QUALIFICATION HANDBOOK

Level 3 NVQ in Insulation and Building Treatments (Construction)

(5931)

October 2021 Version 1.0

City & Guilds

A City & Guilds Group Business

Qualifications at a glance

Subject area	**Insulation and Building Treatments**
City & Guilds number	5931
Age group approved	16+
Entry requirements	N/A
Assessment	Portfolio
Grading	This qualification is graded as Achieved a Pass and Not Achieved a Pass
Fast track	Available
Support materials	Centre handbook Candidate logbook
Registration and certification	Consult the Walled Garden/Online Catalogue for last dates

Title and level	GLH	TQT	C&G number	Accreditation number
City & Guilds Level 3 NVQ in Insulation and Building Treatments – Room in Roof (Construction)	624	1150	5931-51	603/7689/2
City & Guilds Level 3 NVQ in Insulation and Building Treatments – Park Homes (Construction)	649	1170	5931-52	603/7689/2
City & Guilds Level 3 NVQ in Insulation and Building Treatments – Hybrid Wall (Construction)	479	930	5931-53	603/7689/2
City & Guilds Level 3 NVQ in Insulation and Building Treatments – Insulating Framed Sections of Buildings (Construction)	364	720	5931-54	603/7689/2
City & Guilds Level 3 NVQ in Insulation and Building Treatments – External Wall Insulation – Boarder (Construction)	369	750	5931-55	603/7689/2
City & Guilds Level 3 NVQ in Insulation and Building Treatments – External Wall Insulation – Finisher (Construction)	329	715	5931-56	603/7689/2

City & Guilds Level 3 NVQ in Insulation and Building Treatments – External Wall Insulation – Boarder and Finisher (Construction)	454	925	5931-57	603/7689/2
City & Guilds Level 3 NVQ in Insulation and Building Treatments – Internal Insulation (Walls) (Construction)	354	720	5931-58	603/7689/2

Date and version No.	Change detail	Section
July 2021 V1.0 (october)	Document created	All

Contents

1 Introduction

This document tells you what you need to do to deliver the qualifications:

Area	Description
Who are these qualifications for?	This qualification is ideal for those working in the construction industry and specialising in insulation and building treatments.
What does the qualification cover?	They cover a number of specialist areas including: • room in roof • park homes • hybrid wall • insulating framed sections of buildings • external wall insulation – boarder • external wall insulation – finisher • external wall insulation – boarder and finisher • internal insulation (walls) Upon completion, learners show that they have the required skills and knowledge and are competent in the specialist occupational area.
Are the qualifications part of a framework or initiative?	This qualification is competency based for the Insulation and Building Treatments sector. It covers both the knowledge and skills to operate in this specialist industry. This qualification also supports applications for the TICA worker Cards, in line with TICA and CSCS worker card requirements.
What opportunities for progression are there?	After gaining work experience in the chosen occupational area there are also opportunities to progress into occupational work supervision, management or technical support areas or a higher level qualification in construction."

Structure

These qualification structures originate from CITB.

The **City & Guilds NVQ in Insulation and Building Treatments** has eight pathways:

- City & Guilds Level 3 NVQ in Insulation and Building Treatments – Room in Roof (Construction) – TQT value of 1150
- City & Guilds Level 3 NVQ in Insulation and Building Treatments – Park Homes (Construction) – TQT value of 1170
- City & Guilds Level 3 NVQ in Insulation and Building Treatments – Hybrid Wall (Construction) – TQT value of 930
- City & Guilds Level 3 NVQ in Insulation and Building Treatments – Insulating Framed Sections of Buildings (Construction) – TQT value of 720
- City & Guilds Level 3 NVQ in Insulation and Building Treatments – External Wall Insulation – Boarder (Construction) – TQT value of 750
- City & Guilds Level 3 NVQ in Insulation and Building Treatments – External Wall Insulation – Finisher (Construction) – TQT value of 715
- City & Guilds Level 3 NVQ in Insulation and Building Treatments – External Wall Insulation – Boarder and Finisher (Construction) – TQT value of 925
- City & Guilds Level 3 NVQ in Insulation and Building Treatments – Internal Insulation (Walls) (Construction) – TQT value of 720

To achieve the **City & Guilds Level 3 NVQ in Insulation and Building Treatments – Room in Roof (Construction) (5931-51)** learners must achieve all the mandatory units listed below, plus **two** units from the additional mandatory units, plus **one** unit from Group A and **one** unit from Group B optional units.

Learners can also undertake the additional unit 265; however, the completion of this unit will not contribute to the overall achievement of this qualification pathway.

City & Guilds unit number	Unit title	Unit Level
Mandatory		
102	Conforming to general health, safety and welfare in the workplace	1
300	Confirming work activities and resources for an occupational work area in the workplace	3
502	Developing and maintaining good occupational working relationships in the workplace	3
303	Confirming the occupational method of work in the workplace	3
242	Insulation and building treatments, building construction, defects and interfaces	3
Additional mandatory	**Two units required**	
270	Installing internal insulation to walls in the workplace	3
271	Installing insulation to framed sections of buildings in the workplace	3
269	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace	3
Optional Group A	**One unit required**	
238	Installing insulation to cold roofs in the workplace	2
273	Installing blown insulation to cold roofs in the workplace	2
266	Develop customer relationships	2
Optional Group B	**One unit required**	
274	Installing insulation to create warm roofs in the workplace	3

275	Spraying insulation to create warm roofs in the workplace	3
266	Develop customer relationships	2
Additional (not compulsory)		
265	Erecting and dismantling access/working platforms in the workplace	2

To achieve the **City & Guilds Level 3 NVQ in Insulation and Building Treatments – Park Homes (Construction) (5931-52)** learners must achieve all the mandatory units listed below, plus **one** unit from the additional mandatory units, and **one** unit from the optional units.

Learners can also undertake the additional unit 265; however, the completion of this unit will not contribute to the overall achievement of this qualification pathway.

City & Guilds unit number	Unit title	Unit Level
Mandatory		
102	Conforming to general health, safety and welfare in the workplace	1
300	Confirming work activities and resources for an occupational work area in the workplace	3
502	Developing and maintaining good occupational working relationships in the workplace	3
303	Confirming the occupational method of work in the workplace	3
276	Installing external wall insulation in the workplace	3
277	Park homes insulation	3
242	Insulation and building treatments, building construction, defects and interfaces	3
Addional mandatory	**One unit required**	
243	Installing insulation to suspended floors in the workplace	2
244	Spraying insulation to suspended floors in the workplace	2
Optional	**One unit required**	
238	Installing insulation to cold roofs in the workplace	2
273	Installing blown insulation to cold roofs in the workplace	2
266	Develop customer relationships	2
Additional (not compulsory)		
265	Erecting and dismantling access/working platforms in the workplace	2

To achieve the **City & Guilds Level 3 NVQ in Insulation and Building Treatments – Hybrid Wall (Construction) (5931-53)** learners must achieve all the mandatory units listed below, plus **one** unit from the additional mandatory units.

Learners can also undertake the additional units 265, 266 and 278; however, the completion of these units will not contribute to the overall achievement of this qualification pathway.

City & Guilds unit number	Unit title	Unit Level
Mandatory		
102	Conforming to general health, safety and welfare in the workplace	1
300	Confirming work activities and resources for an occupational work area in the workplace	3
502	Developing and maintaining good occupational working relationships in the workplace	3
303	Confirming the occupational method of work in the workplace	3
276	Installing external wall insulation in the workplace	3
242	Insulation and building treatments, building construction, defects and interfaces	3
Additional mandatory	**One unit reqired**	
270	Installing internal insulation to walls in the workplace	3
272	Injecting, blowing and spraying insulation to internal walls in the workplace	3
Additional (not compulsory)		
265	Erecting and dismantling access/working platforms in the workplace	2
278	Applying surface finishes to external wall insulation in the workplace	3
266	Develop customer relationships	2

To achieve the **City & Guilds Level 3 NVQ in Insulation and Building Treatments – Insulating Framed Sections of Buildings (Construction) (5931-54)** learners must achieve all the mandatory units listed below, plus **one** unit from the additional mandatory units.

Learners can also undertake the additional units 265 & 266; however, the completion of these units will not contribute to the overall achievement of this qualification pathway.

City & Guilds unit number	Unit title	Unit Level
Mandatory		
102	Conforming to general health, safety and welfare in the workplace	1
300	Confirming work activities and resources for an occupational work area in the workplace	3
502	Developing and maintaining good occupational working relationships in the workplace	3
303	Confirming the occupational method of work in the workplace	3
242	Insulation and building treatments, building construction, defects and interfaces	3
Additional mandatory	**One unit required**	
271	Installing insulation to framed sections of buildings in the workplace	3
269	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace	3
Additional (not compulsory)		
265	Erecting and dismantling access/working platforms in the workplace	2
266	Develop customer relationships	2

To achieve the **City & Guilds Level 3 NVQ in Insulation and Building Treatments – External Wall Insulation – Boarder (Construction) (5931-55)** learners must achieve all the mandatory units listed below.

Learners can also undertake the additional units 265 & 266; however, the completion of these units will not contribute to the overall achievement of this qualification pathway.

City & Guilds unit number	Unit title	Unit Level
Mandatory		
102	Conforming to general health, safety and welfare in the workplace	1
300	Confirming work activities and resources for an occupational work area in the workplace	3
502	Developing and maintaining good occupational working relationships in the workplace	3
303	Confirming the occupational method of work in the workplace	3
276	Installing external wall insulation in the workplace	3
242	Insulation and building treatments, building construction, defects and interfaces	3
Additional (not compulsory)		
265	Erecting and dismantling access/working platforms in the workplace	2
266	Develop customer relationships	2

To achieve the **City & Guilds Level 3 NVQ in Insulation and Building Treatments – External Wall Insulation – Finisher (5931-56)** learners must achieve all the mandatory units listed below.

Learners can also undertake the additional units 265 & 266; however, the completion of these units will not contribute to the overall achievement of this qualification pathway.

City & Guilds unit number	Unit title	Unit Level
Mandatory		
102	Conforming to general health, safety and welfare in the workplace	1
300	Confirming work activities and resources for an occupational work area in the workplace	3
502	Developing and maintaining good occupational working relationships in the workplace	3
303	Confirming the occupational method of work in the workplace	3
278	Applying surface finishes to external wall insulation in the workplace	3
242	Insulation and building treatments, building construction, defects and interfaces	3
Additional (not compulsory)		
265	Erecting and dismantling access/working platforms in the workplace	2
266	Develop customer relationships	2

To achieve the **City & Guilds Level 3 NVQ in Insulation and Building Treatments – External Wall Insulation – Boarder and Finisher (5931-57)** learners must achieve all the mandatory units listed below.

Learners can also undertake the additional units 265 & 266; however, the completion of these units will not contribute to the overall achievement of this qualification pathway.

City & Guilds unit number	Unit title	Unit Level
Mandatory		
102	Conforming to general health, safety and welfare in the workplace	1
300	Confirming work activities and resources for an occupational work area in the workplace	3
502	Developing and maintaining good occupational working relationships in the workplace	3
303	Confirming the occupational method of work in the workplace	3
276	Installing external wall insulation in the workplace	3
278	Applying surface finishes to external wall insulation in the workplace	3
242	Insulation and building treatments, building construction, defects and interfaces	3
Additional (not compulsory)		
265	Erecting and dismantling access/working platforms in the workplace	2
266	Develop customer relationships	2

To achieve the **City & Guilds Level 3 NVQ in Insulation and Building Treatments – Internal Insulation (Walls) (5931-58)** learners must achieve all the mandatory units listed below, plus **one** unit from the additional mandatory units.

Learners can also undertake the additional units 265 & 266; however, the completion of these units will not contribute to the overall achievement of this qualification pathway.

City & Guilds unit number	Unit title	Unit Level
Mandatory		
102	Conforming to general health, safety and welfare in the workplace	1
300	Confirming work activities and resources for an occupational work area in the workplace	3
502	Developing and maintaining good occupational working relationships in the workplace	3
303	Confirming the occupational method of work in the workplace	3
242	Insulation and building treatments, building construction, defects and interfaces	3
Additional mandatory	**One unit required**	
270	Installing internal insulation to walls in the workplace	3
272	Injecting, blowing and spraying insulation to internal walls in the workplace	3
Additional (not compulsory)		
265	Erecting and dismantling access/working platforms in the workplace	2
266	Develop customer relationships	2

Total Qualification Time

Total Qualification Time (TQT) is the total amount of time, in hours, expected to be spent by a learner to achieve a qualification. It includes both guided learning hours (which are listed separately) and hours spent in preparation and study.

Title and level	GLH	TQT
City & Guilds Level 3 NVQ in Insulation and Building Treatments – Room in Roof (Construction)	624	1150
City & Guilds Level 3 NVQ in Insulation and Building Treatments – Park Homes (Construction)	649	1170
City & Guilds Level 3 NVQ in Insulation and Building Treatments – Hybrid Wall (Construction)	479	930
City & Guilds Level 3 NVQ in Insulation and Building Treatments – Insulating Framed Sections of Buildings (Construction)	364	720
City & Guilds Level 3 NVQ in Insulation and Building Treatments – External Wall Insulation – Boarder (Construction)	369	750
City & Guilds Level 3 NVQ Certificate in Insulation and Building Treatments – External Wall Insulation – Finisher (Construction)	329	715
City & Guilds Level 3 NVQ Certificate in Insulation and Building Treatments – External Wall Insulation – Border and Finisher (Construction)	454	925
City & Guilds Level 3 NVQ Certificate in Insulation and Building Treatments – Internal Insulation (Walls) (Construction)	354	720

2 Centre requirements

Approval

The approval process for construction qualifications is available on our website. Please visit **www.cityandguilds.com/construction** for further information.

Resource requirements

Staff delivering this qualification must be able to demonstrate that they meet the following occupational expertise requirements. They should

- be technically competent in the areas for which they are delivering training and/or have experience of providing training; this knowledge must be at least to the same level as the training being delivered
- hold appropriate qualifications as detailed in this handbook
- have recent relevant experience in the specific area they will be assessing
- have credible experience of providing training.

Centre staffing

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification before designing a course programme.

Centres may design course programmes of study in any way which

- best meets the needs and capabilities of their candidates
- satisfies the requirements of the qualification.

When designing and delivering the course programme, centres might wish to incorporate other teaching and learning that is not assessed as part of the qualification. This might include the following:

- literacy, language and/or numeracy
- personal learning and thinking
- personal and social development
- employability.

Where applicable, this could involve enabling the candidate to access relevant qualifications covering these skills.

Centre staff may undertake more than one role, eg tutor and assessor or internal verifier, but cannot internally verify their own assessments.

Assessors and internal verifiers

Assessors must have sufficient, verifiable, relevant current industry experience, knowledge and understanding of the occupational working area at, or above, the level being assessed.

This must be of sufficient depth to be effective and reliable when judging candidates' competence. Assessors' experience, knowledge and understanding could be verified by a combination of

- curriculum vitae and employer endorsement
- references
- possession of a relevant NVQ/SVQ, or vocationally related qualification
- corporate membership of a relevant professional institution
- interview.

(The verification process must be recorded and available for audit)

Assessors **must** have sufficient occupational expertise so that they have up to date experience, knowledge and understanding of the aspects of work they are assessing. This could be verified by records of continuing professional development achievements. Assessors

- should only assess in their acknowledged area of occupational competence
- shall be prepared to participate in training activities for their continued professional development
- must have a sound, in-depth knowledge of, and uphold the integrity of, the sector's NOS and the Assessment Strategy
- must hold, or be working towards, a qualification as listed within 'Assessing and Assuring Quality of Assessment', either in the Regulated Qualification Framework (RQF), or the Scottish Credit and Qualifications Framework (SCQF):
    - Level 3 Award in Assessing Competence in the Work Environment
    - Level 3 Certificate in Assessing Vocational Achievement
    - SVQ (SCQF level) Assessing Competence in the Work Environment
    - SVQ (SCQF level) Assessing Vocational Achievement

  or hold one of the following:
    - A1 Assess candidates using a range of methods
    - D32/33 Assess candidate performance, using differing sources of evidence

  Holders of A1 and D32/33 must assess to the reviewed National Occupational Standards (NOS) for Learning and Development.

In Scotland, approval for exemptions must be obtained from the Scottish Qualifications Authority.

Continuing Professional Development (CPD)

Centres must support their staff to ensure that they have current knowledge of the occupational area, that delivery, mentoring, training,

assessment and verification is in line with best practice, and that it takes account of any national or legislative developments.

Candidate entry requirements

City & Guilds does not set entry requirements for these qualifications. However, centres must ensure that candidates have the potential and opportunity to gain the qualifications successfully.

Age restrictions

These qualifications are approved for 16–18, and 19 + learners. There are no age limits however attached to learners undertaking the qualification unless this is a legal requirement of the process or the environment.

3 Delivering the qualification

Initial assessment and induction

An initial assessment of each learner should be made before the start of their programme to identify:

- if the learner has any specific training needs
- support and guidance they may need when working towards their qualifications
- any units they have already completed, or credit they have accumulated which is relevant to the qualifications
- the appropriate type and level of qualification.

We recommend that centres provide an induction programme so the learner fully understands the requirements of the qualifications, their responsibilities as a learner, and the responsibilities of the centre. This information can be recorded on a learning contract.

Support materials

The following resources are available for these qualifications:

Description	How to access
Candidate logbook	Available to download from the City & Guilds website

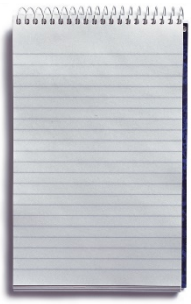
Recording documents

Candidates and centres may decide to use a paper-based or electronic method of recording evidence.

City & Guilds endorses several ePortfolio systems, including our own, **Learning Assistant**, an easy-to-use and secure online tool to support and evidence learners' progress towards achieving qualifications. Further details are available at: **www.cityandguilds.com/eportfolios**

City & Guilds has developed a set of Recording Forms including examples of completed forms, for new and existing centres to use as appropriate. *Recording forms* are available on the City & Guilds website.

Although new centres are expected to use these forms, centres may devise or customise alternative forms, which must be approved for use by the external verifier, before they are used by candidates and assessors at the centre. Amendable (MS Word) versions of the forms are available on the City & Guilds website.



Assessment

Assessment of the qualification

Candidates must have a completed portfolio of evidence for each unit. Centres are able to download the 5931 logbook from the City & Guilds website.

Aspects to be assessed through performance in the workplace

Direct evidence produced through normal performance in the workplace is the primary source for meeting the requirements. This includes naturally occurring documentary evidence (hard copy and electronic), direct observation of activities and witness testimony as relevant. Individual units will specify any exceptions to this position.

Workplace evidence must be supported by the required evidence of knowledge and understanding. This evidence may be identified by:

- questioning the candidate
- recognised industry education and training programme assessment or professional interview assessment that has been matched to NOS requirements
- performance evidence.

A holistic approach towards the collection of evidence should be encouraged. The focus should be on assessing activities generated by the whole work experience rather than focusing on specific tasks. This would show how evidence requirements could be met across the qualification to make the most efficient use of evidence.

4 Units

Availability of units

These units are also on The Register of Regulated Qualifications **http://register.ofqual.gov.uk/Unit**

Structure of units

These units each have the following:

- City & Guilds unit number
- title
- level
- TQT
- recommended Guided Learning Hours (GLH)
- endorsement by a sector or other appropriate body
- learning outcomes which are comprised of several assessment criteria.

Unit 102 Conforming to general health, safety and welfare in the workplace

Level:	1
GLH:	17
TQT:	20

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*	
1 Comply with all workplace health, safety and welfare legislation requirements.	1.1	comply with information from workplace inductions and any health, safety and welfare briefings attended relevant to the occupational area
	1.2	use health and safety control equipment safely to carry out the activity in accordance with legislation and organisational requirements
	1.3	comply with statutory requirements, safety notices and warning notices displayed within the workplace and/or on equipment
	1.4	state why and when health and safety control equipment, identified by the principles of protection, should be used relating to types, purpose and limitations of each type, the work situation, occupational use and the general work environment, in relation to: a. collective protective measures b. Personal Protective Equipment (PPE) c. Respiratory Protective Equipment (RPE) d. Local Exhaust Ventilation (LEV)
	1.5	state how the health and safety control equipment relevant to the

		work should be used in accordance with the given instructions
	1.6	state which types of health, safety and welfare legislation, notices and warning signs are relevant to the occupational area and associated equipment
	1.7	state why health, safety and welfare legislation, notices and warning signs are relevant to the occupational area
	1.8	state how to comply with control measures that have been identified by risk assessments and safe systems of work
2 Recognise hazards associated with the workplace that have not been previously controlled and report them in accordance with organisational procedures.	2.1	report any hazards created by changing circumstances within the workplace in accordance with organisational procedures
	2.2	list typical hazards associated with the work environment and occupational area in relation to resources, substances, asbestos, equipment, obstructions, storage, services and work activities
	2.3	list the current Health and Safety Executive top ten safety risks
	2.4	list the current Health and Safety Executive top five health risks
	2.5	state how changing circumstances within the workplace could cause hazards
	2.6	state the methods used for reporting changed circumstances, hazards and incidents in the workplace
3 Comply with organisational policies and procedures to contribute to health, safety and welfare.	3.1	interpret and comply with given instructions to maintain safe systems of work and quality working practices
	3.2	contribute to discussions by offering/providing feedback relating to health, safety and welfare
	3.3	contribute to the maintenance of workplace welfare facilities in accordance with workplace welfare procedures
	3.4	safely store health and safety control equipment in accordance with given instructions
	3.5	dispose of waste and/or consumable items in accordance with legislation

	3.6	state the organisational policies and procedures for health, safety and welfare, in relation to: a. dealing with accidents and emergencies associated with the work and environment b. methods of receiving or sourcing information c. reporting d. stopping work e. evacuation f. fire risks and safe exit procedures g. consultation and feedback
	3.7	state the appropriate types of fire extinguishers relevant to the work
	3.8	state how and when the different types of fire extinguishers are used in accordance with legislation and official guidance
4 Work responsibly to contribute to workplace health, safety and welfare whilst carrying out work in the relevant occupational area.	4.1	demonstrate behaviour which shows personal responsibility for general workplace health, safety and welfare
	4.2	state how personal behaviour demonstrates responsibility for general workplace health, safety and welfare, in relation to: a. recognising when to stop work in the face of serious and imminent danger to self and/or others b. contributing to discussions and providing feedback c. reporting changed circumstances and incidents in the workplace d. complying with the environmental requirements of the workplace
	4.3	give examples of how the behaviour and actions of individuals could affect others within the workplace
5 Comply with and support all organisational security arrangements and	5.1	provide appropriate support for security arrangements in accordance with approved procedures: a. during the working day b. on completion of the day's work

approved procedures.		c. for unauthorised personnel (other operatives and the general public) d. for theft
	5.2	state how security arrangements are implemented in relation to the workplace, the general public, site personnel and resources

Unit 102 Conforming to general health, safety and welfare in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational are in which the candidate is being assessed.

Unit 238 Installing insulation to cold roofs in the workplace

Level:	2
GLH:	100
Value for TQT	190

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when installing insulation to cold roofs.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them.
	1.5 Describe different types of information, their source, accuracy, completeness and how they are interpreted in relation to: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. design

	g. standards h. manufacturers' information i. data sheets j. official guidance k. current legislation and regulations governing buildings.

2	Know how to comply with environmentally responsible work practices to meet current legislation standards and official guidance when installing insulation to cold roofs.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. below ground level c. confined spaces d. at height e. tools and equipment f. materials and substances g. movement and storage of materials by manual handling and mechanical lifting.
		2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: a. site b. workplace c. siting and location of vehicles d. company e. customer f. assess equipment g. materials and waste storage h. the general public.
		2.3 Explain the accident reporting procedures and who is responsible for making reports.
		2.4 Describe the types of fire extinguishers available when installing to cold roofs and describe how and when they are used in relation to: a. water b. CO_2 c. foam d. powder.

3	Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when installing insulation to cold roofs in relation to the following: a. methods of work b. safe use of health and safety control equipment c. safe use of access equipment and harness systems d. safe use, storage and handling of materials, tools and equipment e. specific risks to health including mental health f. specific risks associated with ventilation (roof space, inside the property and under floor) and combustion appliances.
		3.2 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when installing insulation to cold roofs in relation to: a. collective protective measures b. personal protective equipment (PPE) c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
		3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: a. fires b. spillages c. injuries d. emergencies relating to occupational activities e. identification of and reporting of asbestos containing materials.

	3.4 Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. manufacturers' technical information e. data sheets f. statutory regulations g. official guidance h. Control of Substances Hazardous to Health (COSHH).
4 Select the required quantity and quality of resources for the methods of work to install insulation to cold roofs.	4.1 Select resources associated with own work in relation to materials, components, fixings, finishes, tools and equipment.
	4.2 Check the suitability, compatibility characteristics of the materials, components, fixing and finishes determine if they are moisture open or moisture closed and their impact on the building.
	4.3 Record and report issues or defects
	4.4 Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
	4.5 Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. protective sheeting b. warning signs c. temporary barriers d. insulation e. pipe insulation f. tank and cylinder jackets g. insulation fixings and ancillary items h. access boards i. loft hatches j. light wells k. soffit and fascia boards l. tile vents m. ridge tiles n. sarking felt vents

	o. draught-proofing materials p. fire rated caps q. cable protection r. all work tools and equipment.
	4.6 Describe how to confirm that the resources and materials conform to the specification.
	4.7 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.8 Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
	4.8 Describe how to calculate the quantity of materials required and used to ensure, adequacy of fill as per system designer specification and wastage associated with the method and procedure to install insulation to cold roofs.
5 Minimise the risk of damage to the work and surrounding area when installing insulation to cold roofs.	5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2 Maintain a safe, clear and tidy work area.
	5.3 Explain why it is important to maintain a safe, clear and tidy work area.
	5.4 Dispose of waste in accordance with current legislation.
	5.5 Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
	5.6 Explain the importance of protecting the work and its surrounding area against the risk of damage.
	5.7 Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation

	b. environmental responsibilities c. organisational procedures d. manufacturers' information e. data sheets f. statutory regulations g. official guidance.
6 Complete the work within the allocated time when installing insulation to cold roofs.	6.1 Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
	6.2 Describe the purpose of the work programme, including the estimated and allocated time and explain why deadlines should be kept in relation to: a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances which will affect the work programme.

7	Comply with the given contract information to carry out the work efficiently to install insulation to cold roofs to the required specification.	7.1	Demonstrate the following work skills when installing insulation to cold roofs: a. measuring b. marking out c. calculating d. cutting e. fitting f. filling g. positioning h. securing i. making good.
		7.2	Use and maintain all work tools and equipment.
		7.3	Carry out external and internal pre installation checks assessing, recording and reporting issues to include: a. suitable access b. property suitability c. structural integrity d. dampness e. decay f. vents and adequate ventilation g. services (gas, electric, water, media cables).
		7.4	Prepare and install insulation to cold roofs using at least one of the following methods in compliance with current regulations and to given working instructions: a. placed b. mechanically or adhesively fixed.
		7.5	Prepare and install insulation to the following in compliance with current regulations and to given working instructions: a. pipes b. tanks and/or cylinders c. access hatches d. light wells.

	7.6	Protect electrical services, lighting, media, high amperage cables.
	7.7	Create and protect platforms and walkways for access and storage.
	7.8	Remove and secure building occupants stored items.
	7.9	Install passive ventilation and safeguarding existing ventilation.
	7.10	Insulate and draught-proof access hatches.

	7.11	Insulate light wells.
	7.12	Minimise the effects of thermal bridging.
	7.13	Carry out post installation checks to ensure insulation complies with the design.
	7.14	Provide post installation advice and guidance to building occupants including homeowner packs.
	7.15	Hand over and sign off to the customers satisfaction.
	7.16	Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to carry out external and internal pre-installation checks

	d. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: i. common infestations ii. protected species iii. suitable access iv. property suitability v. structural integrity vi. dampness vii. decay viii. vents and ventilation ix. services (gas, electric, water, media cables) e. why it is important to ensure that all necessary repairs are completed prior to installation f. how and why it is important to check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre and post installation g. how to identify and follow the installation quality requirements h. how to recognise, record and report the key issues
	i. that may inhibit commencement of the work including but not limited to: i. condition of building fabric ii. identification of any areas of potential water penetration iii. condition of roof iv. drainage and down pipes j. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i. fire safety ii. electrical iii. asbestos iv. Radon v. heritage vi. architectural features

	vii. ecology viii. ventilation k. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional (pre-1919) construction, hard-to-treat buildings and historical significance l. how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of: thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk m. why it is important to avoid unintended consequences n. why it is important to explain installation procedure to building occupants to include but not limited to the following: i. scope and work programme ii. safety requirements during the installation process iii. protection of property and personal items iv. specific benefits and implications to include homeowner information v. agreed standards of making good o. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: i. roof skylights ii. loft guarantees iii. building warranties iv. timber treatment

7 Continued…	p. how to work with, around and in close proximity to plant and machinery q. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment r. how to work in confined spaces s. how to create and protect platforms and walkways t. why it is important to identify and remove infested, damaged and contaminated insulation from the roof area u. how to remove and secure building occupants stored items v. how to identify and install passive ventilation and report any ventilation limitations identified w. why it is important to recognise and report the potential risk of increased condensation following installation relating to roof coverings (pitched and flat) and roof structures (timber, metal, concrete) x. the importance of ensuring all work to services (gas, electric, water, media cables) is carried out by suitably qualified people y. how to check for and protect hidden utilities z. how to identify insulation materials and their characteristics for cold roofs, pipes, storage tanks, cylinders and access hatches aa. how to prepare and install, placed, mechanically or adhesively fixed insulation to cold roofs bb. why it is important to minimise the effects of thermal bridging through compliance with design detail ensuring consistent insulation of the area being insulated

	cc. how to check serviceability and provision of walkway boards and platforms dd. how to prepare and fix pipe, tank and cylinder insulation ee. how to ensure the insulation is contained within the prescribed areas ff. how to protect downlighters by installation of fire rated caps to the required specification gg. how to ensure insulation around electrical apparatus will not create fire hazards (light fittings, electrical units and cables) hh. how to insulate and draught-proof access hatches ii. how to Insulate light wells to ensure continuity of insulation

	jj. how to maintain fire resistant barriers kk. the different types of air and vapour control layers and breather membranes, where and how they should be used and why it is important to install them correctly ll. the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity mm. why it is important to immediately record and report unforeseen events including but not limited to equipment malfunctions, situations and faults not identified in the original design nn. why it is important to complete post installation checks in accordance with the design, method statement and installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects oo. why it is important to provide advice to building occupants to preserve the integrity of the

	insulation (insulation data sheet and warning labels) pp. how to handover and sign off to the customers' satisfaction qq. how to use all work tools and equipment rr. how to work at height using access equipment and harness systems ss. how and why maintenance of all work tools and equipment is carried out
	7.17 Describe the needs of other occupations and the importance of teamwork and communication when installing insulation to cold roofs.

Unit 238 Installing insulation to cold roofs in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

One of the following endorsements required:

- placed
- mechanically or adhesively fixed.

Unit 242 Insulation and building treatments, building construction, defects and interfaces

Level:	3
GLH:	100
Value for TQT:	190

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources and identify its suitability, taking into consideration building type, defects and detailing and recording and reporting issues in regard to building construction, defects and interfaces.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Explain the importance of organisational procedures to solve problems and why it is important to follow them.
	1.4 Describe different types of information, their source, accuracy, completeness and how they are interpreted in relation to: a. types of construction b. energy efficiency measures c. building treatments d. drawings

	e. method statements f. design g. standards h. manufacturers' information i. data sheets j. official guidance k. current legislation and regulations governing buildings.

2	Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices as stated for each measure to be installed.	2.1 Describe the relevant, current legislation, standards and official guidance and how they are applied.
		2.2 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: a. fires b. spillages c. injuries d. emergencies relating to occupational activities e. identification of and reporting of asbestos containing materials.
		2.3 Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. safe systems of work e. manufacturers' technical information f. data sheets g. statutory regulations h. official guidance i. Control of Substances Hazardous to Health (COSHH).
		2.4 Explain the accident reporting procedures and who is responsible for making reports.

3	Select the required quantity and quality of resources for the methods of work in relation to building construction, defects and interfaces.	3.1	Select resources associated with own work.
		3.2	Check the suitability, compatibility and characteristics of the materials, components and finishes and determine if they are moisture open or moisture closed and their impact on the building.
		3.3	Record and report issues or defects.
		3.4	Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
		3.5	Describe how the resources should be used and how problems associated with the resources are reported.
		3.6	Describe how to confirm that the resources and materials conform to the specification.
		3.7	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
		3.8	Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
4	Minimise the risk of damage to the work and surrounding area in relation to building construction, defects and interfaces.	4.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
		4.2	Maintain a safe, clear and tidy work area.
		4.3	Explain why it is important to maintain a safe, clear and tidy work area.
		4.4	Dispose of waste in accordance with current legislation.
		4.5	Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to

		minimise damage to existing building fabric.
	4.6	Explain the importance of protecting the work and its surrounding area against the risk of damage.

5 Comply with the given contract information when identifying common building construction, defects and interfaces to the required specification.	5.1	Comply with the given contract information to carry out the work efficiently to the required specification.
	5.2	Demonstrate work skills to carry out external and internal pre installation checks in regard to building construction, defects and material interfaces:
	5.3	Identify common building defects including but not limited to: a. salt contamination b. causes of dampness c. rain penetration d. rising damp e. internal moisture vapour f. damaged services g. structural defects.
	5.4	Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes

	c. why it is important to carry out external and internal pre-installation checks d. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to: i. property suitability ii. structural integrity iii. dampness iv. decay v. exposure ratings vi. vents and ventilation vii. services (gas, electric, water, media cables) e. why it is important to ensure that all necessary repairs are completed prior to installation f. the implications that types of construction and materials have on the introduction of energy efficiency measures and other forms of building treatments with specific reference to: i. roofs ii. walls including internal and external finishes iii. floors iv. windows and doors v. chimneys and fireplaces vi. flues and combustion ventilation vii. fabric interfaces viii. existing services g. the importance of the correct sequencing of installation of energy efficiency measures and building treatments h. how performance varies in different construction types, locations and through the impact of habitation and usage

	i. how alterations, additions and extensions to the original construction can affect the performance of the building j. how to identify common building defects including but not limited to: salt contamination and causes of dampness, rain penetration, rising damp, internal moisture vapour, damaged services, structural defects and understand the implications of these when they are present k. how achieving continuity of the insulation and building treatments can prevent problems such as water ingress, poor energy efficiency and thermal bridges, whilst understanding the unique circumstances at party walls and the associated risks to adjacent properties l. how to recognise unintended consequences, why they happen, how to avoid them and the importance of moisture content in external fabric including but not limited to: i. impacts on neighbouring properties ii. insulation fitting and placement for different insulation types iii. junctions iv. thermal bridging and condensation risks v. thermal bypassing vi. void ventilation m. the potential causes of mould and fungal decay in buildings and the impact of ventilation and air flow following the installation of thermal efficiency measures

	n. the implications of building defects and the repairs required and how they will affect the choice of energy efficiency measures and building treatments o. the importance of compatibility and interactions between measures and the fabric of the underlying building p. how to identify when specialist skills and knowledge are required and report accordingly, including but not limited to: i. fire safety ii. electrical iii. gas iv. asbestos v. Radon vi. heritage vii. ecology viii. archaeological and architectural features ix. ventilation x. dampness and building exposure q. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance r. how your actions can lead to unintended consequences, why they happen, how to avoid them and the importance of reporting them
	5.5 Describe the needs of other occupations and the importance of teamwork and communication how to effectively communicate within a team when identifying building construction, defects and interfaces.

Unit 242 Insulation and building treatments, building construction, defects and interfaces

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Unit 243 Installing insulation to suspended floors in the workplace

Level:	2
GLH:	100
Value for TQT:	190

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when installing insulation to suspended floors.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them.
	1.5 Describe different types of information, their source, accuracy, completeness and how they are interpreted in relation to: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. design

	g. standards h. manufacturers' information i. data sheets j. official guidance k. current legislation and regulations governing buildings.

2	Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when installing insulation to suspended floors.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. below ground level c. confined spaces d. at height e. tools and equipment f. materials and substances g. movement and storage of materials by manual handling and mechanical lifting.
		2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: a. site b. workplace c. siting and location of vehicles d. company e. customer f. access equipment g. materials and waste storage h. the general public.
		2.3 Explain the accident reporting procedures and who is responsible for making reports.
		2.4 Describe the types of fire extinguishers available when applying surface finishes to installing insulation to suspended floors and describe how and when they are used in relation to: a. water b. CO_2 c. foam d. powder.

3	Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when installing insulation to suspended floors in relation to the following: a. methods of work b. safe use of health and safety control equipment c. safe use of access equipment d. safe use, storage and handling of materials, tools and equipment e. specific risks to health including mental health f. specific risks associated with ventilation (inside the property and under floor) and also including combustion appliances g. specific risks associated with working in confined spaces.
		3.2 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when installing insulation to suspended floors, in relation to: a. collective protective measures b. personal protective equipment (PPE) c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
		3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: a. fires b. spillages c. injuries d. emergencies relating to occupational activities e. identification of and reporting of asbestos containing materials.
		3.4 Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work

	d. manufacturers' technical information e. data sheets f. statutory regulations g. official guidance h. Control of Substances Hazardous to Health (COSHH).

4	Select the required quantity and quality of resources for the methods of work to install insulation to suspended floors.	4.1 Select resources associated with own work in relation to materials, components, fixings, finishes, tools and equipment.
		4.2 Check the suitability, compatibility and characteristics of the materials, components and finishes, determine if they are moisture open or moisture closed and their impact on the building.
		4.3 Record and report issues.
		4.4 Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
		4.5 Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. protective sheeting b. warning signs c. temporary barriers d. making good materials e. filling materials f. sealants g. all work tools and equipment.
		4.6 Describe how to confirm that the resources and materials conform to the specification.
		4.7 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
		4.8 Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
		4.9 Describe how to calculate the quantity of materials required and used to ensure, adequacy of fill as per system designer specification and wastage

	associated with the method and procedure to install insulation to suspended floors.
5 Minimise the risk of damage to the work and surrounding area when installing insulation to suspended floors.	5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2 Maintain a safe, clear and tidy work area.
	5.3 Explain why it is important to maintain a safe, clear and tidy work area
	5.4 Dispose of waste in accordance with current legislation.
	5.5 Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
	5.6 Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation b. environmental responsibilities c. organisational procedures d. suppliers and manufactures' information e. data sheets f. statutory regulations g. official guidance.
6 Complete the work within the allocated time when installing insulation to suspended floors.	6.1 Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
	6.2 Describe the purpose of the work programme, including the estimated and allocated time and explain why deadlines should be kept in relation to: a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances which will affect the work programme.

7	Comply with the given contract information to carry out the work efficiently to install insulation to suspended floors to the required specification.	7.1	Demonstrate the following work skills when installing insulation to suspended floors: a. measuring b. marking out c. cutting d. fitting e. positioning f. securing g. making good.
		7.2	Use and maintain all work tools and equipment.
		7.3	Carry out external and internal pre-installation check, assessing, recording and reporting issues to include: a. suitable access b. property suitability c. structural integrity d. dampness e. decay f. vents and ventilation g. services (gas, electric, water, media cables).
		7.4	Recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: a. condition of building fabric b. identification of any areas of potential water penetration c. visibility and completeness of damp proof course d. condition of window and door seals e. height of internal floors in relation to finished ground level f. drainage and down pipes g. protection and existence of sub floor ventilation.
		7.5	Identify the potential risk of increased condensation following installation relating to suspended floors and how to prevent it.
		7.6	Check, record and report issues with under floor (cross flow) ventilation, flues, chimneys and combustion air ventilators pre- and post-installation.

	7.7	Prepare floor for insulation creating access points taking into consideration the following but not limited to: a. safe systems of work b. minimising damage c. checking existing services d. building construction and heritage significance e. customer safety.
	7.8	Install placed, mechanically or adhesively fixed insulation to suspended floors**.**
	7.9	Check for hidden utilities.
	7.10	Maintain integrity of membranes.
	7.11	Remove and minimise damage to floorcoverings.
	7.12	Ensure the minimum void area air space is maintained by removing debris.
	7.13	Clear and safeguard existing and install additional in accordance with the design and installation checks and report back issues which impact the ventilation assessment.
	7.14	Protect the building occupants and their property.
	7.15	Confirm pre-installation material checks are within specified parameters to include checking and reporting defects.
	7.16	Rectify defects in preparation of insulation measures.
	7.17	Maintain existing soundproofing.
	7.18	Install and maintain fire resistant barriers.
	7.19	Carry out post installation checks in accordance with the design, method statement and installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects.
	7.20	Provide post installation advice and guidance to building occupants including homeowner packs.
	7.21	Handover and sign off to the customers satisfaction.
	7.22	Work at height using access equipment.

	7.23 Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to carry out external and internal pre-installation checks d. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: i. suitable access ii. property suitability iii. structural integrity iv. dampness v. decay vi. vents and ventilation vii. services (gas, electric, water, media cables). e. how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: i. condition of building fabric ii. identification of any areas of potential water penetration iii. visibility and completeness of damp proof course iv. condition of window and door seals v. height of internal floors in relation to external floor height

	vi. condition of roof vii. damaged and spalled brickwork viii. rain and wastewater goods ix. protection and existence of sub floor ventilation x. wall cavity width and identification of any debris f. why it is important to ensure that all necessary repairs are completed prior to installation g. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i. fire safety ii. electrical iii. asbestos iv. Radon v. heritage vi. archaeological and architectural features vii. ecology viii. ventilation ix. exposure and topography. h. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance i. how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of: thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk j. why it is important to avoid unintended consequences k. how to check, record and report issues with under floor (cross flow) ventilation, flues, chimneys and combustion air ventilators pre- and post-installation

	l. why it is important to explain installation procedure to building occupants to include but not limited to the following: i. scope and work programme ii. safety requirements during the installation process iii. protection of property and personal items iv. specific benefits and implications to include homeowner information v. agreed standards of making good m. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: i. timber treatments ii. replacement wall ties iii. injected damp proof course iv. under floor and central heating systems v. Radon barriers vi. electrical wiring vii. services. n. how to identify and follow the installation quality requirements o. how to work with, around and in close proximity to plant and machinery p. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment q. why it is important to recognise the potential risk of increased condensation following installation relating to suspended floors and how to prevent it r. how to prepare a floor for insulation, creating access points taking into consideration the following but not limited to: i. safe systems of work ii. minimising damage

	iii. checking existing services iv. building construction and heritage significance v. customer safety vi. archaeology s. how to check for hidden utilities t. the importance of ensuring all work to services (gas, electric, water) is carried out by suitably qualified people u. how to maintain the integrity of membranes v. how to remove and minimise damage to floorcoverings w. why it is important to ensure the minimum void area air space is maintained by removing debris as required x. why it is important to clear and safeguard existing and install additional ventilation if required in accordance with the design and installation checks and report back issues which impact the ventilation assessment y. how to protect the building occupants and their property z. how to install placed, mechanically or adhesively fixed insulation to suspended floors aa. the different types of air and vapour control layers and breather membranes, where and how they should be used and why it is important to install them correctly bb. the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity cc. why it is important to immediately record and report unforeseen events including but not limited to equipment malfunctions, situations and faults not identified in the original design

	dd. how to ensure pre-installation material checks are within specified parameters and reporting defects ee. how to ensure existing cross flow ventilation is maintained within the floor void ff. how to maintain existing soundproofing gg. how to install and maintain fire resistant barriers hh. why it is important to minimise thermal bridging through compliance with design detail ensuring a consistent level of insulation to the area being insulated ii. why it is important to complete post installation checks in accordance with the design, method statement and installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects jj. why it is important to provide post installation advice and guidance to building occupants including homeowner packs kk. how to handover and sign off to the customers satisfaction ll. how to use all work tools and equipment mm. how to work at height using access equipment nn. how and why maintenance of all work tools and equipment is carried out
	7.24 Describe the needs of other occupations and the importance of teamwork and communication when installing insulation to suspended floors.

Unit 243 Installing insulation to suspended floors in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Unit 244 Spraying insulation to suspended floors in the workplace

Level:	2
GLH:	110
Value for TQT:	200

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when spraying insulation to suspended floors.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them.
	1.5 Describe different types of information, their source, accuracy, completeness and how they are interpreted in relation to: a. drawings b. specifications c. schedules

	d. method statements e. risk assessments f. design g. standards h. manufacturers' information i. data sheets j. official guidance k. current legislation and regulations governing buildings.

2	Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when spraying insulation to suspended floors.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. below ground level c. in confined spaces d. at height e. tools and equipment f. materials and substances g. movement and storage of materials by manual handling and mechanical lifting.
		2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: a. site b. workplace c. siting and location of vehicles d. company e. customer f. access equipment g. material and waste storage h. the general public.
		2.3 Explain the accident reporting procedures and who is responsible for making reports.
		2.4 Describe the types of fire extinguishers available when spraying insulation to suspended floors and describe how and when they are used in relation to: a. water

	b. CO_2 c. foam d. powder.

3 Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with relevant legislation, standards and official guidance when spraying insulation to suspended floors in relation to the following: a. methods of work b. safe use of health and safety control equipment c. safe use of access equipment d. safe use, storage and handling of materials, tools and equipment e. operative maintenance of installation equipment f. specific risks to health including mental health g. specific risks associated with ventilation (inside the property and under floor) and also including combustion appliances h. specific risks associated with working in confined spaces.
	3.2 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when spraying insulation to suspended floors in relation to: a. collective protective measures b. personal protective equipment (PPE) c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: a. fires b. spillages

		c. injuries d. emergencies relating to occupational activities e. identification of and reporting of asbestos containing materials.
	3.4	Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. manufacturers' technical information e. data sheets f. statutory regulations g. official guidance h. Control of Substances Hazardous to Health (COSHH).
4 Select the required quantity and quality of resources for the methods of work to spray insulation to suspended floors.	4.1	Select resources associated with own work in relation to materials, components and finishes, tools and equipment.
	4.2	Check the suitability, compatibility and characteristics of the materials, components and finishes, determine if they are moisture open or moisture closed and their impact on the building.
	4.3	Record and report issues or defects.
	4.4	Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
	4.5	Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. protective sheeting b. warning signs c. temporary barriers d. making good materials e. filling materials f. sealants

	g. installation equipment h. all work tools.
	4.6 Describe how to confirm that the resources and materials conform to the specification.
	4.7 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.8 Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
	4.9 Describe how to calculate the quantity of materials required and used to ensure adequacy of fill as per the system designer specification and wastage associated with the method and procedure to spray insulation to suspended floors.

5 Minimise the risk of damage to the work and surrounding area when spraying insulation to suspended floors.	5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2 Maintain a safe, clear and tidy work area.
	5.3 Explain why it is important to maintain a safe, clear and tidy work area.
	5.4 Dispose of waste in accordance with current legislation.
	5.5 Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
	5.6 Explain the importance of protecting the work and its surrounding area against the risk of damage.
	5.7 Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation

	b. environmental responsibilities c. organisational procedures d. manufacturers' information e. data sheets f. statutory regulations g. official guidance.
6 Complete the work within the allocated time when spraying insulation to suspended floors.	6.1 Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
	6.2 Describe the purpose of the work programme, including the estimated and allocated time and explain why deadlines should be kept in relation to: a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances which will affect the work programme.

7 Comply with the given contract information to carry out the work efficiently to spray insulation to suspended floors to the required specification.	7.1 Demonstrate the following work skills when spraying insulation to suspended floors: a. measuring b. marking out c. calculating d. cutting e. fitting f. filling g. positioning and securing h. making good.
	7.2 Use and maintain all work tools and installation equipment.
	7.3 Carry out external and internal pre installation checks assessing, recording and reporting issues to include: a. suitable access b. property suitability

	c. structural integrity d. dampness e. decay f. vents and ventilation g. services (gas, electric, water, media cables).
	7.4 Recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: a. condition of building fabric b. identification of any areas of potential water penetration c. visibility and completeness of damp proof course d. condition of window and door seals e. height of internal floors in relation to external floor height f. drainage and down pipes g. protection and existence of sub floor ventilation.
	7.5 Identify the potential risk of increased condensation following installation relating to suspended floors and how to prevent it.
	7.6 Check, record and report issues with under floor (cross flow) ventilation, flues, chimneys and combustion air ventilators pre- and post-installation.
	7.7 Prepare floor for insulation creating access points taking into consideration the following but not limited to: a. safe systems of work b. minimising damage c. checking existing services d. building construction and heritage significance e. customer safety.
	7.8 Check for hidden utilities.
	7.9 Maintain integrity of membranes.
	7.1 Remove and minimise damage to floorcoverings.

	7.1	Ensure the minimum void area air space is maintained by removing debris.
	7.1	Clear and safeguard existing and install additional ventilation in accordance with the design and installation checks and report back issues which impact the ventilation assessment.
	7.1	Protect the building occupants and their property.
	7.1	Confirm pre-installation material checks are within specified parameters to include checking and reporting defects.
	7.1	Rectify defects in preparation of insulation measures.
	7.1	Assemble, operate, clean and disassemble installation processing equipment.
	7.1	Calibrate equipment to measure density, flow and quality tests.
	7.1	Spray insulation to suspended floors.
	7.1	Maintain existing soundproofing.
	7.2	Install and maintain fire resistant barriers.
	7.2	Complete post installation checks in accordance with the design, method statement and installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects.
	7.2	Provide post installation advice and guidance to building occupants including homeowner packs.
	7.2	Handover and sign off to the customers satisfaction.
	7.2	Clean and disassemble installation processing equipment and pack away for transportation.
	7.2	Work at height using access equipment.

7	Comply with the given contract information to carry out the work efficiently to spray insulation to suspended floors to the required specification.	7.2	Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to carry out external and internal pre-installation checks d. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: i. suitable access ii. property suitability iii. structural integrity iv. dampness v. decay vi. vents and ventilation vii. services (gas, electric, water, media cables) e. why it is important to ensure that all necessary repairs are completed prior to installation f. how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: i. condition of building fabric ii. identification of any areas of potential water penetration

	iii. visibility and completeness of damp proof course iv. condition of window and door seals v. height of internal floors in relation to external floor height vi. condition of roof vii. damaged or spalled brickwork viii. rain and wastewater goods ix. protection and existence of sub floor ventilation x. cavity width and identification of any debris g. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i. fire safety ii. electrical iii. asbestos iv. Radon v. heritage vi. archaeological and architectural features vii. ecology viii. ventilation ix. exposure & topography h. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance i. how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk j. why it is important to avoid unintended consequences

	k. how to check, record and report issues with under floor (cross flow) ventilation, flues, chimneys and combustion air ventilators pre- and post-installation l. why it is important to explain installation procedure to building occupants to include but not limited to the following: i. scope and work programme ii. safety requirements during the installation process iii. protection of property and personal items iv. specific benefits and implications to include homeowner information v. agreed standards of making good m. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: i. timber treatments ii. replacement wall ties iii. injected damp proof course iv. under floor and central heating systems v. Radon barriers vi. electrical wiring vii. services n. how to identify and follow the installation quality requirements o. how to work with, around and in close proximity to plant and machinery p. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment q. why it is important to recognise the potential risk of

	increased condensation following installation relating to suspended floors and how to prevent it r. how to prepare a floor for insulation, creating access points taking into consideration the following but not limited to: i. safe systems of work ii. minimising damage iii. checking existing services iv. building construction and heritage significance v. customer safety vi. archaeology s. how to check for hidden utilities t. the importance of ensuring all work to services (gas, electric, water) is carried out by suitably qualified people u. how to maintain integrity of membranes v. how to remove and minimise damage to floorcoverings w. why it is important to ensure the minimum void area air space is maintained by removing debris as required x. why it is important to clear and safeguard existing and install additional ventilation if required in accordance with the design and installation checks and report back issues which impact the ventilation assessment y. how to protect the building occupants and their property z. how to assemble, operate, clean and disassemble installation processing equipment aa. how to calibrate equipment to measure density, flow and quality tests bb. how to spray insulation to suspended floors

	cc. how to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects dd. the different types of air and vapour control layers and breather membranes, where and how they should be used and why it is important to install them correctly ee. the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity ff. why it is important to immediately record and report unforeseen events including but not limited to equipment malfunctions, situations and faults not identified in the original design gg. how to ensure existing cross flow ventilation is maintained within the floor void hh. how to maintain existing soundproofing ii. how to install and maintain fire resistant barriers jj. why it is important to minimise thermal bridging through compliance with design detail ensuring a consistent level of insulation of the area being insulated kk. why it is important to complete post installation checks in accordance with the design, method statement and installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects ll. why it is important to provide post installation advice and guidance to building

		occupants including homeowner packs mm. how to handover and sign off to the customers satisfaction nn. how to clean and disassemble installation processing equipment and pack away for transportation oo. how to use all work tools and installation equipment in line with manufacturers and system specifications pp. how to work at height using access equipment and harness systems qq. how and why maintenance of all work tools and installation equipment is carried out.
	7.2	Describe the needs of other occupations and the importance of teamwork and communication when spraying insulation to suspended floors.

Unit 244 Spraying insulation to suspended floors in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Unit 265 Erecting and dismantling access/working platforms in the workplace

Level:	2
GLH:	37
Value for TQT	80

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given information relating to the work and resources when erecting and dismantling access/working platforms.	1.1 Interpret and extract information from specifications, method statements, risk assessments and manufacturers' information.
	1.2 Comply with information and/or instructions derived from risk assessments and method statement.
	1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
	1.4 Describe different types of information, their source and how they are interpreted in relation to: a. specifications, current legislation, method statements, risk assessments and manufacturers' information.
2 Know how to comply with relevant legislation and official guidance when erecting and dismantling	2.1 Describe their responsibilities under current legislation and official guidance whilst working: a. in the workplace, at height, in confined areas, with tools and equipment, with movement/storage of materials and by manual handling.

	access/working platforms.	2.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.
		2.3	State what the accident reporting procedures are and who is responsible for making reports.
3	Maintain safe working practices when erecting and dismantling access/working platforms.	3.1	Use personal protective equipment (PPE) and access equipment safely to carry out the activity in accordance with legislation and organisational requirements when erecting and dismantling access/working platforms.
		3.2	Explain why, when and how personal protective equipment (PPE) should be used, relating to erecting and dismantling access/working platforms, and the types, purpose and limitations of each type.
		3.3	State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.
4	Select the required quantity and quality of resources for the methods of work to erect and dismantle access/working platforms.	4.1	Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to: a. ladders/crawler boards b. stepladders/platform steps c. trestles d. proprietary staging/podiums e. proprietary towers f. mobile scaffold towers g. protection equipment and notices h. tools and ancillary equipment.
		4.2	Select resources associated with own work in relation to materials, components, tools and equipment.
		4.3	State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.

	4.4	Outline potential hazards associated with the resources and method of work.
	4.5	Describe how to calculate quantity of equipment required associated with the method/procedure to erect and dismantle access equipment/working platforms.
5 Minimise the risk of damage to the work and surrounding area when erecting and dismantling access/working platforms.	5.1	Protect the work and its surrounding area from damage.
	5.2	Minimise damage and maintain a clean workspace.
	5.3	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
	5.4	Dispose of waste in accordance with legislation.
	5.5	State why the disposal of waste should be carried out in relation to the work.
6 Complete the work within the allocated time when erecting and dismantling access/working platforms.	6.1	Demonstrate completion of the work within the allocated time.
	6.2	Demonstrate completion of the work within the allocated time. State the purpose of the work programme and explain why deadlines should be kept in relation to: a. organisational procedures for reporting circumstances which will affect the work programme
7 Comply with the given contract information to erect and dismantle access/ working platforms to the required specification.	7.1	Demonstrate the following work skills when erecting and dismantling access/working platforms: a. moving, positioning/erecting, securing, checking, dismantling and removing
	7.2	Erect, dismantle and store two of the following access equipment to given access regulations: a. ladders/crawler boards b. stepladders/platform steps c. proprietary towers

	d. trestle platforms e. mobile scaffold towers f. proprietary staging/podiums
	7.3 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them to: a. provide protection to the work area b. establish a base for equipment c. erect proprietary access equipment to manufacturer's instructions suitable for the work d. erect non-proprietary access equipment suitable for the work e. place protective screens and notices f. check/monitor equipment during the period of use g. dismantle and store access equipment h. use tools and equipment i. work at height.
	7.4 Safely use and store materials, hand tools and ancillary equipment.
	7.5 State the needs of other occupations and how to communicate within a team when erecting and dismantling access/working platforms.
	7.6 Describe how to maintain the tools and equipment used when erecting and dismantling access/working platforms.

Unit 265 Erecting and dismantling access/working platforms in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Two or more of the following endorsements required:

- ladders/crawler boards
- step ladders/platform steps
- proprietary towers
- trestle platforms
- mobile scaffold towers
- proprietary staging/podiums.

Unit 266 Develop customer relationships

Level:	2
GLH:	50
Value for TQT	60

Learning outcomes *The learner will be able to:*		**Assessment criteria** *The learner can:*
1	Build their customer's confidence that the service they give will be excellent.	1.1 Show that they behave assertively and professionally with customers reassure their customer that they are doing everything possible to keep the service promises made by the organisation
		1.2 Allocate the time they take to deal with their customer following organisational guidelines.
		1.3 Reassure their customer that they are doing everything possible to keep the service promises made by the organisation.
2	Meet the expectations of their customers.	2.1 Recognise when there may be a conflict between their customer's expectations and your organisation's service offer.
		2.2 Balance their customer's expectations with their organisation's service offer by offering an alternative or explaining the limits of the service offer.
		2.3 Work effectively with others to resolve any difficulties in meeting their customer's expectations.
3	Develop the long-term relationship between their customer and their organisation.	3.1 Give additional help and information to their customer in response to customer questions and comments about their organisation's services or products.
		3.2 Discuss expectations with their customer and explain how these

		compare with their organisation's services or products.
	3.3	Advise others of feedback received from their customer.
	3.4	Identify new ways of helping customers based on the feedback customers have given them.
	3.5	Identify added value that their organisation could offer to long-term customers.
4 Know how to develop customer relationships.	4.1	Describe their organisation's services or products.
	4.2	Explain the importance of customer retention.
	4.3	Explain how their own behaviour affects the behaviour of the customer.
	4.4	Describe how to behave assertively and professionally with customers.
	4.5	Describe how to defuse potentially stressful situations.
	4.6	Identify the limitations of their organisation's service offer.
	4.7	Compare how customer expectations may change as the customer deals with their organisation.
	4.8	Identify the cost and resource implications of an extension of the service offer to meet or exceed customer expectations.
	4.9	Explain the cost implications of bringing in new customers as opposed to retaining existing customers.
	4.10	Identify who to refer to when considering any variation to their organisation's service offer.

Unit 266 Develop customer relationships

Supporting information

Guidance

The assessment and quality assurance requirement for this unit provides evidence towards A and V units.

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Unit 269 Injecting, blowing or spraying insulation to framed sections of buildings in the workplace

Level:	3
GLH:	130
Value for TQT:	240

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when injecting, blowing or spraying insulation to framed sections of buildings.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. suppliers and manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them.
	1.5 Describe different types of information, their source, accuracy, completeness and how they are interpreted in relation to: a. drawings b. specifications c. schedules

	d. method statements e. risk assessments f. design g. standards h. suppliers and manufacturers' information i. data sheets j. official guidance k. current legislation and regulations governing buildings.

2 Know how to comply with environmentally responsible work practices to meet current legislation standards and official guidance when injecting, blowing or spraying insulation to framed sections of buildings.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. confined spaces c. at height d. tools and equipment e. materials and substances f. movement and storage of materials by manual handling and mechanical lifting.
	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: a. site b. workplace c. siting and location of vehicles d. company e. customer f. access equipment g. material and waste storage h. the general public.
	2.3 Explain the accident reporting procedures and who is responsible for making reports.
	2.4 Describe the types of fire extinguishers available when injecting, blowing or spraying insulation to framed sections of

	buildings and describe how and when they are used in relation to: a. water b. CO_2 c. foam d. powder.

3	Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with relevant legislation, standards and official guidance when injecting, blowing or spraying insulation to framed sections of buildings in relation to the following: a. methods of work b. safe use of health and safety control equipment c. safe use of access equipment and harness systems d. safe use, storage and handling of materials, tools and equipment e. operative maintenance of installation equipment f. specific risks to health including mental health g. specific risks associated with ventilation and combustion appliances.
		3.2 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when injecting, blowing or spraying insulation to framed sections of buildings in relation to: a. collective protective measures b. personal protective equipment (PPE) c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
		3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to:

	a. fires b. spillages c. injuries d. emergencies relating to occupational activities ~~e.~~ identification of and reporting of asbestos containing materials.
	3.4 Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. manufacturers' technical information e. data sheets f. statutory regulations g. official guidance h. Control of Substances Hazardous to Health (COSHH).

4 Select the required quantity and quality of resources for the methods of work to inject, blow or spray insulation to framed sections of buildings.	4.1 Select resources associated with own work in relation to materials, components, fixings and finishes, tools and equipment.
	4.2 Check the suitability, compatibility and characteristics of the materials, components, fixings and finishes and determine if they are moisture open or moisture closed and their impact on the building.
	4.3 Record and report issues or defects.
	4.4 Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
	4.5 Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. protective sheeting b. masking materials c. warning signs

	d. public protection equipment e. insulation materials f. sheathing board g. timber and metal studwork h. breather membranes and vapour control layers i. fire stops j. acoustic treatments k. plasterboard or finishing board l. vent sleeves m. down lighters n. primers o. expansion and movement joints, compression joints p. metal lath and plaster beads q. seal tapes and joints r. joint strips and mesh s. plaster finish t. sealants u. pre-formed trims v. all work tools and installation equipment.
	4.6 Describe how to confirm that the resources and materials conform to the specification.
	4.7 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.8 Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
	4.9 Describe how to calculate the quantity of materials required and used to ensure adequacy of fill as per the system designer specification and wastage associated with the method and procedure to inject, blow or spray insulation to framed sections of buildings.
5 Minimise the risk of damage to the work and surrounding area	5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.

	when injecting, blowing or spraying insulation to framed sections of buildings.	5.2	Maintain a safe, clear and tidy work area.
		5.3	Explain why it is important to maintain a safe, clear and tidy work area.
		5.4	Dispose of waste in accordance with current legislation.
		5.5	Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
		5.6	Explain the importance of protecting the work and its surrounding area against the risk of damage.
		5.7	Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation b. environmental responsibilities c. organisational procedures d. manufacturers' information e. data sheets f. statutory regulations g. official guidance

6	Complete the work within the allocated time when injecting, blowing or spraying insulation to framed sections of buildings.	6.1	Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
		6.2	Describe the purpose of the work programme, including the estimated and allocated time and explain why deadlines should be kept in relation to: a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances which will affect the work programme.
7	Comply with the given contract	7.1	Carry out external and internal pre installation checks assessing,

information to carry out the work efficiently to inject, blow or spray insulation to framed sections of buildings to the required specification.		recording and reporting issues to include: a. suitable access b. property suitability c. structural integrity d. dampness e. decay f. vents and ventilation g. services (gas, electric, water, media cables).
	7.2	Demonstrate the following work skills injecting, blowing or spraying insulation to framed sections of buildings: a. removing b. measuring c. calibrating d. marking out e. cutting f. line and level g. drilling h. fitting i. fixing j. filling k. finishing l. positioning and securing.
	7.3	Use and maintain all work tools and installation equipment.
	7.4	Remove existing defective insulation, boarding, breather membranes and vapour control layers.
	7.5	Assemble and operate installation processing equipment in line with manufacturers and system manuals.
	7.6	Prepare for and install insulation to framed sections of roof, floor, wall or ceiling structures, contained frame or open frame, to given working instructions, using at least one of the following methods: a. injected b. blown c. sprayed.

	7.7	Calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers' specifications and material requirements.
	7.8	Remove defective timber, localised plaster and render.
	7.9	Fix finishing board, sheathing board and plasterboard.
	7.10	Make good any marks or screw and nail holes.
	7.11	Fit insulation between and/or to timber and metal studwork.
	7.12	Clean and disassemble installation processing equipment and pack away for transportation.
	7.13	Carry out post installation checks to ensure insulation complies with the design.
	7.14	Hand over and sign off to the customers satisfaction.
	7.15	Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to explain installation procedure to building occupants to include but not limited to the following:

	i. scope and work programme ii. safety requirements during the installation process iii. protection of property and personal items iv. specific benefits and implications to include homeowner information v. agreed standards of making good d. how to work with, around and in close proximity to plant and machinery e. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment f. how to identify and follow the installation quality requirements g. how and why it is important to check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre and post installation h. why it is important to carry out external and internal pre-installation checks i. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: i. suitable access ii. property suitability iii. structural integrity iv. dampness v. decay vi. vents and ventilation vii. services (gas, electric, water, media cables) j. why it is important to ensure that all necessary repairs are completed prior to installation

	k. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i. fire safety ii. acoustics iii. condensation analysis iv. electrical v. gas vi. asbestos vii. Radon viii. rot ix. heritage x. architectural features xi. ecology xii. ventilation l. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance m. how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of: thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk n. weather restrictions of the frame materials when temporarily exposed to the elements o. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: i. blocked and restricted ventilation ii. windows and door replacement iii. firestops

	iv. weather seals v. silicone weatherproof coatings p. how to protect adjacent surfaces q. how to check for and protect hidden utilities r. how to remove wall fixtures including but not limited to: light switches, radiators, down lighters, handrails, as necessary to install the insulation in accordance with the specification, design, drawings and method statements s. how to prepare and remove existing wall lining, defective insulation, boarding, breather membranes and vapour control layers t. how to remove defective timber, localised plaster and render u. how to fix any holes, broken or damaged boards that form the backdrop for injected, blown and sprayed insulation. v. how to identify and report the existence of thermal bridges and water ingress not addressed in the design w. how to ensure pre-installation material checks are within specified parameters, to include checking and recording batch number and reporting defects x. how to calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers specifications and material requirements y. how to inject, blow and spray insulation between and or to timber and metal studwork z. how to ensure insulation thickness and type meets the design specification for fire,

	thermal and acoustic requirements aa. how to fit breather membrane and vapour control layer in conjunction with design, maintaining their integrity bb. how to fix finishing board, sheathing board and plasterboard in conjunction with design cc. how to apply mastic aesthetic sealant to all interface, joints and penetrations dd. how to make good any marks or screw and nail holes ee. how to scrim and tape joints ready for surface finish ff. how to reinstate fixtures and fittings gg. the different types of air and vapour control layers and breather membranes, where and how they should be used and why it is important to install them correctly hh. the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity ii. why it is important to immediately record and report unforeseen events including but not limited to equipment malfunctions, situations and faults not identified in the original design jj. how to clean and disassemble installation processing equipment and pack away for transportation kk. why it is important to complete post installation checks in accordance with the design, method statement and installations operations manual and report issues to include but not limited to

	safeguarding the combustion ventilation and report defects ll. how to handover and sign off to the customers' satisfaction mm. how to use all work tools and installation equipment nn. how to work at height using access equipment and harness systems oo. how and why maintenance of all work tools and installation equipment is carried out
	7.16 Describe the needs of other occupations and the importance of teamwork and when injecting, blowing or spraying insulation to framed sections of buildings.

Unit 269 Injecting, blowing or spraying insulation to framed sections of buildings in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

One of the following endorsements required:

- injected
- blown
- sprayed.

Unit 270 Installing internal insulation to walls in the workplace

Level:	3
GLH:	110
Value for TQT:	220

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when installing internal insulation to walls.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. suppliers and manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them.
	1.5 Describe different types of information, their source, accuracy, completeness and how they are interpreted in relation to: a. drawings b. specifications c. schedules d. method statements

	e. risk assessments f. design g. suppliers and manufacturers' information h. data sheets i. official guidance j. standards k. current legislation and regulations governing buildings.

2	Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when installing internal insulation to walls.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. below ground level c. confined spaces d. at height e. tools and equipment f. materials and substances g. movement and storage of materials by manual handling and mechanical lifting .
		2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: a. site b. workplace c. siting and location of vehicles d. company e. customer f. access equipment g. materials and waste storage h. the general public.
		2.3 Explain the accident reporting procedures and who is responsible for making reports.
		2.4 Describe the types of fire extinguishers available when

	installing internal insulation to walls and describe how and when they are used in relation to: a. water b. CO_2 c. foam d. powder.

3 Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when installing internal insulation to walls in relation to the following: a. methods of work b. safe use of health and safety control equipment c. safe use of access equipment and harness systems d. safe use, storage and handling of materials, tools and equipment e. specific risks to health including mental health f. specific risks associated with ventilation and combustion appliances.
	3.2 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when installing internal insulation to walls in relation to: a. collective protective measures b. personal protective equipment (PPE) c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to:

	a. fires b. spillages c. injuries d. emergencies relating to occupational activities e. identification of and reporting of asbestos containing materials.
	3.4 Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. suppliers and manufacturers' technical information e. data sheets f. statutory regulations g. official guidance h. Control of Substances Hazardous to Health (COSHH).
4 Select the required quantity and quality of resources for the methods of work to install internal insulation to walls.	4.1 Select resources associated with own work in relation to materials, components, fixings, finishes, tools and equipment.
	4.2 Check the suitability, compatibility characteristics of the materials, components, fixing and finishes determine if they are moisture open or moisture closed and their impact on the building.
	4.3 Record and report issues or defects.
	4.4 Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
	4.5 Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. protective sheeting internal

	b. masking materials c. warning signs d. vent sleeves e. insulation materials f. fixings and adhesives g. vapour control and breather membranes h. finishing board and coat i. combustion vents j. all work tools equipment.
	4.6 Describe how to confirm that the resources and materials conform to the specification.
	4.7 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.8 Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
	4.9 Describe how to calculate the quantity of materials, length, thickness, area and wastage associated with the method and procedure to install insulation to internal walls.

5 Minimise the risk of damage to the work and surrounding area when installing internal insulation to walls.	5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2 Maintain a safe, clear and tidy work area.
	5.3 Explain why it is important to maintain a safe, clear and tidy work area
	5.4 Dispose of waste in accordance with current legislation.
	5.5 Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.

	5.6 Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation b. environmental responsibilities c. organisational procedures d. suppliers and manufactures' information e. data sheets f. statutory regulations g. official guidance.
6 Complete the work within the allocated time when installing internal insulation to walls.	6.1 Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
	6.2 Describe the purpose of the work programme, including the estimated and allocated time and explain why deadlines should be kept in relation to: a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances which will affect the work programme.

7	Comply with the given contract information to carry out the work efficiently to install internal insulation to walls. to the required specification.	7.1	Demonstrate the following work skills when installing internal insulation to walls: a. measuring b. marking out c. fixing d. finishing e. positioning f. sealing g. securing.
		7.2	Use and maintain all work tools and equipment.
		7.3	Carry out external and internal pre-installation check, assessing, recording and reporting issues to include: a. suitable access b. property suitability c. structural integrity d. dampness e. decay f. vents and ventilation g. services (gas, electric, water, media cables).
		7.4	Check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre- and post-installation.
		7.5	Fit breather membrane and vapour control layers.
		7.6	Prepare and install internal wall insulation system to given system designer specification, method statement and the required standard using the following methods to given working instructions: a. placed b. mechanically or adhesively fixed including thermal boards.
		7.7	Protect and reinstate, access routes, existing fixtures and fittings (carpets).
		7.8	Remove, replace and reinstate skirting, coving and cornices, radiators and electrical sockets.

	7.9	Carry out repairs after installation.
	7.10	Handover and sign off to the customer's satisfaction.
	7.11	Carry out post installation checks.
	7.12	Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to carry out external and internal pre-installation checks d. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to: i. suitable access ii. property suitability iii. structural integrity iv. dampness v. condensation vi. penetrating damp vii. rising damp viii. decay ix. vents and ventilation x. services (gas, electric, water, media cables) xi. architectural features xii. condition of down pipes, xiii. roof overhangs and gutters xiv. external and internal finish condition xv. wall moisture content

	xvi. damp proof course height above floor level xvii. condition of ground and suspended floor joists e. why it is important to ensure that all necessary repairs are completed prior to installation f. how to identify thermal bridges and understand solutions and limitations g. the implications for party wall thermal bridge h. how and why it is important to check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre and post installation i. how to check for hidden utilities how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: i. condition of building fabric ii. identification of any areas of potential water penetration iii. visibility and completeness of damp proof course iv. condition of window and door seals v. height of internal floors in relation to external floor height vi. condition of roof vii. damaged or spalled brickwork viii. drainage and down pipes ix. protection and existence of sub floor ventilation x. cavity width and identification of any debris xi. electrical cables, media cables, junction and meter boxes, signal receiving equipment xii. flues, gas pipes, chimneys and combustion air ventilators xiii. identification of protected wildlife

	(nesting birds, bees, bats) j. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i. fire safety ii. electrical iii. media cables iv. signal receiving equipment v. junction boxes vi. asbestos vii. Radon viii. heritage ix. architectural and archaeological features x. ecology xi. ventilation xii. rot k. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance l. how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of: thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk m. why it is important to avoid unintended consequences n. why it is important to explain installation procedure to building occupants to include but not limited to the following: i. scope and work programme ii. safety requirements during the installation process iii. protection of property and personal items iv. specific benefits and implications to include

	homeowner information v. agreed standards of making good o. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: i. wall ties ii. windows iii. damp proof course (dpc) iv. renders v. Tyrolean coatings vi. silicone weather-proof coatings p. how to work with, around and in close proximity to plant and machinery q. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment r. how to identify and follow the installation quality requirements s. which wall types are unsuitable for internal wall insulation t. the implications of insulating a terrace or semi-detached house regarding party wall bridge u. why it is important to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects v. how to protect and reinstate, access routes, existing fixtures and fittings (carpets) w. how to prepare Internal walls for insulation x. how to treat external walls in line with system holder specification y. the importance of ensuring all work to services (gas, electric, water, media cables) is carried out by suitably qualified people

	z. how to remove, replace and reinstate skirting, coving and cornices, radiators and electrical sockets aa. how to construct straps to walls to contain or hold insulation bb. how to fit mechanically or adhesively fixed insulation including thermal boards cc. how to fit breather membrane and vapour control layers dd. the importance of ensuring the integrity of breather membranes and vapour control layers ee. the different types of air and vapour control layers and breather membranes, where and how they should be used and why it is important to install them correctly ff. the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity gg. why it is important to immediately record and report unforeseen events including but not limited to equipment malfunctions, situations and faults not identified in the original design hh. why it is important to maintain or install fire resistant barriers ii. how to maintain soundproofing jj. how to seal joints, perimeters and penetrations kk. why it is important to minimise thermal bridging through compliance with design detail ensuring a consistent level of insulation to the area being insulated ll. how to carry out any repair after installation mm. why it is important to complete post installation checks in accordance with the system designer installations

	operations manual and report issues nn. why it is important to provide post installation advice and guidance to building occupants and client including homeowner packs oo. how to handover and sign off to the customers satisfaction pp. how to use all work tools and installation equipment in line with manufacturers' and system specification

Unit 270 Installing internal insulation to walls in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with:
the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Unit 271 Installing insulation to framed sections of buildings in the workplace

Level:	3
GLH:	120
Value for TQT:	220

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when installing insulation to framed sections of buildings.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them.
	1.5 Describe different types of information, their source accuracy, completeness and how they are interpreted in relation to: a. drawings b. specifications c. schedules d. method statements

	e. risk assessments f. design g. standards h. manufacturers' information i. data sheets j. official guidance k. current legislation and regulations governing buildings.

2	Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when installing insulation to framed sections of buildings.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. at height c. tools and equipment d. materials and substances e. movement and storage of materials by manual handling and mechanical lifting.
		2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: a. site b. workplace c. siting and location of vehicles d. company e. customer f. access equipment g. materials and waste storage h. the general public.
		2.3 Explain the accident reporting procedures and who is responsible for making reports.
		2.4 Describe the types of fire extinguishers available when

	Installing insulation to framed sections of buildings and describe how and when they are used in relation to: a. water b. CO2 c. foam d. powder.

3	Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when installing insulation to framed sections of buildings in relation to the following: a. methods of work b. safe use of health and safety control equipment c. safe use of access equipment and harness systems d. safe use, storage and handling of materials, tools and equipment e. specific risks to health including mental health f. specific risks associated with ventilation and combustion appliances.
		3.2 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when installing insulation to framed sections of buildings in relation to: a. collective protective measures b. personal protective equipment (PPE) c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
		3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: a. fires

	b. spillages c. injuries d. emergencies relating to occupational activities e. identification of and reporting of asbestos containing materials.
	3.4 Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. manufacturers' technical information e. data sheets f. statutory regulations g. official guidance h. Control of Substances Hazardous to Health (COSHH).
4 Select the required quantity and quality of resources for the methods of work to install insulation to framed sections of buildings.	4.1 Select resources associated with own work in relation to materials, components, fixings, finishes, tools and equipment.
	4.2 Check the suitability, compatibility characteristics of the materials, components, fixing and finishes determine if they are moisture open or moisture closed and their impact on the building.
	4.3 Record and report issues or defects
	4.4 Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
	4.5 Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. protective sheeting b. masking materials c. warning signs d. public protection equipment e. Insulation materials f. sheathing board

	g. timber and metal studwork h. breather membranes and vapour control layers i. fire stops j. acoustic treatments k. plasterboard or finishing board l. vent sleeves m. down lighters n. primers o. expansion and movement joints, compression joints p. metal lath and plaster beads q. seal tapes and joints r. joint strips and mesh s. plaster finish t. sealants u. mechanical fixing components v. pre-formed trims w. all work tools and equipment
	4.6 Describe how to confirm that the resources and materials conform to the specification.
	4.7 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.8 Describe how to identify the hazards associated with the resources and methods of work.
	4.9 Describe how to calculate the quantity, length and area of materials required and wastage associated with the method and procedure to install insulation to framed sections of buildings.
5 Minimise the risk of damage to the work and surrounding area when installing insulation to framed sections of buildings.	5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2 Maintain a safe, clear and tidy work area.
	5.3 Explain why it is important to maintain a safe, clear and tidy work area
	5.4 Dispose of waste in accordance with current legislation.

	5.5 Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
	5.6 Explain the importance of protecting the work and its surrounding area against the risk of damage
	5.7 Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation b. environmental responsibilities c. organisational procedures d. suppliers and manufactures' information e. data sheets f. statutory regulations g. official guidance.
6 Complete the work within the allocated time when installing insulation to framed sections of buildings.	6.1 Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
	6.2 Describe the purpose of the work programme, including the estimated and allocated time and explain why deadlines should be kept in relation to: a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances which will affect the work programme.

7	Comply with the given contract information to carry out the work efficiently to install insulation to framed sections of buildings to the required specification.	7.1	Demonstrate the following work skills when installing insulation to framed sections of buildings: a. removing b. measuring c. marking out d. cutting e. line f. levelling g. drilling h. fitting i. fixing j. filling k. finishing l. positioning m. securing.
		7.2	Use and maintain all work tools and equipment.
		7.3	Carry out external and internal pre-installation check, assessing, recording and reporting issues to include: a. suitable access b. property suitability c. structural integrity d. dampness e. decay f. vents and ventilation g. services (gas, electric, water, media cables)
		7.4	Prepare and remove existing defective insulation, boarding, breather membranes and vapour control layers.
		7.5	Remove defective timber, localised plaster and render.
		7.6	Fix finishing board, sheathing board and plasterboard.
		7.7	Make good any marks or screw and nail holes.
		7.8	Fit insulation between and/or to timber and metal studwork.
		7.9	Carry out installation checks to ensure insulation complies with the design.
		7.10	Provide post installation advice and guidance to building occupants including homeowner packs.

	7.11 Hand over and sign off to the customers satisfaction.

	7.12 Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to explain installation procedure to building occupants to include but not limited to the following: i. scope and work programme ii. safety requirements during the installation process iii. protection of property and personal items iv. specific benefits and implications to include homeowner information v. agreed standards of making good d. how to work with, around and in close proximity to plant and machinery e. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment

	f. how to identify and follow the installation quality requirements g. how and why it is important to check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre and post installation h. why it is important to carry out external and internal pre-installation checks i. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: i. suitable access ii. property suitability iii. structural integrity

7 Continued…	iv. dampness v. decay vi. vents and ventilation vii. services (gas, electric, water, media cables) j. why it is important to ensure that all necessary repairs are completed prior to installation k. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i. fire safety ii. acoustics iii. condensation analysis iv. electrical v. gas vi. asbestos vii. Radon viii. rot ix. heritage x. architectural features xi. ecology xii. ventilation l. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional

	construction, hard-to-treat buildings and historical significance m. how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk n. why it is important to avoid unintended consequences o. how to identify potential thermal bridges p. weather restrictions of the frame materials when temporarily exposed to the elements q. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: i. blocked and restricted ventilation ii. windows and door replacement iii. firestops iv. weather seals v. silicone weatherproof coatings r. how to protect adjacent surfaces

	s. how to check for and protect hidden utilities t. how to remove wall fixtures including but not limited to light switches, radiators, down lighters, handrails, as necessary to install the insulation in accordance with the specification, design, drawings and method statements u. how to prepare and remove existing wall lining, defective insulation, boarding, breather membranes and vapour control layers

	v. how to remove defective timber, localised plaster and render w. how to fix any holes, broken or damaged boards that form the backdrop for fixed, insulation. x. how to identify and report the existence of thermal bridges and water ingress not addressed in the design y. how to ensure pre-installation material checks are within specified parameters z. how to cut, apply, fix or fit insulation between and or to timber and metal studwork aa. how to ensure insulation thickness and type meets the design specification for fire, thermal and acoustic requirements bb. how to fit breather membrane and vapour control layer in conjunction with design, maintaining their integrity cc. how to fix finishing board, sheathing board and plasterboard in conjunction with design dd. how to apply mastic aesthetic sealant to all interface, joints and penetrations ee. how to make good any marks or screw and nail holes ff. how to scrim and tape joints ready for surface finish gg. how to reinstate fixtures and fittings hh. the different types of air and vapour control layers and breather membranes, where and how they should be used and why it is important to install them correctly ii. the importance of ensuring the integrity of air and vapour control layers and breather membranes

	following installation and the need to maintain continuity jj. why it is important to immediately record and report unforeseen events including but not limited to equipment malfunctions, situations and faults not identified in the original design kk. why it is important to complete post installation checks in accordance with the design, method statement and installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects ll. how to handover and sign off to the customers' satisfaction mm. how to use all work tools and equipment nn. how to work at height using access equipment and harness systems oo. how and why maintenance of all work tools and equipment is carried out
	7.13 Describe the needs of other occupations and the importance of teamwork and communication when installing insulation to framed sections of buildings.

Unit 271 Installing insulation to framed sections of buildings in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. Please refer to the NVQ Structure applicable to the qualification/occupational area in which the candidate is being assessed.

Unit 272 Injecting, blowing and spraying insulation to internal walls in the workplace

Level:	3
GLH:	110
Value for TQT:	220

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when injecting, blowing and spraying insulation to internal walls.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them.
	1.5 Describe different types of information, their source, accuracy,

	completeness and how they are interpreted in relation to: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. design g. standards h. suppliers and manufacturers' information i. data sheets j. official guidance k. current legislation and regulations governing buildings.

2	Know how to comply with environmentally responsible work practices to meet current legislation standards and official guidance when injecting, blowing and spraying insulation to internal walls.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. below ground level c. confined spaces d. at height e. tools and equipment f. materials and substances g. movement and storage of materials by manual handling and mechanical lifting.
		2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to:

	a. site b. workplace c. siting and location of vehicles d. company e. customer f. access equipment g. material and waste storage h. the general public.
	2.3 Explain the accident reporting procedures and who is responsible for making reports.
	2.4 Describe the types of fire extinguishers available when injecting, blowing and spraying insulation to internal walls and describe how and when they are used in relation to: a. water b. CO_2 c. foam d. powder.

3	Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with relevant legislation, standards and official guidance when injecting, blowing and spraying insulation to internal walls in relation to the following: a. methods of work b. safe use of health and safety control equipment c. safe use of access equipment and harness systems d. safe use, storage and handling of materials, tools and equipment e. operative maintenance of installation equipment f. specific risks to health including mental health g. specific risks associated with ventilation and combustion appliances.
		3.2 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when injecting, blowing and spraying insulation to internal walls in relation to: a. collective protective measures b. personal protective equipment (PPE) c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
		3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: a. fires b. spillages c. injuries d. emergencies relating to occupational activities e. identification of and reporting of asbestos containing materials.

	3.4	Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. suppliers and manufacturers' technical information e. data sheets f. statutory regulations g. official guidance h. Control of Substances Hazardous to Health (COSHH).

4 Select the required quantity and quality of resources for the methods of work to inject, blow and spray insulation to internal walls.	4.1	Select resources associated with own work in relation to materials, components, fixings, finishes, tools and equipment.
	4.2	Check the suitability, compatibility and characteristics of the materials, components, fixings and finishes, determine if they are moisture open or moisture closed and their impact on the building.
	4.3	Record and report issues or defects.
	4.4	Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
	4.5	Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. protective sheeting b. masking materials c. warning signs d. vent sleeves e. insulation materials f. fixings and adhesives g. vapour control and breather membranes h. finishing board and coat i. combustion vents j. all work tools

		k. installation equipment.
	4.6	Describe how to confirm that the resources and materials conform to the specification.
	4.7	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.8	Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
	4.9	Describe how to calculate the quantity of materials, length, thickness, area and wastage associated with the method and procedure to inject, blow and spray insulation to internal walls.

5	Minimise the risk of damage to the work and surrounding area when injecting, blowing and spraying insulation to internal walls.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
		5.2	Maintain a safe, clear and tidy work area.
		5.3	Explain why it is important to maintain a safe, clear and tidy work area.
		5.4	Dispose of waste in accordance with current legislation.
		5.5	Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
		5.6	Explain the importance of protecting the work and its surrounding area against the risk of damage.
		5.7	Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation b. environmental responsibilities c. organisational procedures d. manufacturers' information e. data sheets f. statutory regulations g. official guidance.
6	Complete the work within the allocated time when injecting, blowing and spraying insulation to internal walls.	6.1	Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
		6.2	Describe the purpose of the work programme, including the estimated and allocated time and explain why

	deadlines should be kept in relation to: a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances which will affect the work programme.

7	Comply with the given contract information to carry out the work efficiently to inject, blow and spray insulation to internal walls to the required specification.	7.1 Demonstrate the following work skills when injecting, blowing and spraying insulation to internal walls: a. measuring b. marking out c. fixing d. finishing e. positioning f. sealing and securing.
		7.2 Use and maintain all work tools and equipment.
		7.3 Carry out external and internal pre installation checks assessing, recording and reporting issues to include: a. suitable access b. property suitability c. structural integrity d. dampness e. decay f. vents and ventilation g. services (gas, electric, water, media cables).
		7.4 Check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre and post installation.
		7.5 Fit breather membrane and vapour control layers.
		7.6 Prepare and install Internal wall insulation system to given system designer specification, method statement and the required standard using at least two of the following methods to given working instructions: a. injected b. blown c. sprayed
		7.7 Assemble and operate installation processing equipment in line with manufacturers and system manuals.

	7.8	Calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers specifications and material requirements.
	7.9	Protect and reinstate, access routes, existing fixtures and fittings (carpets).
	7.10	Remove, replace and reinstate skirting, coving and cornices, radiators and electrical sockets.
	7.11	Carry out repairs after installation.
	7.12	Clean and disassemble installation processing equipment and pack away for transportation.
	7.13	Handover and sign off to the customers satisfaction.
	7.14	Carry out post installation checks.
	7.15	Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to carry out external and internal pre-installation checks d. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to: i. suitable access ii. property suitability iii. structural integrity iv. dampness

	v. condensation vi. penetrating damp vii. rising damp viii. decay ix. vents and ventilation x. services (gas, electric, water, media cables) xi. condition of down pipes, xii. roof overhangs and gutters xiii. external and internal finish condition xiv. wall moisture content xv. damp proof course height above floor level xvi. condition of ground and suspended floor joists e. how to identify thermal bridges and understand solutions and limitations f. why it is important to ensure that all necessary repairs are completed prior to installation g. the implications for party wall thermal bridge h. how and why it is important to check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre and post installation i. how to check for hidden utilities j. how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: i. condition of building fabric ii. identification of any areas of potential water penetration iii. visibility and completeness of damp proof course iv. condition of window and door seals v. height of internal floors in relation to external floor height vi. condition of roof vii. damaged or spalled brickwork viii. drainage and down pipes ix. protection and existence of sub floor ventilation

	x. cavity width and identification of any debris xi. flues, gas pipes, chimneys and combustion air ventilators xii. identification of protected wildlife (nesting birds, bees, bats) k. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i. fire safety ii. electrical iii. media cables iv. signal receiving equipment v. junction and meter boxes vi. asbestos vii. Radon viii. heritage ix. archaeological and architectural features x. ecology xi. ventilation xii. rot l. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance m. how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of: thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk n. why it is important to avoid unintended consequences o. why it is important to explain installation procedure to building occupants to include but not limited to the following: i. scope and work programme ii. safety requirements during the installation process

	iii. protection of property and personal items iv. specific benefits and implications to include homeowner information v. agreed standards of making good p. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: i. wall ties ii. windows iii. damp proof course iv. renders v. Tyrolean coatings vi. silicone weatherproof coatings q. how to work with, around and in close proximity to plant and machinery r. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment s. how to identify and follow the installation quality requirements t. which wall types are unsuitable for internal wall insulation u. the implications of insulating a terrace or semi-detached house regarding party wall bridge v. why it is important to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects w. how to protect and reinstate, access routes, existing fixtures and fittings (carpets) x. how to prepare internal walls for insulation y. how to treat external walls in line with system holder specification z. the importance of ensuring all work to services (gas, electric, water, media cables) is carried out by suitably qualified people aa. how to remove, replace and reinstate skirting, coving and cornices, radiators and electrical sockets

	bb. how to calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers specifications and material requirements cc. how to install injected, blown and sprayed insulation dd. how to fit breather membrane and vapour control layers ee. the different types of air and vapour control layers and breather membranes, where and how they should be used and why it is important to install them correctly ff. the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity gg. why it is important to immediately record and report unforeseen events hh. why it is important to maintain or install fire resistant barriers ii. how to maintain sound proofing jj. how to seal joints, perimeters and penetrations kk. why it is important to minimise thermal bridging through compliance with design detail and ensuring a consistent level of insulation to the area being insulated ll. how to carry out any repair after installation mm. how to clean and disassemble installation processing equipment and pack away for transportation nn. why it is important record and report unforeseen events including but not limited to equipment malfunctions, situations and faults not identified in the original design oo. why it is important to complete post installation checks in accordance with the system designer installations operations manual and report issues pp. why it is important to provide post installation advice and guidance to building occupants and client including homeowner packs qq. how to handover and sign off to the customers satisfaction

	rr. how to use all work tools and installation equipment in line with manufacturers' and systems specifications ss. how to work at height using access equipment and harness systems tt. how and why maintenance of all work tools and installation equipment is carried out
	7.16 Describe the needs of other occupations and the importance of teamwork and communication when injecting, blowing and spraying insulation to internal walls.

Unit 272 Injecting, blowing and spraying insulation to internal walls in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Two of the following endorsements required:

- injected
- blown
- sprayed.

Unit 273 Installing blown insulation to cold roofs in the workplace

Level:	2
GLH:	100
Value for TQT:	190

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when installing blown insulation to cold roofs.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them
	1.5 Describe different types of information, their source, accuracy, completeness and how they are interpreted in relation to: a. drawings b. specifications c. schedules d. method statements e. risk assessments

	f. design g. standards h. manufacturers' information i. data sheets j. official guidance k. current legislation and regulations governing buildings.

2 Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when installing blown insulation to cold roofs.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. confined spaces c. at height d. tools and equipment e. materials and substances f. movement and storage of materials by manual handling and mechanical lifting
	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: a. site b. workplace c. siting and location of vehicles d. company e. customer f. access equipment g. material and waste storage h. the general public
	2.3 Explain the accident reporting procedures and who is responsible for making reports.
	2.4 Describe the types of fire extinguishers available when installing blown insulation to cold roofs and describe how and when they are used in relation to: a. water

	b. CO2 c. foam d. powder

3 Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when installing blown insulation to cold roofs in relation to the following: a. methods of work b. safe use of health and safety control equipment c. safe use of access equipment and harness systems d. safe use, storage and handling of materials, tools and equipment e. operative maintenance of installation equipment f. specific risks to health including mental health g. specific risks associated with ventilation and combustion appliances.
	3.2 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when installing blown insulation to cold roofs in relation to: a. collective protective measures b. personal protective equipment (PPE) c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: a. fires

		b. spillages c. injuries d. emergencies relating to occupational activities e. identification of and reporting of asbestos containing materials.
	3.4	Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. manufacturers' technical information e. data sheets f. statutory regulations g. official guidance h. Control of Substances Hazardous to Health (COSHH).

4 Select the required quantity and quality of resources for the methods of work to install blown insulation to cold roofs.	4.1	Select resources associated with own work in relation to materials, components, fixings and finishes, tools and equipment.
	4.2	Check the suitability, compatibility and characteristics of the materials, components, fixings and finishes, determine if they are moisture open or moisture closed and their impact on the building.
	4.3	Record and report issues or defects.
	4.4	Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
	4.5	Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. insulation b. pipe insulation c. tank and cylinder jackets d. fixings and ancillary items

	e. access boards f. loft hatches g. soffit and fascia boards h. tile vents i. ridge tiles j. sarking felt vents k. draught-proofing materials l. fire rated caps m. cable protection n. all work tools o. installation equipment
	4.6 Describe how to confirm that the resources and materials conform to the specification.
	4.7 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.

	4.8 Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
	4.9 Describe how to calculate the quantity of materials required and used to ensure adequacy of fill as per the system designer specification and wastage associated with the method and procedure to install blown insulation to cold roofs.
5 Minimise the risk of damage to the work and surrounding area when installing blown insulation to cold roofs.	5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2 Maintain a safe, clear and tidy work area.
	5.3 Explain why it is important to maintain a safe, clear and tidy work area.
	5.4 Dispose of waste in accordance with current legislation.
	5.5 Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse

		weather conditions and how to minimise damage to existing building fabric.
	5.6	Explain the importance of protecting the work and its surrounding area against the risk of damage.
	5.7	Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation b. environmental responsibilities c. organisational procedures d. manufacturers' information e. data sheets f. statutory regulations g. official guidance.

6 Complete the work within the allocated time when installing blown insulation to cold roofs.	6.1	Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
	6.2	Describe the purpose of the work programme, including the estimated and allocated time and explain why deadlines should be kept in relation to: a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances which will affect the work programme.
7 Comply with the given contract information to carry out the work efficiently to install blown insulation to cold roofs to the required specification.	7.1	Demonstrate the following work skills when installing blown insulation to cold roofs: a. removing b. measuring c. marking out d. calculating e. making good.

	7.2	Use and maintain all work tools and installation equipment.
	7.3	Carry out pre-installation checks, assessing, recording and reporting issues to include: a. suitable access b. property suitability c. structural integrity d. dampness e. decay f. exposure ratings g. vents and ventilation h. services (gas, electric, water, media cables).
	7.4	Prepare and install blown insulation to cold roofs in accordance with the specification, design, drawings and method statements to given working instructions.
	7.5	Recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: a. condition of building fabric b. identification of any areas of potential water penetration c. condition of roof.
	7.6	Create and protect platforms and walkways for access and storage.
	7.7	Remove and secure building occupants stored items.
	7.8	Identify and remove infested, damaged and contaminated insulation from roof area.
	7.9	Identify and install passive ventilation as required by the design and report any identified ventilation limitations.
	7.10	Identify and report the potential risk of uninsulated omitted areas in relation to increased condensation following installation relating to roof coverings (pitched and flat) and roof structures (timber, metal, concrete).
	7.11	Check for and protect hidden utilities.

	7.12	Identify insulation materials and their characteristics for cold roofs, pipes, storage tanks, cylinders and access hatches.
	7.13	Confirm pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects.
	7.14	Assemble and operate installation processing equipment in line with manufacturers and system manuals.
	7.15	Calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers' specifications and material requirements.
	7.16	Install passive ventilation and safeguard existing ventilation.
	7.17	Prepare and fix pipe, tank and cylinder insulation.
	7.18	Ensure the insulation is contained within the prescribed areas.
	7.19	Protect downlighters by installation of fire rated caps to the required specification.
	7.20	Ensure insulation around electrical apparatus will not create fire hazards (light fittings, electrical units and cables).
	7.21	Minimise the effects of thermal bridging through compliance with design detail and ensuring a consistent level of insulation of the installed area.
	7.22	Install and maintain fire resistant barriers.
	7.23	Clean and disassemble installation processing equipment and pack away for transportation.
	7.24	Complete post installation checks in accordance with the system designer installations operations manual and report issues including but not limited to safeguarding the combustion ventilation and report defects.

	7.25	Provide post installation advice and guidance to building occupants including homeowner packs, warning labels and data sheets.
	7.26	Use all work tools and installation equipment in line with manufacturers and system specifications.
	7.27	Work at height using access equipment and harness systems.
	7.28	Use and maintain all work tools and installation equipment.
	7.29	Handover and sign off to the customers satisfaction.
	7.30	Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to carry out external and internal pre-installation checks d. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: i suitable access ii property suitability iii structural integrity iv dampness

	v decay vi vents and ventilation vii services (gas, electric, water, media cables) e. why it is important to ensure that all necessary repairs are completed prior to installation f. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: i timber treatment ii re-wiring iii loft guarantees iv building warranties g. how and why it is important to check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre and post installation h. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i fire safety ii electrical iii asbestos iv Radon v heritage vi ecology vii architectural features viii ventilation i. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance j. how to identify, record, report and rectify unintended consequences

	not addressed in the design, including but not limited to the existence of: thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk k. why it is important to avoid unintended consequences l. why it is important to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: i. condition of building fabric ii. identification of any areas of potential water penetration iii. condition of roof iv. damaged or spalled brickwork into gable ridge v. drainage and down pipes m. how to work with, around and in close proximity to plant and machinery n. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment o. why it is important to explain installation procedure to building occupants to include but not limited to the following: i. scope and work programme ii. safety requirements during the installation process iii. protection of property and personal items iv. specific benefits and implications to

	include homeowner information v. agreed standards of making good p. how to identify and follow the installation quality requirements q. how to create and protect platforms and walkways r. how to remove and secure stored items s. why it is important to identify and remove infested, damaged and contaminated insulation from roof area t. how to install passive ventilation as required by the design and report any identified ventilation limitations u. how to identify and report the potential risk of uninsulated omitted areas in relation to increased condensation following installation relating to roof coverings (pitched and flat) and roof structures (timber, metal, concrete) v. the importance of ensuring all work to services (gas, electric, water, media cables) is carried out by suitably qualified people w. how to check for and protect hidden utilities x. how to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects y. how to assemble and operate installation processing equipment in line with manufacturers and system manuals z. how to calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers

	specifications and material requirements aa. how to install passive ventilation and safeguard existing ventilation bb. how to prepare and install blown insulation to cold roofs cc. why it is important to minimise thermal bridging through compliance with design detail and ensuring a consistent level of insulation of the installed area dd. how to prepare and fix pipe, tank and cylinder insulation ee. how to ensure the insulation is contained within the prescribed areas ff. how to protect downlighters by installation of fire rated caps to the required specification gg. how to ensure insulation around electrical apparatus will not create fire hazards (light fittings, electrical units and cables) hh. how to install and maintain fire resistant barriers ii. how to clean and disassemble installation processing equipment and pack away for transportation jj. the different types of air and vapour control layers and breather membranes, where and how they should be used and why it is important to install them correctly kk. the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity

		ll. why it is important to immediately record and report unforeseen events including but not limited to equipment malfunctions, situations and faults not identified in the original design mm. why it is important to complete post installation checks in accordance with the system designer installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects nn. why it is important to provide post installation advice and guidance to building occupants including homeowner packs, warning labels and data sheets oo. how to handover and sign-off to the customers satisfaction pp. how to use all work tools and installation equipment in line with manufacturers and system specifications qq. how to work at height using access equipment and harness systems rr. how and why maintenance of all work tools and installation equipment is carried out.
	7.31	Describe the needs of other occupations and the importance of teamwork and communication when installing blown insulation to cold roofs.

Unit 273 Installing blown insulation to cold roofs in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Unit 274 Installing insulation to create warm roofs in the workplace

Level:	3
GLH:	100
Value for TQT:	190

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when installing insulation to create warm roofs in the workplace.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them.
	1.5 Describe different types of information, their source, accuracy, completeness and how they are interpreted in relation to: a. drawings b. specifications c. schedules d. method statements

	e. risk assessments f. design g. standards h. manufacturers' information i. data sheets j. official guidance k. current legislation and regulations governing buildings.

2	Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when installing insulation to create warm roofs.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. confined spaces c. at height d. tools and equipment e. materials and substances f. movement and storage of materials by manual handling and mechanical lifting.
		2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: a. site b. workplace c. siting and location of vehicles d. company e. customer f. access equipment g. material and waste storage h. the general public.
		2.3 Explain the accident reporting procedures and who is responsible for making reports.
		2.4 Describe the types of fire extinguishers available when installing insulation to create warm roofs and describe how and when they are used in relation to: a. water

	b. CO_2 c. foam d. powder.

3 Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when installing insulation to create warm roofs in relation to the following: a. methods of work b. safe use of health and safety control equipment c. safe use of access equipment and harness systems d. safe use, storage and handling of materials, tools and equipment e. specific risks to health including mental health f. specific risks associated with ventilation and combustion appliances.
	3.2 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when installing external wall insulation in relation to: a. collective protective measures b. personal protective equipment (PPE) c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: a. fires b. spillages c. injuries. d. emergencies relating to occupational activities

	e. identification of and reporting of asbestos containing materials.
	3.4 Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. manufacturers' technical information e. data sheets f. statutory regulations g. official guidance h. Control of Substances Hazardous to Health (COSHH).

4	Select the required quantity and quality of resources for the methods of work to install insulation to create warm roofs.	4.1 Select resources associated with own work in relation to materials, components, finishes, tools and equipment.
		4.2 Check the suitability, compatibility characteristics of the materials, components and finishes determine if they are moisture open or moisture closed and their impact on the building.
		4.3 Record and report issues or defects
		4.4 Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
		4.5 Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. protective sheeting b. warning signs c. temporary barriers d. insulation materials e. air and vapour control materials f. insulation fixings g. soffit and fascia boards h. tile vents i. ridge tiles j. sarking felt vents

		k. fire rated caps l. cable protection m. all work tools.
	4.6	Describe how to confirm that the resources and materials conform to the specification.
	4.7	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.8	Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
	4.9	Describe how to calculate the quantity of materials required and used to ensure, adequacy of fill as per system designer specification and wastage associated with the method and procedure to install insulation to create warm roofs.
5 Minimise the risk of damage to the work and surrounding area when installing insulation to create warm roofs.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2	Maintain a safe, clear and tidy work area.
	5.3	Explain why it is important to maintain a safe, clear and tidy work area
	5.4	Dispose of waste in accordance with current legislation.
	5.5	Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
	5.6	Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation b. environmental responsibilities c. organisational procedures d. suppliers and manufactures' information e. data sheets

	f. statutory regulations g. official guidance.
6 Complete the work within the allocated time when installing insulation to create warm roofs.	6.1 Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
	6.2 Describe the purpose of the work programme, including the estimated and allocated time and explain why deadlines should be kept in relation to: a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances which will affect the work programme.

7	Comply with the given contract information to carry out the work efficiently to install insulation to create warm roofs to the required specification.	7.1	Demonstrate the following work skills when installing insulation to create warm roofs: a. measuring b. marking out c. cutting d. fitting e. positioning f. securing g. making good.
		7.2	Use and maintain all work tools and equipment.
		7.3	Carry out external and internal pre-installation check, assessing, recording and reporting issues to include: a. suitable access b. property suitability c. structural integrity d. dampness e. decay f. vents and ventilation g. services (gas, electric, water, media cables).
		7.4	Prepare and install insulation to the roof pitch using at least one of the following methods in compliance with system specification, manufacturers' instructions, current regulations and to given work instructions: a. placed b. mechanically or adhesively fixed.
		7.5	Prepare and install insulation to pipes, tanks and/or cylinders in compliance with current regulations and to given working instructions.
		7.6	Install air and vapour control layers.
		7.7	Protect electrical services, lighting, media, high amperage cables.
		7.8	Create and protect platforms and walkways for access and storage.
		7.9	Remove and secure building occupants stored items.

	7.10	Install passive ventilation and safeguard existing ventilation in accordance with the system design.
	7.11	Carry out post installation checks to ensure adequate ventilation above and below insulation.
	7.12	Maintain fire resistant barriers.
	7.13	Seal joints, perimeters and penetrations.
	7.14	Minimise the effects of thermal bridging.

	7.15	Complete post installation checks in accordance with the system designer installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects.
	7.16	Provide post installation advice and guidance to building occupants including homeowner packs.
	7.17	Hand over and sign off to the customers satisfaction.
	7.18	Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to carry out external and internal pre-installation checks

	d. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: i. suitable access ii. property suitability iii. structural integrity iv. dampness v. decay vi. vents and ventilation vii. services (gas, electric, water, media cables) e. why it is important to ensure that all necessary repairs are completed prior to installation f. how and why it is important to check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre and post installation g. how to identify and follow the installation quality requirements h. how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: i. condition of building fabric ii. identification of any areas of potential water penetration
7 Continued…	iii. condition of roof iv. damaged or spalled brickwork (gable end) v. drainage and down pipes i. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i. fires safety ii. electrical

	iii. asbestos iv. Radon v. Heritage vi. architectural features vii. ecology viii. ventilation j. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional construction hard-to-treat buildings and historical significance k. how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk l. why it is important to avoid unintended consequences m. why it is important to explain installation procedure to building occupants to include but not limited to the following: i. scope and work programme ii. safety requirements during the installation process iii. protection of property and personal items iv. specific benefits and implications to include homeowner information v. agreed standards of making good n. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to:

	i. timber treatment ii. replacement roof tiles and felt iii. re-wiring iv. loft guarantees v. roof replacement warranties
	o. how to work with, around and in close proximity to plant and machinery p. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment q. how to work in confined spaces r. how to create and protect platforms and walkways s. why it is important to identify and remove infested, damaged and contaminated insulation from roof areas t. how to remove and secure building occupants stored items u. how to identify and install passive ventilation, maintain existing ventilation and report any ventilation limitations identified v. the importance of ensuring all work to services (gas, electric, water, media cables) is carried out by suitably qualified people w. how to check for and protect hidden utilities x. why it is important to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects y. how to prepare and install, placed, mechanically or adhesively fixed insulation to create warm roofs

	z. the different types of air and vapour control layers and breather membranes, where and how they should be used and why it is important to install them correctly aa. the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity bb. why it is important to immediately record and report unforeseen events including but not limited to equipment malfunctions, situations and faults not identified in the original design cc. why it is important to ensure adequate ventilation above and below insulation dd. why it is important to minimise thermal bridging through compliance with design detail ensuring a consistent level of insulation to the area being insulated ee. how to fit cavity barriers in accordance with specification from roof to ground level in order to avoid overspill and underspill between the two separated cavity elements

		ff. how to ensure the insulation is contained within the prescribed areas gg. how to ensure insulation around electrical apparatus will not create fire hazards (lighting, media and high amperage cables) hh. why it is important to maintain fire resistant barriers ii. how to seal joints, perimeters and penetrations jj. why it is important to recognise the potential risk of increased condensation following installation relating to roof coverings (pitched and flat) and roof structures (timber, metal, concrete) kk. why it is important to complete post installation checks in accordance with the design, method statement and installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects ll. why it is important to provide advice to building occupants to preserve the integrity of the insulation (insulation data sheet and warning labels) mm.how to handover and sign off to the customers satisfaction nn. how to use all work tools and equipment oo. how to work at height using access equipment and harness systems pp. how and why maintenance of all work tools and equipment is carried out
	7.19	Describe the needs of other occupations and the importance of teamwork and communication when

	installing insulation to create warm roofs.

Unit 274 Installing insulation to create warm roofs in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

One of the following endorsements required:

- placed
- mechanically or adhesively fixed.

Unit 275 Spraying insulation to create warm roofs in the workplace

Level:	3
GLH:	120
Value for TQT:	190

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when spraying insulation to create warm roofs.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them
	1.5 Describe different types of information, their source, accuracy, completeness and how they are interpreted in relation to: a. drawings b. specifications

	c. schedules d. method statements e. risk assessments f. design g. standards h. manufacturers' information i. data sheets j. official guidance k. current legislation and regulations governing buildings.

2	Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when spraying insulation to create warm roofs.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. confined spaces c. at height d. tools and equipment e. materials and substances f. movement and storage of materials by manual handling and mechanical lifting.
		2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: a. site b. workplace c. siting and location of vehicles d. company e. customer f. access equipment g. material and waste storage h. the general public.
		2.3 Explain the accident reporting procedures and who is responsible for making reports.
		2.4 Describe the types of fire extinguishers available when spraying insulation to create warm

		roofs and describe how and when they are used in relation to: a. water b. CO_2 c. foam d. powder.

3 Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1	Demonstrate compliance with relevant legislation, standards and official guidance when spraying insulation to create warm roofs in relation to the following: a. methods of work b. safe use of health and safety control equipment c. safe use of access equipment and harness systems d. safe use, storage and handling of materials, tools and equipment e. operative maintenance of installation equipment f. specific risks to health including mental health g. specific risks associated with ventilation and combustion appliances.
	3.2	Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when spraying insulation to create warm roofs in relation to: a. collective protective measures b. personal protective equipment (PPE) c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
	3.3	Describe how emergencies should be responded to in accordance with

		organisational authorisation and personal skills in relation to: a. fires, spillages, injuries b. emergencies relating to occupational activities c. identification of and reporting of asbestos containing materials.
	3.4	Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. manufacturers' technical information e. data sheets f. statutory regulations g. official guidance h. Control of Substances Hazardous to Health (COSHH).
4 Select the required quantity and quality of resources for the methods of work to spray insulation to create warm roofs.	4.1	Select resources associated with own work in relation to materials and components, tools and equipment.
	4.2	Check the suitability, compatibility and characteristics of the materials, components and finishes, determine if they are moisture open or moisture closed and their impact on the building.
	4.3	Record and report issues or defects.
	4.4	Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
	4.5	Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. insulation b. fixings and ancillary items c. access boards

		d. fire rated caps e. cable protection f. all work tools g. installation equipment.
	4.6	Describe how to confirm that the resources and materials conform to the specification.
	4.7	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.8	Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
	4.9	Describe how to calculate the quantity of materials required and used to ensure adequacy of fill as per the system designer specification and wastage associated with the method and procedure to spray insulation to create warm roofs.

5 Minimise the risk of damage to the work and surrounding area when spraying insulation to create warm roofs.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2	Maintain a safe, clear and tidy work area.
	5.3	Explain why it is important to maintain a safe, clear and tidy work area.
	5.4	Dispose of waste in accordance with current legislation.
	5.5	Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
	5.6	Explain the importance of protecting the work and its surrounding area against the risk of damage.

	5.7 Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation b. environmental responsibilities c. organisational procedures d. manufacturers' information e. data sheets f. statutory regulations g. official guidance.
6 Complete the work within the allocated time when spraying insulation to create warm roofs.	6.1 Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
	6.2 Describe the purpose of the work programme, including the estimated and allocated time and explain why deadlines should be kept in relation to: a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances which will affect the work programme.

7 Comply with the given contract information to carry out the work efficiently to spray insulation to create warm roofs to the required specification.	7.1 Demonstrate the following work skills when spraying insulation to create warm roofs: a. measuring b. marking out c. calculating d. making good.
	7.2 Use and maintain all work tools and installation equipment.
	7.3 Carry out external and internal pre-installation checks assessing, recording and reporting issues to include:

		a. suitable access b. property suitability c. structural integrity d. dampness e. decay f. exposure ratings g. vents and ventilation h. services (gas, electric, water, media cables).
	7.4	Prepare and install sprayed insulation to create a warm roof in accordance with the specification, design, drawings and method statements to given working instructions.
	7.5	Avoid damage to the building, recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: a. condition of building fabric b. identification of any areas of potential water penetration c. condition of roof.
	7.6	Create and protect walkways and platforms for access and storage.
	7.7	Remove and secure building occupants stored items.
	7.8	Identify and install passive ventilation as required by the design and report any identified ventilation limitations.
	7.9	Identify and report the potential risk of uninsulated omitted areas in relation to increased condensation following installation relating to roof coverings (pitched and flat) and roof structures (timber, metal, concrete).
	7.10	Check for and protect hidden utilities.
	7.11	Protect electrical services, lighting, media, high amperage cables.
	7.12	Use and maintain all work tools and installation equipment.
	7.13	Confirm pre-installation material checks are within specified parameters to include checking and

		recording batch number and reporting defects.
	7.14	Assemble and operate installation processing equipment in line with manufacturers and system manuals.
	7.15	Calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers specifications and material requirements.
	7.16	Install passive ventilation and safeguard existing ventilation.
	7.17	Prepare and fix pipe, tank and cylinder insulation.
	7.18	Ensure the insulation is contained within the prescribed areas.
	7.19	Ensure insulation around electrical apparatus will not create fire hazards (light fittings, electrical units and cables).
	7.20	Install and maintain fire resistant barriers where appropriate.
	7.21	Minimise the effects of thermal bridging through compliance with design detail and ensuring a consistent level of insulation of the installed area.
	7.22	Clean and disassemble installation processing equipment and pack away for transportation.
	7.23	Provide post installation advice and guidance to building occupants to include homeowner packs and data sheets.
	7.24	Complete post installation checks in accordance with the system designer installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects.
	7.25	Use all work tools.
	7.26	Work at height using access equipment and harness systems.
	7.27	Carry out post installation checks.

	7.28 Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to carry out external and internal pre-installation checks d. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to: i. suitable access ii. property suitability iii. structural integrity iv. dampness v. decay vi. exposure ratings vii. vents and ventilation viii. services (gas, electric, water, media cables) e. why it is important to ensure that all necessary repairs are completed prior to installation f. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i. fire safety ii. electrical iii. asbestos iv. Radon v. heritage

	vi. architectural features vii. ecology viii. ventilation g. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance h. how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk i. why it is important to avoid unintended consequences j. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: i. building warranties ii. roof skylights iii. loft guarantees iv. timber treatment k. recognise the procedures to check flues and combustion air ventilation l. check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre- and post-installation m. how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: i. condition of building fabric ii. identification of any areas of potential water penetration iii. condition of roof

	n. how to work with, around and in close proximity to plant and machinery o. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment p. why it is important to explain installation procedure to building occupants to include but not limited to the following: i. scope and work programme ii. safety requirements during the installation process iii. protection of property and personal items iv. specific benefits and implications to include homeowner information v. agreed standards of making good q. how to identify and follow the installation quality requirements r. how to create and protect walkways and platforms s. how to remove and secure building occupants stored items t. how to identify and install passive ventilation as required by the design and report any identified ventilation limitations u. how to identify and report the potential risk of uninsulated omitted areas in relation to increased condensation following installation relating to roof coverings (pitched and flat) and roof structures (timber, metal, concrete) v. the importance of ensuring all work to services (gas, electric, water, media cables) is carried

	out by suitably qualified people w. how to check for and protect hidden utilities x. how to protect electrical services, lighting, media, high amperage cables y. how to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects z. how to assemble and operate installation processing equipment in line with manufacturers and system manuals aa. how to calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers specifications and material requirements bb. how to prepare and install sprayed insulation to create a warm roof cc. how to ensure the insulation is contained within the prescribed areas dd. how to ensure insulation around electrical apparatus will not create fire hazards (light fittings, electrical units and cables) ee. how to install and maintain fire resistant barriers where appropriate ff. why it is important to minimise the effects of thermal bridging through compliance with design detail and ensuring a consistent level of insulation of the installed area gg. how to clean and disassemble installation processing equipment and pack away for transportation

	hh. the different types of air and vapour control layers and breather membranes, where and how they should be used and why it is important to install them correctly ii. the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity jj. why it is important to complete post installation checks in accordance with the system designer installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects kk. why it is important to provide post installation advice and guidance to building occupants including homeowner packs ll. how to handover and sign off to the customers satisfaction mm. how to use all work tools and installation equipment in line with manufacturers and system specifications nn. how to work at height using access equipment and harness systems oo. why it is important to immediately record and report unforeseen events including but not limited to equipment malfunctions, situations and faults not identified in the original design pp. how and why maintenance of all work tools and installation equipment is carried out
	7.29 Describe the needs of other occupations and the importance of teamwork and communication when

	spraying insulation to create warm roofs.

Unit 275 Spraying insulation to create warm roofs in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Unit 276 Installing external wall insulation in the workplace

Level:	3
GLH:	125
Value for TQT:	250

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when installing external wall insulation.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. suppliers and manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them
	1.5 Describe different types of information, their source, accuracy, completeness and how they are interpreted in relation to: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. design g. standards h. suppliers and manufacturers' information

	i. data sheets j. official guidance k. current legislation and regulations governing buildings.

2	Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when installing external wall insulation.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. below ground level c. confined spaces d. at height e. tools and equipment f. materials and substances g. movement and storage of materials by manual handling and mechanical lifting.
		2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: a. site b. workplace c. siting and location of vehicles d. company e. customer f. access equipment g. material and waste storage h. the general public.
		2.3 Explain the accident reporting procedures and who is responsible for making reports.
		2.4 Describe the types of fire extinguishers available when installing external wall insulation and describe how and when they are used in relation to: a. water b. CO_2 c. foam d. powder.

3	Comply with current, relevant legislation,	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when installing

standards and official guidance to carry out your work and maintain safe and healthy work practices.		external wall insulation in relation to the following: a. methods of work b. safe use of health and safety control equipment c. safe use of access equipment and harness systems d. safe use, storage and handling of materials, tools and equipment e. operative maintenance of installation equipment f. specific risks to health including mental health ~~g.~~ specific risks associated with ventilation and combustion appliances.
	3.2	Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when installing external wall insulation in relation to: a. collective protective measures b. personal protective equipment (PPE) c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
	3.3	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: a. fires b. spillages c. injuries d. emergencies relating to occupational activities e. identification of and reporting of asbestos containing materials.
	3.3	Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. suppliers and manufacturers' technical information e. data sheets f. statutory regulations

	g. official guidance h. Control of Substances Hazardous to Health (COSHH).
	3.4 Select resources associated with own work in relation to materials, components and finishes, tools and equipment.
4 Select the required quantity and quality of resources for the methods of work to install external wall insulation.	4.1 Check the suitability, compatibility and characteristics of the materials, components and finishes, determine if they are moisture open or moisture closed and their impact on the building.
	4.2 Record and report issues or defects.
	4.3 Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
	4.4 Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. protective sheeting b. masking materials c. insulation and fixings d. warning signs e. public protection equipment f. renders, reinforcements, g. base tracks and fixings h. vent sleeves i. primers j. adhesives k. fire stops l. expansion and movement joints, compression joints m. pattress's n. corner beads and profiles o. base coats p. seal tapes and joints q. mesh and stress patches r. topcoats and finishes s. sealants t. mechanical fixing components u. pre-formed trims v. tracks and shims w. beads x. joints and cills

	y. air and vapour control materials ~~z.~~ all work tools and equipment.
	4.5 Describe how to confirm that the resources and materials conform to the specification.
	4.6 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.7 Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
	4.8 Describe how to calculate the quantity of materials required as per the system designer specification and wastage associated with the method and procedure to install external wall insulation.

5 Minimise the risk of damage to the work and surrounding area when installing external wall insulation.	5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2 Maintain a safe, clear and tidy work area.
	5.3 Explain why it is important to maintain a safe, clear and tidy work area.
	5.4 Dispose of waste in accordance with current legislation.
	5.5 Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
	5.6 Explain the importance of protecting the work and its surrounding area against the risk of damage.
	5.7 Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation b. environmental responsibilities c. organisational procedures d. suppliers and manufacturers' information

		e. data sheets f. statutory regulations g. official guidance.
6	Complete the work within the allocated time when installing external wall insulation.	6.1 Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
		6.2 Describe the purpose of the work programme, including the estimated and allocated time and explain why deadlines should be kept in relation to: a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances which will affect the work programme.

7	Comply with the given contract information to carry out the work efficiently to install external wall insulation to the required specification.	7.1 Demonstrate the following work skills when installing external wall insulation: a. removing b. measuring c. marking out d. cutting e. line and level f. drilling g. fitting h. fixing i. filling j. finishing k. positioning and securing.
		7.2 Use and maintain all work tools and equipment.
		7.3 Carry out external and internal pre installation checks assessing, recording and reporting issues to include: a. suitable access b. property suitability c. structural integrity d. dampness e. decay f. vents and adequate ventilation

		g. services (gas, electric, water, media cables) h. architectural features i. vegetation j. rainwater goods k. loose surface finishes l. external cracking m. water ingress n. damp proof course.
	7.4	Prepare and install insulated external wall system in accordance with the specification, design, drawings and method statements.
	7.5	Cut and fix pre-formed trims and mounting blocks.
	7.6	Install pattresses for fixtures and fittings.
	7.7	Apply treatments to existing walls.
	7.8	Embed mesh and stress patches in accordance with specification.
	7.9	Carry out mid-install checks to boarding and basecoat stage.
	7.10	Apply mastic aesthetic sealant to all interface, joints and penetrations.
	7.11	Install air and vapour control layers.
	7.12	Make good any marks and holes following scaffold removal.
	7.13	Handover and sign off to the customers satisfaction.
	7.14	Carry out post installation checks.
	7.15	Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to

	the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to carry out external and internal pre-installation checks d. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to: i. suitable access ii. property suitability iii. structural integrity iv. dampness v. decay vi. vents and ventilation vii. services (gas, electric, water, media cables) viii. vegetation ix. rainwater goods x. loose surface finishes xi. external cracking xii. water ingress xiii. damp proof course e. why it is important to ensure that all necessary repairs are completed prior to installation f. the importance and function of pull-out tests g. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i. fire safety ii. electrical iii. media cables iv. signal receiving equipment v. junction boxes vi. asbestos vii. Radon viii. heritage

	ix. architectural features x. ecology xi. ventilation xii. flues h. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance i. how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of: thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk j. why it is important to avoid unintended consequences k. the effects of weather and the restrictions when applying an external wall system l. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: i. wall ties ii. windows iii. damp proof course iv. renders v. Tyrolean coatings vi. silicone weatherproof coatings m. how to protect the adjacent surfaces n. how to remove ancillary wall fixtures including but not limited to downpipes, soil pipes, alarm boxes, fences, handrails, as necessary to install the system in accordance with the specification, design,

	drawings and method statements o. how to prepare surfaces by removing existing defective surface finishes, repairing and using appropriate materials to make good the following, including but not limited to holes, loose render, belcasts, painted surfaces, remove existing vegetation and treat p. how to apply surface treatments to existing walls q. why it is important to identify and report architectural features not addressed on the design r. why it is important to provide temporary protective covers to work areas s. how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: i. confirm condition of substrate building fabric ii. identification of any areas of potential water penetration iii. visibility and completeness of damp proof course iv. condition of window and door seals v. height of internal floors in relation to external floor height vi. condition of roof vii. damaged brickwork viii. drainage and down pipes ix. protection and existence of sub floor ventilation

	x. cavity width and identification of any debris xi. electrical cables, media cables, junction and meter boxes, signal receiving equipment xii. flues, gas pipes, chimneys and combustion air ventilators xiii. identification of protected wildlife (nesting birds, bees, bats) t. why it is important to explain installation procedure to building occupants to include but not limited to the following: i. scope and work programme ii. safety requirements during the installation process iii. protection of property and personal items iv. specific benefits and implications to include homeowner information v. agreed standards of making good u. how to work with, around and in close proximity to plant and machinery v. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment w. how to identify and follow the installation quality requirements x. how and why it is important to check, record and report issues with construction ventilation,

	flues, chimneys and combustion air ventilators pre and post installation y. how to ensure pre-installation material checks are within specification z. how to prepare and install insulated external wall system in accordance with the system design, specification and details, method statement and the require standard aa. how to cut and fix pre-formed trims and mounting blocks bb. how to cut, line, level, drill and fix tracks, beads, shims, joints, cills cc. how to install pattresses for fixtures and fittings dd. how to apply weather sealing and compressive tapes at interfaces and penetrations ee. how to install insulation to walls with specified fixing pattern using adhesive and mechanical fasteners ff. how to apply base coat to insulation gg. how to embed mesh and stress patches in accordance with specification hh. how to apply second coat and primers ii. how to reinstate ancillary wall fixtures including but not limited to downpipes, alarm boxes, fences, handrails jj. how to apply mastic aesthetic sealant to all interface, joints and penetration kk. how to make good any marks and holes following scaffold removal ll. the different types of air and vapour control layers and breather membranes, where and how they should

		be used and why it is important to install them correctly mm. the importance of ensuring the integrity of air and vapour control layers and breather membranes, following installation and the need to maintain continuity nn. why it is important to immediately record and report unforeseen events including but not limited to equipment malfunctions, situations and faults not identified in the original design oo. how to handover and sign off to the customers satisfaction and explain maintenance requirements pp. why it is important to complete post installation checks in accordance with the system designer installations manual, specifications, water penetration, anchorage and fixing, vents, services (gas, electric, water, media cables) qq. why it is important to provide post installation advice and guidance to building occupants and client including homeowner packs rr. how to use all work tools and installation equipment in line with manufacturers' and system specifications ss. how to work at height using access equipment and harness systems tt. how and why operative/technician care maintenance of all work tools and installation equipment is carried out
	7.16	Describe the needs of other occupations and the importance of teamwork and communication when installing external wall insulation.

Unit 276 Installing external wall insulation in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Unit 277 Park homes insulation

Level:	3
GLH:	130
Value for TQT:	250

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when reviewing the suitability of Park Homes for insulation measures.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. manufacturers' information g. data sheets h. surveys i. Park Home site rules and restrictions.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them.
	1.5 Describe different types of information, their source, accuracy, completeness and how they are interpreted in relation to: a. drawings b. specifications

	c. schedules d. method statements e. risk assessments f. designs g. manufacturers' information h. data sheets i. official guidance j. current legislation and regulations governing Park Homes k. Park Home site rules.

2	Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when reviewing the suitability of Park Homes for insulation measures.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. below suspended structures c. confined spaces d. at height e. tools and equipment f. materials and substances g. movement and storage of materials by manual handling and mechanical lifting h. vehicles.
		2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: a. site b. workplace c. siting and location of vehicles d. company e. customer f. access equipment g. material and waste storage

	h. park personnel, visitors and other park residents.
	2.3 Explain the accident reporting procedures and who is responsible for making reports.
	2.4 Describe the types of fire extinguishers available when reviewing the suitability of Park Homes for insulation measures and describe how and when they are used in relation to: a. water b. CO2 c. foam d. powder.

3	Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with relevant legislation, standards and official guidance when reviewing the suitability of Park Homes for insulation measures in relation to the following: a. methods of work b. safe use of health and safety control equipment c. safe use of access equipment d. safe use, storage and handling of materials, tools and equipment e. operative maintenance of installation equipment f. specific risks to health including mental health g. specific risks associated with ventilation (roof space, inside the property, working below suspended supported floor structure) and also including combustion appliances.
		3.2 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when reviewing the suitability of Park Homes for insulation measures in relation to: a. collective protective measures b. personal protective equipment (PPE)

	c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: a. fires b. spillages c. injuries d. emergencies relating to occupational activities including but not limited to the following: i. partial or full collapse of suspension system ii. electrical cabling iii. Radon, methane, LPG or other gases iv. identification of and reporting of asbestos containing materials.
	3.4 Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. manufacturers' technical information e. data sheets f. statutory regulations g. official guidance h. Control of Substances Hazardous to Health (COSHH) i. Park Home site rules.
4 Select the required quantity and quality of resources as per the designs for the methods of work when reviewing the suitability of Park Homes for insulation measures.	4.1 Select resources associated with own work in relation to materials, components and finishes, tools and equipment.
	4.2 Check the suitability, compatibility and characteristics of the materials, components and finishes, determine if they are moisture open or moisture closed and their impact on the building.
	4.3 Record and report issues or defects.

	4.4 Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
	4.5 Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. protective sheeting b. warning signs c. public protection equipment d. calibration equipment.
	4.6 Describe how to confirm that the resources and materials conform to the specification.
	4.7 Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.8 Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
	4.9 Describe how to calculate the quantity of materials required and used to carry out remediation and preparatory work.

5	Minimise the risk of damage to the work and surrounding area when reviewing the suitability of Park Homes for insulation measures.	5.1	Protect the work and its surrounding internal and external area from damage in accordance with safe working practices and organisational procedures.
		5.2	Maintain a safe, clear and tidy work area.
		5.3	Explain why it is important to maintain a safe, clear and tidy work area.
		5.4	Dispose of waste in accordance with current legislation.
		5.5	Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
		5.6	Explain the importance of protecting the work and its surrounding area against the risk of damage.
		5.7	Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation b. environmental responsibilities c. organisational procedures d. manufacturers' information e. data sheets f. statutory regulations g. official guidance h. Park Home site rules.
6	Complete the work within the allocated time when reviewing the suitability of Park Homes for insulation measures.	6.1	Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
		6.2	Describe the purpose of the work programme, including the estimated and allocated time and explain why deadlines should be kept in relation to: a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances

	which will affect the work programme.

7 Comply with the given contract information to carry out the work efficiently when reviewing the suitability of Park Homes for insulation measures to the required specification.	7.1 Demonstrate work skills to carry out external and internal pre-installation checks, to cover the following: a. moisture content of frame at all corners b. integrity of Park Home fabric and suspension system c. any signs of board warping, bubbling, dry rot d. the distance between Park Homes will meet fire regulations following installation e. gas pipes, bottles and electrical cables are secure and safe f. insect infestation, vermin, animals and protected species.
	7.2 Demonstrate work skills to carry out the following: a. measuring b. marking out c. calibrating d. completing remedial and preparatory work.
	7.2 Use and maintain all work tools.
	7.3 Carry out post installation checks.
	7.5 Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their

	impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to carry out external and internal pre-installation checks d. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to: i. Park Home site approvals ii. suitable access iii. property suitability iv. structural integrity v. dampness vi. decay vii. vents and ventilation viii. suitable minimum Park Home spacing following proposed installation ix. services (gas, electric, water, media cables, overhead cables, insect and vermin infestation, animals and protected species) e. why it is important to ensure that all necessary repairs are completed prior to installation f. how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: i. condition of building fabric ii. identification of any areas of potential water penetration iii. mould or evidence of condensation iv. moisture content of the timber frame and dry rot

	v. condition of windows and doors vi. lack of permission from site owner vii. condition of roof viii. space between park homes would be less than 6m following installation ix. drainage and down pipes x. poor condition of suspension system g. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i. fire safety ii. electrical iii. asbestos iv. Radon v. ecology vi. architectural features vii. ventilation viii. combustion ventilation ix. gas h. how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of: thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk i. why it is important to avoid unintended consequences j. the different types of air and vapour control layers and breather membranes, where and how they should be used and why it is important to install them correctly k. the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity

	l. why it is important to explain installation procedure to building occupants to include but not limited to the following: i. scope and work programme i. safety requirements during the installation process ii. protection of property and personal items iii. specific benefits and implications to include homeowner information iv. agreed standards of making good m. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: i. the Park Home ii. windows and doors iii. renders iv. previous damp treatments n. how to work with, around and in close proximity to plant and machinery o. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment p. how to identify and follow the installation quality requirements q. how and why it is important to check, record and report issues with combustion ventilation, flues, chimneys and combustion air ventilators pre, during and post installation r. how to identify routing of internal services, using relevant detectors s. why it is important to immediately record and report unforeseen events including but not limited to

	equipment malfunctions, situations and faults not identified in the original design t. why it is important to complete post installation checks in accordance with the designs and operations manual and report issues to include, but not limited to, safeguarding the combustion ventilation, services and report defects u. why it is important to provide post installation advice and guidance to building occupants including homeowner packs v. how to handover and sign off to the customers satisfaction w. how to use all work tools and equipment x. how to work at height using access equipment y. how and why maintenance of all work tools and equipment is carried out
	7.6 Describe the needs of other occupations and the importance of teamwork and communication when reviewing the suitability of Park Homes for insulation measures.

Unit 277 Park homes insulation

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Unit 278 Applying surface finishes to external wall insulation in the workplace

Level:	3
GLH:	85
Value for TQT:	215

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Interpret the given design information relating to the work and resources to confirm its accuracy, completeness and relevance to the building type, fabric and condition when applying surface finishes to external wall insulation.	1.1 Interpret and extract relevant information from: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. suppliers and manufacturers' information g. data sheets.
	1.2 Comply with information and/or instructions derived from risk assessments and method statements.
	1.3 Describe why the organisational procedures have been developed and how they are implemented.
	1.4 Explain the importance of organisational procedures to solve problems and why it is important to follow them.
	1.5 Describe different types of information, their source, accuracy, completeness and how they are interpreted in relation to: a. drawings b. specifications c. schedules d. method statements e. risk assessments f. design g. standards h. suppliers and manufacturers' information i. data sheets j. official guidance

	k. current legislation and regulations governing buildings.

2 Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when applying surface finishes to external wall insulation.	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: a. the workplace b. below ground level c. confined spaces d. at height e. tools and equipment f. materials and substances g. movement and storage of materials by manual handling and mechanical lifting.
	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: a. site b. workplace c. siting and location of vehicles d. company e. customer f. access equipment g. materials and waste storage h. the general public.
	2.3 Explain the accident reporting procedures and who is responsible for making reports.
	2.4 Describe the types of fire extinguishers available when applying surface finishes to external wall insulation and describe how and when they are used in relation to: a. water b. CO_2 c. foam d. powder.

3 Comply with current, relevant legislation, standards and official guidance to carry out your	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when applying surface finishes to external wall insulation in relation to the following: a. methods of work

work and maintain safe and healthy work practices when applying surface finishes to external wall insulation.		b. safe use of health and safety control equipment c. safe use of access equipment and harness systems d. safe use, storage and handling of materials, tools and equipment e. operative maintenance of installation equipment f. specific risks to health including mental health g. specific risks associated with ventilation and combustion appliances.
	3.2	Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used when applying surface finishes to external wall insulation, in relation to: a. collective protective measures b. personal protective equipment (PPE) c. respiratory protective equipment (RPE) d. local exhaust ventilation (LEV).
	3.3	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: a. fires b. spillages c. injuries d. emergencies relating to occupational activities e. identification of and reporting of asbestos containing materials.
	3.4	Describe how to report risks and hazards identified by the following: a. risk assessment b. personal assessment c. methods of work d. suppliers and manufacturers' technical information e. data sheets f. statutory regulations g. official guidance

	h. Control of Substances Hazardous to Health (COSHH).

4 Select the required quantity and quality of resources for the methods of work to apply surface finishes to external wall insulation.	4.1	Select resources associated with own work in relation to materials, components, fixings, finishes, tools and equipment.
	4.2	Check the suitability, compatibility characteristics of the materials, components, fixing and finishes determine if they are moisture open or moisture closed and their impact on the building.
	4.3	Record and report issues or defects.
	4.4	Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
	4.5	Describe how the resources should be used and how problems associated with the resources are reported in relation to: a. primers b. paints c. beads and trims d. reinforcement e. stress patches f. renders g. mesh h. sealants and sealant tapes and strips i. fixing and fittings j. all work tools k. installation equipment.
	4.6	Describe how to confirm that the resources and materials conform to the specification.
	4.7	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	4.8	Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
	4.9	Describe how to calculate the quantity length, area and wastage

		associated with the method and procedure to apply surface finishes to external wall insulation.

5 Minimise the risk of damage to the work and surrounding area when applying surface finishes to external wall insulation.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2	Maintain a safe, clear and tidy work area.
	5.3	Explain why it is important to maintain a safe, clear and tidy work area.
	5.4	Dispose of waste in accordance with current legislation.
	5.5	Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
	5.6	Explain the importance of protecting the work and its surrounding area against the risk of damage.
	5.7	Explain why and how the disposal of waste must be carried out safely in accordance with the following: a. current legislation b. environmental responsibilities c. organisational procedures d. suppliers and manufactures' information e. data sheets f. statutory regulations g. official guidance.
6 Complete the work within the allocated time when applying surface finishes to external wall insulation.	6.1	Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
	6.2	Describe the purpose of the work programme, including the estimated and allocated time and explain why deadlines should be kept in relation to:

	a. types of progress charts, timetables and estimated times b. organisational procedures for reporting circumstances which will affect the work programme.

7 Comply with the given contract information to carry out the work efficiently when applying surface finishes to external wall insulation to the required specification.	7.1 Demonstrate the following work skills when applying surface finishes to external wall insulation: a. measuring b. marking out c. mixing d. applying e. making good including any defects.
	7.2 Use and maintain all work tools and equipment.
	7.3 Carry out external and internal pre-installation check, assessing, recording and reporting issues to include: a. suitable access b. property suitability c. structural integrity d. architectural features e. vegetation f. rainwater goods g. cracking h. position of damp proof course i. dampness j. decay k. vents and ventilation l. services (gas, electric, water, media cables).
	7.4 Apply base coats, reinforcing mesh and stress patches in accordance with the design.
	7.5 Apply corner and surface beads and trims.
	7.6 Apply sealant tapes, strips and mastics.
	7.7 Prepare and apply external wall insulation (EWI) surface finishes to given system designer specification, method statement and the required standard for at least three of the following: a. dash finishes b. synthetic or non-synthetic renders c. proprietary pre-cast finishes d. paint finishes e. brick slips f. brick effect render

7 Continued	7.8	Fit weather seals.
	7.9	Carry out post installation repairs.
	7.10	Handover and sign off to the customers satisfaction.
	7.11	Carry out post installation checks.
	7.12	Describe how the methods of work to meet the specification, are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: a. the suitability, compatibility and characteristics of the materials, components and finishes, and determine if they are moisture open or moisture closed, their impact on the building and their appropriateness to the design and physical application b. how to record and report issues or defects with the materials, components and finishes c. why it is important to carry out external and internal pre-installation checks d. how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: i. suitable access ii. property suitability iii. structural integrity iv. dampness v. decay vi. vents and ventilation vii. vegetation viii. services (gas, electric, water, media cables) ix. architectural features x. rainwater goods xi. cracking xii. position of damp proof course e. why it is important to ensure that all necessary repairs are completed prior to installation f. the weather restrictions for each external wall system finish

	g. how and why it is important to check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre and post installation h. why it is important to Identify and report potential thermal bridging i. how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: i. condition of building fabric - *identification of any areas of potential water penetration* ii. visibility and completeness of damp proof course iii. condition of window and door seals iv. damaged or spalled brickwork v. drainage and down pipes vi. protection and existence of sub floor ventilation - *electrical cables, media cables, junction and meter boxes* vii. signal receiving equipment - *flues, gas pipes, chimneys and combustion air ventilators.* - *identification of protected wildlife (nesting birds, bees, bats).* j. how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: i. fire safety ii. electrical iii. media cables iv. signal receiving equipment v. junction boxes vi. asbestos vii. Radon viii. heritage

	ix. ecology x. ventilation xi. flues k. the relevance of an assessment of significance and how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance l. how to identify, record, report and rectify unintended consequences not addressed in the design, including but not limited to the existence of: thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk m. why it is important to avoid unintended consequences n. why it is important to explain installation procedure to building occupants to include but not limited to the following: i. scope and work programme ii. safety requirements during the installation process iii. protection of property and personal items iv. specific benefits and implications to include homeowner information v. agreed standards of making good o. the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: i. windows & doors ii. damp proof course iii. renders iv. Tyrolean coatings v. silicone weatherproof coatings p. how to work with, around and in close proximity to plant and machinery q. how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment

	r. how to identify and follow the installation quality requirements s. how to ensure pre-installation material checks are within specified parameters and reporting defects t. how to fix corner surface beads and trims u. how to apply base and primer coats, reinforcing mesh and stress patches v. how to fit weather seals at interfaces, window and door reveals and at system penetrations in accordance with design details w. how to apply dash finishes, synthetic and non-synthetic renders, proprietary pre-cast finishes, paint finishes, brick slips and brick effect render to external wall insulation system including door and window reveals x. how to reinstate fixtures and fittings and seal y. the different types of air and vapour control layers and breather membranes, where and how they should be used and why it is important to install them correctly z. the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity aa. why it is important to complete post installation checks: compliance with specifications, resistance to water penetration, anchorage, and fixing, vents, services (gas, electric, water, media cables) bb. how to carry out any repairs after installation cc. why it is important to immediately record and report unforeseen events including but not limited to equipment malfunctions, situations and faults not identified in the original design dd. why it is important to complete post installation checks in accordance with system designer

	installations operations manual and report issues ee. why it is important to provide post installation advice and guidance to building occupants and client including homeowner packs ff. how to handover and sign off to the customers satisfaction gg. how to use all work tools and installation equipment hh. how to work at height using access equipment and harness systems ii. how and why maintenance of all work tools and installation equipment is carried out
	7.13 Describe the needs of other occupations and the importance of teamwork and communication when applying surface finishes to external wall insulation.

Unit 278 Applying surface finishes to external wall insulation in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against the endorsements detailed within the relevant NVQ structure. Please refer to the NVQ structure applicable to the qualification/occupational area in which the candidate is being assessed

Three of the following endorsements required:

- dash finishes
- synthetic or non-synthetic renders
- proprietary pre-cast finishes
- paint finishes
- brick slips
- brick effect render.

Unit 300 Confirming work activities and resources for an occupational work area in the workplace

Level:	3
GLH:	43
Value for TQT	100

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Identify work activities, assess required resources and plan the sequence of work.	1.1 Identify work activities, assess required resources and plan the sequence of work.
	1.2 Identify work activities and formulate a plan for their own sequence of work.
	1.3 Explain the types of work relative to the occupational area and how to identify different work activities.
	1.4 Explain methods of assessing the resources needed from a range of available information.
	1.5 Explain the required information and the different methods used to prepare a work programme relative to the occupational area.
2 Obtain clarification and advice where the resources required are not available.	2.1 Seek advice and clarity from appropriate sources on resources available and the alternatives that can be used for the work when required resources are not available.
	2.2 Explain the different sources and methods that can be used to obtain clarification and advice when the required resources are not available.

3 Evaluate the work activities and the requirements of any significant external factors against the project requirements.	3.1 Assess progress of work against project requirements, taking into account external factors relating to: a. other occupations and /or customers b. resources c. weather conditions d. health and safety requirements.
	3.2 Explain different methods of evaluating work activities against the following project requirements: a. contract conditions b. contract programme c. health and safety requirements of operatives.
	3.3 Evaluate the requirements of significant external factors that could affect the progress of work, in relation to: a. other related programmes b. special working conditions c. weather conditions d. other occupations/people e. resources f. health and safety requirements.

4 Identify work activities which influence each other and make the best use of the resources available.	4.1 Determine work activities that have an influence on each other.
	4.2 Evaluate which work activities make the best use of available resources in relation to: a. occupations and/or customers associated with the work b. tools, plant and/or ancillary equipment c. materials and components.
	4.3 Explain different methods and sources that can identify which work activities influence each other.
	4.4 Describe how to determine the sequence of work activities and how long each work activity will take.
	4.5 Describe what zero and low carbon requirements are.
	4.6 Explain how work activities and different ways of using resources can impact on zero and low carbon requirements, and make a positive contribution to the environment.
5 Identify changed circumstances that require alterations to the work programme and justify them to decision makers.	5.1 Evaluate project progress against the work programme to identify any changed circumstances.
	5.2 Inform line management and/or customers on the type and extent of any required changes to the work programme.
	5.3 Explain how to identify possible alterations to the work programme to meet changed circumstances relating to action lists, method statements, duration, schedules and/or occupation specific requirements.
	5.4 Explain how to assess contractual/work effects resulting from alterations to the work programme.
	5.5 Explain the methods used to justify to decision makers on the effects

	resulting from alterations to the work programme.

Unit 300 Confirming work activities and resources for an occupational work area in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment, in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Unit 303 Confirming the occupational method of work in the workplace

Level:	3
GLH:	47
Value for TQT:	110

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Assess available project data accurately to determine the occupational method of work.	1.1 Interpret and extract information from drawings, specifications, schedules, manufacturer's information, methods of work, risk assessments and programmes of work.
	1.2 Explain how to summarise the following project data: a. required quantities b. specifications c. detailed drawings d. health and safety requirements e. timescales f. scope of works.
	1.3 Explain the different methods of assessing available project data.
	1.4 Explain how to use project data to interpret the work method, In relation to: a. standard work procedures b. sequence of work c. organisation of resources (people, equipment, materials) d. work techniques e. working conditions (health, safety and welfare) f. risk assessment.

2 Obtain additional information from alternative sources in cases where the available project data is insufficient.	2.1 Collect and collate additional information from alternative sources to clarify the work to be carried out.
	2.3 Explain different methods and techniques of obtaining additional information from the following alternative sources when available project data is insufficient: a. customers or representatives b. suppliers c. regulatory authorities d. manufacturer's literature.

3 Identify work methods that will make best use of resources and meet project, statutory and contractual requirements.	3.1 Examine potential work methods to carry out the occupational work activity.
	3.2 Determine which work methods will make best use of relevant resources and meet health and safety requirements relating to technical and/or project criteria.
	3.3 Explain how to identify work methods that make best use of resources and meet project, statutory and contractual requirements against technical criteria, in relation to: a. health and safety welfare (principles of protection) b. fire protection c. access and egress d. equipment availability e. availability of competent workforce f. pollution risk g. waste and disposal h. zero and low carbon outcomes i. weather conditions.
	3.4 Explain how to identify work methods that make best use of resources and

		meet project, statutory and contractual requirements against project criteria, in relation to: a. conforming to statutory requirements b. customer and user needs c. contract requirements in terms of time, quantity and quality d. environmental considerations.
	3.5	Explain how different methods of work can achieve zero/low carbon outcomes.
4 Confirm and communicate the selected work method to relevant personnel.	4.1	Confirm the selected occupational work method that meets project, statutory and contractual requirements.
	4.2	Communicate appropriately to relevant people on the selected occupational work method.
	4.3	Describe the different techniques and methods of confirming and communicating work methods to relevant people.
	4.4	Explain the principles of equality and diversity and how to apply them when working and communicating with others.

Unit 303 Confirming the occupational method of work in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Unit 502 Developing and maintaining good occupational working relationships in the workplace

Level:	3
GLH:	37
Value for TQT	80

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
1 Develop, maintain and encourage working relationships to promote good will and trust.	1.1 Give appropriate advice and information to relevant people about the occupational work activities and/or associated occupations involved.
	1.2 Apply the principles of equality and diversity by considering the needs of individuals when working and communicating with others.
	1.3 Explain the methods and techniques used and personal attributes required to encourage and maintain working relationships that promote goodwill and trust with relevant people.
	1.4 Explain the principles of equality and diversity and how to apply them when working and communicating with others.
2 Inform relevant people about work activities in an appropriate level of detail, with the	2.1 Communicate on the following work activity information to relevant people following organisational procedures: a. appropriate timescales

	appropriate level of urgency.	b. health and safety requirements c. co-ordination of work procedures.
		2.2 Explain the different methods and techniques used to inform relevant people about work activities.
		2.3 Explain the effects of not informing relevant people with the expected level of urgency.
		2.4 Explain the different types of work activity related information and to what level of detail the following people would expect to receive: a. colleagues b. employers c. customers d. contractors e. suppliers of products and services f. other people affected by the work/project.

3	Offer advice and help to relevant people about work activities and encourage questions/requests for clarification and comments.	3.1 Give appropriate advice and information to relevant people about the different methods of carrying out occupational work activities to achieve the required outcome.
		3.2 Explain the techniques of encouraging questions and/or requests for clarification and comments.
		3.3 Explain the different ways of offering advice and help to different people about work activities, in relation to: a. progress b. results c. achievements d. occupational problems e. occupational opportunities f. health and safety requirements g. co-ordinated work.
4	Clarify proposals with relevant people	4.1 Engage regular discussions with relevant people about the

	and discuss alternative suggestions.		occupational work activity and/or other occupations involved.
		4.2	Explain the methods of clarifying alternative proposals with relevant people.
		4.3	Explain the methods of suggesting alternative proposals.
5	Resolve differences of opinion in ways that minimise offence and maintain goodwill, trust and respect.	5.1	Examine and agree the work activities that satisfy all people involved and will meet the required outcome of the proposed method of work.
		5.2	Explain the methods and techniques used to resolve differences of opinion in ways which minimise offence and maintain goodwill, trust and respect.

Unit 502 Developing and maintaining good occupational working relationships in the workplace

Supporting information

Guidance

This unit must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

Appendix 1 Relationships to other qualifications

Literacy, language, numeracy and ICT skills development

These qualifications can develop skills that can be used in the following qualifications:

- Functional Skills (England) – see **www.cityandguilds.com/functionalskills**
- Essential Skills (Northern Ireland) – see **www.cityandguilds.com/essentialskillsni**
- Essential Skills Wales – see **www.cityandguilds.com/esw**

Appendix 2 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the **Centres and Training Providers homepage** on **www.cityandguilds.com**.

Centre Manual - Supporting Customer Excellence contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve 'approved centre' status, or to offer a particular qualification, as well as updates and good practice exemplars for City & Guilds assessment and policy issues. Specifically, the document includes sections on:

- The centre and qualification approval process
- Assessment, internal quality assurance and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Management systems
- Maintaining records
- Assessment
- Internal quality assurance
- External quality assurance

Access to Assessment & Qualifications provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **centre homepage** section of the City & Guilds website also contains useful information such on such things as:

- Walled Garden: how to register and certificate candidates on line
- Events: dates and information on the latest Centre events
- Online assessment: how to register for e-assessments.

Centre Guide – Delivering International Qualifications contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve 'approved centre' status, or to offer a particular qualification. Specifically, the document includes sections on:

- The centre and qualification approval process and forms
- Assessment, verification and examination roles at the centre

- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Frequently asked questions

Useful contacts

UK learners **General qualification information**	**T: +44 (0)844 543 0033** **E: learnersupport@cityandguilds.com**
International learners General qualification information	T: +44 (0)844 543 0033 F: +44 (0)20 7294 2413 E: **intcg@cityandguilds.com**
Centres Exam entries, Certificates, Registrations/enrolment, Invoices, Missing or late exam materials, Nominal roll reports, Results	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413 E: **centresupport@cityandguilds.com**
Single subject qualifications Exam entries, Results, Certification, Missing or late exam materials, Incorrect exam papers, Forms request (BB, results entry), Exam date and time change	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413 F: +44 (0)20 7294 2404 (BB forms) E: **singlesubjects@cityandguilds.com**
International awards Results, Entries, Enrolments, Invoices, Missing or late exam materials, Nominal roll reports	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413 E: **intops@cityandguilds.com**
Walled Garden Re-issue of password or username, Technical problems, Entries, Results, e-assessment, Navigation, User/menu option, Problems	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413 E: **walledgarden@cityandguilds.com**
Employer Employer solutions, Mapping, Accreditation, Development Skills, Consultancy	T: +44 (0)121 503 8993 E: **business@cityandguilds.com**
Publications Logbooks, Centre documents, Forms, Free literature	T: +44 (0)844 543 0000 F: +44 (0)20 7294 2413

If you have a complaint, or any suggestions for improvement about any of the services that we provide, email: feedbackandcomplaints@cityandguilds.com

About City & Guilds

As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

City & Guilds Group

The City & Guilds Group operates from three major hubs: London (servicing Europe, the Caribbean and Americas), Johannesburg (servicing Africa), and Singapore (servicing Asia, Australia and New Zealand). The Group also includes the Institute of Leadership & Management (management and leadership qualifications), City & Guilds Land Based Services (land-based qualifications), the Centre for Skills Development (CSD works to improve the policy and practice of vocational education and training worldwide) and Learning Assistant (an online e-portfolio).

Published by City & Guilds, a registered charity established to promote education and training

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SP-01-5931