Level 3 NVQ Diploma in Insulation and Building Treatments (Construction)

Qualification Specification

Contents

Introduction

The ProQual Level 3 NVQ Diploma in Insulation and Building Treatments (Construction) qualification provides a nationally recognised qualification for those working in this specialised area of construction.

The awarding body for this qualification is ProQual Awarding Body (www.proqualab.com) and the regulatory body is the Office of Qualifications and Examinations Regulation (Ofqual); it is also endorsed by the sector body for construction - CITB.

The qualification has been accredited onto the Regulated Qualifications Framework (RQF) and is published on Ofqual's Register of Qualifications.

Qualification Profile
Level 3 NVQ Diploma in Insulation and Building Treatments (Construction)

Qualification title	**ProQual Level 3 NVQ Diploma in Insulation and Building Treatments (Construction)**
Ofqual qualification number	603/6898/6
Level	3
Total Qualification Time	700-1170 hours (261-544 GLH)
Assessment	Pass or fail Internally assessed and verified by centre staff External quality assurance by ProQual verifiers
Qualification start date	14/12/2020
Qualification end date	

Entry Requirements

There are no formal entry requirements for this qualification.

Centres should carry out an **initial assessment** of candidate skills and knowledge to identify any gaps and help plan the assessment.

Qualification Structure

To achieve the qualification candidates must complete one of the pathways, candidates may also complete any of the Additional Units.

Unit Endorsements are indicated in the Pathway unit listings below, details of endorsements are also included after the learning outcomes/assessment criteria at the end of each relevant unit.

Pathway 1 – Room in Roof
Pathway 2 – Park Homes
Pathway 3 – Hybrid Wall
Pathway 4 – Insulating Framed Sections of Buildings
Pathway 5 – External Wall Insulation Boarder
Pathway 6 – External Wall Insulation Finisher
Pathway 7 – External Wall Insulation Boarder and Finisher
Pathway 8 – Internal Insulation (Walls)

CITB references are provided in this document for information only.

Pathway 1 – Room in Roof

Candidates must complete:

- **All** of the Mandatory units in this pathway
- Plus **TWO** of the Additional Mandatory units
- Plus **ONE** Optional unit from Group A
- Plus **ONE** Optional unit from Group B

Mandatory Units – ALL units required			***CITB references for information only***
Unit Ref.	**Title**	**Level**	*CITB Internal Unit Ref.*
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	*641*
A/503/2772	Confirming work activities and resources for an occupational work area in the workplace	3	*209v2*
M/503/2915	Developing and maintaining good occupational working relationships in the workplace	3	*210v3*
R/503/2924	Confirming the occupational method of work in the workplace	3	*211v3*
R/618/5670	Insulation and building treatments building construction, defects and interfaces	3	*817v1*
Plus Additional Mandatory Units – TWO units required			***CITB references for information only***
Y/618/5671	Installing internal insulation to walls in the workplace	3	*644v3*
D/618/5672	Installing insulation to frames sections of buildings in the workplace	3	*645v3*
H/618/5673	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace *Unit Endorsements:* ***One** of the following:* *Injected* *Blown* *Sprayed*	3	*819v1*
Plus Optional Units – ONE from GROUP A and ONE from GROUP B			
GROUP A – ONE unit required			***CITB references for information only***
K/618/5674	Installing insulation to cold roofs in the workplace *Unit Endorsements:* ***One** of the following:* *Placed* *Mechanically or adhesively fixed*	2	*451v4*
M/618/5675	Installing blow insulation to cold roofs in the workplace	2	*813v1*
T/618/5676	Develop customer relationships	2	*ICS B2 2010-2014*

GROUP B – ONE unit required			***CITB references for information only***
A/618/5677	Installing insulation to create warm roofs in the workplace *Unit Endorsements:* ***One** of the following:* *Placed* *Mechanically or adhesively fixed*	3	*748v2*
F/618/5678	Spraying insulation to create warm roofs in the workplace	3	*812v1*
T/618/5676	Develop customer relationships	2	*ICS B2 2010-2014*
Additional unit (not compulsory)			***CITB references for information only***
A/615/1609	Erecting and dismantling access/working platforms in the workplace *Unit Endorsements:* ***Two** or more of the following:* *Ladders/crawler boards* *Stepladders/platform steps* *Proprietary towers* *Trestle platforms* *Mobile scaffold towers* *Proprietary staging/podiums*	2	*250v1*

Pathway 2 – Park Homes

Candidates must complete:

- **All** of the Mandatory units in this pathway
- Plus **ONE** Additional Mandatory unit
- Plus **ONE** Optional unit

Mandatory Units – ALL units required			***CITB references for information only***
Unit Ref.	**Title**	**Level**	*CITB Internal Unit Ref.*
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	*641*
A/503/2772	Confirming work activities and resources for an occupational work area in the workplace	3	*209v2*
M/503/2915	Developing and maintaining good occupational working relationships in the workplace	3	*210v3*
R/503/2924	Confirming the occupational method of work in the workplace	3	*211v2*
J/618/5679	Installing external wall insulation in the workplace	3	*448v4*
A/618/5680	Park homes insulation	3	*816v1*
R/618/5670	Insulation and building treatments, building construction, defects and interfaces	3	*817v1*
Plus Additional Mandatory Unit – ONE unit required			***CITB references for information only***
F/618/5681	Installing insulation to suspended floors in the workplace	2	*749v2*
J/618/5682	Spraying insulation to suspended floors in the workplace	2	*818v1*
Plus Optional Units – ONE unit required			***CITB references for information only***
K/618/5674	Installing insulation to cold roofs in the workplace *<u>Unit Endorsements</u>:* ***One** of the following:* *Placed* *Mechanically or adhesively fixed*	2	*451v4*
M/618/5675	Installing blown insulation to cold roofs in the workplace	2	*813v1*
T/618/5676	Develop customer relationships	2	*ICS B2 2010-2014*

Additional unit (not compulsory)			***CITB references for information only***
A/615/1609	Erecting and dismantling access/working platforms in the workplace *<u>Unit Endorsements</u>:* ***Two** or more of the following:* *Ladders/crawler boards* *Stepladders/platform steps* *Proprietary towers* *Trestle platforms* *Mobile scaffold towers* *Proprietary staging/podiums*	2	*250v1*

Pathway 3 – Hybrid Wall

Candidates must complete:

- **All** of the Mandatory units in this pathway
- plus **ONE** Additional Mandatory unit

Mandatory Units – ALL units required			***CITB references for information only***
Unit Ref.	**Title**	**Level**	*CITB Internal Unit Ref.*
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	*641*
A/503/2772	Confirming work activities and resources for an occupational work area in the workplace	3	*209v2*
M/503/2915	Developing and maintaining good occupational working relationships in the workplace	3	*210v3*
R/503/2924	Confirming the occupational method of work in the workplace	3	*211v2*
J/618/5679	Installing external wall insulation in the workplace	3	*448v4*
R/618/5670	Insulation and building treatments, building construction, defects and interfaces	3	*817v1*
Plus Additional Mandatory Unit – ONE unit required			***CITB references for information only***
Y/618/5671	Installing internal insulation to walls in the workplace	3	*644v3*
R/618/5684	Injecting, blowing and spraying insulation to internal walls in the workplace *Unit Endorsements:* ***Two*** *of the following:* *Injected* *Blown* *Sprayed*	3	*815v1*
Additional Units (not compulsory)			***CITB references for information only***
A/615/1609	Erecting and dismantling access/working platforms in the workplace *Unit Endorsements:* ***Two*** *or more of the following:* *Ladders/crawler boards* *Stepladders/platform steps* *Proprietary towers* *Trestle platforms* *Mobile scaffold towers* *Proprietary staging/podiums*	2	*250v1*
Y/618/5685	Applying surface finishes to external wall insulation in the workplace *Unit Endorsements:* ***Three*** *of the following:* *Dash finishes* *Synthetic or non-synthetic renders*	3	*449v4*

	Proprietary pre-cast finishes *Paint finishes* *Brick slips* *Brick effect render*		
T/618/5676	Develop customer relationships	2	*ICS B2 2010-2014*

Pathway 4 – Insulating Framed Sections of Buildings

Candidates must complete:

- **All** of the Mandatory units in this pathway
- plus **ONE** Additional Mandatory unit

Mandatory Units – ALL units required			***CITB references for information only***
Unit Ref.	**Title**	**Level**	*CITB Internal Unit Ref.*
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	*641*
A/503/2772	Confirming work activities and resources for an occupational work area in the workplace	3	*209v2*
M/503/2915	Developing and maintaining good occupational working relationships in the workplace	3	*210v3*
R/503/2924	Confirming the occupational method of work in the workplace	3	*211v2*
R/618/5670	Insulation and building treatments, building construction, defects and interfaces	3	*817v1*
Plus Additional Mandatory Units – ONE unit required			***CITB references for information only***
D/618/5672	Installing insulation to framed sections of buildings in the workplace	3	*645v3*
H/618/5673	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace *Unit Endorsements:* ***One** of the following:* *Injected* *Blown* *Sprayed*	3	*819v1*
Additional Units (not compulsory)			***CITB references for information only***
A/615/1609	Erecting and dismantling access/working platforms in the workplace *Unit Endorsements:* ***Two** or more of the following:* *Ladders/crawler boards* *Stepladders/platform steps* *Proprietary towers* *Trestle platforms* *Mobile scaffold towers* *Proprietary staging/podiums*	2	*250v1*
T/618/5676	Develop customer relationships	2	*ICS B2 2010-2014*

Pathway 5 – External Wall Insulation Boarder

Candidates must complete:

- **All** of the Mandatory units in this pathway

Mandatory Units – ALL units required			***CITB references for information only***
Unit Ref.	**Title**	**Level**	*CITB Internal Unit Ref.*
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	*641*
A/503/2772	Confirming work activities and resources for an occupational work area in the workplace	3	*209v2*
M/503/2915	Developing and maintaining good occupational working relationships in the workplace	3	*210v3*
R/503/2924	Confirming the occupational method of work in the workplace	3	*211v2*
J/618/5679	Installing external wall insulation in the workplace	3	*448v4*
R/618/5670	Insulation and building treatments, building construction, defects and interfaces	3	*817v1*
Additional Units (not compulsory)			***CITB references for information only***
A/615/1609	Erecting and dismantling access/working platforms in the workplace *<u>Unit Endorsements</u>:* ***Two** or more of the following:* *Ladders/crawler boards* *Stepladders/platform steps* *Proprietary towers* *Trestle platforms* *Mobile scaffold towers* *Proprietary staging/podiums*	2	*250v1*
T/618/5676	Develop customer relationships	2	*ICS B2 2010-2014*

Pathway 6 – External Wall Insulation Finisher

Candidates must complete:

- **All** of the Mandatory units in this pathway
- **plus ONE Additional Mandatory unit**

Mandatory Units – ALL units required			***CITB references for information only***
Unit Ref.	**Title**	**Level**	*CITB Internal Unit Ref.*
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	*641*
A/503/2772	Confirming work activities and resources for an occupational work area in the workplace	3	*209v2*
M/503/2915	Developing and maintaining good occupational working relationships in the workplace	3	*210v3*
R/503/2924	Confirming the occupational method of work in the workplace	3	*211v2*
Y/618/5685	Applying surface finishes to external wall insulation in the workplace *<u>Unit Endorsements:</u>* ***Three** of the following:* *Dash finishes* *Synthetic or non-synthetic renders* *Proprietary pre-cast finishes* *Paint finishes* *Brick slips* *Brick effect render*	3	*449v4*
R/618/5670	Insulation and building treatments, building construction, defects and interfaces	3	*817v1*
Additional Units (not compulsory)			***CITB references for information only***
A/615/1609	Erecting and dismantling access/working platforms in the workplace *<u>Unit Endorsements</u>:* ***Two** or more of the following:* *Ladders/crawler boards* *Stepladders/platform steps* *Proprietary towers* *Trestle platforms* *Mobile scaffold towers* *Proprietary staging/podiums*	2	*250v1*
T/618/5676	Develop customer relationships	2	*ICS B2 2010-2014*

Pathway 7 – External Wall Insulation Boarder and Finisher

Candidates must complete **all of the Mandatory** units in this pathway.

Mandatory Units			***CITB references for information only***
Unit Ref.	**Title**	**Level**	*CITB Internal Unit Ref.*
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	*641*
A/503/2772	Confirming work activities and resources for an occupational work area in the workplace	3	*209v2*
M/503/2915	Developing and maintaining good occupational working relationships in the workplace	3	*210v3*
R/503/2924	Confirming the occupational method of work in the workplace	3	*211v2*
J/618/5679	Installing external wall insulation in the workplace	3	*448v4*
Y/618/5685	Applying surface finishes to external wall insulation in the workplace *Unit Endorsements:* ***Three** of the following:* *Dash finishes* *Synthetic or non-synthetic renders* *Proprietary pre-cast finishes* *Paint finishes* *Brick slips* *Brick effect render*	3	*449v4*
R/618/5670	Insulation and building treatments, building construction, defects and interfaces	3	*817v1*
Additional Units (not compulsory)			***CITB references for information only***
A/615/1609	Erecting and dismantling access/working platforms in the workplace *Unit Endorsements:* ***Two** or more of the following:* *Ladders/crawler boards* *Stepladders/platform steps* *Proprietary towers* *Trestle platforms* *Mobile scaffold towers* *Proprietary staging/podiums*	2	*250v1*
T/618/5676	Develop customer relationships	2	*ICS B2 2010-2014*

Pathway 8 – Internal Insulation (Walls)

Candidates must complete:

- **All** of the Mandatory units in this pathway
- plus **ONE** Additional Mandatory unit

Mandatory Units			***CITB references for information only***
Unit Ref.	**Title**	**Level**	*CITB Internal Unit Ref.*
M/508/6537	Conforming to general health, safety and welfare in the workplace	1	*641*
A/503/2772	Confirming work activities and resources for an occupational work area in the workplace	3	*209v2*
M/503/2915	Developing and maintaining good occupational working relationships in the workplace	3	*210v3*
R/503/2924	Confirming the occupational method of work in the workplace	3	*211v2*
R/618/5670	Insulation and building treatments, building construction, defects and interfaces	3	*817v1*
Additional Mandatory Units – ONE unit required			***CITB references for information only***
Y/618/5671	Installing internal insulation to walls in the workplace	3	*644v3*
	Injecting, blowing and spraying insulation to internal walls in the workplace *<u>Unit Endorsements:</u>* ***One** of the following:* *Injected* *Blown* *Sprayed*	3	*815v1*
Additional Units (not compulsory)			***CITB references for information only***
T/618/5676	Develop customer relationships	2	*ICS B2 2010-2014*

Centre Requirements

Centres must be approved to offer this qualification. If your centre is not approved please complete and submit form **ProQual Additional Qualification Approval Application**.

Staff
Staff delivering this qualification must be appropriately qualified and/or occupationally competent.

Assessors/Internal Quality Assurance
Assessors for each 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.

Assessors and internal quality assurance verifiers for competence-based units or qualifications will normally need to hold appropriate assessor or internal quality assurance qualifications.

Support for Candidates

Materials produced by centres to support candidates should:

- enable them to track their achievements as they progress through the learning outcomes and assessment criteria;
- provide information on where ProQual's policies and procedures can be viewed;
- provide a means of enabling Internal and External Quality Assurance staff to authenticate evidence

Links to National Standards / NOS mapping

National Occupational Standards (NOS) are owned by a Sector Skills Council or Standard Setting Body and they describe the skills, knowledge and understanding needed to undertake a particular task or job at different levels of competence.

The structure and units of this qualification are based on NOS for the construction sector developed by CITB.

Assessment

This qualification is competence-based, candidates must demonstrate the level of competence described in the units. Assessment is the process of measuring a candidate's skill, knowledge and understanding against the standards set in the qualification.

The qualifications must be assessed in a work environment and in accordance with the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment, and it must be internally assessed by an appropriately experienced and qualified assessor.

Each candidate is required to produce a portfolio of evidence which demonstrates their achievement of all of the learning outcomes and assessment criteria for each unit.

Evidence can include:

- observation report by assessor
- assignments/projects/reports
- professional discussion
- witness testimony
- candidate product
- worksheets
- record of oral and written questioning
- Recognition of Prior Learning

Learning outcomes set out what a candidate is expected to know, understand or be able to do.

Assessment criteria specify the standard a candidate must meet to show the learning outcome has been achieved.

Learning outcomes and assessment criteria can be found from page 18.

Additional information for assessment and requirements for unit **endorsements** where relevant is included after all of the learning outcomes and assessment criteria for each unit.

Internal Quality Assurance

An internal quality assurance verifier confirms that assessment decisions made in centres are made by competent and qualified assessors, that they are the result of sound and fair assessment practice and that they are recorded accurately and appropriately.

Adjustments to Assessment

Adjustments to standard assessment arrangements are made on the individual needs of candidates. ProQual's Reasonable Adjustments Policy and Special Consideration Policy sets out the steps to follow when implementing reasonable adjustments and special considerations and the service that ProQual provides for some of these arrangements.

Centres should contact ProQual for further information or queries about the contents of the policy.

Results Enquiries and Appeals

All enquiries relating to assessment or other decisions should be dealt with by centres, with reference to ProQual's Enquiries and Appeals Procedures.

Certification

Candidates who achieve the requirements for this qualification will be awarded:

- A certificate listing all units achieved, and
- A certificate giving the full qualification title -

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Claiming certificates

Centres may claim certificates for candidates who have been registered with ProQual and who have successfully achieved the qualification. All certificates will be issued to the centre for successful candidates.

Unit certificates

If a candidate does not achieve all of the units required for a qualification, the centre may claim a unit certificate for the candidate which will list all of the units achieved.

Replacement certificates

If a replacement certificate is required a request must be made to ProQual in writing. Replacement certificates are labelled as such and are only provided when the claim has been authenticated. Refer to the Fee Schedule for details of charges for replacement certificates.

Title:	Conforming to general health, safety and welfare in the workplace.
Unit Number:	M/508/6537

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: – collective protective measures – personal protective equipment (PPE) – respiratory protective equipment (RPE) – 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.

Title:	Conforming to general health, safety and welfare in the workplace.
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
2 continued	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: – dealing with accidents and emergencies associated with the work and environment – methods of receiving or sourcing information – reporting – stopping work – evacuation – fire risks and safe exit procedures – 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.

Title:	Conforming to general health, safety and welfare in the workplace.

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: – recognising when to stop work in the face of serious and imminent danger to self and/or others – contributing to discussions and providing feedback – reporting changed circumstances and incidents in the workplace – 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 approved procedures.	5.1 Provide appropriate support for security arrangements in accordance with approved procedures: – during the working day – on completion of the day's work – for unauthorised personnel (other operatives and the general public) – for theft.
	5.2 State how security arrangements are implemented in relation to the workplace, the general public, site personnel and resources.

Title:	Conforming to general health, safety and welfare in the workplace.
Additional information about this unit	
Assessment 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.
Sector Subject Area	05.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	7

Title:	Confirming work activities and resources for an occupational work area in the workplace
Unit Number:	A/503/2772

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: – other occupations and /or customers – resources – weather conditions – health and safety requirements.
	3.2 Explain different methods of evaluating work activities against the following project requirements: – contract conditions – contract programme – 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: – other related programmes – special working conditions – weather conditions – other occupations/people – resources – health and safety requirements.

Title:	Confirming work activities and resources for an occupational work area in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: – occupations and/or customers associated with the work – tools, plant and/or ancillary equipment – 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.

Title:	Confirming work activities and resources for an occupational work area in the workplace
Additional information about this unit	
Assessment 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.
Subject Sector Area	05.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	33

Title:	Developing and maintaining good occupational working relationships in the workplace
Unit Number:	M/503/2915

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 appropriate level of urgency.	2.1 Communicate on the following work activity information to relevant people following organisational procedures: – appropriate timescales – health and safety requirements – 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: – colleagues – employers – customers – contractors – suppliers of products and services – other people affected by the work/project.

Title:	Developing and maintaining good occupational working relationships in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: – progress – results – achievements – occupational problems – occupational opportunities – health and safety requirements – co-ordinated work.
4 Clarify proposals with relevant people and discuss alternative suggestions.	4.1 Engage regular discussions with relevant people about the 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.

Title:	Developing and maintaining good occupational working relationships in the workplace
Additional information about this unit	
Assessment 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.
Sector Subject Areas	05.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	27

Title:	Confirming the occupational method of work in the workplace
Unit Number:	R/503/2924

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: – required quantities – specifications – detailed drawings – health and safety requirements – timescales – 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: – standard work procedures – sequence of work – organisation of resources (people, equipment, materials) – work techniques – working conditions (health, safety and welfare) – 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.
	2.2 Explain different methods and techniques of obtaining additional information from the following alternative sources when available project data is insufficient: – customers or representatives – suppliers – regulatory authorities – manufacturer's literature.

Title:	Confirming the occupational method of work in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: – health and safety welfare (principles of protection) – fire protection – access and egress – equipment availability – availability of competent workforce – pollution risk – waste and disposal – zero and low carbon outcomes – 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: – conforming to statutory requirements – customer and user needs – contract requirements in terms of time, quantity and quality – 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.

Title:	Confirming the occupational method of work in the workplace
Additional information about this unit	
Assessment 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.
Sector Subject Areas	05.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	37

Unit Title:	Insulation and Building Treatments Building Construction, Defects and Interfaces
Unit Number:	R/618/5670

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: • drawings • specifications • schedules • method statements • risk assessments • manufacturers' information • 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: • types of construction • energy efficiency measures • building treatments • drawings • method statements • design • standards • manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings

Unit Title:	Insulation and Building Treatments Building Construction, Defects and Interfaces

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • fires • spillages • injuries • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	2.3 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • safe systems of work • manufacturers' technical information • data sheets • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH)
	2.4 Explain the accident reporting procedures and who is responsible for making reports.

Unit Title:	Insulation and Building Treatments Building Construction, Defects and Interfaces

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*	
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.

Unit Title:	Insulation and Building Treatments Building Construction, Defects and Interfaces

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • salt contamination • causes of dampness • rain penetration • rising damp • internal moisture vapour • damaged services • 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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to: - property suitability - structural integrity - dampness - decay - exposure ratings - vents and ventilation - services (gas, electric, water, media cables) • why it is important to ensure that all necessary repairs are completed prior to installation

	• 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: - roofs - walls including internal and external finishes - floors - windows and doors - chimneys and fireplaces - flues and combustion ventilation - fabric interfaces - existing services • the importance of the correct sequencing of installation of energy efficiency measures and building treatments • how performance varies in different construction types, locations and through the impact of habitation and usage • how alterations, additions and extensions to the original construction can affect the performance of the building • 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 • 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 • 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: - impacts on neighbouring properties - insulation fitting and placement for different insulation types - junctions - thermal bridging and condensation risks - thermal bypassing - void ventilation • 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 • the implications of building defects and the repairs required and how they will affect the choice of energy efficiency measures and building treatments

	• the importance of compatibility and interactions between measures and the fabric of the underlying building • how to identify when specialist skills and knowledge are required and report accordingly, including but not limited to: - fire safety - electrical - gas - asbestos - Radon - heritage - ecology - archaeological and architectural features - ventilation - dampness and building exposure • 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 • 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 team work and communication how to effectively communicate within a team when identifying building construction, defects and interfaces.

Unit Title:	Insulation and Building Treatments Building Construction, Defects and Interfaces
Additional information about this unit	
Assessment 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.
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	90
Assessment	10

Title:	Installing internal insulation to walls in the workplace
Unit Number:	Y/618/5671

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: • drawings • specifications • schedules • method statements • risk assessments • suppliers and manufacturers' information • 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: • drawings • specifications • schedules • method statements • risk assessments • design • suppliers and manufacturers' information • data sheets • official guidance • standards • current legislation and regulations governing buildings

Title:	Installing internal insulation to walls in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • below ground level • confined spaces • at height • tools and equipment • materials and substances • 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: • site • workplace • siting and location of vehicles • company • customer • access equipment • materials and waste storage • 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: • water • CO_2 • foam • powder

Title:	Installing internal insulation to walls in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • methods of work • safe use of health and safety control equipment • safe use of access equipment and harness systems • safe use, storage and handling of materials, tools and equipment • specific risks to health including mental health • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires • spillages • injuries • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	3.4 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • suppliers and manufacturers' technical information • data sheets • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH)

Title:	Installing internal insulation to walls in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • protective sheeting internal • masking materials • warning signs • vent sleeves • insulation materials • fixings and adhesives • vapour control and breather membranes • finishing board and coat • combustion vents • 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.

Title:	Installing internal insulation to walls in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • current legislation • environmental responsibilities • organisational procedures • suppliers and manufactures' information • data sheets • statutory regulations • 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: • types of progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme.

Title:	Installing internal insulation to walls in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*	
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: • measuring • marking out • fixing • finishing • positioning • sealing • 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: • suitable access • property suitability • structural integrity • dampness • decay • vents and ventilation • 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 - placed - 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 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

Title:	Installing internal insulation to walls in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	work relating to the following: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to: - suitable access - property suitability - structural integrity - dampness - condensation - penetrating damp - rising damp - decay - vents and ventilation - services (gas, electric, water, media cables) - architectural features - condition of down pipes, -roof overhangs and gutters - external and internal finish condition - wall moisture content - damp proof course height above floor level - condition of ground and suspended floor joists • why it is important to ensure that all necessary repairs are completed prior to installation • how to identify thermal bridges and understand solutions and limitations • the implications for party wall thermal bridge • 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 • how to check for hidden utilities

Title:	Installing internal insulation to walls in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	• how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: - condition of building fabric - identification of any areas of potential water penetration - visibility and completeness of damp proof course - condition of window and door seals - height of internal floors in relation to external floor height - condition of roof - damaged or spalled brickwork - drainage and down pipes - protection and existence of sub floor ventilation - cavity width and identification of any debris - electrical cables, media cables, junction and meter boxes, signal receiving equipment - flues, gas pipes, chimneys and combustion air ventilators - identification of protected wildlife (nesting birds, bees, bats) • how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: - fire safety - electrical - media cables - signal receiving equipment - junction boxes - asbestos - Radon - heritage - architectural and archaeological features - ecology - ventilation - rot • 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 • how to identify, record, report and rectify unintended consequences not addressed in the

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	• design, including but not limited to the existence of: thermal bridges, thermal bypassing and water ingress, inadequate ventilation and condensation risk • why it is important to avoid unintended consequences • why it is important to explain installation procedure to building occupants to include but not limited to the following: - scope and work programme - safety requirements during the installation process - protection of property and personal items - specific benefits and implications to include homeowner information - agreed standards of making good • the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: - wall ties - windows - damp proof course (dpc) - renders - Tyrolean coatings - silicone weather proof coatings • how to work with, around and in close proximity to plant and machinery • how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment • how to identify and follow the installation quality requirements • which wall types are unsuitable for internal wall insulation • the implications of insulating a terrace or semi-detached house regarding party wall bridge • why it is important to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects • how to protect and reinstate, access routes, existing fixtures and fittings (carpets) • how to prepare Internal walls for insulation

Title:	Installing internal insulation to walls in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	• how to treat external walls in line with system holder specification • the importance of ensuring all work to services (gas, electric, water, media cables) is carried out by suitably qualified people • how to remove, replace and reinstate skirting, coving and cornices, radiators and electrical sockets • how to construct straps to walls to contain or hold insulation • how to fit mechanically or adhesively fixed insulation including thermal boards • how to fit breather membrane and vapour control layers • the importance of ensuring the integrity of breather membranes and vapour control layers • 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity • 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 • why it is important to maintain or install fire resistant barriers • how to maintain sound-proofing • how to seal joints, perimeters and penetrations • why it is important to minimise thermal bridging through compliance with design detail ensuring a consistent level of insulation to the area being insulated • how to carry out any repair after installation • why it is important to complete post installation checks in accordance with the system designer installations operations manual and report issues • why it is important to provide post installation advice and guidance to building occupants and client including homeowner packs • how to handover and sign off to the customers satisfaction • how to use all work tools and installation equipment in line with manufacturers' and system specification

Title:	Installing internal insulation to walls in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	• how to work at height using access equipment and • harness systems • 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 team work and communication when installing external wall insulation.

Title:	Installing internal insulation to walls in the workplace
Additional information about this unit	
Assessment 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.
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	100
Assessment	10

Title:	Installing insulation to framed sections of buildings in the workplace
Unit Number:	D/618/5672

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: • drawings • specifications • schedules • method statements • risk assessments • manufacturers' information • 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: • drawings • specifications • schedules • method statements • risk assessments • design • standards • manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings

Title:	Installing insulation to framed sections of buildings in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • at height • tools and equipment • materials and substances • 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: • site • workplace • siting and location of vehicles • company • customer • access equipment • materials and waste storage • 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: • water • CO2 • foam • powder

Title:	Installing insulation to framed sections of buildings in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • methods of work • safe use of health and safety control equipment • safe use of access equipment and harness systems • safe use, storage and handling of materials, tools and equipment • specific risks to health including mental health • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires • spillages • injuries. • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	3.4 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • manufacturers' technical information • data sheets • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH)

Title:	Installing insulation to framed sections of buildings in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • protective sheeting • masking materials • warning signs • public protection equipment • Insulation materials • sheathing board • timber and metal studwork • breather membranes and vapour control layers • fire stops • acoustic treatments • plasterboard or finishing board • vent sleeves • down lighters • primers • expansion and movement joints, compression joints • metal lath and plaster beads • seal tapes and joints • joint strips and mesh • plaster finish • sealants • mechanical fixing components • pre-formed trims • all work tools and equipment
	4.6 Describe how to confirm that the resources and materials conform to the specification.

Title:	Installing insulation to framed sections of buildings in the workplace	
Learning outcomes *The learner will be able to:*		**Assessment criteria** *The learner can:*
4 continued…		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: • current legislation • environmental responsibilities • organisational procedures • suppliers and manufactures' information • data sheets • statutory regulations • 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: • types of progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme

Title:	Installing insulation to framed sections of buildings in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • removing • measuring • marking out • cutting • line • levelling • drilling • fitting • fixing • filling • finishing • positioning • 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: • suitable access • property suitability • structural integrity • dampness • decay • vents and ventilation • 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.

Title:	Installing insulation to framed sections of buildings in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to explain installation procedure to building occupants to include but not limited to the following: - scope and work programme - safety requirements during the installation process - protection of property and personal items - specific benefits and implications to include homeowner information - agreed standards of making good • how to work with, around and in close proximity to plant and machinery • how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment • how to identify and follow the installation quality requirements • 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 • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: - suitable access - property suitability - structural integrity

Title:	Installing insulation to framed sections of buildings in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	- dampness - decay - vents and ventilation - services (gas, electric, water, media cables) • why it is important to ensure that all necessary repairs are completed prior to installation • how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: - fire safety - acoustics - condensation analysis - electrical - gas - asbestos - Radon - rot - heritage - architectural features - ecology - ventilation • 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 • 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 • why it is important to avoid unintended consequences • how to identify potential thermal bridges • weather restrictions of the frame materials when temporarily exposed to the elements • the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: - blocked and restricted ventilation - windows and door replacement - firestops - weather seals - silicone weather proof coatings • how to protect adjacent surfaces

Title:	Installing insulation to framed sections of buildings in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	• how to check for and protect hidden utilities • 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 • how to prepare and remove existing wall lining, defective insulation, boarding, breather membranes and vapour control layers • how to remove defective timber, localised plaster and render • how to fix any holes, broken or damaged boards that form the backdrop for fixed, insulation. • how to identify and report the existence of thermal bridges and water ingress not addressed in the design • how to ensure pre-installation material checks are within specified parameters • how to cut, apply, fix or fit insulation between and or to timber and metal studwork • how to ensure insulation thickness and type meets the design specification for fire, thermal and acoustic requirements • how to fit breather membrane and vapour control layer in conjunction with design, maintaining their integrity • how to fix finishing board, sheathing board and plasterboard in conjunction with design • how to apply mastic aesthetic sealant to all interface, joints and penetrations • how to make good any marks or screw and nail holes • how to scrim and tape joints ready for surface finish • how to reinstate fixtures and fittings • 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity • 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

Title:	Installing insulation to framed sections of buildings in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	• 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 • how to handover and sign off to the customers' satisfaction • how to use all work tools and equipment • how to work at height using access equipment and harness systems • 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 team work and communication when installing insulation to framed sections of buildings.

Title:	Installing insulation to framed sections of buildings in the workplace
Additional information about this unit	
Assessment 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.
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	110
Assessment	10

Title:	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace
Unit Number:	H/618/5673

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: • drawings • specifications • schedules • method statements • risk assessments • suppliers and manufacturers' information • 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: • drawings • specifications • schedules • method statements • risk assessments • design • standards • suppliers and manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings

Title:	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • confined spaces • at height • tools and equipment • materials and substances • 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: • site • workplace • siting and location of vehicles • company • customer • access equipment • material and waste storage • 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: • water • CO_2 • foam • powder

Title:	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • methods of work • safe use of health and safety control equipment • safe use of access equipment and harness systems • safe use, storage and handling of materials, tools and equipment • operative maintenance of installation equipment • specific risks to health including mental health • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires • spillages • injuries • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	3.4 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • manufacturers' technical information • data sheets • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH)

Title:	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • protective sheeting • masking materials • warning signs • public protection equipment • insulation materials • sheathing board • timber and metal studwork • breather membranes and vapour control layers • fire stops • acoustic treatments • plasterboard or finishing board • vent sleeves • down lighters • primers • expansion and movement joints, compression joints • metal lath and plaster beads • seal tapes and joints • joint strips and mesh • plaster finish • sealants • pre-formed trims • all work tools and installation equipment

4 Continued	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 when injecting, blowing or spraying 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: • current legislation • environmental responsibilities • organisational procedures • manufacturers' information • data sheets • statutory regulations • official guidance

Title:	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • types of progress charts, timetables and estimated times • 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 or spray insulation to framed sections of buildings to the required specification.	7.1 Carry out external and internal pre installation checks assessing, recording and reporting issues to include: • suitable access • property suitability • structural integrity • dampness • decay • vents and ventilation • services (gas, electric, water, media cables)
	7.2 Demonstrate the following work skills injecting, blowing or spraying insulation to framed sections of buildings: • removing • measuring • calibrating • marking out • cutting • line and level • drilling • fitting • fixing • filling • finishing • 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.

Continued…..	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: • injected • blown • 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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to explain installation procedure to building occupants to include but not limited to the following: - scope and work programme - safety requirements during the installation process - protection of property and personal items - specific benefits and implications to include homeowner information - agreed standards of making good • how to work with, around and in close proximity to plant and machinery

- how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment
- how to identify and follow the installation quality requirements
- 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
- why it is important to carry out external and internal pre-installation checks
- how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include:
  - suitable access
  - property suitability
  - structural integrity
  - dampness
  - decay
  - vents and ventilation
  - services (gas, electric, water, media cables)
- why it is important to ensure that all necessary repairs are completed prior to installation
- how to identify when specialist skills and knowledge are required and report accordingly including but not limited to:
  - fire safety
  - acoustics
  - condensation analysis
  - electrical
  - gas
  - asbestos
  - Radon
  - rot
  - heritage
  - architectural features
  - ecology
  - ventilation
- 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
- 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

- weather restrictions of the frame materials when temporarily exposed to the elements
- the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to:
  - blocked and restricted ventilation
  - windows and door replacement
  - firestops
  - weather seals
  - silicone weather proof coatings
- how to protect adjacent surfaces
- how to check for and protect hidden utilities
- 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
- how to prepare and remove existing wall lining, defective insulation, boarding, breather membranes and vapour control layers
- how to remove defective timber, localised plaster and render
- how to fix any holes, broken or damaged boards that form the backdrop for injected, blown and sprayed insulation.
- how to identify and report the existence of thermal bridges and water ingress not addressed in the design
- how to ensure pre-installation material checks are within specified parameters, to include checking and recording batch number and reporting defects
- how to calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers specifications and material requirements
- how to inject, blow and spray insulation between and or to timber and metal studwork
- how to ensure insulation thickness and type meets the design specification for fire, thermal and acoustic requirements
- how to fit breather membrane and vapour control layer in conjunction with design, maintaining their integrity
- how to fix finishing board, sheathing board and plasterboard in conjunction with design
- how to apply mastic aesthetic sealant to all interface, joints and penetrations

	• how to make good any marks or screw and nail holes • how to scrim and tape joints ready for surface finish • how to reinstate fixtures and fittings • 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity • 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 • how to clean and disassemble installation processing equipment and pack away for transportation • 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 • how to handover and sign off to the customers' satisfaction • how to use all work tools and installation equipment • how to work at height using access equipment and harness systems • 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 team work and when injecting, blowing or spraying insulation to framed sections of buildings.

Title:	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace
Additional information about this unit	
Assessment 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. This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. <u>ProQual Level 3 NVQ Diploma in Insulation and Building Treatments</u> **One** of the following: Injected Blown Sprayed
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	120
Assessment	10

Title:	Installing insulation to cold roofs in the workplace
Unit Number:	K/618/5674

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: • drawings • specifications • schedules • method statements • risk assessments • manufacturers' information • 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: • drawings • specifications • schedules • method statements • risk assessments • design • standards • manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings

Title:	Installing insulation to cold roofs in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • below ground level • confined spaces • at height • tools and equipment • materials and substances • 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: • site • workplace • siting and location of vehicles • company • customer • assess equipment • materials and waste storage • 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: • water • CO_2 • foam • powder

Title:	Installing insulation to cold roofs in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • methods of work • safe use of health and safety control equipment • safe use of access equipment and harness systems • safe use, storage and handling of materials, tools and equipment • specific risks to health including mental health • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires • spillages • injuries • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	3.4 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • manufacturers' technical information • data sheets • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH)

Title:	Installing insulation to cold roofs in the workplace	
Learning outcomes *The learner will be able to:*		**Assessment criteria** *The learner can:*
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: • protective sheeting • warning signs • temporary barriers • insulation • pipe insulation • tank and cylinder jackets • insulation fixings • access boards • loft hatches • light wells • soffit and fascia boards • tile vents • ridge tiles • sarking felt vents • draught-proofing materials • fire rated caps • cable protection • 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
	4.8	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

Title:	Installing insulation to cold roofs in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • current legislation • environmental responsibilities • organisational procedures • manufacturers' information • data sheets • statutory regulations • 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: • types of progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme.

Title:	Installing insulation to cold roofs in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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 • measuring • marking out • calculating • cutting • fitting • filling • positioning • securing • 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: • suitable access • property suitability • structural integrity • dampness • decay • vents and adequate ventilation • 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: • placed • mechanically or adhesively fixed
	7.5 Prepare and install insulation to the following in compliance with current regulations and to given working instructions: • pipes • tanks and/or cylinders • access hatches • 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 safe guarding existing ventilation.
	7.10 Insulate and draught-proof access hatches.

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: - common infestations - protected species - suitable access - property suitability - structural integrity - dampness - decay - vents and ventilation - services (gas, electric, water, media cables) • why it is important to ensure that all necessary repairs are completed prior to installation • 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 • how to identify and follow the installation quality requirements • how to recognise, record and report the key issues

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	• that may inhibit commencement of the work including but not limited to: - condition of building fabric - identification of any areas of potential water penetration - condition of roof - drainage and down pipes • how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: - fire safety - electrical - asbestos - Radon - heritage - architectural features - ecology - ventilation • 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 • 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 • why it is important to avoid unintended consequences • why it is important to explain installation procedure to building occupants to include but not limited to the following: - scope and work programme - safety requirements during the installation process - protection of property and personal items - specific benefits and implications to include homeowner information - agreed standards of making good • the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: - roof skylights - loft guarantees - building warranties

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	- timber treatment • how to work with, around and in close proximity to plant and machinery • how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment • how to work in confined spaces • how to create and protect platforms and walkways • why it is important to identify and remove infested, damaged and contaminated insulation from the roof area • how to remove and secure building occupants stored items • how to identify and install passive ventilation and report any ventilation limitations identified • 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) • the importance of ensuring all work to services (gas, electric, water, media cables) is carried out by suitably qualified people • how to check for and protect hidden utilities • how to identify insulation materials and their characteristics for cold roofs, pipes, storage tanks, cylinders and access hatches • how to prepare and install, placed, mechanically or adhesively fixed insulation to cold roofs • why it is important to minimise the effects of thermal bridging through compliance with design detail ensuring consistent insulation of the area being insulated • how to check serviceability and provision of walkway boards and platforms • how to prepare and fix pipe, tank and cylinder insulation • how to ensure the insulation is contained within the prescribed areas • how to protect downlighters by installation of fire rated caps to the required specification • how to ensure insulation around electrical apparatus will not create fire hazards (light fittings, electrical units and cables) • how to insulate and draught-proof access hatches • how to Insulate light wells to ensure continuity of

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	insulation • how to maintain fire resistant barriers • 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity • 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 • 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 • why it is important to provide advice to building occupants to preserve the integrity of the insulation (insulation data sheet and warning labels) • how to handover and sign off to the customers' satisfaction • how to use all work tools and equipment • how to work at height using access equipment and harness systems • 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 team work and communication when installing insulation to cold roofs.

Additional information about this unit	
Assessment 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. This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. <u>ProQual Level 3 NVQ Diploma in Insulation and Building Treatments</u> **One** of the following: Placed Mechanically or adhesively fixed
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	90
Assessment	10

Title:	Installing blown insulation to cold roofs in the workplace
Unit Number:	M/618/5675

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: • drawings • specifications • schedules • method statements • risk assessments • manufacturers' information • 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: • drawings • specifications • schedules • method statements • risk assessments • design • standards • manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings

Title:	Installing blown insulation to cold roofs in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • confined spaces • at height • tools and equipment • materials and substances • 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: • site • workplace • siting and location of vehicles • company • customer • access equipment • material and waste storage • 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: • water • CO_2 • foam • powder

Title:	Installing blown insulation to cold roofs in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • methods of work • safe use of health and safety control equipment • safe use of access equipment and harness systems • safe use, storage and handling of materials, tools and equipment • operative maintenance of installation equipment • specific risks to health including mental health • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires • spillages • injuries • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	3.4 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • manufacturers' technical information • data sheets • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH)

Title:	Installing blown insulation to cold roofs in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • insulation • pipe insulation • tank and cylinder jackets • fixings and ancillary items • access boards • loft hatches • soffit and fascia boards • tile vents • ridge tiles • sarking felt vents • draught-proofing materials • fire rated caps • cable protection • all work tools • 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.

Title:	Installing blown insulation to cold roofs in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
4 Continued	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: • current legislation • environmental responsibilities • organisational procedures • manufacturers' information • data sheets • statutory regulations • official guidance

Title:	Installing blown insulation to cold roofs in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • types of progress charts, timetables and estimated times • 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: • removing • measuring • marking out • calculating • 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: • suitable access • property suitability • structural integrity • dampness • decay • exposure ratings • vents and ventilation • 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: • condition of building fabric

	• identification of any areas of potential water penetration • 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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: - suitable access - property suitability - structural integrity - dampness - decay - vents and ventilation - services (gas, electric, water, media cables) • why it is important to ensure that all necessary repairs are completed prior to installation • the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: - timber treatment - re-wiring - loft guarantees

	- building warranties • 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 • how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: - fire safety - electrical - asbestos - Radon - heritage - ecology - architectural features - ventilation • 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 • 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 • why it is important to avoid unintended consequences • why it is important to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: - condition of building fabric - identification of any areas of potential water penetration - condition of roof - damaged or spalled brickwork into gable ridge - drainage and down pipes • how to work with, around and in close proximity to plant and machinery • how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment • why it is important to explain installation procedure to building occupants to include but not limited to the following: - scope and work programme

	- safety requirements during the installation process - protection of property and personal items - specific benefits and implications to include homeowner information - agreed standards of making good • how to identify and follow the installation quality requirements • how to create and protect platforms and walkways • how to remove and secure stored items • why it is important to identify and remove infested, damaged and contaminated insulation from roof area • how to install passive ventilation as required by the design and report any identified ventilation limitations • 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) • the importance of ensuring all work to services (gas, electric, water, media cables) is carried out by suitably qualified people • how to check for and protect hidden utilities • how to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects • how to assemble and operate installation processing equipment in line with manufacturers and system manuals • how to calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers specifications and material requirements • how to install passive ventilation and safeguard existing ventilation • how to prepare and install blown insulation to cold roofs • why it is important to minimise thermal bridging through compliance with design detail and ensuring a consistent level of insulation of the installed area • how to prepare and fix pipe, tank and cylinder insulation • how to ensure the insulation is contained within the prescribed areas • how to protect downlighters by installation of fire rated caps to the required specification

	• how to ensure insulation around electrical apparatus will not create fire hazards (light fittings, electrical units and cables) • how to install and maintain fire resistant barriers • how to clean and disassemble installation processing equipment and pack away for transportation • 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity • 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 • 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 • why it is important to provide post installation advice and guidance to building occupants including homeowner packs, warning labels and data sheets • how to handover and sign-off to the customers satisfaction • how to use all work tools and installation equipment in line with manufacturers and system specifications • how to work at height using access equipment and harness systems • 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 team work and communication when installing blown insulation to cold roofs.

Title:	Installing blown insulation to cold roofs in the workplace
Additional information about this unit	
Assessment 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.
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	90
Assessment	10

Title:	Develop customer relationships	
Unit Number:	T/618/5676	
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
		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

Title:	Develop customer relationships
Additional information about this unit	
Assessment Guidance	The assessment and quality assurance requirement for this unit provides evidence towards A and V units.
Sector Subject Area	5.2 Building and Construction
Availability for use	Shared unit
Unit review date	31.01.17
Unit credit value	6
Unit guided learning hours	40

Title:	Installing insulation to create warm roofs in the workplace
Unit Number:	A/618/5677

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: • drawings • specifications • schedules • method statements • risk assessments • manufacturers' information • 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: • drawings • specifications • schedules • method statements • risk assessments • design • standards • manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings

Title:	Installing insulation to create warm roofs in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • confined spaces • at height • tools and equipment • materials and substances • 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: • site • workplace • siting and location of vehicles • company • customer • access equipment • material and waste storage • 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: • water • CO_2 • foam • powder

Title:	Installing insulation to create warm roofs in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • methods of work • safe use of health and safety control equipment • safe use of access equipment and harness systems • safe use, storage and handling of materials, tools and equipment • specific risks to health including mental health • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires • spillages • injuries. • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	3.4 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • manufacturers' technical information • data sheets • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH)

Title:	Installing insulation to create warm roofs in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • protective sheeting • warning signs • temporary barriers • insulation materials • air and vapour control materials • insulation fixings • soffit and fascia boards • tile vents • ridge tiles • sarking felt vents • fire rated caps • cable protection • 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.

Title:	Installing insulation to create warm roofs in the workplace

Learning outcomes *The learner will be able to*	**Assessment criteria** *The learner can:*
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: • current legislation • environmental responsibilities • organisational procedures • suppliers and manufactures' information • data sheets • statutory regulations • 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: • types of progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme

Title:	Installing insulation to create warm roofs in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • measuring • marking out • cutting • fitting • positioning • securing • 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: • suitable access • property suitability • structural integrity • dampness • decay • vents and ventilation • 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: • placed • 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.

Title:	Installing insulation to create warm roofs in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: - suitable access - property suitability - structural integrity - dampness - decay - vents and ventilation - services (gas, electric, water, media cables) • why it is important to ensure that all necessary repairs are completed prior to installation • 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 • how to identify and follow the installation quality requirements • how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: - condition of building fabric - identification of any areas of potential water penetration

Title:	Installing insulation to create warm roofs in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	- condition of roof - damaged or spalled brickwork (gable end) - drainage and down pipes • how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: - fires safety - electrical - asbestos - Radon - Heritage - architectural features - ecology - ventilation • 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 • 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 • why it is important to avoid unintended consequences • why it is important to explain installation procedure to building occupants to include but not limited to the following: - scope and work programme - safety requirements during the installation process - protection of property and personal items - specific benefits and implications to include homeowner information - agreed standards of making good • the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: - timber treatment - replacement roof tiles and felt - re-wiring - loft guarantees - roof replacement warranties

Title:	Installing insulation to create warm roofs in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	• how to work with, around and in close proximity to plant and machinery • how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment • how to work in confined spaces • how to create and protect platforms and walkways • why it is important to identify and remove infested, damaged and contaminated insulation from roof areas • how to remove and secure building occupants stored items • how to identify and install passive ventilation, maintain existing ventilation and report any ventilation limitations identified • the importance of ensuring all work to services (gas, electric, water, media cables) is carried out by suitably qualified people • how to check for and protect hidden utilities • why it is important to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects • how to prepare and install, placed, mechanically or adhesively fixed insulation to create warm roofs • 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity • 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 • why it is important to ensure adequate ventilation above and below insulation • why it is important to minimise thermal bridging through compliance with design detail ensuring a consistent level of insulation to the area being insulated • how to fit cavity barriers in accordance with specification from roof to ground level in order

Title:	Installing insulation to create warm roofs in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
7 Continued…	to avoid overspill and underspill between the two separated cavity elements • how to ensure the insulation is contained within the prescribed areas • how to ensure insulation around electrical apparatus will not create fire hazards (lighting, media and high amperage cables) • why it is important to maintain fire resistant barriers • how to seal joints, perimeters and penetrations • 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) • 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 • why it is important to provide advice to building occupants to preserve the integrity of the insulation (insulation data sheet and warning labels) • how to handover and sign off to the customers satisfaction • how to use all work tools and equipment • how to work at height using access equipment and harness systems • 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 team work and communication when installing insulation to create warm roofs.

Title:	Installing insulation to create warm roofs in the workplace
Additional information about this unit	
Assessment 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. This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. ProQual Level 3 NVQ Diploma in Insulation and Building Treatments: ProQual Level 3 NVQ Diploma in Insulation and Building Treatments **One** of the following: Placed Mechanically or adhesively fixed
Sector Subject areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	90
Assessment	10

Title:	Spraying insulation to create warm roofs in the workplace	
Unit Number:	F/618/5678	
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: • drawings • specifications • schedules • method statements • risk assessments • manufacturers' information • 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: • drawings • specifications • schedules • method statements • risk assessments • design • standards • manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings

Title:	Spraying insulation to create warm roofs in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • confined spaces • at height • tools and equipment • materials and substances • 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: • site • workplace • siting and location of vehicles • company • customer • access equipment • material and waste storage • 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: • water • CO_2 • foam • powder

Title:	Spraying insulation to create warm roofs in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • methods of work • safe use of health and safety control equipment • safe use of access equipment and harness systems • safe use, storage and handling of materials, tools and equipment • operative maintenance of installation equipment • specific risks to health including mental health • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires, spillages, injuries • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	3.4 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • manufacturers' technical information • data sheets • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH)

Title:	Spraying insulation to create warm roofs in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*	
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: • insulation • fixings and ancillary items • access boards • fire rated caps • cable protection • all work tools • 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.

Title:	Spraying insulation to create warm roofs in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • current legislation • environmental responsibilities • organisational procedures • manufacturers' information • data sheets • statutory regulations • 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: • types of progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme

Title:	Spraying insulation to create warm roofs in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • measuring • marking out • calculating • 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: • suitable access • property suitability • structural integrity • dampness • decay • exposure ratings • vents and ventilation • 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: • condition of building fabric • identification of any areas of potential water penetration • 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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to: - suitable access - property suitability - structural integrity - dampness - decay - exposure ratings - vents and ventilation - services (gas, electric, water, media cables) • why it is important to ensure that all necessary repairs are completed prior to installation • how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: - fire safety - electrical

	- asbestos - Radon - heritage - architectural features - ecology - ventilation • 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 • 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 • why it is important to avoid unintended consequences • the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: - building warranties - roof skylights - loft guarantees - timber treatment • recognise the procedures to check flues and combustion air ventilation • check, record and report issues with construction ventilation, flues, chimneys and combustion air ventilators pre and post installation • how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: - condition of building fabric

	- identification of any areas of potential water penetration - condition of roof • how to work with, around and in close proximity to plant and machinery • how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment • why it is important to explain installation procedure to building occupants to include but not limited to the following: - scope and work programme - safety requirements during the installation process - protection of property and personal items - specific benefits and implications to include homeowner information - agreed standards of making good • how to identify and follow the installation quality requirements • how to create and protect walkways and platforms • how to remove and secure building occupants stored items • how to identify and install passive ventilation as required by the design and report any identified ventilation limitations • 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)

	• the importance of ensuring all work to services (gas, electric, water, media cables) is carried out by suitably qualified people • how to check for and protect hidden utilities • how to protect electrical services, lighting, media, high amperage cables • how to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects • how to assemble and operate installation processing equipment in line with manufacturers and system manuals • how to calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers specifications and material requirements • how to prepare and install sprayed insulation to create a warm roof • how to ensure the insulation is contained within the prescribed areas • how to ensure insulation around electrical apparatus will not create fire hazards (light fittings, electrical units and cables) • how to install and maintain fire resistant barriers where appropriate • 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 • how to clean and disassemble installation processing equipment and pack away for transportation

	• 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity • 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 • why it is important to provide post installation advice and guidance to building occupants including homeowner packs • how to handover and sign off to the customers satisfaction • how to use all work tools and installation equipment in line with manufacturers and system specifications • how to work at height using access equipment and harness systems • 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 • 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 team work and communication when spraying insulation to create warm roofs.

Title:	Spraying insulation to create warm roofs in the workplace
Additional information about this unit	
Assessment Guidance	This unit must be assessed in a work environment, in accordance 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.
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	110
Assessment	10

Title:	Erecting and dismantling access/working platforms in the workplace
Unit Number:	A/615/1609

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: – 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 access/working platforms.	2.1 Describe their responsibilities under current legislation and official guidance whilst working: – in the workplace, at height, in confined areas, with tools and equipment, with movement/storage of materials and by manual handling.
	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.

Title:	Erecting and dismantling access/working platforms in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: – ladders/crawler boards – stepladders/platform steps – trestles – proprietary staging/podiums – proprietary towers – mobile scaffold towers – protection equipment and notices – 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 work space.
	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 State the purpose of the work programme and explain why deadlines should be kept in relation to: – organisational procedures for reporting circumstances which will affect the work programme.

Title:	Erecting and dismantling access/working platforms in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: – moving, positioning/erecting, securing, checking, dismantling and removing.
	7.2 Erect, dismantle and store two of the following access equipment to given access regulations: – ladders/crawler boards – stepladders/platform steps – proprietary towers – trestle platforms – mobile scaffold towers – 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: – provide protection to the work area – establish a base for equipment – erect proprietary access equipment to manufacturer's instructions suitable for the work – erect non-proprietary access equipment suitable for the work – place protective screens and notices – check/monitor equipment during the period of use – dismantle and store access equipment – use tools and equipment – 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.

Title:	Erecting and dismantling access/working platforms in the workplace
Additional information about this unit	
Assessment 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. This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. <u>ProQual Level 3 NVQ Diploma in Insulation and Building Treatments (Construction):</u> The following endorsements required: **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
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	27

Title:	Installing external wall insulation in the workplace
Unit Number:	J/618/5679

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: • drawings • specifications • schedules • method statements • risk assessments • suppliers and manufacturers' information • 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: • drawings • specifications • schedules • method statements • risk assessments • design • standards • suppliers and manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings

Title:	Installing external wall insulation in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • below ground level • confined spaces • at height • tools and equipment • materials and substances • 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: site • workplace • siting and location of vehicles • company • customer • access equipment • material and waste storage • 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: • water • CO_2 • foam • powder

Title:	Installing external wall insulation in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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 external wall insulation in relation to the following: • methods of work • safe use of health and safety control equipment • safe use of access equipment and harness systems • safe use, storage and handling of materials, tools and equipment • operative maintenance of installation equipment • specific risks to health including mental health • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires • spillages • injuries • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	3.3 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • suppliers and manufacturers' technical information • data sheets • statutory regulations • official guidance • 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.

Title:	Installing external wall insulation in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • protective sheeting • masking materials • insulation and fixings • warning signs • public protection equipment • renders, reinforcements, • base tracks and fixings • vent sleeves • primers • adhesives • fire stops • expansion and movement joints, compression joints • pattress's • corner beads and profiles • base coats • seal tapes and joints • mesh and stress patches • topcoats and finishes • sealants • mechanical fixing components • pre-formed trims • tracks and shims • beads • joints and cills • air and vapour control materials • 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.

Title:	Installing external wall insulation in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • current legislation • environmental responsibilities • organisational procedures • suppliers and manufacturers' information • data sheets • statutory regulations • 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: • types of progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme

Title:	Installing external wall insulation in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*	
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: • removing • measuring • marking out • cutting • line and level • drilling • fitting • fixing • filling • finishing • 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: • suitable access • property suitability • structural integrity • dampness • decay • vents and adequate ventilation • services (gas, electric, water, media cables) • architectural features • vegetation • rainwater goods • loose surface finishes • external cracking • water ingress • 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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to: - suitable access - property suitability - structural integrity - dampness - decay - vents and ventilation - services (gas, electric, water, media cables) - vegetation - rainwater goods - loose surface finishes - external cracking - water ingress - damp proof course • why it is important to ensure that all necessary repairs are completed prior to installation • the importance and function of pull out tests • how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: - fire safety - electrical - media cables - signal receiving equipment - junction boxes - asbestos - Radon - heritage - architectural features - ecology - ventilation - flues

	• 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 • 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 • why it is important to avoid unintended consequences • the effects of weather and the restrictions when applying an external wall system • the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: - wall ties - windows - damp proof course - renders - Tyrolean coatings - silicone weather proof coatings • how to protect the adjacent surfaces • 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 • 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 • how to apply surface treatments to existing walls • why it is important to identify and report architectural features not addressed on the design • why it is important to provide temporary protective covers to work areas • how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: - confirm condition of substrate building fabric - identification of any areas of potential water penetration - visibility and completeness of damp proof course - condition of window and door seals - height of internal floors in relation to external floor height - condition of roof - damaged brickwork - drainage and down pipes - protection and existence of sub floor ventilation

	- cavity width and identification of any debris - electrical cables, media cables, junction and meter boxes, signal receiving equipment - flues, gas pipes, chimneys and combustion air ventilators - identification of protected wildlife (nesting birds, bees, bats) • why it is important to explain installation procedure to building occupants to include but not limited to the following: - scope and work programme - safety requirements during the installation process - protection of property and personal items - specific benefits and implications to include homeowner information - agreed standards of making good • how to work with, around and in close proximity to plant and machinery • how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment • how to identify and follow the installation quality requirements • 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 • how to ensure pre-installation material checks are within specification • how to prepare and install insulated external wall system in accordance with the system design, specification and details, method statement and the require standard • how to cut and fix pre-formed trims and mounting blocks • how to cut, line, level, drill and fix tracks, beads, shims, joints, cills • how to install pattresses for fixtures and fittings • how to apply weather sealing and compressive tapes at interfaces and penetrations • how to install insulation to walls with specified fixing pattern using adhesive and mechanical fasteners • how to apply base coat to insulation • how to embed mesh and stress patches in accordance with specification • how to apply second coat and primers • how to reinstate ancillary wall fixtures including but not limited to downpipes, alarm boxes, fences, handrails • how to apply mastic aesthetic sealant to all interface, joints and penetration • how to make good any marks and holes following scaffold removal

	• 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes, following installation and the need to maintain continuity • 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 • how to handover and sign off to the customers satisfaction and explain maintenance requirements • 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) • why it is important to provide post installation advice and guidance to building occupants and client including homeowner packs • how to use all work tools and installation equipment in line with manufacturers' and system specifications • how to work at height using access equipment and harness systems • 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.

Title:	Installing external wall insulation in the workplace
Additional information about this unit	
Assessment 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.
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	110
Assessment	15

Title:	Park homes insulation	
Unit Number:	A/618/5680	
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: • drawings • specifications • schedules • method statements • risk assessments • manufacturers' information • data sheets • surveys • 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: • drawings • specifications • schedules • method statements • risk assessments • designs • manufacturers' information • data sheets • official guidance • current legislation and regulations governing Park Homes • Park Home site rules

Title:	Park homes insulation

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • below suspended structures • confined spaces • at height • tools and equipment • materials and substances • movement and storage of materials by manual handling and mechanical lifting • vehicles
	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: • site • workplace • siting and location of vehicles • company • customer • access equipment • material and waste storage • 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: • water • CO2 • foam • powder

Title:	Park homes insulation
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • methods of work • safe use of health and safety control equipment • safe use of access equipment • safe use, storage and handling of materials, tools and equipment • operative maintenance of installation equipment • specific risks to health including mental health • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires • spillages • injuries • emergencies relating to occupational activities including but not limited to the following: - partial or full collapse of suspension system - electrical cabling - Radon, methane, LPG or other gases - identification of and reporting of asbestos containing materials
	3.4 Describe how to report risks and hazards identified by the following: • risk assessment

		• personal assessment • methods of work • manufacturers' technical information • data sheets • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH) • 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: • protective sheeting • warning signs • public protection equipment • 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.

Title:	Park homes insulation
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • current legislation • environmental responsibilities • organisational procedures • manufacturers' information • data sheets • statutory regulations • official guidance • 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: • types of progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme

Title:	Park homes insulation
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • moisture content of frame at all corners • integrity of Park Home fabric and suspension system • any signs of board warping, bubbling, dry rot • the distance between Park Homes will meet fire regulations following installation • gas pipes, bottles and electrical cables are secure and safe • insect infestation, vermin, animals and protected species
	7.2 Demonstrate work skills to carry out the following: • measuring • marking out • calibrating • 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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to: - Park Home site approvals - suitable access - property suitability - structural integrity - dampness

	- decay - vents and ventilation - suitable minimum Park Home spacing following proposed installation - services (gas, electric, water, media cables, overhead cables, insect and vermin infestation, animals and protected species) • why it is important to ensure that all necessary repairs are completed prior to installation • how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: - condition of building fabric - identification of any areas of potential water penetration - mould or evidence of condensation - moisture content of the timber frame and dry rot - condition of windows and doors - lack of permission from site owner - condition of roof - space between park homes would be less than 6m following installation - drainage and down pipes - poor condition of suspension system • how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: - fire safety - electrical - asbestos - Radon - ecology - architectural features - ventilation - combustion ventilation - gas • 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 • why it is important to avoid unintended consequences • 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity

	• why it is important to explain installation procedure to building occupants to include but not limited to the following: - scope and work programme - safety requirements during the installation process - protection of property and personal items - specific benefits and implications to include homeowner information - agreed standards of making good • the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: - the Park Home - windows and doors - renders - previous damp treatments • how to work with, around and in close proximity to plant and machinery • how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment • how to identify and follow the installation quality requirements • 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 • how to identify routing of internal services, using relevant detectors • 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 • 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 • why it is important to provide post installation advice and guidance to building occupants including homeowner packs • how to handover and sign off to the customers satisfaction • how to use all work tools and equipment • how to work at height using access equipment • 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 team work and communication when reviewing the suitability of Park Homes for insulation measures.

Title:	Park homes insulation
Additional information about this unit	
Assessment 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.
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	110
Assessment	20

Title:	Installing insulation to suspended floors in the workplace
Unit Number:	F/618/5681

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: • drawings • specifications • schedules • method statements • risk assessments • manufacturers' information • 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: • drawings • specifications • schedules • method statements • risk assessments • design • standards • manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings

Title:	Installing insulation to suspended floors in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • below ground level • confined spaces • at height • tools and equipment • materials and substances • 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: • site • workplace • siting and location of vehicles • company • customer • access equipment • materials and waste storage • 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: • water • CO_2 • foam • powder

Title:	Installing insulation to suspended floors in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • methods of work • safe use of health and safety control equipment • safe use of access equipment • safe use, storage and handling of materials, tools and equipment • specific risks to health including mental health • specific risks associated with ventilation (inside the property and under floor) and also including combustion appliances • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires • spillages • injuries • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	3.4 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • manufacturers' technical information • data sheets • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH)

Title:	Installing insulation to suspended floors in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • protective sheeting • warning signs • temporary barriers • making good materials • filling materials • sealants • 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: • current legislation • environmental responsibilities • organisational procedures

Title:	Installing insulation to suspended floors in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
	• suppliers and manufactures' information • data sheets • statutory regulations • 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: • types of progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme

Title:	Installing insulation to suspended floors in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*	
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: • measuring • marking out • cutting • fitting • positioning • securing • 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: • suitable access • property suitability • structural integrity • dampness • decay • vents and ventilation • 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: • condition of building fabric • identification of any areas of potential water penetration • visibility and completeness of damp proof course • condition of window and door seals • height of internal floors in relation to finished ground level • drainage and down pipes • 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: • safe systems of work • minimising damage • checking existing services • building construction and heritage significance • 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 sound-proofing.
	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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: - suitable access - property suitability - structural integrity - dampness - decay - vents and ventilation - services (gas, electric, water, media cables) • how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to:

	- condition of building fabric - identification of any areas of potential water penetration - visibility and completeness of damp proof course - condition of window and door seals - height of internal floors in relation to external floor height - condition of roof - damaged and spalled brickwork - rain and waste water goods - protection and existence of sub floor ventilation - wall cavity width and identification of any debris • why it is important to ensure that all necessary repairs are completed prior to installation • how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: - fire safety - electrical - asbestos - Radon - heritage - archaeological and architectural features - ecology - ventilation - exposure and topography • 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 • 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 • why it is important to avoid unintended consequences • how to check, record and report issues with under floor (cross flow) ventilation, flues, chimneys and combustion air ventilators pre and post installation • why it is important to explain installation procedure to building occupants to include but not limited to the following: - scope and work programme - safety requirements during the installation process - protection of property and personal items - specific benefits and implications to include homeowner information - agreed standards of making good • the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: - timber treatments - replacement wall ties

	- injected damp proof course - under floor and central heating systems - Radon barriers - electrical wiring - services • how to identify and follow the installation quality requirements • how to work with, around and in close proximity to plant and machinery • how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment • why it is important to recognise the potential risk of increased condensation following installation relating to suspended floors and how to prevent it • how to prepare a floor for insulation, creating access points taking into consideration the following but not limited to: - safe systems of work - minimising damage - checking existing services - building construction and heritage significance - customer safety - archaeology • how to check for hidden utilities • the importance of ensuring all work to services (gas, electric, water) is carried out by suitably qualified people • how to maintain the integrity of membranes • how to remove and minimise damage to floorcoverings • why it is important to ensure the minimum void area air space is maintained by removing debris as required • 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 • how to protect the building occupants and their property • how to install placed, mechanically or adhesively fixed insulation to suspended floors • 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity • 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 • how to ensure pre-installation material checks are within specified parameters and reporting defects • how to ensure existing cross flow ventilation is maintained within the floor void

		• how to maintain existing sound-proofing • how to install and maintain fire resistant barriers • why it is important to minimise thermal bridging through compliance with design detail ensuring a consistent level of insulation to the area being insulated • 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 • why it is important to provide post installation advice and guidance to building occupants including homeowner packs • how to handover and sign off to the customers satisfaction • how to use all work tools and equipment • how to work at height using access equipment • 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 team work and communication when installing insulation to suspended floors.

Title:	Installing insulation to floors in the workplace
Additional information about this unit	
Assessment 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.
Sector Subject areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	90
Assessment	10

Title:	Spraying insulation to suspended floors in the workplace
Unit Number:	J/618/5682

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: • drawings • specifications • schedules • method statements • risk assessments • manufacturers' information • 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: • drawings • specifications • schedules • method statements • risk assessments • design • standards • manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings

Title:	Spraying insulation to suspended floors in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • below ground level • in confined spaces • at height • tools and equipment • materials and substances • 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: • site • workplace • siting and location of vehicles • company • customer • access equipment • material and waste storage • 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: • water • CO_2 • foam • powder

Title:	Spraying insulation to suspended floors in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • methods of work • safe use of health and safety control equipment • safe use of access equipment • safe use, storage and handling of materials, tools and equipment • operative maintenance of installation equipment • specific risks to health including mental health • specific risks associated with ventilation (inside the property and under floor) and also including combustion appliances • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires • spillages • injuries • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	3.4 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • manufacturers' technical information

Continued……		• data sheets • statutory regulations • official guidance • 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: • protective sheeting • warning signs • temporary barriers • making good materials • filling materials • sealants • installation equipment • 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.

Title:	Spraying insulation to suspended floors in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • current legislation • environmental responsibilities • organisational procedures • manufacturers' information • data sheets • statutory regulations • 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: • types of progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme

Title:	Spraying insulation to suspended floors in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • measuring • marking out • calculating • cutting • fitting • filling • positioning and securing • 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: • suitable access • property suitability • structural integrity • dampness • decay • vents and ventilation • 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: • condition of building fabric • identification of any areas of potential water penetration • visibility and completeness of damp proof course • condition of window and door seals • height of internal floors in relation to external floor height • drainage and down pipes • 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:

		• safe systems of work • minimising damage • checking existing services • building construction and heritage significance • customer safety
	7.8	Check for hidden utilities.
	7.9	Maintain integrity of membranes.
	7.10	Remove and minimise damage to floorcoverings.
	7.11	Ensure the minimum void area air space is maintained by removing debris.
	7.12	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.
	7.13	Protect the building occupants and their property.
	7.14	Confirm pre-installation material checks are within specified parameters to include checking and reporting defects.
	7.15	Rectify defects in preparation of insulation measures.
	7.16	Assemble, operate, clean and disassemble installation processing equipment.
	7.17	Calibrate equipment to measure density, flow and quality tests.
	7.18	Spray insulation to suspended floors.
	7.19	Maintain existing sound-proofing.
	7.20	Install and maintain fire resistant barriers.
	7.21	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.
	7.22	Provide post installation advice and guidance to building occupants including homeowner packs.
	7.23	Handover and sign off to the customers satisfaction.
	7.24	Clean and disassemble installation processing equipment and pack away for transportation.
	7.25	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.	7.26	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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: - suitable access - property suitability - structural integrity - dampness - decay - vents and ventilation - services (gas, electric, water, media cables) • why it is important to ensure that all necessary repairs are completed prior to installation • how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to: - condition of building fabric identification of any areas of potential water penetration - visibility and completeness of damp proof course - condition of window and door seals - height of internal floors in relation to external floor height - condition of roof - damaged or spalled brickwork - rain and waste water goods - protection and existence of sub floor ventilation - cavity width and identification of any debris • how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: - fire safety - electrical - asbestos - Radon - heritage - archaeological and architectural features

	- ecology - ventilation - exposure & topography • 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 • 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 • why it is important to avoid unintended consequences • how to check, record and report issues with under floor (cross flow) ventilation, flues, chimneys and combustion air ventilators pre and post installation • why it is important to explain installation procedure to building occupants to include but not limited to the following: - scope and work programme - safety requirements during the installation process - protection of property and personal items specific benefits and implications to include homeowner information - agreed standards of making good • the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: - timber treatments - replacement wall ties - injected damp proof course - under floor and central heating systems - Radon barriers - electrical wiring - services • how to identify and follow the installation quality requirements • how to work with, around and in close proximity to plant and machinery • how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment • why it is important to recognise the potential risk of increased condensation following installation relating to suspended floors and how to prevent it • how to prepare a floor for insulation, creating access points taking into consideration the following but not limited to: - safe systems of work

	- minimising damage - checking existing services - building construction and heritage significance - customer safety - archaeology • how to check for hidden utilities • the importance of ensuring all work to services (gas, electric, water) is carried out by suitably qualified people • how to maintain integrity of membranes • how to remove and minimise damage to floorcoverings • why it is important to ensure the minimum void area air space is maintained by removing debris as required • 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 • how to protect the building occupants and their property • how to assemble, operate, clean and disassemble installation processing equipment • how to calibrate equipment to measure density, flow and quality tests • how to spray insulation to suspended floors • how to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects • 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity • 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 • how to ensure existing cross flow ventilation is maintained within the floor void • how to maintain existing sound-proofing • how to install and maintain fire resistant barriers • why it is important to minimise thermal bridging through compliance with design detail ensuring a consistent level of insulation of the area being insulated • 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 • why it is important to provide post installation advice and guidance to building occupants including homeowner packs • how to handover and sign off to the customers satisfaction • how to clean and disassemble installation processing equipment and pack away for transportation • how to use all work tools and installation equipment in line with manufacturers and system specifications • how to work at height using access equipment and harness systems • how and why maintenance of all work tools and installation equipment is carried out
	7.27	Describe the needs of other occupations and the importance of team work and communication when spraying insulation to suspended floors.

Title:	Spraying insulation to suspended floors in the workplace
Additional information about this unit	
Assessment 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.
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	100
Assessment	10

Title:	Injecting, blowing and spraying insulation to internal walls in the workplace
Unit Number:	R/618/5684

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: • drawings • specifications • schedules • method statements • risk assessments • manufacturers' information • 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: • drawings • specifications • schedules • method statements • risk assessments • design • standards • suppliers and manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings

Title:	Injecting, blowing and spraying insulation to internal walls in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • below ground level • confined spaces • at height • tools and equipment • materials and substances • 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: • site • workplace • siting and location of vehicles • company • customer • access equipment • material and waste storage • 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: • water • CO_2 • foam • powder

Title:	Injecting, blowing and spraying insulation to internal walls in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • methods of work • safe use of health and safety control equipment • safe use of access equipment and harness systems • safe use, storage and handling of materials, tools and equipment • operative maintenance of installation equipment • specific risks to health including mental health • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires • spillages • injuries • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	3.4 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • suppliers and manufacturers' technical information • data sheets • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH)

Title:	Injecting, blowing and spraying insulation to internal walls in the workplace

Learning outcomes *The learner will be able to:*		**Assessment criteria** *The learner can:*
4 Select the required quantity and quality of resources for the methods of work to inject, blow and spray insulation to internal walls. 4 Continued	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: • protective sheeting • masking materials • warning signs • vent sleeves • insulation materials • fixings and adhesives • vapour control and breather membranes • finishing board and coat • combustion vents • all work tools • 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.

Title:	Injecting, blowing and spraying insulation to internal walls in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • current legislation • environmental responsibilities • organisational procedures • manufacturers' information • data sheets • statutory regulations • 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: • types of progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme

Title:	Injecting, blowing and spraying insulation to internal walls in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • measuring • marking out • fixing • finishing • positioning • 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: • suitable access • property suitability • structural integrity • dampness • decay • vents and ventilation • 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: • injected • blown • 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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include but not limited to: - suitable access - property suitability - structural integrity - dampness - condensation - penetrating damp - rising damp - decay - vents and ventilation - services (gas, electric, water, media cables) - condition of down pipes, - roof overhangs and gutters - external and internal finish condition - wall moisture content - damp proof course height above floor level - condition of ground and suspended floor joists • how to identify thermal bridges and understand solutions and limitations

	• why it is important to ensure that all necessary repairs are completed prior to installation • the implications for party wall thermal bridge • 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 • 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: - condition of building fabric - identification of any areas of potential water penetration - visibility and completeness of damp proof course - condition of window and door seals - height of internal floors in relation to external floor height - condition of roof - damaged or spalled brickwork - drainage and down pipes - protection and existence of sub floor ventilation - cavity width and identification of any debris - flues, gas pipes, chimneys and combustion air ventilators - identification of protected wildlife (nesting birds, bees, bats) • how to identify when specialist skills and knowledge are required and report accordingly including but not limited to: - fire safety - electrical - media cables - signal receiving equipment - junction and meter boxes - asbestos - Radon - heritage - archaeological and architectural features - ecology - ventilation - rot • 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 • 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 • why it is important to avoid unintended consequences • why it is important to explain installation procedure to building occupants to include but not limited to the following: - scope and work programme - safety requirements during the installation process - protection of property and personal items - specific benefits and implications to include homeowner information - agreed standards of making good • the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: - wall ties - windows - damp proof course - renders - Tyrolean coatings - silicone weather proof coatings • how to work with, around and in close proximity to plant and machinery • how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment • how to identify and follow the installation quality requirements • which wall types are unsuitable for internal wall insulation • the implications of insulating a terrace or semi-detached house regarding party wall bridge • why it is important to ensure pre-installation material checks are within specified parameters to include checking and recording batch number and reporting defects • how to protect and reinstate, access routes, existing fixtures and fittings (carpets) • how to prepare internal walls for insulation • how to treat external walls in line with system holder specification • the importance of ensuring all work to services (gas, electric, water, media cables) is carried out by suitably qualified people • how to remove, replace and reinstate skirting, coving and cornices, radiators and electrical sockets • how to calibrate equipment to measure density, flow and quality tests to ensure they are in line with manufacturers specifications and material requirements

	• how to install injected, blown and sprayed insulation • how to fit breather membrane and vapour control layers • 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity • why it is important to immediately record and report unforeseen events • why it is important to maintain or install fire resistant barriers • how to maintain sound proofing • how to seal joints, perimeters and penetrations • 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 • how to carry out any repair after installation • how to clean and disassemble installation processing equipment and pack away for transportation • 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 • why it is important to complete post installation checks in accordance with the system designer installations operations manual and report issues • why it is important to provide post installation advice and guidance to building occupants and client including homeowner packs • how to handover and sign off to the customers satisfaction • how to use all work tools and installation equipment in line with manufacturers' and systems specifications • how to work at height using access equipment and harness systems • 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 team work and communication when injecting, blowing and spraying insulation to internal walls.

Title:	Injecting, blowing and spraying insulation to internal walls in the workplace
Additional information about this unit	
Assessment 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. This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. <u>ProQual Level 3 NVQ Diploma in Insulation and Building Treatment</u> **Two** of the following: Injected Blown Sprayed
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	100
Assessment	10

Title:	Applying surface finishes to external wall insulation in the workplace
Unit Number:	Y/618/5685

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: • drawings • specifications • schedules • method statements • risk assessments • suppliers and manufacturers' information • 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: • drawings • specifications • schedules • method statements • risk assessments • design • standards • suppliers and manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings

Title:	Applying surface finishes to external wall insulation in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • the workplace • below ground level • confined spaces • at height • tools and equipment • materials and substances • 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: • site • workplace • siting and location of vehicles • company • customer • access equipment • materials and waste storage • 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: • water • CO_2 • foam • powder

Title:	Applying surface finishes to external wall insulation in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
3 Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices when applying surface finishes to external wall insulation.	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when applying surface finishes to external wall insulation in relation to the following: • methods of work • safe use of health and safety control equipment • safe use of access equipment and harness systems • safe use, storage and handling of materials, tools and equipment • operative maintenance of installation equipment • specific risks to health including mental health • 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: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)
	3.3 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires • spillages • injuries • emergencies relating to occupational activities • identification of and reporting of asbestos containing materials
	3.4 Describe how to report risks and hazards identified by the following: • risk assessment • personal assessment • methods of work • suppliers and manufacturers' technical information • data sheets • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH)

Title:	Applying surface finishes to external wall insulation in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*	
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: • primers • paints • beads and trims • reinforcement • stress patches • renders • mesh • sealants and sealant tapes and strips • fixing and fittings • all work tools • 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.

Title:	Applying surface finishes to external wall insulation in the workplace
Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • current legislation • environmental responsibilities • organisational procedures • suppliers and manufactures' information • data sheets • statutory regulations • 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: • types of progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme.

Title:	Applying surface finishes to external wall insulation in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • measuring • marking out • mixing • applying • 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: • suitable access • property suitability • structural integrity • architectural features • vegetation • rainwater goods • cracking • position of damp proof course • dampness • decay • vents and ventilation • 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: • dash finishes • synthetic or non-synthetic renders • proprietary pre-cast finishes • paint finishes • brick slips • brick effect render

Title:	Applying surface finishes to external wall insulation in the workplace

Learning outcomes *The learner will be able to:*	**Assessment criteria** *The learner can:*
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: • 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 • how to record and report issues or defects with the materials, components and finishes • why it is important to carry out external and internal pre-installation checks • how to carry out external and internal pre-installation checks, assessing, recording and reporting issues to include: - suitable access - property suitability - structural integrity - dampness - decay - vents and ventilation - vegetation - services (gas, electric, water, media cables) - architectural features - rainwater goods - cracking - position of damp proof course • why it is important to ensure that all necessary repairs are completed prior to installation • the weather restrictions for each external wall system finish • 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 • why it is important to Identify and report potential thermal bridging

7 Continued	• how to recognise, record and report the key issues that may inhibit commencement of the work including but not limited to:
	- condition of building fabric
	  - identification of any areas of potential water penetration
	- visibility and completeness of damp proof course
	- condition of window and door seals
	- damaged or spalled brickwork
	- drainage and down pipes
	- protection and existence of sub floor ventilation
	  - electrical cables, media cables, junction and meter boxes
	- signal receiving equipment
	  - flues, gas pipes, chimneys and combustion air ventilators
	  - identification of protected wildlife (nesting birds, bees, bats)
	• how to identify when specialist skills and knowledge are required and report accordingly including but not limited to:
	  - fire safety
	  - electrical
	  - media cables
	  - signal receiving equipment
	  - junction boxes
	  - asbestos
	  - Radon
	  - heritage
	  - ecology
	  - ventilation
	  - flues
	• 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
	• 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
	• why it is important to avoid unintended consequences
	• why it is important to explain installation procedure to building occupants to include but not limited to the following:
	  - scope and work programme
	  - safety requirements during the installation process
	  - protection of property and personal items

7	Continued	- specific benefits and implications to include homeowner information - agreed standards of making good • the implications of existing guarantees and warranties that may be compromised by the installation to include but not limited to: - windows & doors - damp proof course - renders - Tyrolean coatings - silicone weather proof coatings • how to work with, around and in close proximity to plant and machinery • how to direct and guide the operations and movement of plant and machinery to ensure protection of a safe working environment • how to identify and follow the installation quality requirements • how to ensure pre-installation material checks are within specified parameters and reporting defects • how to fix corner surface beads and trims • how to apply base and primer coats, reinforcing mesh and stress patches • how to fit weather seals at interfaces, window and door reveals and at system penetrations in accordance with design details • 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 • how to reinstate fixtures and fittings and seal • 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 • the importance of ensuring the integrity of air and vapour control layers and breather membranes following installation and the need to maintain continuity • 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) • how to carry out any repairs after installation • 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 • why it is important to complete post installation checks in accordance with system designer installations operations manual and report issues

7 Continued	• why it is important to provide post installation advice and guidance to building occupants and client including homeowner packs • how to handover and sign off to the customers satisfaction • how to use all work tools and installation equipment • how to work at height using access equipment and harness systems • 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 team work and communication when applying surface finishes to external wall insulation.

Title:	Applying surface finishes to external wall insulation in the workplace
Additional information about this unit	
Assessment 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. This unit must be assessed against the endorsements detailed within the relevant NVQ Structure. <u>ProQual Level 3 NVQ Diploma in Insulation and Building Treatments</u>: **Three** of the following: Dash finishes Synthetic or non-synthetic renders Proprietary pre-cast finishes Paint finishes Brick slips Brick effect render
Sector Subject Areas	5.2 Building and Construction
Availability for use	Shared unit
Unit guided learning hours	75
Assessment	10

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