GQA Level 2 NVQ Diploma in Waterproof Membrane Roofing Systems (Construction) v3

Qualification Reference Number

610/4826/4

Personal Competence Summary

Name	Company/Centre
Job Title	GQA Registration Number

Mandatory Units					
Unit Number	**Unit Title**	**Level**	**Credit Value**	**Assessor Signature**	**Date**
A/503/1170	Conforming to General Health, Safety and Welfare in the Workplace	1	2		
J/503/1169	Conforming to Productive Working Practices in the Workplace	2	3		
F/503/1171	Moving, Handling and Storing Resources in the Workplace	2	5		
L/651/3700	Preparing surfaces for membrane roofing systems in the workplace	2	15		
Y/651/3704	Repairing membrane roofing systems in the workplace	2	16		

RELIABLE EVIDENCE: The forms of evidence available include (mark as appropriate)

Observation in the workplace	☐	Assessment of knowledge	☐
Records of prior experience	☐	Witness statement(s)	☐
Testimonial(s)	☐	Photographic evidence	☐
Work records	☐	External testing	☐

Passport Style Candidate Photo (Mandatory)

COMPETENCE COMPLETION SIGNATURES

By signing here, the Candidate and Assessor confirm that evidence presented is authentic and that the assessments took place in accordance with the relevant assessment strategy. Details of the assessments and evidence must be recorded in the assessment decision record/summaries at the end of each unit.

	Name	**Signature**	**Date**
Candidate			
Lead Assessor			
Internal Verifier			
EQA			

Introduction to the Qualification

Who is this Qualification for?

The Level 2 NVQ Diploma in Waterproof membrane roofing systems (Construction) qualification has been developed for achievement in a real workplace environment. It is understood that not all individuals employed in this industry carry out the same tasks, so the qualification has pathways to allow proof of knowledge and competence in any or all of 3 areas, reinforced bitumen membrane systems, single ply membrane systems and liquid membrane systems.

All work must be carried out in accordance with safe working practices and to meet the specified contract requirements. The qualification has 5 mandatory units with a total credit value of 41 credits. To complete this qualification all mandatory units must be completed with the required credits from the chosen pathway(s).

The minimum credit value of this qualification is 58 credits.

Qualifications are now required to indicate the total qualification time (TQT), this is to show the typical time it will take someone to attain the required skills and knowledge to meet the qualification criteria, this qualification has a TQT of 580 hours.

Qualifications are also required to indicate the number of hours of teaching someone would normally need to gain the skills and knowledge to achieve the qualification. These are referred to as Guided Learning Hours (GLH). The GLH for thisqualification is 284.

Unit Number	Unit Title	Level	Credit Value	GLH	TQT
A/503/1170	Conforming to General Health, Safety and Welfare in the Workplace	1	2	17	20
J/503/1169	Conforming to Productive Working Practices in the Workplace	2	3	20	30
F/503/1171	Moving, Handling and Storing Resources in the Workplace	2	5	27	50
L/651/3700	Preparing surfaces for membrane roofing systems in the workplace	2	15	65	150
Y/651/3704	Repairing membrane roofing systems in the workplace	2	16	75	160
Pathway 1 - Reinforced Bitumen Membrane System					
A/651/3705	Applying reinforced bitumen membrane systems in the workplace	2	20	20	200
Pathway 2 - Single Ply Membrane Systems					
Y/651/3713	Applying single ply membrane systems in the workplace	2	17	17	170
Pathway 3 - Liquid Membrane Systems					
M/651/3710	Applying liquid membrane systems in the workplace	2	17	17	170

Achieving the combination of Mandatory units and the correct choice of Optional credits will mean the qualification has been completed and GQA will provide the Diploma with the qualification title. Where a candidate has completed additional credits, the Diploma will list these as “additional credits”, in cases where the candidate has not completed thefull qualification and will not go on to do so, a Certificate of credit can be issued for the credits achieved.

Assessment Guidance

Evidence should show that the candidate can cover the scope of performance outlined for each relevant unit consistently over an appropriate period.

Types of evidence:

Evidence of performance and knowledge is required. Evidence of performance should be demonstrated by activities and outcomes, and should be generated in the workplace only, unless indicated under potential sources of evidence (see below). Evidence of knowledge can be demonstrated through performance or by responding to questions.

Potential sources of evidence:

The main source of evidence for each unit will be observation of performance. This can be supplemented by the following types of physical or documentary evidence:

- Audio/photographic/video
- Safety records
- Witness testimony
- Organisational reporting systems
- Notes and memos
- Equipment used
- Inspection reports

Please Note that photocopied or downloaded documents such as manufacturers or industry guidance, H&S policies, Risk Assessments etc., are not normally acceptable evidence for GQA qualifications unless accompanied by a record of a professional discussion or assessor statement confirming candidate knowledge of the subject. If you are in any doubt about the validity of evidence, please contact your GQA EQA.

GQA Qualification Implementation Requirements covering Centre Approval, Candidate Assessment and ongoing Quality Assurance

This document indicates the requirements of approved centres delivering GQA qualifications and/or units of credit. This document complements the appropriate SSC Assessment Strategy linked to this qualification.

1. Equality of Opportunity

Equality of access to fair and valid assessment is necessary for all candidates undergoing assessment. This may mean making reasonable adjustments to normal assessment methods for candidates with particular or special assessment requirements. Candidates work patterns should not become a barrier to assessment, the organisation of which may have to be flexible. In the same way, reasonable adjustment arrangements may be necessary for candidates with a disability. For example, a candidate who is unable, through disability, to produce oral or written evidence, may be allowed to use the method they normally use as a substitute for the required form of communication. Reasonable adjustments need to be approved by GQA.

2. Recognised/Approved Assessment Centres

2.1 Individual centres must be approved by GQA to offer specific qualifications and / or units of credit. A centre may be a single organisation or a partnership of two or more organisations. It may operate at a single location or have satellites. For further details see the GQA booklet "Guide to Centre Approval." The Centre Approval process is carried out by a GQA approved EQA. Each Centre must maintain a centre file. It is important to be clear what the steps in the assessment process are:

- plan evidence collection and opportunities for assessment
- collect evidence
- judge evidence
- determine whether sufficient evidence has been presented
- make an assessment decision and give feedback to the candidate

NB Any deviation from the norm must be approved by a GQA EQA

2.2 Assessors and Verifiers

All Assessors of candidate performance must be competent, to make qualitative judgements, both in the skills they are assessing and in the assessment of candidates and hold the appropriate Assessor national award. Assessor occupational knowledge related to the qualifications being assessed is essential and must be illustrated to GQA prior to approval.

Internal Verifiers are responsible for the quality assurance of the assessment process within a centre. They should have a relevant occupational background, be competent in internal verification and hold the Internal Verifier national award. It is recommended that Internal Verifiers work towards national recognition of assessor competence.

EQAs are responsible for ensuring accurate and consistent standards of assessment across centres, qualifications, units of credit and over time. They should have a relevant occupational background, be competent in External Quality Assurance and hold the EQA national award
GQA will approve and licence all individuals involved in the assessment and verification of its approved qualifications and / or units of credit. Individuals who are working towards the Assessor or Internal Verifier national awards can only be provisionally licensed. The judgement of provisional licence holders will need to be agreed/authorised by a fully qualified and GQA licensed individual who cannot carry out a dual role in relation to a specific candidate.

All GQA Assessors and Verifiers must undertake a minimum of two significant CPD activities in both occupational areas and assessment and verification. Reflective CPD records must be maintained and made available to GQA EQAs for review.

2.3 Centre Approval, Monitoring Reviews and Quality Assurance

The centre recognition/approval process is the start of a significant part of the awarding body's quality assurance system. The Approval process will begin with an EQA review of centre procedures to ascertain the potential centre's ability to deliver GQA qualifications and / or units of credit. Centres will be expected to meet the relevant regulatory authority criteria for delivery of qualifications prior to initial approval; continued compliance with the criteria will be monitored through regular EQA visits. It is recommended that centre reviews are conducted at minimum every six months by a GQA EQA.
New or multi-site centres may be required to undertake quarterly or more frequent EV reviews to ensure that different locations can be seen to satisfy the national requirements.

GQA will ensure that unacceptable barriers relating to the assessment and internal verification of candidates in small companies do not deny recognition of competence to competent young workers. In such circumstances, GQA will demonstrate that its quality assurance procedures remain sufficient and rigorous to ensure that the competence outcomes have standing and credibility in the occupational area.

Enhanced quality procedures to ensure consistency of assessment and verification will be necessary and will include:

- a high level of sampling of assessment decisions N.B. In some instances, the EQA may visit each assessment location and qualification / unit of credit candidate (e.g., single candidates dispersed throughout different small companies on government funded programmes)
- an in-depth scrutiny of assessment plans, materials and records
- specific centre guidance aimed at the successful implementation of qualifications and / or units of credit in SMEs via approved centre partnerships. This can include guidance on the quantity and quality of valid, authentic, and transferable evidence expected to be attributed to individual candidates
- ensuring centres are following the requirements prescribed in any appropriate assessment strategies and applicable codes of practice
- the identification and publication of good practice in centres

As part of the Quality Assurance process Proskills require an Enhanced External Quality Assurance process. This will be in the form of one significant underpinning knowledge question answered by the candidate for each unit of the qualification. The questions will be decided by GQA, and guideline answers must be submitted for approval and once approved kept in the Centre File to allow independent assessment

3. Qualification/Unit of Credit Candidates

All candidates must register with a GQA recognised/approved centre. The centre must maintain appropriate candidate personal details for external audit purposes etc.

The centre will provide candidates with advice and guidance on how to prepare for assessment and allocate an Assessor who will assess candidate ability to meet the requirements of the relevant qualifications / unit of credit.

It is the candidate's responsibility to demonstrate competence and to do this they must:

- prove they can consistently meet all the qualification and / or unit of credit criteria
- provide evidence from work, that they can perform competently in all the contexts specified in the qualification / unit of credit requirements
- prove that they have the knowledge and understanding required to perform competently, even where they have not provided evidence from the workplace

It is therefore critical that quality evidence is provided in a format to allow the Assessor to decide and for the Internal Verifier to audit/verify his/her decision.

4. Evidence

A qualification and / or credit is awarded when a person has achieved the necessary outcomes of the qualification and / or unit of credit.

The specific combination of units necessary to achieve a qualification is detailed in the qualification structure. Certificates of Unit Credit can be awarded when candidates achieve anyone, or more, units from the qualification. The evidence the candidate brings forward is primarily evidence of performance of what he/she can do, not just what he/she knows. The assessment criteria / qualification requirements are described within the qualification and / or unit of credit itself and can incorporate practical skills and knowledge.

The assessor's role is to judge each relevant item of evidence. Each must be judged against the qualification and / or unit of credit requirements. It is not sensible to collect evidence against individual criteria. Nor is it effective. If items of evidence were collected for each of the criteria, the candidate may have to produce many items of evidence, well above the number required. GQA recommend holistic assessment.

When judging each item of evidence, the assessor is deciding whether the evidence:

- is authentic – i.e., produced by the candidate
- meets the criteria
- relates as appropriate to a context defined within the qualification and / or unit of credit
- confirms that the candidate has the required underpinning knowledge

When the assessor decides about the candidate's competence, he or she examines all the evidence available to determine:

- if the evidence covers all the evidence of achievement
- whether the evidence indicates consistency in competent performance
- whether there is enough evidence on which to base an inference of competence

The answer can only be:

- yes (the candidate is competent)
- no (the candidate is not yet competent)
- there is insufficient evidence to decide

Consistency means that the individual is likely to achieve the standard in their work role, in the different activities defined

5. Performance Evidence

Performance evidence can be what the individual produces, or the way the individual achieves the standard.

One is called product evidence and the other process evidence.

Product evidence is tangible – you can look at it and feel it. Products can be inspected, and the candidate can be asked questions about them.

To make a fair and objective assessment, the assessor must be able to answer the question: Is there sufficient evidence that the candidate can consistently meet the requirements of the qualification and / or unit of credit? Process evidence describes the way the candidate has achieved an outcome – how they went about it. This may be,

for example, the way the quality of products is checked, or the way customer complaints are handled. This usually means observing the candidate in action.

Performance evidence may cover several outcomes. It makes sense to plan evidence collection so that what the candidate does, in the normal course of their job, can be related to different outcomes and units. The activities that clearly link to the qualification and / or unit of credit requirements are the things to concentrate on when planning evidence collection and assessment and when monitoring the candidate's progress. Look for opportunities in the candidate's job when evidence can be collected against several units at the same time.

Performance evidence can be:

- Naturally occurring – evidence produced in the normal course of work. Evidence of this sort is usually of high quality and reliable. It is also cost effective to collect naturally occurring evidence
- Taken from previous achievements – the candidate may be able to bring forward evidence from previous work experience to show that they are still competent to the standard
- Evidence of prior achievement can be used when it can be shown to support a judgment that the candidate can still achieve the standard. So, the assessor must be satisfied that the evidence of prior achievement is sufficiently reliable to justify saying that the candidate is currently competent
- Simulated – from circumstances specially designed to enable the candidate's performance to be assessed. Simulation is not acceptable

The exceptions this are:

- Dealing with emergencies
- Dealing with accidents
- Certain pre-approved real time simulators
- Limited other procedures that cannot be practically performed in the workplace, and for which sufficient evidence can be collected through other means

NB: It is not always possible or feasible to collect naturally occurring evidence. It is likely that some simulation may be needed, when it may take too long to wait for the evidence to arise e.g., it may be an aspect of performance which occurs infrequently. An example of this may be evidence of how to deal with emergencies i.e., it makes sense to look for evidence from sources other than naturally occurring ones, rather than for, say, waiting for the building to burn down. Centres must obtain GQA EV approval prior to the use of simulation.

Knowledge evidence

Being able to achieve a standard requires the ability to put knowledge to work. The qualification and / or unit of credit indicates the knowledge each person should use if they are to perform competently.
It should not be necessary to test all of the candidate's knowledge separately; however, any exception to this would be detailed in the relevant Assessment Strategy. Performance evidence could show that the candidate knows what he or she is doing. When this is not the case, or if the assessor is not convinced from the performance evidence, it may be necessary to check the individual's knowledge separately.
Oral or written assessments must clearly provide a suitable means of checking the breadth and depth of an individual's knowledge. Assessors will need to judge the best mix of knowledge evidence according to individual circumstances. Knowledge evidence is useful when deciding the quality of performance evidence but must not be used in isolation to judge competence or as an alternative to performance evidence. Care must be taken that candidate evidence is auditable and verifiable.

NB: These Qualification implementation guidelines are generic across the full range of GQA qualifications. Further guidance on acceptable evidence on each qualification will be found in the Introduction to the Qualification section of the candidate booklet.

Candidate Declaration

Candidate Name.....

Centre/Company Name.....

Assessor(s) Name(s).....

I acknowledge receipt of this copy of GQA qualification booklet. The unit structure provides information on which units must be achieved to be awarded the qualification. The individual units detail the necessary requirements etc. that I must achieve.

I understand that I will have an important role in preparing for and planning assessments and with guidance from the Assessor.

I will collect and record relevant evidence.

I have been informed of the appeals system, should I want to appeal against any part of the assessment process.

I understand the assessments will be carried out regarding the company's/centre's Equal Opportunities Policy.

Candidate signature.....

Date.....

Conforming to General Health, Safety and Welfare in the Workplace							
GQA Ref	641v2	**Regulatory Ref**	M/651/2360	**Level**	1	**Credit Value**	2

Aims

The aim of this unit is to ensure that the Candidate has the skills and knowledge required to evaluate which work activities make the best use of available resources in relation to occupations and/or customers associated with the work, the tools, plant and/or ancillary equipment and the materials and components.

Assessment Guidance

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge.

All criteria must be assessed, and evidence must be auditable.

Learning outcome; The learner will:	Assessment criteria: The learner can:	Evidence Ref No.		
		1	2	3
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			

Assessor Comments/Feedback

Conforming to productive working practices in the workplace							
GQA Ref	642v1	**Regulatory Ref**	F/507/9561	**Level**	2	**Credit Value**	3

Aims

The aim of this unit is to ensure that the candidate is able to demonstrate they are able to work productively, to the agreed specification, in conjunction with line management, colleagues, customers and/or other relevant people involved in the work to maintain good working relationships in relation to individuals, customer and operative, operative and line management.

Assessment Guidance

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge.

All criteria must be assessed, and evidence must be auditable.

Learning outcome; The learner will:	Assessment criteria: The learner can:	Evidence Ref No.		
		1	2	3
1. Communicate with others to establish productive work practices	1.1 Communicate in an appropriate manner with line management, colleagues and/or customers to ensure that work is carried out productively			
	1.2 Describe the different methods of communicating with line management, colleagues and customers			
	1.3 Describe how to use different methods of communication to ensure that the work carried out is productive			
2. Follow organisational procedures to plan the sequence of work	2.1 Interpret relevant information from organisational procedures in order to plan the sequence of work			
	2.2 Plan the sequence of work, using appropriate resources, in accordance with organisational procedures to ensure work is completed productively			
	2.3 Describe how organisational procedures are applied to ensure work is planned and carried out productively, in relation to: • using resources for own and other's work requirements • allocating appropriate work to employees • organising the work sequence • reducing carbon emissions			
	2.4 Describe how to contribute to zero/low carbon work outcomes within the built environment			
3. Maintain relevant records in accordance with the organisational procedures	3.1 Complete relevant documentation according to the occupation as required by the organisation			

	3.2 Describe how to complete and maintain documentation in accordance with organisational procedures, in relation to: • job cards • worksheets • material/resource lists • time sheets			
	3.3 Explain the reasons for ensuring documentation is completed clearly and within given timescales			
4. Maintain good working relationships when conforming to productive working practices	4.1 Carry out work productively, to the agreed specification, in conjunction with line management, colleagues, customers and/or other relevant people involved in the work to maintain good working relationships			
	4.2 Apply the principles of equality and diversity and respect the needs of individuals when communicating and working with others			
	4.3 Describe how to maintain good working relationships, in relation to: • individuals • customer and operative • operative and line management • own and other occupations			
	4.4 Describe why it is important to work effectively with line management, colleagues and customers			
	4.5 Describe how working relationships could have an effect on productive working			
	4.6 Describe how to apply principles of equality and diversity when communicating and working with others			

Assessor Comments/Feedback

Moving, handling and storing resources in the workplace							
GQA Ref	643v1	**Regulatory Ref**	J/507/9562	**Level**	2	**Credit Value**	5

Aims

The aim of this unit is to ensure that the candidate is able to demonstrate and discuss they are able to move, handle and/or store occupational resources to meet product information and organisational requirements relating to three of the following, sheet material, loose material, bagged or wrapped material, fragile material, tools and equipment, components and liquids.

Assessment Guidance

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge.

All criteria must be assessed, and evidence must be auditable.

Learning outcome; The learner will:	Assessment criteria: The learner can:	Evidence Ref No.		
		1	2	3
1. Comply with given information when moving, handling and/or storing resources	1.1 Interpret the given information relating to moving, handling and/or storing resources, relevant to the given occupation			
	1.2 Interpret the given information relating to the use and storage of lifting aids and equipment.			
	1.3 Describe the different types of technical, product and regulatory information, their source and how they are interpreted			
	1.4 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented			
	1.5 Describe how to obtain information relating to using and storing lifting aids and equipment			
2. Know how to comply with relevant legislation and official guidance when moving, handling and/or storing resources	2.1 Describe their responsibilities under current legislation and official guidance whilst working: • in the workplace, in confined spaces, below ground level, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting			
	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative			
	2.3 Explain what the accident reporting procedures are and who is responsible for making the reports			
	2.4 State the appropriate types of fire extinguishers relevant to the work.			

	2.5 Describe how and when the different types of fire extinguishers, relevant to the given occupation, are used in accordance with legislation and official guidance			
3. Maintain safe working practices when moving, handling and/or storing resources	3.1 Use health and safety control equipment safely to carry out the activity in accordance with legislation and organisational requirements when moving, handling and/or storing resources			
	3.2 Use lifting aids safely as appropriate to the work			
	3.3 Protect the environment in accordance with safe working practices as appropriate to the work			
	3.4 Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to moving, handling **and/or** storing resources, and the 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)			
	3.5 Describe how the health and safety control equipment relevant to the work should be used in accordance with the given instructions			
	3.6 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 move, handle and/or store occupational resources	4.1 Select the relevant resources to be moved, handled and/or stored, associated with own work			
	4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the occupational resources in relation to: • lifting and handling aids • container(s) • fixing, holding and securing systems			
	4.3 Describe how the resources should be handled and how any problems associated with the resources are reported			
	4.4 Explain why the organisational procedures have been developed and how they are used for the selection of required resources			
	4.5 Describe any potential hazards associated with the resources and methods of work			

5. Prevent the risk of damage to occupational resources and surrounding environment when moving, handling and/or storing resources	5.1 Protect occupational resources and their surrounding area from damage in accordance with safe working practices and organisational procedures			
	5.2 Dispose of waste and packaging in accordance with legislation			
	5.3 Maintain a clean workspace when moving, handling or storing resources			
	5.4 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions			
	5.5 Explain why the disposal of waste should be carried safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance			
6. Complete the work within the allocated time when moving, handling and/or storing resources	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: • progress charts, timetables and estimated times • organisational procedures for reporting circumstances which will affect the work programme			
7. Comply with the given occupational resource information to move, handle and/or store resources to the required guidance	7.1 Demonstrate the following work skills when moving, handling and/or storing occupational resources: • moving, positioning, storing, securing and/or using lifting aids and kinetic lifting techniques			
	7.2 Move, handle and/or store occupational resources to meet product information and organisational requirements relating to three of the following: • sheet material • loose material • bagged or wrapped material • fragile material • tools and equipment • Components • liquids			
	7.3 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them when moving, handling and/or storing occupational resources			

	7.4 Describe the needs of other occupations when moving, handling and/or storing resources			

Assessor Comments/Feedback

Preparing surfaces for membrane roofing systems in the workplace							
GQA Ref	685v3	**Regulatory Ref**	L/651/3700	**Level**	2	**Credit Value**	15

Unit Aims

The aim of this unit is to ensure that candidates are able to demonstrate work skills including measuring, cutting, marking out, fitting, positioning and securing,

Assessment Guidance

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge.

All criteria must be assessed, and evidence must be auditable

Learner Outcomes - The learner will:	Assessment Criteria - The learner can:	Evidence Ref Number		
		1	2	3
1. Interpret the given information relating to the work and resources when preparing surfaces for membrane roofing systems	1.1 Interpret and extract relevant information from: • drawings • specifications • schedules • method statements • risk assessments • permits to work • manufacturers information • electronic data • oral and written instructions • current regulations • site inductions			
	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 Describe different types of information, their source and how they are interpreted in relation to: • drawings • specifications schedules • method statements • risk assessments • permits to work • manufacturers' information • electronic data • oral and written procedures • current legislation • site inductions			

	1.5 The range of relevant digital services, tools and systems and they are used			
	1.6 The importance of organisational procedures to solve problems with the information and why it is important to follow them			
2. Know how to comply with relevant legislation and official guidance when preparing surfaces for membrane roofing systems	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environmental impact, whilst working in the workplace: • below ground level • in confined spaces • at height • in proximity to fragile elements • with tools and equipment • with materials and substances • moving and storing materials by manual handling and mechanical lifting			
	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: • operative • site • workplace • vehicles • company • customer • 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 and how they are used in relation to: • water • CO_2 • foam • powder			
3. Maintain safe and healthy working practices when preparing surfaces for membrane roofing systems	3.1 Outline information for relevant, current legislation and official guidance and how it is applied			
	3.2 Use health and safety control equipment safely and comply with the methods of work to carry out the work in accordance with relevant legislation and official guidance			
	3.3 Demonstrate compliance with relevant legislation and official guidance relating to the following: • methods of work • safe use of health and safety control equipment • safe use of access equipment			

	• safe use, storage, handling and distribution of • materials, tools and ancillary equipment • specific risks to health • specific risks associated with asbestos containing materials • specific risk associated with respirable crystalline silicia (RCS)			
	3.4 Explain why, when and how health and safety control equipment, identified by the principles prevention should be used, in relation to: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)			
	3.5 Describe how the relevant health and safety control equipment should be used in accordance with the work instructions			
	3.6 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • fires, spillages and injuries • emergencies relating to occupational activities • identification of and reporting asbestos containing materials • identification of silica			
	3.7 Describe how to report risks and hazards identified by the following: • methods of work • risk assessment • personal assessment • manufacturers' technical information • 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 prepare surfaces for membrane roofing systems	4.1 Select resources associated with own work in relation to: • materials • components and fixings • tools and ancillary equipment			
	4.2 Describe why the characteristics, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified			
	4.3 Describe how to confirm that the resources and materials conform with the specification			

	4.4 Describe how the resources should be used and how any problems associated with the resources are reported in relation to: • primers • preparation coats • separating/isolating/carrier/ cushion layers • joint tapes • screed materials • associated materials • components • fixings and fittings • hand and power tools • ancillary equipment			
	4.5 Explain the organisational procedures to select resources, why they have been developed and how they are used			
	4.6 Describe how to identify any potential hazards associated with the resources and methods of work and how they are overcome			
	4.7 Describe methods of calculating quantity, length, and wastage associated with the method and procedure to prepare surfaces for membrane roofing systems			
5. Minimise the risk of damage to the work and surrounding area when preparing surfaces for membrane roofing systems	5.1 Comply with organisational procedures to protect the work and its surrounding area from damage by: • maintaining a safe, clear and tidy work area • disposing of waste in accordance with current legislation			
	5.2 Explain why it is important to maintain a safe, clear and tidy work area			
	5.3 Describe how to protect work and its surrounding area from damage and the purpose of protection from general workplace activities, other occupations and adverse weather conditions			
	5.4 Explain how to minimise damage to the existing building fabric			
	5.5 Explain why and how the disposal of waste must be carried out safely in accordance with the following: • environmental responsibilities • organisational procedures • manufacturers' information • statutory regulations • official guidance			

6. Complete the work within the allocated time when preparing surfaces for membrane roofing systems	6.1 Demonstrate completion of the work within the estimated, allocated time			
	6.2 Describe the programme of work to be carried out 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 prepare surfaces for membrane roofing systems to the required specification	7.1 Demonstrate the following work skills: • measuring • cutting • marking out • fitting • positioning • securing			
	7.2 Use and maintain: • hand tools • power tools • ancillary equipment including one of the following: • LPG gas torch • hot air gun • electronic torch			
	7.3 Clean, dry and prepare surfaces as appropriate to the substrate to given working instructions for one of the following membrane roofing systems: • reinforced bitumen • single ply • liquid applied			

	7.4 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 practises, procedures and skills relating to the methods of work: • carry out remedial work to roofing backgrounds • clean and dry surfaces and method • prepare surfaces (as appropriate to the substrate) for reinforced bitumen, single ply and liquid applied membrane systems • hot work permits • apply primers/preparation coats • install separating/isolating/cushion layers • install joint tapes • the relevance of an assessment of significance • how to recognise specific requirements for the building structure • work with, around and in close proximity to plant and machinery • safely work at height using access and fall prevention equipment • use all hand tools, power tools and ancillary equipment including LPG gas torch, hot air gun, electronic torch • how and why operative care and maintenance of all hand and power tools and ancillary equipment is carried out			
	7.5 Describe the needs of other occupations			
	7.6 Describe the importance of applying, fairness, inclusion, and respect (FIR) when dealing with others			
	7.7 Explain the importance of teamwork and communication, organisational procedures with respect to site behaviours, and how to challenge inappropriate site behaviours			

Assessor Comments/Feedback

Repairing membrane roofing systems in the workplace							
GQA Ref	686v3	**Regulatory Ref**	Y/651/3704	**Level**	2	**Credit Value**	16

Unit Aims

The aim of this unit is to ensure that candidates are able to describe how to identify and evaluate defects in the membrane and inspect condition of sub-strata, record and report findings including photographic or video evidence take account of the local environment, remove debris and blockages, repair damaged reinforced bitumen membrane system, single ply membrane system or liquid membrane system, carry out appropriate repair to edges, upstands, penetrations, pipes, vents, perimeters and rainwater outlets, repair/replace damaged insulation/decking, repair/replace damaged associated materials and components, hot work permits, the relevance of an assessment of significance, how to recognise specific requirements for building structure, work with, around and in close proximity to plant and machinery, safely work at height using access and fall prevention equipment, use all hand and power tools and ancillary equipment including LPG gas torch, hot air gun, automatic hot air gun and how and why operative care and maintenance of all hand and power tools and ancillary equipment is carried out

Assessment Guidance

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge.

All criteria must be assessed, and evidence must be auditable

Learner Outcomes - The learner will:	Assessment Criteria - The learner can:	Evidence Ref Number		
		1	2	3
1. Interpret the given information relating to the work and resources when repairing membrane roofing systems	1.1 Interpret and extract relevant information from: • drawings • specifications • schedules • method statements • risk assessments • permits to work • manufacturers' information • electronic data • oral and written procedures • current legislation • site inductions			
	1.2 Comply with information and/or instructions derived from risk assessments and method statements			
	1.3 Describe why organisational procedures have been developed and how they are implemented			

	1.4 Describe different types of information, their source and how they are interpreted in relation to: • drawings • specifications • schedules • method statements • risk assessments • permits to work • manufacturers' information • electronic data • oral and written procedures • current legislation • site inductions			
	1.5 The importance of organisational procedures to solve problems with the information, and why it is important to follow them			
2. Know how to comply with relevant legislation and official guidance when repairing membrane roofing systems	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environmental impact, whilst working in the workplace in relation to: • below ground level • in confined spaces • at height • in proximity to fragile elements • with tools and equipment • with materials and substances • moving and storing materials by manual handling and mechanical lifting			
	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: operative • site • workplace • vehicles • company • customer • 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 and how and when they are used in relation to: • water • CO_2 • foam • powder			
3. Maintain safe and healthy working practices when repairing membrane roofing systems	3.1 Outline information for relevant, current legislation and official guidance and how it is applied			

	3.2 Use health and safety control equipment safely and comply with the methods of work to carry out the work in accordance with relevant legislation and official guidance			
	3.3 Demonstrate compliance with relevant legislation and official guidance relating to the following: • methods of work • safe use of health and safety control equipment • safe use of access equipment • safe use, storage, handling and distribution of materials, tools and ancillary equipment • specific risks to health • specific risks associated with asbestos containing materials • specific risk associated with respirable crystalline silica (RCS)			
	3.4 Describe the importance of mental health awareness and wellbeing			
	3.5 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used in relation to: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)			
	3.6 Describe how the relevant health and safety control equipment should be used in accordance with work instructions			
	3.7 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			
	3.8 Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills in relation to: • methods of work • risk assessment • personal assessment • manufacturers' technical information • 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 repair membrane roofing systems	4.1 Select resources associated with own work in relation to: • materials • components and fixings • tools and ancillary equipment			
	4.2 Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified			
	4.3 Describe how to confirm that the resources and materials conform with the specification			
	4.4 Describe how the resources should be used and how any problems associated with the resources should be reported in relation to: • relevant membrane system materials • upstands • pipes • vents • rainwater outlets and associated materials, • components • fixings and fittings • access equipment • hand and/or power tools • ancillary equipment			
	4.5 Explain the organisational procedures to select resources, why they have been developer and how they are used			
	4.6 Describe how to identify any potential hazards associated with the resources and methods of work and how they are overcome			
	4.7 Describe methods of calculating the quantity, length, and wastage associated with the method and procedure to repair membrane roofing systems			
5. Minimise the risk of damage to the work and surrounding area when repair membrane roofing systems	5.1 Comply with organisational procedures to protect the work and its surrounding area from damage by: • protecting the work and its surrounding area from damage • maintaining a safe, clear and tidy work area			
	5.2 Explain why it is important to maintain a safe, clear and tidy work area			

	5.3 Describe how to protect work and its surrounding area from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions			
	5.4 Explain how to minimise damage to the existing building fabric			
	5.5 Explain why and how the disposal of waste must be carried out safely in accordance with: • environmental responsibilities • organisational procedures • manufacturers' information • statutory regulations • official guidance			
6. Complete the work within the allocated time when repairing membrane roofing systems	6.1 Demonstrate completion of the work within the estimated, allocated time			
	6.2 Describe the purpose of work to be carried out including the estimated and allocated time and explain why deadlines should be kept in relation to: • the types of progress charts, timetables and estimated times • the organisational procedures for reporting circumstances which will affect the work programme			
7. Comply with the given contract information to repair membrane roofing systems to the required specification	7.1 Demonstrate the following work skills: • removing • measuring • marking out • cutting • fitting • applying • positioning • securing			
	7.2 Use and maintain: • hand tools • power tools • ancillary equipment applicable to roofing system			

	7.3 Repair reinforced bitumen and/or single ply and/or liquid applied membrane roofing systems to given working instructions relating to one of the following: • damaged membrane • edges and upstands • penetrations, pipes and vents • perimeters, rainwater outlets			
	7.4 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: • identify and evaluate defects in the membrane and inspect condition of sub-strata • record and report findings including photographic or video evidence • take account of the local environment • remove debris and blockages • repair damaged reinforced bitumen membrane system, single ply membrane system or liquid membrane system • carry out appropriate repair to edges, upstands, penetrations, pipes, vents, perimeters and rainwater outlets • repair/replace damaged insulation/decking • repair/replace damaged associated materials and components • hot work permits • the relevance of an assessment of significance • how to recognise specific requirements for building structure • work with, around and in close proximity to plant and machinery • safely work at height using access and fall prevention equipment • use all hand and power tools and ancillary equipment including LPG gas torch, hot air gun, automatic hot air gun • how and why operative care and maintenance of all hand and power tools and ancillary equipment is carried out			
	7.5 Describe the needs of other occupations			

	7.6 Describe the importance of applying, fairness, inclusion, and respect (FIR) when dealing with others			
	7.7 Explain the importance of teamwork and communication, organisational procedures with respect to site behaviours, and how to challenge inappropriate site behaviours			

Assessor Comments/Feedback

Applying reinforced bitumen membrane systems in the workplace							
GQA Ref	107v5	**Regulatory Ref**	A/651/3705	**Level**	2	**Credit Value**	20

Unit Aims

The aim of this unit is to ensure that candidates are able to demonstrate the application of one of the following methods of attachment for reinforced bitumen membrane systems which could include pour and roll, torch-on, flame free, cold applied, self-adhesive or hot melt to given working instructions.

Assessment Guidance

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge.

All criteria must be assessed, and evidence must be auditable

Learner Outcomes - The learner will:	Assessment Criteria - The learner can:	Evidence Ref Number		
		1	2	3
1. Interpret the given information relating to the work and resources when applying reinforced bitumen membrane systems	1.1 Interpret and extract relevant information from: • drawings • specifications • schedules • method statements • risk assessments • permits to work • manufacturers' information • electronic data • oral and written procedures • current regulations • site inductions			
	1.2 Comply with information and/or instructions derived from risk assessments and method statements			
	1.3 Describe 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: • drawings • specifications • schedules • method statements • risk assessments • permits to work • manufacturers' information • electronic data • oral and written procedures • current regulations			

	1.5 The range of relevant digital services, tools and systems, and how they are used			
	1.6 The importance of organisational procedures to solve problems with the information, and why it is important to follow them			
2. Know how to comply with relevant legislation and official guidance when applying reinforced bitumen membrane systems	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environmental impact, whilst working in the workplace in relation to: • below ground level • confined spaces • at height • at proximity to fragile roofs • tools and equipment • materials and substances • moving and storing materials by manual handling and mechanical lifting			
	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: • operative • site • workplace • vehicles • company • general public • customer			
	2.3 Explain what the accident reporting procedures are and who is responsible for making reports			
	2.4 Describe the types of fire extinguishers and how and when they are used in relation to: • water • CO_2 • foam • powder			
3. Maintain safe and healthy working practices when applying reinforced bitumen membrane systems	3.1 Outline information for relevant, current legislation and official guidance and how it is applied			
	3.2 Use health and safety control equipment safely and comply with the methods of work to carry out the work in accordance with relevant legislation and official guidance when applying reinforced bitumen membrane systems			

	3.3 Demonstrate compliance with relevant legislation and official guidance relating to the following: • methods of work • safe use of health and safety control equipment • safe use of access equipment • safe storage and distribution of materials, tools and equipment • specific risks to health. • specific risks associated with asbestos containing materials • specific risk associated with respirable crystalline silica (RCS)			
	3.4 Describe the importance of mental health awareness and wellbeing			
	3.5 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used in relation to: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)			
	3.6 Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions			
	3.7 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 • identification of silica			
	3.8 Describe how to report risks and hazards identified by the following: • methods of work • risk assessment • personal assessment • manufacturers' technical information • 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 apply reinforced bitumen membrane systems	4.1 Select resources associated with own work in relation to: • materials • components, fixings • tools • ancillary equipment			

	4.2 Describe why the characteristics, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified			
	4.3 Describe how to confirm that the resources and materials conform with the specification			
	4.4 Describe how the resources should be used and how any problems associated with the resources are reported in relation to: • bitumen • reinforced bitumen membrane • air and vapour control layers • insulation • base layers • solvents • adhesives • pedestrian surfacing • surface protection • filter and drainage layers • outlets • gutters • pipes • vents • cap sheets • flashings • trims • movement joints • rooflights • associated materials • components • fixings and fittings • hand and/or power tools and ancillary equipment			
	4.5 Explain the organisational procedures to select resources, why they have been developed and how they are used			
	4.6 Describe how to identify any potential hazards associated with the resources and methods of work and how they are overcome			
	4.7 Describe how to calculate quantity, length, and wastage associated with the method and procedure to apply reinforced bitumen membrane systems.			

5. Minimise the risk of damage to the work and surrounding area when applying reinforced bitumen membrane systems	5.1 Comply with organisational procedures to protect the work and its surrounding area from damage by: • maintaining a safe, clear and tidy work area • disposing of wate in accordance with current legislation			
	5.2 Explain why it is important to maintain a safe, clear and tidy work area			
	5.3 Describe how to protect work and its surrounding area from damage and the purpose of protection from general workplace activities, other occupations and adverse weather conditions and how to minimise the damage to existing building fabric			
	5.4 Explain how to minimise damage to the existing building fabric			
	5.5 Explain why and how the disposal of waste must be carried out safely in accordance with the following: • environmental responsibilities • organisational procedures • manufacturers' information • statutory regulations • official guidance			
6. Complete the work within the allocated time when applying reinforced bitumen membrane systems	6.1 Demonstrate completion of the work within the allocated time			
	6.2 Describe the programme of work to be carried out including the estimated and allocated time and explain why deadlines should be kept in relation to: • the types of progress charts, timetables and estimated times • the organisational procedures for reporting circumstances which will affect the work programme			

7. Comply with the given contract information to apply reinforced bitumen membrane systems	7.1 Demonstrate the following work skills when applying reinforced bitumen membrane systems: • measuring • cutting • marking out • fitting • positioning • securing			
	7.2 Use and maintain: • hand tools • power tools • ancillary equipment			
	7.3 Install air and vapour control layers (warm and cold roofs) and insulation			
	7.4 Apply one of the following methods of attachment for reinforced bitumen membrane systems: pour and roll, torch-on, flame free, cold applied, self-adhesive or hot melt to given working instructions relating to the following: • base layers • cap sheets • edges and upstands • penetrations, pipes and vents • perimeters, gutters and rainwater outlets			
	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: • pre-install/apply checks/preparation • install air and vapour control layers (AVCL) • install insulation materials • use bitumen boilers (according to the system) • use gas torches and/or hot air gun • install base layers including nailed layers • install cap sheets, including solar/fire protection • install vertical upstands, including internal/external • corners, joints and junctions, straight and curved • and incorporating changes of plane and treatment • of internal angles • install terminations (cover flashing, external trim, • termination bar, junctions to other materials) • install to perimeters (eaves, mono ridge, verges and drips), outlets (spigot, sump,			

	parapet, overflow), pipes, structural penetrations (vertical, pitched and horizontal, including plinths and hand rolled collars), safety systems, internal gutters, stop ends, rooflights, hips, valleys and pedestrian finishes, incorporating vertical surfaces • apply membrane by pour and roll and/or hot melt • method • apply membrane by torch-on method • apply membrane by flame free, cold applied • and/or self-adhesive method • take into account the effects of temperature and • weather conditions • implement snagging procedures and appropriate • remedial work, including preparation for test • procedures • the relevance of an assessment of significance • how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance • work with, around and in close proximity to plant and machinery • safely work at height using access and fall prevention equipment • use hand and power tools and ancillary equipment 7.6 Describe the needs of other occupations			
	7.7 Describe the importance of applying, fairness, inclusion, and respect (FIR) when dealing with others			
	7.8 Explain the importance of team-work and communication, organisational procedures with respect to site behaviours, and how to challenge inappropriate site behaviours			

Assessor Comments/Feedback

Applying single ply membrane roofing systems in the workplace							
GQA Ref	110v4	**Regulatory Ref**	Y/651/3713	**Level**	2	**Credit Value**	17

Unit Aims

The aim of this unit is to ensure that candidates are able to demonstrate the application of one of the following methods of attachment for reinforced bitumen membrane systems which could include pour and roll, torch-on, flame free, cold applied, self-adhesive or hot melt to given working instructions.

Assessment Guidance

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge.

All criteria must be assessed, and evidence must be auditable

Learner Outcomes - The learner will:	Assessment Criteria - The learner can:	Evidence Ref Number		
		1	2	3
6. Interpret the given information relating to the work and resources when applying reinforced bitumen membrane systems	1.1 Interpret and extract relevant information from: • drawings • specifications • schedules • method statements • risk assessments • permits to work • manufacturers' information • electronic data • oral and written procedures • current regulations • site inductions			
	1.2 Comply with information and/or instructions derived from risk assessments and method statements			
	1.3 Describe 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: • drawings • specifications • schedules • method statements • risk assessments • permits to work • manufacturers' information • electronic data • oral and written procedures • current regulations			

	1.5 The range of relevant digital services, tools and systems, and how they are used			
	1.6 The importance of organisational procedures to solve problems with the information, and why it is important to follow them			
7. Know how to comply with relevant legislation and official guidance when applying reinforced bitumen membrane systems	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environmental impact, whilst working in the workplace in relation to: • below ground level • confined spaces • at height • at proximity to fragile roofs • tools and equipment • materials and substances • moving and storing materials by manual handling and mechanical lifting			
	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: • operative • site • workplace • vehicles • company • general public • customer			
	2.3 Explain what the accident reporting procedures are and who is responsible for making reports			
	2.4 Describe the types of fire extinguishers and how and when they are used in relation to: • water • CO_2 • foam • powder			
8. Maintain safe and healthy working practices when applying reinforced bitumen membrane systems	3.1 Outline information for relevant, current legislation and official guidance and how it is applied			
	3.2 Use health and safety control equipment safely and comply with the methods of work to carry out the work in accordance with relevant legislation and official guidance when applying reinforced bitumen membrane systems			

	3.3 Demonstrate compliance with relevant legislation and official guidance relating to the following: • methods of work • safe use of health and safety control equipment • safe use of access equipment • safe storage and distribution of materials, tools and equipment • specific risks to health. • specific risks associated with asbestos containing materials • specific risk associated with respirable crystalline silica (RCS)			
	3.4 Describe the importance of mental health awareness and wellbeing			
	3.5 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used in relation to: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)			
	3.6 Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions			
	3.7 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 • identification of silica			
	3.8 Describe how to report risks and hazards identified by the following: • methods of work • risk assessment • personal assessment • manufacturers' technical information • statutory regulations • official guidance • Control of Substances Hazardous to Health (COSHH)			
9. Select the required quantity and quality of resources for the methods of work to apply reinforced bitumen membrane systems	4.1 Select resources associated with own work in relation to: • materials • components, fixings • tools • ancillary equipment			

	4.2 Describe why the characteristics, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified			
	4.3 Describe how to confirm that the resources and materials conform with the specification			
	4.4 Describe how the resources should be used and how any problems associated with the resources are reported in relation to: • bitumen • reinforced bitumen membrane • air and vapour control layers • insulation • base layers • solvents • adhesives • pedestrian surfacing • surface protection • filter and drainage layers • outlets • gutters • pipes • vents • cap sheets • flashings • trims • movement joints • rooflights • associated materials • components • fixings and fittings • hand and/or power tools and ancillary equipment			
	4.5 Explain the organisational procedures to select resources, why they have been developed and how they are used			
	4.6 Describe how to identify any potential hazards associated with the resources and methods of work and how they are overcome			
	4.7 Describe how to calculate quantity, length, and wastage associated with the method and procedure to apply reinforced bitumen membrane systems.			

10. Minimise the risk of damage to the work and surrounding area when applying reinforced bitumen membrane systems	5.1 Comply with organisational procedures to protect the work and its surrounding area from damage by: • maintaining a safe, clear and tidy work area • disposing of wate in accordance with current legislation			
	5.2 Explain why it is important to maintain a safe, clear and tidy work area			
	5.3 Describe how to protect work and its surrounding area from damage and the purpose of protection from general workplace activities, other occupations and adverse weather conditions and how to minimise the damage to existing building fabric			
	5.4 Explain how to minimise damage to the existing building fabric			
	5.5 Explain why and how the disposal of waste must be carried out safely in accordance with the following: • environmental responsibilities • organisational procedures • manufacturers' information • statutory regulations • official guidance			
6. Complete the work within the allocated time when applying reinforced bitumen membrane systems	6.1 Demonstrate completion of the work within the allocated time			
	6.2 Describe the programme of work to be carried out including the estimated and allocated time and explain why deadlines should be kept in relation to: • the types of progress charts, timetables and estimated times • the organisational procedures for reporting circumstances which will affect the work programme			

8. Comply with the given contract information to apply reinforced bitumen membrane systems	7.1 Demonstrate the following work skills when applying reinforced bitumen membrane systems: • measuring • cutting • marking out • fitting • positioning • securing			
	7.2 Use and maintain: • hand tools • power tools • ancillary equipment			
	7.3 Install air and vapour control layers (warm and cold roofs) and insulation			
	7.4 Apply one of the following methods of attachment for reinforced bitumen membrane systems: pour and roll, torch-on, flame free, cold applied, self-adhesive or hot melt to given working instructions relating to the following: • base layers • cap sheets • edges and upstands • penetrations, pipes and vents • perimeters, gutters and rainwater outlets			
	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: • pre-install/apply checks/preparation • install air and vapour control layers (AVCL) • install insulation materials • use bitumen boilers (according to the system) • use gas torches and/or hot air gun • install base layers including nailed layers • install cap sheets, including solar/fire protection • install vertical upstands, including internal/external • corners, joints and junctions, straight and curved • and incorporating changes of plane and treatment • of internal angles • install terminations (cover flashing, external trim, • termination bar, junctions to other materials)			

	• install to perimeters (eaves, mono ridge, verges and drips), outlets (spigot, sump, parapet, overflow), pipes, structural penetrations (vertical, pitched and horizontal, including plinths and hand rolled collars), safety systems, internal gutters, stop ends, rooflights, hips, valleys and pedestrian finishes, incorporating vertical surfaces • apply membrane by pour and roll and/or hot melt • method • apply membrane by torch-on method • apply membrane by flame free, cold applied • and/or self-adhesive method • take into account the effects of temperature and • weather conditions • implement snagging procedures and appropriate • remedial work, including preparation for test • procedures • the relevance of an assessment of significance • how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance • work with, around and in close proximity to plant and machinery • safely work at height using access and fall prevention equipment • use hand and power tools and ancillary equipment			
	7.6 Describe the needs of other occupations			
	7.7 Describe the importance of applying, fairness, inclusion, and respect (FIR) when dealing with others			
	7.8 Explain the importance of team-work and communication, organisational procedures with respect to site behaviours, and how to challenge inappropriate site behaviours			

Assessor Comments/Feedback

Applying liquid membrane roofing systems in the workplace							
GQA Ref	113v3v4	**Regulatory Ref**	M/651/3710	**Level**	2	**Credit Value**	17

Unit Aims

The aim of this unit is to ensure that candidates are able to demonstrate the application of liquid membrane systems incorporating reinforcement to given working instructions relating to the following liquid component preparation, base coats, finishing coats, edges and upstands, penetrations, pipes and vents, perimeters, gutters and rainwater outlets

Assessment Guidance

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge.

All criteria must be assessed, and evidence must be auditable

Learner Outcomes - The learner will:	Assessment Criteria - The learner can:	Evidence Ref Number		
		1	2	3
1. Interpret the given information relating to the work and resources when applying liquid membrane systems	1.1 Interpret and extract relevant information from: • drawings • specifications • schedules • method statements • risk assessments • permits to work • manufacturers' information • oral and written instructions • site inductions			
	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 Describe different types of information, their source and how they are interpreted in relation to: • drawings • specifications • schedules • method statements • risk assessments • permits to work • manufacturers' information • electronic data • oral and written procedures • current legislation • site inductions			
	1.5 The range of relevant digital services, tools and systems, and how they are used			

	1.6 The importance of organisational procedures to solve problems with the information, and why it is important to follow them			
2. Know how to comply with relevant legislation and official guidance when applying liquid membrane systems	2.1 Describe their responsibilities regarding potential accidents, health hazards and the environmental impact whilst working in the workplace: • below ground level • in confined spaces • at height • at proximity to fragile roofs • with tools and equipment • with materials and substances • moving and storing materials by manual handling and mechanical lifting			
	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to: • operative • site • workplace • vehicles • company • customer • 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 and how and when they are used: • water • CO_2 • foam • powder			
3. Maintain safe and healthy working practices when applying liquid membrane systems	3.1 Outline information for relevant, current legislation and official guidance and how it is applied			
	3.2 Use health and safety control equipment safely and comply with the methods of work to carry out the work in accordance with relevant legislation and official guidance			

	3.3 Demonstrate compliance with relevant legislation and official guidance relating to the following: • methods of work • safe use of health and safety control equipment • safe use of access equipment • safe use, storage, handling and distribution of • materials, tools and ancillary equipment • specific risks to health • specific risks associated with asbestos containing • materials • specific risk associated with respirable crystalline silica (RCS)			
	3.4 Describe the importance of mental health awareness and wellbeing			
	3.5 Explain why, when and how health and safety control equipment, identified by the principles of prevention, should be used, in relation to: • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV)			
	3.6 Describe how the relevant health and safety control equipment should be used in accordance with the working instructions			
	3.7 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 • identification of silica			
	3.8 Describe how to report risks and hazards identified by the following: • methods of work • risk assessment • personal assessment • manufacturers' technical information • 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 apply liquid membrane systems	4.1 Select resources associated with own work in relation to: • materials • components and fixings • tools and ancillary equipment			

	4.2 Describe why the characteristics, quality, uses, sustainability, limitations and defects associated with the resources are important and how defects should be rectified			
	4.3 Describe how to confirm that the resources and materials conform with the specification			
	4.4 Describe how the resources should be used and how any problems associated with the resources are reported in relation to: • single pack • multi pack and heated liquid components • air and vapour control layers (AVCL) • insulation • preparation coats • base coats • topcoats • reinforcements • solvents • adhesives • pedestrian surfacing • protection layers • separating layers • outlets • gutters • pipes • vents • flashings • trims • movement joints • rooflights • associated materials • components • fixings and fittings • brushes • rollers • trowels • squeegees • spray equipment • hand and/or power tools • ancillary equipment			
	4.5 Explain the organisational procedures to select resources, why they have been developed and how they are used			
	4.6 Describe how to identify any potential hazards associated with the resources and methods of work and how they are overcome.			
	4.7 Describe methods of calculating quantity, length, area and wastage associated with the method and procedure to apply liquid membrane systems			

5. Minimise the risk of damage to the work and surrounding area when applying liquid membrane systems	5.1 Comply with organisational procedures to protect the work and its surrounding area from damage by: • maintaining a safe, clear and tidy work area • disposing of waste in accordance with current legislation			
	5.2 Explain why it is important to maintain a safe, clear and tidy work area			
	5.3 Describe how to protect work and its surrounding area from damage and the purpose of prevention from general workplace activities, other occupations and adverse weather conditions			
	5.4 Explain how to minimise damage to the existing building fabric			
	5.5 Explain why and how the disposal of waste must be carried out safely in accordance with the following: • environmental responsibilities • organisational procedures • manufacturers' information • statutory regulations • official guidance			
6. Complete the work within the allocated time when applying liquid membrane systems	6.1 Demonstrate completion of the work within the allocated time			
	6.2 Describe the programme of work to be carried out including estimated and allocated time and explain why deadlines should be kept in relation to: • types of progress charts, timetables and estimated times • the organisational procedures for reporting circumstances which will affect the work programme			
7. Comply with the given contract information to apply liquid membrane systems to the required specification	7.1 Demonstrate the following work skills: • mixing • brushing • rollering • measuring • cutting • positioning • securing			

	7.2 Use and maintain: • hand tools • power tools • ancillary equipment			
	7.3 Install air and vapour control layers (warm and cold roofs) and insulation			
	7.4 Apply liquid membrane systems incorporating reinforcement to given working instructions relating to the following: • liquid component preparation • base coats • finishing coats • edges and upstands • penetrations, pipes and vents • perimeters, gutters and rainwater outlets			
	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: • install air and vapour control layers (AVCL) • install insulation materials • prepare single pack, multi pack and heated liquid components by mixing and heating techniques • apply liquid membrane systems with control of application thickness by brush, roller, trowel, squeegee and spray application • apply multiple coats including base and finish coats, implementing applicable control and constraints • install reinforcements systems utilising both fleece and glass fibre • install vertical upstands, including internal/external corners, joints and junctions, straight and curved and incorporating changes of plane and treatment of internal angles • install terminations (cover flashing, external trim, termination bar, junctions to other materials) • install to perimeters (eaves, mono ridge, verges and drips), outlets (spigot, sump parapet, overflow), pipes, structural penetrations (vertical, pitched and horizontal, including plinths and hand rolled collars), safety systems, internal gutters, stop ends, rooflights, hips, valleys and pedestrian finishes, incorporating vertical surfaces • take into account the effects of temperature and weather conditions			

	• implement snagging procedures and appropriate remedial work, including preparation for test procedures • the relevance of an assessment of significance • how to recognise specific requirements for structures of special interest, traditional construction, hard-to-treat buildings and historical significance • work with, around and in close proximity to plant and machinery • safely work at height using access and fall prevention equipment • how to use all hand and power tools and ancillary equipment • how and why operative care and maintenance of all hand, power tools and ancillary equipment is carried out			
	7.6 Describe the needs of other occupations			
	7.7 Describe the importance of applying, fairness, inclusion, and respect (FIR) when dealing with others			
	7.8. Explain the importance of teamwork and communication, organisational procedures with respect to site behaviours, and how to challenge inappropriate site behaviours			

Assessor Comments/Feedback

Notes

Notes

GQA Qualifications, Unit 1, 12 O'Clock Court, Attercliffe Road, Sheffield, S4 7WW
Tel: 0114 272 0033/272 0088
Email: info@gqaqualifications.com Website: www.gqaqualifications.com