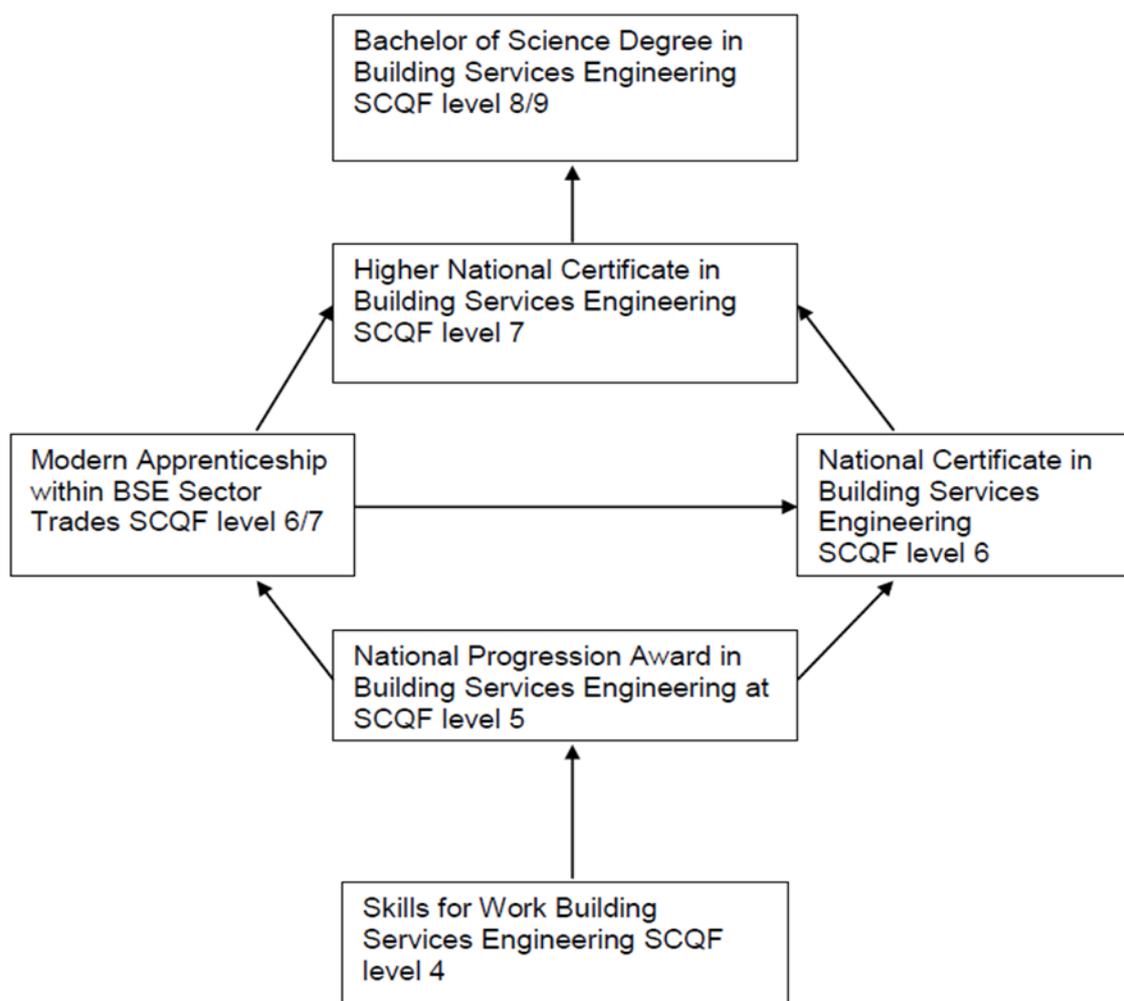
More information and guidance on the *Recognition of Prior Learning* (RPL) may be found on our website: Qualifications Scotland [Home Page](http://www.qualifications.gov.scot) ([www.qualifications.gov.scot](http://www.qualifications.gov.scot))

The following sub-sections outline how existing Qualifications Scotland units 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**

This award has been designed as a pre-apprenticeship qualification on the BSE career pathway. The award can be a progression route from the SfW Building Services Engineering award. The award can lead directly on to the NC (at SCQF level 6) or HNC (at SCQF level 7) or allow successful candidates to apply for employment within the sector as appropriate at apprentice level. Please see progression diagram on next page.

## Progression diagram



The progression diagram shows the possible articulation routes a candidate could select if they chose a career in Building Services Engineer. The bottom of the flowchart is where it all begins:

- the Skills for Work Building Services Engineering SCQF level 4, this course is aimed at entry level candidates, possibly as a part of a school's programme.
- the next level on the flowchart is the National Progression Award in Building Services Engineering at SCQF level 5, this recognised award can be delivered as a stand-alone course or a course embedded in a college's full-time provision.

Once the candidate successfully completes the NPA SCQF level 5 award progression can now go two ways:

- the first path is the candidate gains an apprenticeship within the BSE sector and moves on to a SCQF level 6 or 7 trade.
- the second path leads the candidate to the National Certificate in Building Services Engineering SCQF level 6.

It should also be noted that candidates who have taken the apprenticeship route can also return to college and gain the National Certificate in Building Services Engineering SCQF level 6, from here candidates can then progress and end their further education BSE journey on the Higher National Certificate in Building Services Engineering SCQF level 7.

### **6.3 Opportunities for e-assessment**

The learning and assessments of the knowledge-based outcomes can be conducted by either using e-learning methods, or by traditional teaching approaches.

For example, formal assessments may make the use of IT systems and facilities when available, or alternatively can also use the standard mode of supervising candidates during classroom paper-based assessments.

### **6.4 Support materials**

A list of existing Assessment Support Packs (ASPs) is available to view on Qualifications Scotland's website: [Internal Assessment Support Materials](http://www.qualifications.gov.scot/internal-assessment-support-materials) (www.qualifications.gov.scot/internal-assessment-support-materials).

### **6.5 Resource requirements**

Centres will need to facilitate practical and knowledge assessments when required this would include specialist practical workshop, materials, equipment and access equipment according to the requirements of the Summit Skills Assessment Strategy.

An appropriate ICT facility will be required for secure e-assessment if undertaking Qualifications Scotland SOLAR activity.

## 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: Qualifications Scotland [Assessment arrangements](#)

### Internal and external verification

All assessments used within these qualifications should be internally verified, using the appropriate policy within the centre and the guidelines set by Qualifications Scotland.

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

Further information on internal and external verification can be found on Qualifications Scotland website: [Guide to Assessment](#)

## 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 and/or candidate 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:

- candidates 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).

**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 Qualifications Scotland's website and archived.
- no new centres may be approved to offer the group award.
- centres should only enter learners and/or candidates whom they expect to complete the group award during the defined lapsing period.

**Qualifications Scotland credit value:** The credit value allocated to a unit gives an indication of the contribution the unit makes to a Qualifications Scotland group award. A Qualifications Scotland credit value of 1 given to a Qualifications Scotland 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](http://www.scqf.org.uk).

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

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

## History of changes

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

**Please 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 learners and /or candidates for the unit which has been revised where they are expected to complete the unit before its finish date.

Version number	Description	Date
01	A revision of the NPA Building Services Engineering has taken place, resulting in a new qualification structure.	February 2026

## Acknowledgement

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

Template version: February 2025

## 9. General information for candidates

This information 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 National Progressional Award provides candidates with an opportunity to sample the three sectors: Plumbing, Electrical, and HVRAC by completing mandatory units for each sector. This will enable candidates to then choose which Route they wish to pursue to achieve the qualification.

The award is a mainly competence-based qualification with appropriate practical exercises. You will spend most of your time in a training or simulated work environment, and is designed to equip you with the knowledge, understanding and skills which are required by employers in the BSE sector.

It also allows you to progress towards further qualifications, such as the NC or HNC or to apply directly for employment as an apprentice within the BSE Sector. An apprenticeship in the sector will involve you undertaking the relevant SVQ which helps you to achieve full and recognised industrial competence.

You will be assessed on the knowledge and skills that you have developed in each unit. There are several possible types of assessment, including multiple-choice questions, practical tasks with checklists, and other practical activities working in teams. The practical units will teach you the basic skills and knowledge needed to carry out practical work and to work with others. You will then be asked to complete these practical tasks yourself to demonstrate your range of abilities.

The course is designed to give you an understanding of the following aims relevant to the BSE Sector:

- Practical knowledge and skills
- Ability to solve problems
- Transferable skills
- Ability to take responsibility for their own learning

- Awareness of sustainability and environmental measures in BSE
- Employment and behavioural skills
- Understanding of Health and Safety in the BSE Sector
- Planning and organisational skills
- Oral, written and communication skills
- Numerical and graphical skills
- Flexibility, knowledge, skills and motivation as a basis for progression
- Practical and relevant skills in a safety-conscious context
- Technical skills and knowledge required across each of the BSE industries
- The BSE industries (Plumbing; Heating and Ventilating; Air Conditioning and Refrigeration; Electrotechnical)
- Progression opportunities for those who achieve the NPA
- The ability to make an immediate contribution in employment in the working environment

Occupations are available with a variety of companies in the BSE sector. If you wish to investigate career opportunities in the building industry you can contact Summit Skills at [www.summitskills.org.uk](http://www.summitskills.org.uk).