



GQA Level 3 NVQ Diploma in Insulation and Building Treatments

Qualification Number
603/7375/1

Qualification specification

Summary of changes

This section records the version history of this qualification specification. Centres must ensure that they are using the most current approved version available via the GQA website and GQAonline

Version	2
Publication date	July 2026
Summary of amendments	Amended qualification structure for pathway 3 and added additional not compulsory units to the qualification

Qualification Summary

Qualification Title	GQA Level 3 NVQ Diploma in Insulation and Building Treatments
Qualification Review Date	31/07/2029
Qualification Number	603/7375/1
Total Qualification Time (TQT)	700
Guided Learning Hours	329
Credit value	70
Qualification purpose	This qualification enables the learner to demonstrate and recognise their skills, knowledge and understanding and to demonstrate their competence in a real workplace environment where they can work as an Insulation and Building treatments Operative within the construction industry. It is accepted there are a number of specialisms in the sector, and the qualification has been developed with Pathways to allow as wide an uptake as possible.
Grading	Pass/Fail
Assessment	Portfolio of Evidence
Entry Requirements	Minimum 16 years old. Learners need to be in employment to undertake this qualification and have access to appropriate assessment opportunities.
Progression	On completion of this GQA Level 3 NVQ Diploma in Insulation and Building Treatments qualification, the learner will have obtained the skills, knowledge and understanding and demonstrated competence, progression routes could include: Insulation Team Leader, Building Treatments Supervisor, Retrofit Installation Supervisor, Site Supervisor Contracts Supervisor, Project Supervisor, Insulation Surveyor, Retrofit Surveyor, Damp and Timber Surveyor, Property Condition Inspector, Building Performance Assessor, Energy Efficiency Advisor

1: Introduction

GQA Qualifications

GQA Qualifications Limited is an Awarding Body for specialist sectors and occupational roles. Our current qualifications cover a wide range of sectors, including the Glass and Fenestration Industries, Construction, Print, Automotive Glazing, Polymers, Nuclear, Chimney Occupations, Meteorology and Print.

GQA works with employers, industry experts and training providers to ensure qualifications are relevant, robust and aligned to current industry practice.

Centre Approval

To offer a GQA qualification, a centre must be recognised and approved by GQA. Approval requires centres to show they have appropriate systems, resources and competent staff in place to deliver, assess and quality assure the qualification.

Centres must provide evidence of:

- suitably qualified and occupationally competent staff
- effective internal quality assurance arrangements
- appropriate physical and learning resources.
- policies and procedures that support learner protection and regulatory compliance.

Approval decisions are based on the sufficiency of these arrangements for the qualification being delivered. Centres must also gain approval for each qualification they intend to offer, and no learner assessment may take place until both centre and qualification approval have been confirmed by GQA.

Qualification Specification

Each GQA qualification is supported by a qualification specification containing the information centres need to deliver, assess and quality assure the qualification.

The qualification specification is a controlled document and must be used by centres to plan delivery and assessment. Relevant GQA policies and procedures, including those for centre approval, appeals, reasonable adjustments and recognition of prior learning, are available via the GQA website and GQAonline.

Qualification specifications can also be found on our website: <https://g-q.a.com>. and for existing approved centres can be downloaded from GQAonline.

Centres must ensure they are using the most recent version of the qualification specification for planning and delivery purposes.

Reproduction of this document

Centres may reproduce this qualification specification for internal use only. The content must not be altered, adapted or presented in a way that changes its meaning or regulatory intent.

2. Qualification Summary

Qualification structure

All 5 Mandatory units are to be completed

Core Mandatory units – all pathways			
Unit number	Unit name	Credit value	GLH
A/503/2772	Confirming work activities and resources for an occupational area in the workplace	10	33
K/507/9537	Developing and maintaining good occupational working relationships in the workplace	8	27
L/652/2684	Conforming to general health, safety and welfare in the workplace	2	7
R/503/2924	Confirming the occupational method of work in the workplace	11	37
M/618/7006	Insulations and building treatments, building construction, defects and interfaces	19	90
Pathway 1: Room in Roof – Group RR1 (2 units must be achieved)			
D/618/6997	Installing internal insulation to walls in the workplace	22	100
H/618/6998	Installing insulation to framed sections of buildings in the workplace	22	110
A/618/7008	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace	24	120
Pathway 1: Room in Roof – Group RR2 (1 unit must be achieved)			
Y/618/6996	Installing insulation to cold roofs in the workplace	19	90
Y/618/7002	Installing blown insulation to cold roofs in the workplace	19	90
J/617/8828	Develop customer relationships	6	40
Pathway 1: Room in Roof – Group RR3 (1 unit must be achieved)			
K/618/6999	Installing insulation to create warm roofs in the workplace	19	90
R/618/7001	Spray insulation to create warm roofs in the workplace	19	110
J/617/8828	Develop customer relationships (this unit should not be taken in both groups)	6	40
Pathway 1: Room in Roof – Group RR3 (1Additional unit must be achieved(not compulsory)			
K/618/6999	Installing insulation to create warm roofs in the workplace	19	90
D/600/8281	Erecting and dismantling access/working platforms in the workplace	8	27

Unit number	Unit name	Credit value	GLH
Pathway 2 – Park Homes – Group PH1 (All units required)			
L/618/6994	Installing external wall insulation (EWI Boarder) in the workplace	25	110
K/618/7005	Park homes insulation	25	110
Pathway 2 – Park Homes – Group PH2 (One unit required)			
L/618/700	Installing insulation to suspended floors in the workplace	19	90
T/618/7007	Spraying insulation to suspended floors in the workplace	20	100
Pathway 2 – Park Homes – Group PH3 (One unit required)			
Y/618/6996	Installing insulation to cold roofs in the workplace	19	90
Y/618/7002	Installing blown insulation to cold roofs in the workplace	19	90
J/617/8828	Develop customer relationships	6	40
Pathway 2 – Park Homes – Additional unit (not compulsory)			
D/600/8281	Erecting and dismantling access/working platforms in the workplace	8	27
Pathway 3 – Hybrid Wall– Additional – Group HW1 – Mandatory unit (not compulsory)			
L/618/6994	Installing external wall insulation (EWI Boarder) in the workplace	25	125
Pathway 3 – Hybrid Wall – Group HW2 – (one unit required)			
D/618/6997	Installing internal insulation to walls in the workplace	22	100
H/618/7004	Injecting, blowing and spraying insulation to internal walls in the workplace	22	100
Pathway 3 – Hybrid Wall – Additional units (not compulsory)			
D/600/8281	Erecting and dismantling access/working platforms in the workplace	8	27
R/618/6995	Applying surface finishes to external wall insulation in the workplace	21	75
J/617/8828	Develop customer relationships	6	40

Pathway 4: Insulating Framed Sections of Buildings – Group FS1 – one unit required			
A/618/7008	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace	24	120
H/618/6998	Installing insulation to timber framed sections of buildings in the workplace	22	110
Pathway 4: Insulating Framed Sections of Buildings – Additional units (not compulsory)			
D/600/8281	Erecting and dismantling access/working platforms in the workplace	8	27
J/617/8828	Develop customer relationships	6	40
Pathway 5: External Wall Insulation Boarder– Mandatory unit			
L/618/6994	Installing external wall insulation (EWI Boarder) in the workplace	8	27
Pathway 5: External Wall Insulation Boarder – Additional units (not compulsory)			
D/600/8281	Erecting and dismantling access/working platforms in the workplace	8	27
J/617/8828	Develop customer relationships	6	40
Pathway 6: External Wall Insulation Finisher– Mandatory unit			
R/618/6995	Applying surface finishes to external wall insulation in the workplace	21	75
Pathway 6: External Wall Insulation Finisher – Additional units (not compulsory)			
D/600/8281	Erecting and dismantling access/working platforms in the workplace	8	27
J/617/8828	Develop customer relationships	6	40
Pathway 7: External Wall Insulation Boarder and Finisher– Mandatory unit (both units to be taken)			
R/618/6995	Applying surface finishes to external wall insulation in the workplace	21	75
L/618/6994	Installing external wall insulation (EWI Boarder) in the workplace	8	27
Pathway 7: External Wall Insulation Boarder and Finisher – Additional units (not compulsory)			
D/600/8281	Erecting and dismantling access/working platforms in the workplace	8	27
J/617/8828	Develop customer relationships	6	40
Pathway 8: Internal Insulation Walls– Mandatory unit (both units to be taken)			
H/618/7004	Injecting, blowing and spraying insulation to internal walls in the workplace	22	100
R/618/6995	Applying surface finishes to external wall insulation in the workplace	21	75
Pathway 8: Internal Wall Insulation Walls – Additional units (not compulsory)			
D/600/8281	Erecting and dismantling access/working platforms in the workplace	8	27
J/617/8828	Develop customer relationships	6	40

Total Qualification Time

Total Qualification Time (TQT) is the estimated time a learner typically needs to achieve the qualification, including guided learning, independent study, workplace activity and assessment.

The TQT for this qualification is: 700 hours.

Guided Learning Hours

Guided Learning Hours (GLH) represent the time spent being taught, instructed or supervised by a tutor, trainer or assessor.

The GLH for this qualification is: 329 hours.

Entry guidance

Learners must be aged 16 years old and have access to a working environment that allows them to generate valid evidence across the qualification.

Initial assessment must confirm role suitability, support needs, and the learner's access and opportunity to meet the full requirements of the qualification.

Achieving this qualification

To be awarded this qualification, learners must achieve 5 Mandatory units and the correct number of units for the pathway being taken. Each pathway has additional units that can be completed; however, these additional units are not compulsory to achieve the qualification.

Resource requirements

There are no prescribed mandatory physical resources for this qualification. Centres must, however, ensure learners have access to a working environment, information, documentation, staff support and assessment arrangements needed to generate valid evidence across all units.

How the qualification is assessed

This qualification is internally assessed through a portfolio of evidence generated from the learner's workplace practice and externally quality assured by GQA. Assessment is based on achievement of the published learning outcomes and assessment criteria.

Assessment strategy

Assessment must be planned, conducted and quality assured so that evidence is valid, authentic, sufficient, current and reliable.

Purpose and principles

- **Validity:** evidence must directly relate to the published learning outcomes and assessment criteria, and reflect the level and intent of each unit.
- **Authenticity:** evidence must be the learner's own work and contribution, clearly attributable and confirmed by the learner and assessor.
- **Sufficiency:** there must be enough evidence to support a confident judgement of full achievement.
- **Currency:** evidence must reflect current competence and current organisational practice.
- **Reliability and consistency:** assessment decisions must be consistent across assessors and learners through standardisation and internal quality assurance.
- **Fairness and accessibility:** assessment must provide equal opportunity for all learners, supported by reasonable adjustments where appropriate, without compromising validity.
- **Transparency:** learners must understand assessment requirements, evidence expectations, feedback processes, and the routes for appeals and complaints.
- **Confidentiality and information governance:** evidence must be managed securely and redacted or anonymised.

Assessment approach

Assessment is criterion-referenced. Learners must meet all learning outcomes and assessment criteria for each unit. The qualification is not graded and is awarded on a Pass/Fail basis.

Assessment may be holistic where this reflects authentic workplace practice, provided evidence is clearly mapped to each unit, learning outcome and assessment criterion.

Permitted forms of evidence.

Evidence may include workplace documents, reports, professional discussion, assessor observation, witness testimony, reflective accounts and structured written responses, provided it is valid, appropriate and can be authenticated.

Centres must ensure the evidence selected is appropriate to the demands of each criterion. Competence-based criteria must be evidenced through workplace practice, while knowledge-based criteria must not rely solely on unsupported claims of activity.

Where workplace documents are used as evidence, centres and learners must ensure that confidential, commercially sensitive or personal data is appropriately redacted/anonymised and that the portfolio makes clear the version of the document used and the learner's specific contribution.

Workplace evidence requirements

Evidence must come from the learner's own workplace practice within an organisational context that provides sufficient opportunity to meet the qualification requirements. Centres must confirm, through initial assessment and ongoing review, that the learner's role remains suitable.

For the alternative pathway units, centres must use initial assessment to select the most appropriate option for the learner's role and organisational context. Learners must not complete both units.

Evidence control, authenticity and authorship

All evidence must be attributable to the learner. Learners must confirm authenticity, and assessors must take reasonable steps to verify authorship and validity.

Where digital or AI-enabled tools are used, learners remain responsible for the submitted content. Centres must ensure confidentiality is protected and evidence is stored securely in line with centre procedures and GQA requirements.

Malpractice plagiarism and the use of AI tools

Centres must have procedures to prevent, detect and manage malpractice, including plagiarism and the submission of work that is not the learner's own.

If AI tools are used, centres should require learners to declare this and, where necessary, confirm understanding through questioning or professional discussion.

Sufficiency, currency and cross-referencing

Evidence must be sufficient, current and clearly cross-referenced, so each assessment criterion can be identified and assessed with confidence.

Recognition of Prior Learning (RPL) may be used only in line with GQA requirements and must not undermine the need to demonstrate current, applied competence.

Simulation

Simulation must not be used unless it is expressly permitted within unit requirements or approved by GQA in accordance with its published policy. Where simulation is permitted in limited circumstances, centres must document the rationale, confirm how the scenario reflects realistic workplace conditions, and ensure that simulation does not replace evidence of real workplace practice where such evidence is required.

Assessment planning and judgement

Centres must plan assessments so evidence is generated in a valid, manageable and proportionate way. Assessment decisions must be based only on the published requirements and the evidence presented.

Internal quality assurance and standardisation

All assessment decisions must be subject to internal quality assurance. Centres must operate standardisation and IQA arrangements that support valid, reliable and consistent assessment decisions, with appropriate separation between assessment and IQA activity.

External quality assurance

GQA will apply external quality assurance to confirm that centres are assessing and quality assuring the qualification in accordance with its requirements. Operational requirements relating to external quality assurance are set out later in this specification.

Internal assessment

Each learner must produce a portfolio of evidence showing achievement of all learning outcomes and assessment criteria for each unit. Centres must ensure evidence is clearly mapped, assessed and internally quality assured.

Pre-course information

Centres must provide learners with pre-course information covering the qualification, assessment requirements, fees, entry expectations and any required resources.

This must make clear the need to generate evidence from workplace practice, any expected organisational access, and the routes for reasonable adjustments, complaints and appeals.

Initial assessment

All learners must complete an initial assessment before starting the qualification.

Initial assessment must be used to identify prior knowledge, support needs, pathway suitability and access to an appropriate organisational context.

Teaching resources

Teaching materials and resources must be appropriate to the level and requirements of the qualification and reflect current Floorcovering operations.

Learner registration

Centres must follow GQA procedures for registering learners before assessment begins.

Centres must ensure that registration decisions are made in line with equality legislation and are based on objective evidence from initial assessment, including whether the learner has suitable access and opportunity to generate valid evidence and whether any support or reasonable adjustments are required.

Tutor, assessor and internal quality assurer requirements

All staff involved in delivery, assessment, and IQA must be occupationally competent and experienced enough to support and judge evidence at the required level.

Assessors and internal quality assurers must be occupationally competent in the subject area and familiar with the evidence and judgement demands of this qualification.

Centres must ensure staff competence is reviewed and maintained through continuing professional development (CPD).

Tutors or Trainers

Tutors or trainers who deliver a GQA qualification must possess a teaching qualification appropriate for the level of qualification they deliver.

This can include:

- Further and Adult Education Teacher's Certificate
- Cert Ed/PGCE/Bed/Med
- PTLLS/CTLLS/DTLLS
- Level 3 Award/Level 4 Certificate/Level 5 Diploma in Education and Training.

Assessor

Centre staff who assess a GQA qualification must possess an assessing qualification appropriate for the level of qualification they are delivering, or they should be working towards a relevant qualification and have their assessment decisions countersigned by a qualified assessor.

Suitable assessor qualifications can include:

- Level 3 Award in Assessing Competence in the Work Environment
- Level 3 Certificate in Assessing Vocational Achievement
- Level 3 Award in Assessing Vocationally Related Achievement
- Level 3 Certificate in Assessing Vocational Achievement
- A1 or D32/D33.

Specific requirements for assessors may be indicated in the assessment strategy/principles identified in individual unit or qualification specifications.

Assessors are also required to have relevant occupational experience, or qualifications or membership of a professional body to demonstrate they have the required level of experience and knowledge to assess against the set criteria.

Internal Quality Assurer

Centre staff who undertake the role of an Internal Quality Assurer (IQA) for GQA Qualifications must possess or be working towards a relevant IQA qualification. Those working towards an IQA qualification must have their quality assurance decisions countersigned by a qualified internal quality assessor.

This could include:

- Level 4 Award in the Internal Quality Assurance of Assessment Processes and Practice
- Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Processes and Practice
- V1 qualification (internal quality assurance of the assessment process)
- D34 qualification (internally verify NVQ assessments and processes).

It is best practice that those who quality assure qualifications also hold one of the assessing qualifications outlined above.

Centres must ensure appropriate separation between assessment and internal quality assurance activities so that individuals do not internally quality assure their own assessment decisions.

External Quality Assurance

GQA undertakes external quality assurance to ensure that centres comply with qualification requirements and maintain consistent assessment standards.

External quality assurance activities may include:

- review of assessment and internal quality assurance decisions
- sampling of learner evidence
- observation of assessment practice
- interviews with centre staff and learners

External quality assurance ensures that assessment decisions are valid, reliable and consistent across centres.

Centres must provide GQA with access to learner evidence, assessment and internal quality assurance records, staff records and any other documentation reasonably required to support external quality assurance activity. Centres must also address any actions arising from external quality assurance within the timescales set by GQA.

Complaints

Any complaint from a learner, centre, employer or other stakeholder relating to the delivery of this qualification or associated services must be handled in accordance with the relevant GQA Complaints Policy. Centres must also operate their own complaints arrangements and make these available to learners.

Appeals

Learners must have access to a clear and documented appeals process relating to assessment decisions. In the first instance, appeals against assessment decisions must be considered through the centre's own appeals procedure. Where the learner or centre remains dissatisfied, the matter may then be escalated in accordance with the GQA Appeals Policy and procedure.

Reasonable Adjustments and Special Considerations

GQA and its centres must ensure that assessment is accessible in accordance with relevant equality legislation and GQA policy. Reasonable adjustments and special consideration are controlled adjustments to standard assessment arrangements and must be applied in a way that does not compromise the validity, reliability or comparability of assessment outcomes. Centres must ensure that requests are identified, evidenced, recorded and managed in line with GQA procedures.

RPL

Recognition of Prior Learning (RPL) allows learners to demonstrate that they have already met the requirements of a unit through prior learning or experience.

Centres must ensure that any RPL claims are supported by valid, authentic, sufficient and current evidence.

RPL must not be used where it would undermine the requirement for learners to demonstrate current, applied competence within their organisational context. Centres must operate RPL arrangements in line with GQA requirements and must retain auditable evidence of all RPL decisions.

3: Unit content

This section provides details of the structure and content of this qualification.

Units

This section contains details of the full unit content

Unit Name	Confirming work activities and resources for an occupational area in the workplace		
Unit Number	A/503/2772		
GLH	33	TQT	100
Level	3	Credit value	10
Unit Aim	The aim of this unit is to ensure that the candidate has the skills and knowledge required to understand and plan work activities to complete the work programme, including how to identify and obtain the necessary resources. Candidates must also understand the factors that can affect progress and the sequence of work carried out, understand the impact of changes to work schedules and why and how to inform relevant people of required changes. Candidates must also have an understanding of how work activities can make a positive contribution to the environment, including knowledge of low and zero carbon requirements.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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 resource needs 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. Evaluate the work activities and the requirements of any significant external factors against the project requirements	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.
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 Determine work activities that have an influence on each other.
	4.5 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.
	4.6 Explain different methods and sources that can identify which work activities influence each other.
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.

Scope

Learners must be able to plan, organise, monitor and review work activities within their occupational area, ensuring that sufficient resources, personnel, information and equipment are available to complete work safely, efficiently and in accordance with project requirements.

Range

Work Activities • Installation activities • Surveying activities • Preparation activities • Inspection activities • Remedial works • Quality assurance activities •	Resources • Labour • Materials • Plant and equipment • Access equipment • Documentation • Information technology
Information Sources • Drawings • Specifications • Risk assessments • Method statements • Programmes of work • Manufacturers' instructions	

Unit Name		Conforming to general health, safety and welfare in the workplace.	
Unit Number		A/503/1170	
GLH	17	TQT	20
Level:	1	Credit	2
Unit Aim	This unit aims to develop the learner's understanding and ability to conform to general health, safety and welfare requirements in the workplace by working safely, recognising and reporting hazards, using control measures and PPE correctly, and contributing to a safe working environment in line with legislation, official guidance and organisational procedures.		
Learning outcomes <i>The learner will be able to:</i>		Assessment criteria <i>The learner can:</i>	
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.
		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.
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.

Scope

Learners must demonstrate compliance with workplace health, safety, welfare and environmental requirements when undertaking insulation and building treatment activities.

Range

Hazards • Work at height • Manual handling • Electricity • Hazardous substances • Confined spaces • Dust and fibres • Moving vehicles • Slips, trips and falls	Control Measures • PPE • RPE • Safe systems of work • Exclusion zones • Signage • Permit systems
Emergency Procedures • Fire evacuation • Accident reporting • First aid arrangements • Emergency communications	

Unit Name	Developing and maintaining good occupational working relationships in the workplace		
Unit Number	A/503/2772		
GLH	37	TQT	80
Level	3	Credit value	3
Unit Aim	The aim of this unit is to ensure that the candidate has the skills and knowledge required to develop and maintain effective working relationships in communicating information on proposed work activities with colleagues, employers, customers, contractors, suppliers and others involved in, or affected by, the work activities. Candidates will be required to provide the appropriate level and amount of information and provide clarification and advice where it is required. Candidates must be able to discuss alternatives and options and resolve any differences of opinion in ways that minimise offence and maintain goodwill, trust and respect		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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 urgency	2.1	Communicate on the following work activity information to relevant people following organisational procedures: • appropriate timescales • health and safety requirements coordination 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	
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. Offer advice and help to relevant people about work activities and encourage questions/ 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 • achievement • occupational problems • occupational opportunities • health and safety requirements • coordinated 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 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 the methods of clarifying alternative proposals with relevant people
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

Scope

Learners must communicate effectively and maintain productive working relationships with all parties involved in insulation and building treatment projects.

Range

People • Customers • Occupants • Colleagues • Supervisors • Contractors • Suppliers • Inspectors	Communication Methods • Verbal • Written • Electronic • Toolbox talks • Site meetings
Relationship Requirements • Respect • Professionalism • Equality and diversity • Customer care • Problem resolution	

Unit Name	Confirming occupational methods of work in the workplace		
Unit Number	R/503/2924		
GLH	47	TQT	110
Level	3	Credit value	11
Unit Aim	The aim of this unit is to provide the learner with the knowledge and skills to interpret information from project data to evaluate and confirm work methods that will meet the project requirements, be cost effective and comply with statutory and contractual requirements, taking into account environmental issues. Candidates must be able to communicate recommended methods to all relevant persons.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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.	
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. Identify work methods that will make best use of resources and meet project, statutory and contractual requirements.	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.

Scope

Learners must identify and implement suitable methods of work that meet technical, contractual and legislative requirements.

Range

Documentation • Specifications • Design drawings • Method statements • Risk assessments • Product certification	Methods • Mechanical fixing • Adhesive fixing • Injection systems • Blown insulation systems • Spray insulation systems
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Unit Name	Insulation and building treatments, building construction, defects and interfaces		
Unit Number	M/618/7006		
GLH	100	TQT	190
Level	3	Credit value	19
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in identifying common building defects including but not limited to: salt contamination, causes of dampness, rain penetration, rising damp, internal moisture vapour, damaged services and structural defects. Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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	
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. 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.	2.3	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.
3. Select the required quantity and quality of resources for the methods of work in relation to building construction, defects and interfaces.	3.1	Select resources associated with own work.
	3.2	Check the suitability, compatibility and characteristics of the materials, components and finishes and determine if they are moisture open or moisture closed and their impact on the building.
	3.3	Record and report issues or defects.
	3.4	Describe why the characteristics, compatibility, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified.
	3.5	Describe how the resources should be used and how problems associated with the resources are reported.
	3.6	Describe how to confirm that the resources and materials conform to the specification.
	3.7	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.
	3.8	Describe how to identify the hazards associated with the resources and methods of work and how they are overcome.
4. Minimise the risk of damage to the work and surrounding area in relation to building construction, defects and interfaces	4.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	4.2	Maintain a safe, clear and tidy work area.
	4.3	Explain why it is important to maintain a safe, clear and tidy work area.
	4.4	Dispose of waste in accordance with current legislation.
	4.5	Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
	4.6	Explain the importance of protecting the work and its surrounding area against the risk of damage.
5. Comply with the given contract information when identifying common building construction, defects and interfaces to the required specification.	5.1	Comply with the given contract information to carry out the work efficiently to the required specification.
	5.2	Demonstrate work skills to carry out external and internal pre installation checks in regard to building construction, defects and material interfaces:

5. Comply with the given contract information when identifying common building construction, defects and interfaces to the required specification	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
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5 Comply with the given contract information when identifying common building construction, defects and interfaces to the required specification.	5.4 • 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 teamwork and communication, and how to effectively communicate within a team when identifying building construction defects and interfaces.

Scope

Learners must understand building construction types, recognise defects and identify interfaces affecting insulation installations.

Range

Construction Types • Traditional masonry • Timber frame • Steel frame • Solid wall • Cavity wall Park homes	Defects • Dampness • Condensation • Structural movement • Timber decay • Corrosion • Thermal bridging
Interfaces • Roofs • Floors • Walls • Openings • Services	

Unit Name	Installing internal insulation to walls in the workplace		
Unit Number	M/618/7006		
GLH	110	TQT	220
Level	3	Credit value	22
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in installation of internal insulation to walls in the workplace. Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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 • supplier 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		
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 Know how to comply with environmentally	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	

responsible work practices to meet current, legislation standards and official guidance when installing internal insulation to walls.		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 • CO2 • foam • powder
3. Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices	3.1	Demonstrate compliance with relevant legislation, standards and official guidance when installing internal insulation to walls in relation to the following: • 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)
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,

4. Select the required quantity and quality of resources for the methods of work to install internal insulation to walls.		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.
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.
	7.1	Demonstrate the following work skills when installing.

7.	Comply with the given contract information to carry out the work efficiently to install internal insulation to walls. to the required specification.	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 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)

7 Comply with the given contract information to carry out the work efficiently to install internal insulation to walls. to the required specification.

- 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
- 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 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.

7.12

7 Comply with the given contract information to carry out the work efficiently to install internal insulation to walls. to the required specification.	• 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 weatherproof 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 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 soundproofing • how to seal joints, perimeters and penetrations • why it is important to minimise thermal bridging through compliance with design details, 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 clients, 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 • 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
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7 Comply with the given contract information to carry out the work efficiently to install internal insulation to walls. to the required specification.	7.13 Describe the needs of other occupations and the importance of teamwork and communication when installing external wall insulation.
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Scope

Learners must install internal wall insulation systems safely and to specification.

The learner needs to install insulation using one of the following methods:

- Placed
- Mechanically or adhesively fixed, including thermal boards

Range

Insulation Systems	Installation Activities
• Thermal laminate boards • Insulated plasterboard • Direct bond systems • Framed systems	• Surface preparation • Insulation fixing • Vapour control installation • Joint sealing • Finishing works

Unit Name	Installing insulation to framed section of buildings in the workplace		
Unit Number	H/618/6998		
GLH	120	TQT	220
Level	3	Credit value	22
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in installing insulation to framed sections of buildings in the workplace. Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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	
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 walls.	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 Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when installing internal insulation to walls.	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.
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 section 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 • suppliers and manufacturers' technical information • 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 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, fixings and finishes to 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 Select the required quantity and quality of resources for the methods of work to install insulation to framed sections of buildings.	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. 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.
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 manufacturers' 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
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	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 customer's satisfaction.

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	7.12 • 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 ○ 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.
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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	7.12 • 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 weatherproof 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 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. • 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 teamwork and communication when installing insulation to framed sections of buildings.
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Scope

Learners must install insulation within timber or steel-framed structures.

Range

Frame Types • Timber stud • Timber frame • Steel frame • Partition systems	Materials • Mineral wool • Rigid board • Flexible insulation • Vapour membranes
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Unit Name	Injecting, blowing or spraying insulation to framed sections of buildings in the workplace		
Unit Number	A/618/7008		
GLH	130	TQT	240
Level	3	Credit value	24
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in injecting, blowing or spraying insulation to framed sections of buildings in the workplace. More specifically candidates must be able to 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 Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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 • 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.	

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 Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when installing internal insulation to walls.	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 injecting, blowing or spraying insulation to framed sections of buildings and describe how and when they are used in relation to: • water • CO2 • foam • powder
3. Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices	3.1	Demonstrate compliance with relevant legislation, standards and official guidance when injecting, blowing or spraying insulation to framed sections of buildings in relation to the following: 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	Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices	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)
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, finishes, tools and equipment.
		4.2	Check the suitability, compatibility, and characteristics of the materials, components, fixing and finishes to 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 installation equipment
		4.6	Describe how to confirm that the resources and materials conform to the specification.

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.	4.7	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 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
6.	Complete the work within the allocated time when injecting, blowing or spraying insulation to framed sections of buildings.	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
		6.1	Demonstrate completion of your work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard.
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.	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
		7.1	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	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.	7.2	Demonstrate the following work skills when injecting, blowing or spraying insulation to framed sections of buildings: • removing • measuring • calibrating • marking out • cutting • line and levelling. • drilling • fitting • fixing • filling • finishing • positioning • securing
		7.3	Use and maintain all work tools and equipment
		7.4	Remove existing defective insulation, boarding, breather membranes and vapour control layers.
		7.5	Prepare and remove existing defective insulation, boarding, breather membranes and vapour control layers.
		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 is it 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

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	7.12	• 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 weatherproof 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 installation. • how to identify and report the existence of thermal bridges and water
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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		ingress not addressed in the design • how to ensure pre-installation material checks are within specified parameters, to include checking and recording batch numbers and reporting defects • how to calibrate equipment to measure density, flow and quality tests to ensure that 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 interfaces, 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 installation 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 teamwork and communication when installing insulation to framed sections of buildings.

Scope

Learners must apply insulation to framed elements using specialist application techniques.

Range

Application Methods (one of these to be seen)	Areas
• Injection • Blowing • Spraying	• Walls • Roof structures • Floor voids • Ceiling void

Unit Name	Installing insulation to cold roofs in the workplace		
Unit Number	Y/618/6996		
GLH	100	TQT	190
Level	2	Credit value	19
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in the installation of insulation to cold roofs in the workplace. More specifically, this must include preparation and installation of insulation to cold roofs using at least one of the following methods in compliance with current regulations and to given working instructions. Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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 into 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 • suppliers and manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings.		

2. Know how to comply with environmentally responsible work practices to meet current legislation standards and official guidance when installing insulation into 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 • 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 cold roofs and describe how and when they are used in relation to: • water • CO2 • foam • powder
3. Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices	3.1	Demonstrate compliance with relevant legislation, standards and official guidance when installing insulation to cold roofs in relation to the following: • 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 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 Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices	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)
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, and characteristics of the materials, components, fixing and finishes to 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 and ancillary items • access boards • loft hatches • light wells • soffit and fascia boards • tile vent • 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.
	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 insulation into cold roofs.

5. Minimise the risk of damage to the work and surrounding area when installing insulation into 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 • suppliers and manufacturers' information • data sheets • statutory regulations • official guidance
6. Complete the work within the allocated time when installing insulation into 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 insulation into cold roofs.	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 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	Comply with the given contract information to carry out the work efficiently to install insulation into cold roofs.	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 occupant's stored items.
		7.9	Install passive ventilation and safeguarding existing ventilation.
		7.10	Insulate and draught-proof access hatches.
		7.11	Insulate light wells.
		7.12	Minimise the effects of thermal bridging.
		7.13	Carry out post installation checks to ensure insulation complies with the design.
		7.14	Provide post installation advice and guidance to building occupants including homeowner packs.
		7.15	Hand over and sign off to the customers satisfaction
		7.16	Describe how the methods of work to meet the specification are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: • 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

7 Comply with the given contract information to carry out the work efficiently to install insulation into cold roofs	7.16 ○ 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 ○ -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 ○ 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.
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7 Comply with the given contract information to carry out the work efficiently to install insulation to cold roofs in buildings	7.16 • 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 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 installation 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 teamwork and communication when installing insulation to cold roofs
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Scope

Learners must install insulation within cold roof constructions while maintaining ventilation and moisture control, using one of the following methods: Placed or Mechanically or Adhesive fixed.

Range

Insulation Locations	Considerations
• Loft floors • Ceiling joists • Loft hatches • Water tank areas	• Ventilation • Fire protection • Pipe protection • Condensation control

Unit Name	Installing blown insulation to cold roofs in the workplace		
Unit Number	Y/618/7002		
GLH	100	TQT	190
Level	2	Credit value	19
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in the installation of blown insulation to cold roofs in the workplace. Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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 into 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		
2. Know how to comply with environmentally responsible work practices to meet current legislation standards and official guidance when installing blown insulation in 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 Know how to comply with environmentally responsible work practices to meet current legislation standards and official guidance when installing blown insulation into cold roofs	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 cold roofs and describe how and when they are used in relation to: • water • CO2 • foam • powder
3. Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices	3.1 Demonstrate compliance with relevant legislation, standards and official guidance when installing blown insulation to cold roofs in relation to the following: • 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 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 • suppliers and manufacturers' technical information • 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 install blown 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, and characteristics of the materials, components, fixings, and finishes to 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 and ancillary items • access boards • loft hatches • light wells • soffit and fascia boards • tile vent • 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.
	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 into cold roofs.
5. Minimise the risk of damage to the work and surrounding area when installing blown insulation into 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	Minimise the risk of damage to the work and surrounding area when installing blown insulation into cold roofs.	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 blown insulation into 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 into cold roofs.	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 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:
		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 Comply with the given contract information to carry out the work efficiently to install blown insulation into cold roofs.	7.9	Identify and Install passive ventilation and safeguarding existing ventilation.
	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 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)

7 Comply with the given contract information to carry out the work efficiently to install blown insulation into cold roofs	7.30 • 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
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7 Comply with the given contract information to carry out the work efficiently to install blown insulation to cold roofs in buildings	7.30 • 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 installation 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 customer's 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 teamwork and communication when installing blown insulation to cold roofs

Scope

Learners must install loose-fill or blown insulation systems in roof spaces.

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Range

Equipment	Quality Requirements
• Blowing machines • Delivery hoses • Measurement devices	• Correct depth • Even distribution • Ventilation protection • Coverage verification

Unit Name	Developing customer relationships		
Unit Number	J/617/8828		
GLH	50	TQT	60
Level	2	Credit value	6
Unit Aim	This unit aims to ensure the candidate has the skills and knowledge to deliver customer service professionally and in a way that will build positive working relationships with customers.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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 customers' 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	

Scope

Learners must provide professional customer service before, during and after installation activities.

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Range

Customer Service Activities	Communication Topics
- Initial contact - Property access arrangements - Complaint handling - Handover advice - Aftercare support	- Installation process - Health and safety - Disruption management - Energy efficiency benefits

Unit Name	Installing insulation to create warm roofs in the workplace		
Unit Number	K/618/6999		
GLH	100	TQT	190
Level	3	Credit value	19
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in installation to create warm roofs in the workplace. More specifically, candidates must be able to 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 Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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	

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 • 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 cold roofs and describe how and when they are used in relation to: • water • CO2 • foam • powder
3. Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when installing insulation to create warm roofs in relation to the following: • 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 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	Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	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)
		3.5	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
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 and 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.

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
7.	Comply with the given contract information to carry out the work efficiently to install insulation to create warm roofs	7.1	Demonstrate the following work skills when installing insulation to create warm roofs • measuring • marking out • cutting • fixing • positioning • securing • making good
		7.2	Use and maintain 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 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 Comply with the given contract information to carry out the work efficiently to install insulation to create warm roofs.	7.5	Prepare and install insulation to pipes, tanks and/or cylinders in compliance with current regulations and to given working instructions.
	7.6	Install air and vapour control layers.
	7.7	Protect electrical services, lighting, media, high amperage cables.
	7.8	Create and protect platforms and walkways for access and storage.
	7.9	Remove and secure building occupants stored items.
	7.10	Install passive ventilation and safeguard existing ventilation in accordance with the system design.
	7.11	Carry out post installation checks to ensure adequate ventilation above and below insulation.
	7.12	Maintain fire resistant barriers.
	7.13	Seal joints, perimeters and penetrations.
	7.14	Minimise the effects of thermal bridging.
	7.15	Complete post installation checks in accordance with the system designer installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects.
	7.16	Provide post installation advice and guidance to building occupants including homeowner packs.
	7.17	Hand over and sign off to the customers' satisfaction.
	7.18	Describe how the methods of work to meet the specification are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: - 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 -condition of roof -damaged or spalled brickwork (gable end) -drainage and down pipes

7 Comply with the given contract information to carry out the work efficiently to install insulation to create warm roofs	7.18 • 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. • 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.
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7 Comply with the given contract information to carry out the work efficiently to install insulation to create warm roofs in buildings	7.18 • 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 details, 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 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 installation 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 customer's 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 Protect downlighters by installation of fire rated caps to the required specification.
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Scope

Learners must install insulation systems above or within roof structures to create warm roof constructions, using one of the following methods: Placed or Mechanically or Adhesive fixed.

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Roof Types	Installation Methods
• Flat roofs • Pitched roofs • Hybrid roofs	• Board systems • Mechanical fixing • Adhesive fixing • Combination systems

Unit Name	Spraying insulation to create warm roofs in the workplace		
Unit Number	R/618/7001		
GLH	120	TQT	190
Level	3	Credit value	19
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in spraying insulation to create warm roofs in the workplace. Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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 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	
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 Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when spraying insulation to create warm roofs	2.2	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 cold roofs and describe how and when they are used in relation to: • water • CO2 • foam • powder
3. Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1	Demonstrate compliance with, relevant legislation, standards and official guidance when spraying insulation to create warm roofs in relation to the following: • 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)

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, components, finishes, tools and equipment.
		4.2	Check the suitability and 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: • 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 system designer specification and wastage associated with the method and procedure to spray insulation to create warm roofs.
5	Minimise the risk of damage to the work and surrounding area when spraying insulation to create warm roofs.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
		5.2	Maintain a safe, clear and tidy work area.
		5.3	Explain why it is important to maintain a safe, clear and tidy work area
		5.4	Dispose of waste in accordance with current legislation.
		5.5	Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
		5.6	Explain 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 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

7. Comply with the given contract information to carry out the work efficiently when spraying insulation to create warm roofs	7.1	Demonstrate the following work skills when installing insulation to create warm roofs • measuring • marking out • calculating • making good
	7.2	Use and maintain 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 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 Comply with the given contract information to carry out the work efficiently to spray insulation to create warm roofs.	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.

7 Comply with the given contract information to carry out the work efficiently to spray insulation to create warm roofs	7.28 • 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.
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7 Comply with the given contract information to carry out the work efficiently to spray insulation to create warm roofs in buildings	7.28 • 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 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 customer's 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 teamwork and communication when spraying insulation to create warm roofs.

Scope

Learners must apply spray insulation products to create and enhance warm roof systems.

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Range

Spray Systems	Quality Requirements
• Open-cell foam • Closed-cell foam • Fibre spray systems	• Design thickness • Continuous coverage • Adhesion • Fire performance

Unit Name	Installing external wall insulation (EWI Boarder) in the workplace		
Unit Number	L/618/6994		
GLH	125	TQT	250
Level	3	Credit value	25
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in the installation of external wall insulation in the workplace. Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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 • 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		
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 Know how to comply with environmentally responsible work practices to meet current legislation standards and official guidance when installing external wall insulation	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 cold roofs and describe how and when they are used in relation to: • water • CO2 • foam • powder
3. Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when installing external wall installation 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 external wall installation 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)
	3.5 Select resources associated with own work in relation to materials, components and finishes, tools and equipment.

4	Select the required quantity and quality of resources for the methods of work to install external wall insulation	4.1	Check the suitability and compatibility 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.
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. Minimise the risk of damage to the work and surrounding area when installing external wall insulation.	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.
7. Comply with the given contract information to carry out the work efficiently when installing external wall insulation	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 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 surfaced 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 to given working instructions.

7 Comply with the given contract information to carry out the work efficiently when installing external wall panels	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

7 Comply with the given contract information to carry out the work efficiently when installing external wall panels	7.15 • 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 weatherproof coating • 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
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7 Comply with the given contract information to carry out the work efficiently when installing external wall panels	7.15 • 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 required 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 clients, 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.
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Scope

Learners must install external wall insulation systems incorporating insulation boards and render systems.

Range

Components	Substrates
• Insulation boards • Adhesives • Mechanical fixings • Mesh reinforcement • Base coat • Finish coat • Trims	• Brickwork • Blockwork • Rendered surfaces • Concrete

Unit Name	Park homes insulation		
Unit Number	K/618/7005		
GLH	130	TQT	250
Level	3	Credit value	25
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in the installation of insulation to park homes in the workplace. Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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	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 • Park Home site rules	
2. Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when reviewing the suitability of Park Homes for insulation	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 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	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 • 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 installing insulation to cold roofs and describe how and when they are used in relation to: • water • CO2 • foam • powder
3. Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when reviewing the suitability of Park Homes for insulation 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 • 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 Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	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 for the methods of work to 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 and 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 • 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.
5 Minimise the risk of damage to the work and surrounding area when reviewing the suitability of Park Homes for insulation measures	4.9 Describe how to calculate the quantity of materials required and used to carry out remediation and preparatory work.
	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	Minimise the risk of damage to the work and surrounding area when reviewing the suitability of Park Homes for insulation measures	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 • 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.
7.	Comply with the given contract information to carry out the work efficiently when reviewing the suitability of Park Homes for insulation measures	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
		7.3	Use and maintain all work tools
		7.4	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

7 Comply with the given contract information to carry out the work efficiently when reviewing the suitability of Park Homes for insulation measures	7.5 ○ 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 downpipes ○ 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
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7 Comply with the given contract information to carry out the work efficiently when reviewing the suitability of Park Homes for insulation measures	7.5	• 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 customer's 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 teamwork and communication when reviewing the suitability of Park Homes for insulation measures.

Scope

Learners must install insulation systems to park homes in accordance with site-specific and construction requirements.

Range

Locations	Considerations
• Underfloor areas • External walls • Roof spaces • Service penetrations	• Restricted access • LPG installations • Ventilation • Site regulations

Unit Name	Installing insulation to suspended floors in the workplace		
Unit Number	L/618/7000		
GLH	100	TQT	200
Level	2	Credit value	20
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in installation to suspended floors in the workplace. Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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	
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 Know how to comply with environmentally responsible work practices to meet current, legislation standards and official guidance when installing insulation to suspended floors.	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 suspended floors. and describe how and when they are used in relation to: • water • CO2 • foam • powder
3. Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with, relevant legislation, standards and official guidance when 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. • 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)

4	Select the required quantity and quality of resources for the methods of work when installing 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 and 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 • 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 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 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.
7. Comply with the given contract information to carry out the work efficiently when installing insulation to suspended floors	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
	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 Comply with the given contract information to carry out the work efficiently when installing insulation to suspended floors	7.8	Install placed, mechanically or adhesively fixed insulation to suspended floors.
	7.9	Check for hidden utilities.
	7.10	Maintain integrity of membranes
	7.11	Remove and minimise damage to floorcoverings.
	7.12	Ensure the minimum void area air space is maintained by removing debris.
	7.13	Clear and safeguard existing and install additional in accordance with the design and installation checks and report back issues which impact the ventilation assessment.
	7.14	Protect the building occupants and their property.
	7.15	Confirm pre-installation material checks are within specified parameters to include checking and reporting defects.
	7.16	Rectify defects in preparation of insulation measures.
	7.17	Maintain existing soundproofing.
	7.18	Install and maintain fire resistant barriers.
	7.19	Carry out post installation checks in accordance with the design, method statement and installations operations manual and report issues to include but not limited to safeguarding the combustion ventilation and report defects.
	7.20	Provide post installation advice and guidance to building occupants including homeowner packs.
	7.21	Handover and sign off to the customers' satisfaction.
	7.22	Work at height using access equipment.
	7.23	Describe how the methods of work to meet the specification are carried out and how problems are identified and reported by the application of knowledge for safe, healthy and environmental work practices, procedures and skills relating to the method and area of work relating to the following: - 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.

7 Comply with the given contract information to carry out the work efficiently when installing insulation to suspended floors	7.23 • how to recognise 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
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7 Comply with the given contract information to carry out the work efficiently when installing insulation to suspended floors	7.23 • 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 soundproofing • how to install and maintain fire resistant barriers • why it is important to minimise thermal bridging through compliance with design details, 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 customer's 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 teamwork and communication when installing insulation to suspended floors.

Scope

Learners must install insulation systems beneath suspended floor structures.

Range

Floor Types	Installation Methods
• Timber suspended • Beam and block • Mixed construction floors	• Netting systems • Board fixing • Quilt insulation • Membrane systems

Unit Name	Spraying insulation to suspended floors in the workplace		
Unit Number	T/618/7007		
GLH	110	TQT	200
Level	2	Credit value	20
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in spraying insulation to suspended floors in the workplace. Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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	
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 Know how to comply with environmentally responsible work practices to meet current legislation standards and official guidance when spraying insulation to suspended floors.	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 spraying insulation to suspended floors. and describe how and when they are used in relation to: • water • CO2 • foam • powder
3. Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with relevant legislation, standards and official guidance when spraying insulation 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. • 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)

4	Select the required quantity and quality of resources for the methods of work when spraying 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 and 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 • 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 system designer specification and wastage associated with the method and procedure to spray insulation to suspended floors.
5	Minimise the risk of damage to the work and surrounding area when spraying insulation to suspended floors	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
		5.2	Maintain a safe, clear and tidy work area.
		5.3	Explain why it is important to maintain a safe, clear and tidy work area.
		5.4	Dispose of waste in accordance with current legislation.
		5.5	Describe how to protect work and its surrounding area from damage by general workplace activities, other occupations and adverse weather conditions and how to minimise damage to existing building fabric.
		5.6	Explain the importance of protecting the work and its surrounding area against the risk of damage.
		5.7	Explain why and how the disposal of waste must be carried out safely in accordance with the following: • 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 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.
7. Comply with the given contract information to carry out the work efficiently when spraying insulation to suspended floors	7.1	Demonstrate the following work skills when installing insulation to suspended floors: • measuring • marking out • 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 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 external 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	Check for hidden utilities
	7.9	Maintain integrity of membranes

7 Comply with the given contract information to carry out the work efficiently when spraying insulation to suspended floors	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 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 soundproofing
	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 defect
	7.22	Provide post installation advice and guidance to building occupants including homeowner packs.
	7.23	Handover and sign off to the customer's satisfaction
	7.24	Clean and disassemble installation processing equipment and pack away for transportation.
	7.25	Work at height using access equipment
	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

7 Comply with the given contract information to carry out the work efficiently when spraying insulation to suspended floors	7.26 ○ 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.
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7 Comply with the given contract information to carry out the work efficiently when spraying insulation to suspended floors	7.26 • 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 soundproofing • how to install and maintain fire resistant barriers • why it is important to minimise thermal bridging through compliance with design details, 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 customer's 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 teamwork and communication when spraying insulation to suspended floors.
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Scope

Learners must apply spray insulation materials to suspended floor constructions.

Application Areas	Insulation Performance Requirements
• Crawl spaces • Basements • Suspended timber floors	• Thermal continuity • Moisture control • Adhesion • Fire protection

Unit Name	Injecting, blowing and spraying insulation to internal walls in the workplace		
Unit Number	H/618/7004		
GLH	110	TQT	220
Level	3	Credit value	22
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in injecting, blowing and spraying insulation to internal walls in the workplace. More specifically, candidates must be able to 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 Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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 • manufacturers' information • data sheets • official guidance • current legislation and regulations governing buildings		

2. Know how to comply with environmentally responsible work practices to meet current legislation standards and official guidance when injecting, blowing and spraying insulation to internal walls	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment in relation to: • 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 • 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 injecting, blowing and spraying insulation to internal walls and describe how and when they are used in relation to: • water • CO2 • foam • powder
3. Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1	Demonstrate compliance with relevant legislation, standards and official guidance when injecting, blowing and spraying insulation to internal walls in relation to the following: • 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 injecting, blowing and spraying insulation to internal walls • 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 Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	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)
4. Select the required quantity and quality of resources for the methods of work when injecting, blowing and spraying insulation to internal walls	4.1 Select resources associated with own work in relation to materials, components and finishes, tools and equipment.
	4.2 Check the suitability and 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 • 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 required and used to ensure adequacy of fill as per system designer specification and wastage associated with the method and procedure when injecting, blowing and spraying insulation to internal walls
5. Minimise the risk of damage to the work and surrounding area when injecting, blowing and spraying insulation to internal walls	5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2 Maintain a safe, clear and tidy work area.
	5.3 Explain why it is important to maintain a safe, clear and tidy work area.
	5.4 Dispose of waste in accordance with current legislation.

5 Minimise the risk of damage to the work and surrounding area when injecting, blowing and spraying insulation to internal walls	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 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.
7. Comply with the given contract information to carry out the work efficiently when injecting, blowing and spraying insulation to internal walls	7.1	Demonstrate the following work skills when installing insulation to suspended floors: • measuring • marking out • fixing • finishing • positioning • sealing and securing
	7.2	Use and maintain all work tools and installation 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 external ground level • drainage and down pipes • protection and existence of sub floor ventilation
	7.5	Fit breather membrane and vapour control layers

7 Comply with the given contract information to carry out the work efficiently when injecting, blowing and spraying insulation to internal walls	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 downpipes, ○ 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.

7 Comply with the given contract information to carry out the work efficiently when injecting, blowing and spraying insulation to internal walls	7.15 • •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 weatherproof 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.
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7 Comply with the given contract information to carry out the work efficiently when injecting, blowing and spraying insulation to internal walls	7.15 • 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 soundproofing • 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 to 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 clients, including homeowner packs. • how to handover and sign off to the customer's 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 Assemble, operate, clean and disassemble installation processing equipment.
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Scope

Learners must install internal wall insulation using specialist application methods.

Range

Methods – two of the following to be seen • Injection systems • Blown fibre systems • Spray-applied systems	Installation Activities • Preparation • Application • Quality checks • Finishing repairs
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Unit Name	Applying surface finish to external walls in the workplace		
Unit Number	R/618/6995		
GLH	85	TQT	215
Level	3	Credit value	22
Unit Aim	The aim of this unit is to ensure the candidate has the skills and knowledge to confirm competency in applying surface finishes to external wall insulation in the workplace. Candidates must be able to demonstrate competence and knowledge of at least 3 of the following: • dash finishes • synthetic or non-synthetic renders • proprietary pre-cast finishes • paint finishes • brick slips • brick effect render Candidates must demonstrate completion of the work within the estimated, allocated time and performance requirements of the system design, method statement and the required standard. Specific details of the skills and knowledge are shown within the unit criteria.		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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 • 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		

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 • 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 • 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 • CO2 • foam • powder
3. Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	3.1 Demonstrate compliance with relevant legislation, standards and official guidance when 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 • 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 injecting, blowing and spraying insulation to internal walls • 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 Comply with current, relevant legislation, standards and official guidance to carry out your work and maintain safe and healthy work practices.	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)
4. Select the required quantity and quality of resources for the methods of work when applying surface finishes to external wall insulation	4.1 Select resources associated with own work in relation to materials, components and finishes, tools and equipment.
	4.2 Check the suitability and 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: • primers • paints • beads and trims • reinforcement • stress patches • renders • mesh • sealants, sealant tapes and strips • fixing and fitting • 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 system designer specification and wastage associated with the method and procedure when applying surface finishes to external wall insulation
5. Minimise the risk of damage to the work and surrounding area when applying surface finishes to external wall insulation	5.1 Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.
	5.2 Maintain a safe, clear and tidy work area.
	5.3 Explain why it is important to maintain a safe, clear and tidy work area.
	5.4 Dispose of waste in accordance with current legislation.

5 Minimise the risk of damage to the work and surrounding area when applying surface finishes to external wall insulation	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 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.
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 checks, assessing, recording and reporting issues to include: • suitable access • property suitability • structural integrity • architectural features • vegetation • rainwater goods • cracking • positioning 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 Comply with the given contract information to carry out the work efficiently when applying surface finishes to external wall insulation to the required specifications	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
	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: and materials used to • 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. • 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)

7 Comply with the given contract information to carry out the work efficiently when applying surface finishes to external wall insulation to the required specifications	7.12 • 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 ○ 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 weatherproof 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.
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7 Comply with the given contract information to carry out the work efficiently when applying surface finishes to external wall insulation to the required specifications	7.12	• 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. • why it is important to provide post installation advice and guidance to building occupants and clients, including homeowner packs. • how to handover and sign off to the customer's 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 teamwork and communication when applying surface finishes to external wall insulation.

Scope

Learners must apply decorative and protective finishes to external wall insulation systems.

Range

Finishes -three of the following to be seen • Mineral render • Silicone render • Acrylic render • Dash finish • Brick slips • Brick effect render • Paint systems	Accessories • Beads • Trims • Mesh • Sealants
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Unit Name	Erecting and dismantling access/working platforms in the workplace		
Unit Number	R/618/6995		
GLH	27	TQT	80
Level	2	Credit value	8
Unit Aim	The aim of this unit is to ensure that the candidate has the skills and knowledge required to erect and dismantle access/working platforms in accordance with job specifications, safe working practices and in the allocated time. Candidates will have to demonstrate competence in the positioning, erection, dismantling and storage of 2 of the following: ladders/crawler boards, stepladders/platform steps, proprietary towers, trestle platforms, mobile scaffold towers or proprietary staging/podiums. The candidate must also understand how to communicate with others to ensure work is carried out effectively. All work must be carried out in accordance with safe working practices, minimising risk of damage to the work and surrounding area and using and maintaining tools and equipment effectively, including protective screens and signage. Candidates must understand their responsibilities and the hazards associated with this type of work, including the uses and limitations of different types of access equipment. Candidates must also have knowledge of how to dispose of waste in accordance with legislation and environmental responsibilities, and the accident and emergency procedures. Finally, candidates must understand the types of problems that can occur when carrying out this type of work and the organisational procedures for dealing with them		
Learning outcomes <i>The learner will be able to:</i>	Assessment criteria <i>The learner can:</i>		
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 statements.	
	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.	

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	Describe how to calculate the quantity of equipment required associated with the method/procedure to erect and dismantle access equipment/working platforms.
5 Minimise the risk of damage to the work and surrounding area when erecting and dismantling access/working platforms	5.1	Protect the work and its surrounding area from damage.
	5.2	Minimise damage and maintain a clean workspace.
	5.3	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.
	5.4	Dispose of waste in accordance with legislation.
	5.5	State why the disposal of waste should be carried out in relation to the work.
6. Complete the work within the allocated time when erecting and dismantling access/working platforms.	6.1	Demonstrate completion of the work within the allocated time.
	6.2	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.
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	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	Comply with the given contract information to erect and dismantle access/ working platforms to the required specification.	7.6	Describe how to maintain the tools and equipment used when erecting and dismantling access/working platforms.
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Scope

Learners must safely erect, use, inspect and dismantle low-level access and working platforms.

Range

Equipment – two or more of the following to be used: • Step ladders / platform steps • Extension ladders • Crawler boards • Podium steps • Mobile towers • Trestle platform • Staging	Activities • Inspection • Assembly • Stability checks • Safe use • Dismantling • Storage
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4: Support

Support materials

The following support materials are available to assist with the delivery of this qualification and are available in GQAonline:

- learner's portfolio evidence log
- learning resources
- qualification summary sheet
- GQA e-portfolio which is available from GQA for Centres and Learners to use.

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