

Pearson Edexcel Level 2 NVQ Diploma in Waterproof Membrane Roofing Systems (Construction)

Specification

NVQ qualification

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Issue 3

Edexcel, BTEC and LCCI qualifications

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This specification is Issue 3. Key changes are summarised on the next page and are sidelined in the document. We will inform centres of any changes to this issue. The latest issue can be found on our website, qualifications.pearson.com

This qualification was previously known as:

Pearson Edexcel Level 2 NVQ Diploma in Waterproof Membrane Roofing Systems (Construction) (QCF)

The QN remains the same.

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Summary of Pearson Edexcel Level 2 NVQ Diploma in Waterproof Membrane Roofing Systems (Construction) Issue 3 changes

Summary of changes made between previous Issue 2 and this current Issue 3	Page Number
All references to QCF have been removed throughout the specification with the exception of documents from other organisations eg Assessment Guidance in an Annexe	Throughout
Definition of TQT added	2
Definition of sizes of qualifications aligned to TQT	3
TQT value added	4
GLH range removed and replaced with lowest GLH value for the shortest route through the qualification	4
QCF references removed from unit titles and unit levels in all units	24-114

Earlier issue(s) show(s) previous changes.

If you need further information on these changes or what they mean, contact us via our website at: qualifications.pearson.com/en/support/contact-us.html.

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Purpose of this specification

This specification sets out:

- the objectives of the qualification
- any other qualification that a learner must have completed before taking the qualification
- any prior knowledge, skills or understanding which the learner is required to have before taking the qualification
- the combination of units that a learner must have completed before the qualification will be awarded and any pathways
- any other requirements that a learner must have satisfied before they will be assessed or before the qualification will be awarded
- the knowledge, skills and understanding that will be assessed as part of the qualification
- the method of any assessment and any associated requirements relating to it
- the criteria against which a learner's level of attainment will be measured (such as assessment criteria)
- assessment requirements and/or evidence requirements required as specified by the relevant Sector Skills Council/Standards Setting Body
- assessment requirements/strategy as published by the relevant Sector Skills Council/Standards Setting Body
- the Apprenticeship Framework in which the qualification is included, where appropriate.

1 Introducing Pearson Edexcel NVQ qualifications

What are NVQ qualifications?

National Vocational Qualifications (NVQs) are work-based qualifications that give learners the opportunity to develop and demonstrate their competence in the area of work or job role to which the qualification relates.

NVQs are based on the National Occupational Standards (NOS) for the appropriate sector. NOS define what employees, or potential employees, must be able to do and know, and how well they should undertake work tasks and work roles. At Level 2 and above, these qualifications are recognised as the competence component of Apprenticeship Frameworks. Qualifications at Level 1 can be used in Traineeships, which are stepping-stones to Apprenticeship qualifications. NVQs can also be delivered as stand-alone for those who wish to take a work-based qualification.

NVQs are outcomes-based with no fixed learning programme - allowing flexible delivery that meets the individual learner's needs. They are suitable for those in employment or those who are studying at college and have a part-time job or access to a substantial work placement so that they are able to demonstrate the competencies that are required for work.

Most learners will work towards their qualification in the workplace or in settings that replicate the working environment as specified in the assessment requirements/strategy for the sector. Colleges, training centres and/or employers can offer these qualifications provided they have access to appropriate physical and human resources.

Sizes of NVQ/Competence-based qualifications

For all regulated qualifications, we specify a total number of hours that learners are expected to undertake in order to complete and show achievement for the qualification – this is the Total Qualification Time (TQT). The TQT value indicates the size of a qualification.

Within the TQT, we identify the number of Guided Learning Hours (GLH) that a centre delivering the qualification needs to provide. Guided learning means activities that directly or immediately involve tutors and assessors in teaching, supervising, and invigilating learners, for example lectures, tutorials, online instruction and supervised study.

As well as guided learning, there may be other required learning that is directed by tutors or assessors. This includes, for example, private study, preparation for assessment and undertaking assessment when not under supervision, such as preparatory reading, revision and independent research.

As well as TQT and GLH, qualifications can also have a credit value – equal to one tenth of TQT, rounded to the nearest whole number.

TQT and credit values are assigned after consultation with users of the qualifications.

NVQ/Competence-based qualifications are available in the following sizes:

- Award – a qualification with a TQT value of 120 or less (equivalent to a range of 1–12 credits)
- Certificate – a qualification with a TQT value in the range of 121–369 (equivalent to a range of 13–36 credits)
- Diploma – a qualification with a TQT value of 370 or more (equivalent to 37 credits and above).

2 Qualification summary and key information

Qualification title	Pearson Edexcel Level 2 NVQ Diploma in Waterproof Membrane Roofing Systems (Construction)
Qualification Number (QN)	601/6025/1
Regulation start date	10/04/2015
Operational start date	01/05/2015
Approved age ranges	16-18 19+ Please note that sector-specific requirements or regulations may prevent learners of a particular age from embarking on this qualification. Please refer to the assessment requirements/strategy.
Credit value	58
Assessment	Portfolio of Evidence (internal assessment).
Total Qualification Time (TQT)	580
Guided learning hours	194
Grading information	The qualification and units are graded pass/fail.
Entry requirements	No prior knowledge, understanding, skills or qualifications are required before learners register for this qualification, however it is likely that they will be seeking work or may already be employed within the construction and the built environment sector. Centres must also follow the Pearson <i>Access and Recruitment</i> policy (see <i>Section 7, Access and Recruitment</i>).
Funding	Qualifications eligible and funded for post-16-year-olds can be found on the funding Hub. The Skills Funding Agency also publishes a funding catalogue that lists the qualifications available for 19+ funding.

Centres will need to use the Qualification Number (QN) when they seek public funding for their learners. As well as a QN, each unit within a qualification has a unit reference number (URN).

The qualification title, unit titles and QN will appear on each learner's final certificate. Centres should tell learners this when recruiting them and registering them with Pearson. There is more information about certification in our *UK Information Manual*, available on our website at: qualifications.pearson.com

3 Qualification rationale

Qualification objectives

The Pearson Edexcel Level 2 NVQ Diploma in Waterproof Membrane Roofing Systems (Construction) is for learners who work in, or who want to work in the construction and built environment sector.

It gives learners the opportunity to:

- develop and demonstrate competence as a roofer or construction operative, applying membranes to roofing surfaces to ensure they are water tight
- develop technical skills and knowledge and understanding related to the specified job roles in the construction and built environment sector. This includes repairs, the preparation of surfaces and the installation of either liquid membrane, single ply, or reinforced bitumen systems
- have existing skills recognised
- achieve a nationally-recognised qualification
- develop their own personal growth and engagement in learning.

Relationship with previous qualifications

This qualification is a direct replacement for the Pearson Edexcel Level 2 NVQ Diploma in Applied Waterproof Membranes (Construction) (QCF) (600/9085/6), which has expired. CITB, the Sector Skills Council (SSC) for Construction, in consultation with the industry, have changed the National Occupational Standards (NOS) so it is important that Pearson updates qualifications accordingly to ensure knowledge and skills continue to be relevant for learners and meet the requirements of the job role.

Apprenticeships

CITB includes the Pearson Edexcel Level 2 NVQ Diploma in Floorcovering Occupations (Construction) as the competence component for the Intermediate Apprenticeship in Construction Specialist (England), in the Applied Waterproof Membranes pathway.

Progression opportunities

Learners who achieve the Pearson Edexcel Level 2 NVQ Diploma in Waterproof Membrane Roofing Systems (Construction) can progress to a job role as a roofer or construction operative in their chosen area, such as reinforced bitumen membrane roofing, ply membrane roofing or liquid applied membrane roofing.

It is expected that most learners will already be working as a roofer or construction operative installing waterproof roofing systems. As part of an apprenticeship, it will help to provide recognition and career progression for new entrants, and can lead to employment for those not employed.

Learners may also progress to supervisory qualifications, such as the Pearson Edexcel Level 3 NVQ diploma in Occupational Work Supervision (Construction), or the Pearson Edexcel Level 4 NVQ Diploma in Site Supervision (Construction), if their job role requires greater responsibility.

Industry support and recognition

This qualification is supported by CITB, the Sector Skills Council for construction and the built environment.

Relationship with National Occupational Standards

This qualification is based on the National Occupational Standards (NOS) in Specialist Concrete Occupations, which were set and designed by CITB, the Sector Skills Council for the sector.

4 Qualification structure

Pearson Edexcel Level 2 NVQ Diploma in Waterproof Membrane Roofing Systems (Construction)

The learner will need to meet the requirements outlined in the table below before the qualification can be awarded.

Learners must complete the five mandatory units in Group A and the required number of credits for one of the three pathways. Learners may choose to complete additional optional units, however these will not count towards the minimum credit value for the qualification.

Pathway 1: Pearson Edexcel Level 2 NVQ Diploma in Waterproof Membrane Roofing Systems – Reinforced Bitumen Membrane Roofing (Construction) (**credit value 61**)

Pathway 2: Pearson Edexcel Level 2 NVQ Diploma in Waterproof Membrane Roofing Systems – Single Ply Membrane Roofing (Construction) (**credit value 58**)

Pathway 3: Pearson Edexcel Level 2 NVQ Diploma in Waterproof Membrane Roofing Systems – Liquid Applied Membrane Roofing Systems (Construction) (**credit value 58**)

Minimum number of credits that must be achieved	58
Minimum number of credits that must be achieved at level 2 or above	56
Number of mandatory credits from Group A that must be achieved	41
Minimum number of credits that must be achieved from a selected pathway	17

Unit	Unit reference number	Group A - Mandatory units for all pathways	Level	Credit	Guided learning hours
1	A/503/1170	Conforming to General Health, Safety and Welfare in the Workplace	1	2	7
2	J/503/1169	Conforming to Productive Working Practices in the Workplace	2	3	10
3	F/503/1171	Moving, Handling and Storing Resources in the Workplace	2	5	17
4	R/506/2621	Preparing Surfaces for Membrane Roofing Systems in the Workplace	2	15	50
5	Y/506/2622	Repairing Membrane Roofing Systems in the Workplace	2	16	53

Unit	Unit reference number	Mandatory unit – Reinforced Bitumen Membrane Roofing	Level	Credit	Guided learning hours
6	J/506/2616	Applying Reinforced Bitumen Membrane Systems in the Workplace	2	20	67
Unit	Unit reference number	Mandatory unit – Single Ply Membrane Roofing	Level	Credit	Guided learning hours
7	L/506/2617	Applying Single Ply Membrane Systems in the Workplace	2	17	57
Unit	Unit reference number	Mandatory unit – Liquid Applied Membrane Roofing	Level	Credit	Guided learning hours
8	Y/506/2619	Applying Liquid Membrane Systems in the Workplace	2	17	57

Unit	Unit reference number	Additional units (not compulsory) Credits from this group will not count towards the minimum credit value required for the qualification	Level	Credit	Guided learning hours
9	F/506/2615	Installing Decking for Flat Roof Coverings in the Workplace	2	13	43
10	L/506/2620	Installing Support Systems for Green Roofs in the Workplace	2	12	40
11	K/503/2959	Installing Solar Collectors to Roofs in the Workplace	2	6	20

Unit Endorsements

Unit	Unit reference number	Unit title	Endorsement
4	R/506/2621	Preparing Surfaces for Membrane Roofing Systems in the Workplace	One of the following endorsements required: <ul style="list-style-type: none"> Reinforced bitumen membrane roofing Single ply membrane roofing Liquid applied membrane roofing
5	Y/506/2622	Repairing Membrane Roofing Systems in the Workplace	One of the following endorsements required: <ul style="list-style-type: none"> Reinforced bitumen membrane roofing Single ply membrane roofing Liquid applied membrane roofing
6	J/506/2616	Applying Reinforced Bitumen Membrane Systems in the Workplace	One of the following endorsements required: <ul style="list-style-type: none"> Pour and roll Torch on Cold applied Self-adhesive Hot melt
9	F/506/2615	Installing Decking for Flat Roof Coverings in the Workplace	One of the following endorsements required: <ul style="list-style-type: none"> Boarded timber roof decks Boarded single skin metal roof decks
11	K/503/2959	Installing Solar Collectors to Roofs in the Workplace	One of the following endorsements required: <ul style="list-style-type: none"> Photo voltaic Solar thermal

5 Programme delivery

Centres are free to offer these qualifications using any mode of delivery (for example full-time, part-time, evening only, distance learning) that meets learners' needs. Learners must be in employment or working with a training provider on a programme so that they can develop and demonstrate the occupational competence required.

Whichever mode of delivery is used, centres must make sure that learners have access to specified resources and to the sector specialists delivering and assessing the units. Centres must adhere to the Pearson policies that apply to the different modes of delivery. Our policy on *Collaborative arrangements for the delivery of vocational qualifications* can be found on our website: qualifications.pearson.com

There are various approaches to delivering a successful competence-based qualification. The section below outlines elements of good practice that centres can adopt in relation to learner recruitment, preparation and support, training and assessment delivery, and employer engagement.

Elements of good practice

Learner recruitment, preparation and support

Good practice in relation to learner recruitment, preparation and support include:

- Providing initial advice and guidance, including work tasters, to potential learners to give them an insight into the relevant industry and the learning programme.
- Using a range of appropriate and rigorous selection methods to ensure that learners are matched to the programme best suited to their needs.
- Carrying out a thorough induction for learners to ensure that they completely understand the programme and what is expected of them. The induction should include, for example, the requirements of the programme, an initial assessment of current competency levels, assessment of individual learning styles, identification of training needs, an individual learning plan, details of training delivery and the assessment process. It is good practice to involve the employer in the induction process. This helps employers to understand what will be taking place during the programme and enables them to start building a relationship with the centre to support the effective delivery of the programme.
- Keeping in regular contact with the learner to keep them engaged and motivated, and ensuring that there are open lines of communication between the learner, the assessor, the employer and teaching staff.

Training and assessment delivery

Good practice in relation to training and assessment delivery include:

- Offering flexible delivery and assessment to meet the needs of the employer and learner, through the use of a range of approaches, for example virtual learning environments (VLEs), online lectures, video, printable online resources, virtual visits, webcams for distance training, e-portfolios.
- Planning opportunities for the development and practising of skills on the job. On-the-job training presents an excellent opportunity to develop the learner's routine expertise, resourcefulness, craftspersonship and business-like attitude. It is therefore important that there is intentional structuring of practice and guidance to supplement the learning and development provided through engagement in everyday work activities. Learners need to have structured time to learn and practice their skills separate from their everyday work activities. Teaching and learning methods, such as coaching, mentoring, shadowing, reflective practice, collaboration and consultation, could be used in this structured on-the-job learning.
- Integrating the delivery and assessment of Personal, Learning and Thinking Skills (PLTS) and Employment Rights and Responsibilities (ERR) if the programme is being delivered as a part of an Apprenticeship. It is important that learners understand the relevance of these skills in the workplace and are aware of when and how they will be developing them.
- Developing an holistic approach to assessment by matching evidence to different assessment criteria, learning outcomes and units as appropriate, thereby reducing the assessment burden on learners and assessors. It is good practice to draw up an assessment plan that aligns the units with the learning process and the acquisition of knowledge and skills, and that indicates how and when the units will be assessed.
- Discussing and agreeing with the learner and employer suitable times, dates and work areas where assessment will take place. Learners and employers should be given regular and relevant feedback on performance and progress.

Employer engagement

Good practice in relation to employer engagement include:

- Communicating with employers at the start of the programme to understand their business context and requirements so that the programme can be tailored to meet their needs.
- Working with the employer to ensure that learners are allocated a mentor in the workplace to assist them in the day-to-day working environment and to act as a contact for the assessor/tutor.
- Helping the employer to better understand their role in the delivery of the programme. It is important that employers understand that sufficient and relevant work must be given to learners in order to provide a culture of learning and to ensure that they are given every opportunity to participate in aspects of continuous professional development (CPD).

6 Centre resource requirements

As part of the approval process, centres must make sure that the resource requirements below are in place before offering the qualification.

- Centres must have the appropriate physical resources to support delivery and assessment of the qualification. For example, a workplace in line with industry standards, or a Realistic Working Environment (RWE), where permitted, as specified in the assessment requirements/strategy for the sector, equipment, IT, learning materials, teaching rooms.
- Where RWE is permitted, it must offer the same conditions as the normal, day-to-day working environment, with a similar range of demands, pressures and requirements for cost-effective working.
- Centres must meet any specific human and physical resource requirements outlined in the assessment requirements/strategy in *Annexe A*. Staff assessing learners must meet the occupational competence requirements within the overarching assessment requirements/strategy for the sector.
- There must be systems in place to ensure continuing professional development for staff delivering the qualification.
- Centres must have appropriate health and safety policies, procedures and practices in place for the delivery and assessment of the qualification.
- Centres must deliver the qualification in accordance with current equality legislation. For further details on Pearson's commitment to the Equality Act 2010, please see *Section 7, Access and recruitment*. For full details on the Equality Act 2010, please go to www.legislation.gov.uk

7 Access and recruitment

Our policy on access to our qualifications is that:

- they should be available to everyone who is capable of reaching the required standards
- they should be free from barriers that restrict access and progression
- there should be equal opportunities for all wishing to access the qualifications.

Centres must ensure that their learner recruitment process is conducted with integrity. This includes ensuring that applicants have appropriate information and advice about the qualification to ensure that it will meet their needs.

Prior knowledge, skills and understanding

No prior knowledge, understanding, skills or qualifications are required before learners register for this qualification.

Access to qualifications for learners with disabilities or specific needs

Equality and fairness are central to our work. Pearson's Equality Policy requires all learners to have equal opportunity to access our qualifications and assessments and that our qualifications are awarded in a way that is fair to every learner.

We are committed to making sure that:

- learners with a protected characteristic (as defined by the Equality Act 2010) are not, when they are undertaking one of our qualifications, disadvantaged in comparison to learners who do not share that characteristic
- all learners achieve the recognition they deserve from undertaking a qualification and that this achievement can be compared fairly to the achievement of their peers.

For learners with disabilities and specific needs, the assessment of their potential to achieve the qualification must identify, where appropriate, the support that will be made available to them during delivery and assessment of the qualification. Please see the information regarding reasonable adjustments and special consideration in *Section 8, Assessment*.

8 Assessment

To achieve a pass for the full qualification, the learner must achieve all the units required in the stated qualification structure.

Language of assessment

Assessment of the internally assessed units may be in English, Welsh or Irish. If assessment is to be carried out in either Welsh or Irish then centres must inform Pearson at the point of learner registration.

A learner taking the qualification may be assessed in British or Irish Sign Language where it is permitted for the purpose of reasonable adjustment.

Further information on the use of language in qualifications is available in our policy document *Use of languages in qualifications policy*, available on our website.

Further information on access arrangements can be found in the Joint Council for Qualifications (JCQ) document *Access Arrangements, Reasonable Adjustments and Special Consideration for General and Vocational qualifications*. Both documents are on our website.

Internal assessment

The units in this qualification are assessed through an internally and externally quality assured Portfolio of Evidence made up of evidence gathered during the course of the learner's work.

Each unit has specified learning outcomes and assessment criteria. To pass each unit the learner must:

- achieve **all** the specified learning outcomes
- satisfy **all** the assessment criteria by providing sufficient and valid evidence for each criterion
- prove that the evidence is their own.

The learner must have an assessment record that identifies the assessment criteria that have been met. The assessment record should be cross-referenced to the evidence provided. The assessment record should include details of the type of evidence and the date of assessment. Suitable centre documentation should be used to form an assessment record.

It is important that the evidence provided to meet the assessment criteria for the unit and learning outcomes is:

Valid	relevant to the standards for which competence is claimed
Authentic	produced by the learner
Current	sufficiently recent to create confidence that the same skill, understanding or knowledge persist at the time of the claim
Reliable	indicates that the learner can consistently perform at this level
Sufficient	fully meets the requirements of the standards.

Learners can provide evidence of occupational competence from:

- **current practice** – where evidence is generated from a current job role
- a **programme of development** – where evidence comes from assessment opportunities built into a learning programme. The evidence provided must meet the requirements of the Sector Skills Council's assessment requirements/strategy.
- the **Recognition of Prior Learning (RPL)** – where a learner can demonstrate that they can meet a unit's assessment criteria through knowledge, understanding or skills they already possess without undertaking a course of development. They must submit sufficient, reliable, authentic and valid evidence for assessment. Evidence submitted that is based on RPL should give the centre confidence that the same level of skill, understanding and knowledge exists at the time of claim as existed at the time the evidence was produced. RPL is acceptable for accrediting a unit, several units, or a whole qualification.
- Further guidance is available in our policy document *Recognition of Prior Learning Policy and Process*, available on our website at: qualifications.pearson.com
- a combination of these.

Assessment requirements/strategy

The assessment requirements/strategy for this qualification is included in Annexe A. It sets out the overarching assessment principles and the framework for assessing the units to ensure that the qualification remain valid and reliable. It has been developed by CITB in partnership with employers, training providers, awarding organisations and the regulatory authorities.

Types of evidence

To achieve a unit, the learner must gather evidence that shows that they have met the required standard specified in the assessment criteria, Pearson's quality assurance arrangements (please see *Section 10, Quality assurance of centres*) and the requirements of the assessment requirements/strategy given in *Annexe A*.

In line with the assessment requirements/strategy, evidence for internally assessed units can take a variety of forms as indicated below:

- direct observation of the learner's performance by their assessor (O)
- outcomes from oral or written questioning (Q&A)
- products of the learner's work (P)
- personal statements and/or reflective accounts (RA)
- outcomes from simulation (S)
- professional discussion (PD)
- authentic statements/witness testimony (WT)
- expert witness testimony (EWT)
- evidence of Recognition of Prior Learning (RPL).

Learners can use the abbreviations in their portfolios for cross-referencing purposes.

Learners can also use one piece of evidence to prove their knowledge, skills and understanding across different assessment criteria and/or across different units. It is not necessary for learners to have each assessment criterion assessed separately. They should be encouraged to reference evidence to the relevant assessment criteria. However, the evidence provided for each unit must be clearly reference the unit being assessed. Evidence must be available to the assessor, the internal verifier and the Pearson standards verifier.

Any specific evidence requirements for a unit are given in the *Assessment* section of the unit.

Further guidance on the requirements for centre quality assurance and internal verification processes is available on our website at: qualifications.pearson.com. Please see *Section 12, Further information and useful publications* for details.

Appeals

Centres must have a policy for dealing with appeals from learners. Appeals may relate to incorrect assessment decisions or unfairly conducted assessment. The first step in such a policy is a consideration of the evidence by a Lead Internal Verifier or other member of the programme team. The assessment plan should allow time for potential appeals after learners have been given assessment decisions.

Centres must document all learners' appeals and their resolutions. Further information on the appeals process can be found in the document *Enquiries and appeals about Pearson vocational qualifications policy*, which is available on our website.

Dealing with malpractice

Centres must have a policy for dealing with malpractice by learners. This policy must follow the *Pearson Assessment Malpractice Policy*, which is available on our website at: qualifications.pearson.com. Centres must report malpractice to Pearson, particularly if any units have been subject to quality assurance or certification.

Reasonable adjustments to assessment

Centres are able to make adjustments to assessments to take account of the needs of individual learners in line with the guidance given in the document *Pearson Supplementary Guidance for Reasonable Adjustment and Special Consideration in Vocational Internally Assessed Units*. In most instances, adjustments can be achieved by following the guidance; for example allowing the use of assistive technology or adjusting the format of the evidence. We can advise you if you are uncertain as to whether an adjustment is fair and reasonable. Any reasonable adjustment must reflect the normal learning or working practice of a learner in a centre or working within the occupational area.

Further information on access arrangements can be found in the Joint Council for Qualifications (JCQ) document *Access Arrangements, Reasonable Adjustments and Special Consideration for General and Vocational qualifications*.

Both documents are on our website.

Special consideration

Centres must operate special consideration in line with the guidance given in the document *Pearson Supplementary Guidance for Reasonable Adjustment and Special Consideration in Vocational Internally Assessed Units*. Special consideration may not be applicable in instances where:

- assessment requires the demonstration of practical competence
- criteria have to be met fully
- units/qualifications confer licence to practice.

Centres cannot apply their own special consideration; applications for special consideration must be made to Pearson and can be made only on a case-by-case basis. A separate application must be made for each learner and certification claims must not be made until the outcome of the application has been received.

Further information on special consideration can be found in the Joint Council for Qualifications (JCQ) document *Access Arrangements, Reasonable Adjustments and Special Consideration for General and Vocational qualifications*.

Both of the documents mentioned above are on our website.

9 Centre recognition and approval

Centre recognition

Centres that have not previously offered Pearson vocational qualifications need to apply for and be granted centre recognition and approval as part of the process for approval to offer individual qualifications.

Existing centres will be given 'automatic approval' for a new qualification if they are already approved for a qualification that is being replaced by a new qualification and the conditions for automatic approval are met.

Guidance on seeking approval to deliver Pearson vocational qualifications is available on our website.

Approvals agreement

All centres are required to enter into an approval agreement, which is a formal commitment by the head or principal of a centre, to meet all the requirements of the specification and any associated codes, conditions or regulations. Pearson will act to protect the integrity of the awarding of qualifications. If centres do not comply with the agreement, this could result in the suspension of certification or withdrawal of approval.

10 Quality assurance of centres

Quality assurance is at the heart of vocational qualifications. Centres are required to declare their commitment to ensuring quality and to giving learners appropriate opportunities that lead to valid and accurate assessment outcomes.

Centres must follow quality assurance requirements for standardisation of assessors and internal verifiers and the monitoring and recording of assessment processes. Pearson uses external quality assurance procedures to check that all centres are working to national standards. It gives us the opportunity to identify and provide support to safeguard certification and quality standards. It also allows us to recognise and support good practice.

Centres offering competence-based qualifications will usually receive two standards verification visits per year (a total of two days per year). The exact frequency and duration of standards verifier visits will reflect the centre's performance, taking account of the:

- number of assessment sites
- number and throughput of learners
- number and turnover of assessors
- number and turnover of internal verifiers.

For centres offering a full Pearson BTEC Apprenticeship (i.e. all elements of the Apprenticeship are delivered with Pearson through registration of learners on a BTEC Apprenticeship framework) a single standards verifier will normally be allocated to verify all elements of the BTEC Apprenticeship programme. Centres should make use of our one-click learner registration to access this facility. If a centre is also offering stand-alone NVQs/Competence-based qualifications in the same sector as a full BTEC Apprenticeship, the same standards verifier should be allocated. If a centre is also offering stand-alone BTEC qualifications in the same sector as a full BTEC Apprenticeship, a different quality assurance model applies.

In order for certification to be released, confirmation is required that the National Occupational Standards (NOS) for assessment and verification, and for the specific occupational sector are being met consistently.

For further details, please go to the *NVQ Quality Assurance Centre Handbook*, the *BTEC Apprenticeships Quality Assurance Handbook* and the *Pearson Edexcel NVQs, SVQs and competence-based qualifications – Delivery Requirements and Quality Assurance Guidance* on our website.

11 Unit format

Each unit has the following sections.

Unit title

This is the formal title of the unit that will appear on the learner's certificate.

Unit reference number

Each unit is assigned a unit reference number that appears with the unit title on the Register of Regulated Qualifications.

Level

All units and qualifications have a level assigned to them. The level assigned is informed by the level descriptors defined by Ofqual, the qualifications regulator.

Credit value

All units have a credit value. When a learner achieves a unit, they gain the specified number of credits. The minimum credit value is 1 and credits can be awarded in whole numbers only.

Guided learning hours

Guided Learning Hours (GLH) is the number of hours that a centre delivering the qualification needs to provide. Guided learning means activities that directly or immediately involve tutors and assessors in teaching, supervising, and invigilating learners, for example lectures, tutorials, online instruction and supervised study.

Unit summary

This summarises the purpose of the unit and the learning the unit offers.

Unit assessment requirements/evidence requirements

The SSC/B set the assessment/evidence requirements. Learners must provide evidence according to each of the requirements stated in this section.

Learning outcomes

The learning outcomes set out what a learner will know, understand or be able to do as the result of a process of learning.

Assessment criteria

Descriptions of the requirements a learner is expected to meet to demonstrate that a learning outcome has been achieved.

Unit 1:

Conforming to General Health, Safety and Welfare in the Workplace

Unit reference number: A/503/1170

Level: 1

Credit value: 2

Guided learning hours: 7

Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in conforming to general health, safety and welfare in the workplace within the relevant sector of industry.

Unit assessment requirements/evidence requirements

This unit must be assessed in a work environment, in accordance with:

- the Additional Requirements for Qualifications using the title NVQ
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

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

Workplace evidence of skills cannot be simulated.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements the learner is expected to meet to achieve the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Comply with all workplace health, safety and welfare legislation requirements	1.1	Comply with all workplace health, safety and welfare legislation requirements			
		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: <ul style="list-style-type: none"> • 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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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: <ul style="list-style-type: none"> • 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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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: <ul style="list-style-type: none"> • 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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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: <ul style="list-style-type: none"> • 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			

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____
(if sampled)

Date: _____

Unit 2:

Conforming to Productive Work Practices in the Workplace

Unit reference number: J/503/1169

Level: 2

Credit value: 3

Guided learning hours: 10

Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in conforming to productive practices in the workplace within the relevant sector of industry.

Unit assessment requirements/evidence requirements

This unit must be assessed in a work environment, in accordance with:

- the Additional Requirements for Qualifications using the title NVQ
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

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

Workplace evidence of skills cannot be simulated.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements the learner is expected to meet to achieve the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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: <ul style="list-style-type: none"> • 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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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: <ul style="list-style-type: none"> • job cards • worksheets • material/resource lists • time sheets 			
		3.3	Explain the reasons for ensuring documentation is completed clearly and within given timescales			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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: <ul style="list-style-type: none"> • 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			

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)

Unit 3: Moving, Handling and Storing Resources in the Workplace

Unit reference number: F/503/1171

Level: 2

Credit value: 5

Guided learning hours: 17

Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in moving, handling and storing resources in the workplace within the relevant sector of industry.

Unit assessment requirements/evidence requirements

This unit must be assessed in a work environment, in accordance with:

- the Additional Requirements for Qualifications using the title NVQ
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

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

Workplace evidence of skills cannot be simulated.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements the learner is expected to meet to achieve the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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: <ul style="list-style-type: none"> 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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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	<p>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:</p> <ul style="list-style-type: none"> • 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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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: <ul style="list-style-type: none"> 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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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 work space 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 out 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: <ul style="list-style-type: none"> progress charts, timetables and estimated times organisational procedures for reporting circumstances which will affect the work programme 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> sheet material loose material bagged or wrapped material fragile material tools and equipment components liquids 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		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		

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)

Unit 4: Preparing Surfaces for Membrane Roofing Systems in the Workplace

Unit reference number: R/506/2621

Level: 2

Credit value: 15

Guided learning hours: 50

Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in preparing surfaces for membrane roofing in the workplace within the relevant sector of industry.

Unit assessment requirements/evidence requirements

This unit must be assessed in a work environment, in accordance with:

- the Additional Requirements for Qualifications using the title NVQ
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

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

Workplace evidence of skills cannot be simulated.

This unit must be assessed against the endorsements detailed within the relevant Rule of Combination (RoC). Please refer to the RoC applicable to the qualification/occupational area in which the candidate is being assessed.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements the learner is expected to meet to achieve the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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, manufacturers' information and oral/written instructions			
		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: <ul style="list-style-type: none"> drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, electronic data, oral/written procedures and current regulations 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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 environment, whilst working: <ul style="list-style-type: none"> in the workplace, below ground level, at height, in confined spaces, 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 reports			
		2.4	Describe the types of fire extinguishers available when preparing surfaces for membrane roofing systems and describe how and when they are used			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when preparing surfaces for membrane roofing systems	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when preparing surfaces for membrane roofing systems			
		3.2	Demonstrate compliance with given information and relevant legislation when preparing surfaces for membrane roofing systems in relation to: <ul style="list-style-type: none"> • safe use of access equipment • safe use and handling of materials, tools and equipment • safe storage and distribution of materials, tools and equipment • specific risks to health 			
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to preparing surfaces for membrane roofing systems, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV) 			
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions			
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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, fixings, tools and equipment			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> primers, preparation coats, separating/isolating/carrier/cushion layers, joint tapes, screed materials, associated materials, components, fixings and fittings hand and/or power tools and equipment 			
		4.3	Describe how the resources should be used correctly and how 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			
		4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to prepare surfaces for membrane roofing systems			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Minimise the risk of damage to the work and surrounding area when preparing surfaces for membrane roofing systems	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures			
		5.2	Minimise damage and maintain a clean work space			
		5.3	Dispose of waste in accordance with current legislation			
		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 out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and 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 allocated time			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> types of progress charts, timetables and estimated times organisational procedures for reporting circumstances which will affect the work programme 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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 when preparing surfaces for membrane roofing systems: <ul style="list-style-type: none"> measuring, cutting, marking out, fitting, positioning and securing 			
		7.2	Use and maintain hand tools, power tools and ancillary equipment			
		7.3	Clean, dry and prepare surfaces as appropriate to the substrate to given working instructions for one of the following membrane roofing systems <ul style="list-style-type: none"> reinforced bitumen single ply liquid applied 			
		7.4	Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> carry out remedial work to roofing backgrounds clean and dry surfaces prepare surfaces (as appropriate to the substrate) for reinforced bitumen, single ply and liquid applied membrane systems apply primers/preparation coats install separating/isolating/cushion layers install joint tapes use hand tools, power tools and equipment work at height use access equipment 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to effectively communicate within a team when preparing surfaces for membrane roofing systems		
		7.6	Describe how to maintain the tools and equipment used when preparing surfaces for membrane roofing systems		

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)

Unit 5:

Repairing Membrane Roofing Systems in the Workplace

Unit reference number: Y/506/2622

Level: 2

Credit value: 16

Guided learning hours: 53

Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in repairing membrane roofing systems in the workplace within the relevant sector of industry.

Unit assessment requirements/evidence requirements

This unit must be assessed in a work environment, in accordance with:

- the Additional Requirements for Qualifications using the title NVQ
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

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

Workplace evidence of skills cannot be simulated.

This unit must be assessed against the endorsements detailed within the relevant Rule of Combination (RoC). Please refer to the RoC applicable to the qualification/occupational area in which the candidate is being assessed.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements the learner is expected to meet to achieve the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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, manufacturers' information and oral/written instructions			
		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: <ul style="list-style-type: none"> drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, electronic data, oral/written procedures and current regulations 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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 environment, whilst working: <ul style="list-style-type: none"> in the workplace, below ground level, at height, in confined spaces, 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 reports			
		2.4	Describe the types of fire extinguishers available when repairing membrane roofing systems and describe how and when they are used			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when repairing membrane roofing systems	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when repairing membrane roofing systems			
		3.2	Demonstrate compliance with given information and relevant legislation when repairing membrane roofing systems in relation to: <ul style="list-style-type: none"> • safe use of access equipment • safe use and handling of materials, tools and equipment • safe storage and distribution of materials, tools and equipment • specific risks to health 			
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used relating to repairing membrane roofing systems, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV) 			
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions			
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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, fixings, tools and equipment			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> relevant membrane system materials, upstands, pipes, vents, rainwater outlets and associated materials, components, fixings and fittings access equipment hand and/or power tools and equipment 			
		4.3	Describe how the resources should be used correctly and how 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			
		4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to repair membrane roofing systems			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Minimise the risk of damage to the work and surrounding area when repairing membrane roofing systems	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures			
		5.2	Minimise damage and maintain a clean work space			
		5.3	Dispose of waste in accordance with current legislation			
		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 out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance			
6	Complete the work within the allocated time when repairing membrane roofing systems	6.1	Demonstrate completion of the work within the allocated time			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> types of progress charts, timetables and estimated times organisational procedures for reporting circumstances which will affect the work programme 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
7	Comply with the given contract information to repair membrane roofing systems to the required specification	7.1	Demonstrate the following work skills when repairing membrane roofing systems: <ul style="list-style-type: none"> removing, measuring, marking out, cutting, fitting, applying, positioning and securing 			
		7.2	Use and maintain hand tools, power tools and ancillary equipment			
		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: <ul style="list-style-type: none"> damaged membrane edges and upstands penetrations, pipes and vents perimeters, rainwater outlets 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • identify and evaluate defects in the membrane and inspect condition of sub-strata • record and report findings • 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 • work at height • use access equipment 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to effectively communicate within a team when repairing membrane roofing systems		
		7.6	Describe how to maintain the tools and equipment used when repairing membrane roofing systems		

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)

Unit 6:

Applying Reinforced Bitumen Membrane Systems in the Workplace

Unit reference number: J/506/2616

Level: 2

Credit value: 20

Guided learning hours: 67

Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in applying reinforced bitumen membrane systems in the workplace within the relevant sector of industry.

Unit assessment requirements/evidence requirements

This unit must be assessed in a work environment, in accordance with:

- the Additional Requirements for Qualifications using the title NVQ
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

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

Workplace evidence of skills cannot be simulated.

This unit must be assessed against the endorsements detailed within the relevant Rule of Combination (RoC). Please refer to the RoC applicable to the qualification/occupational area in which the candidate is being assessed.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements the learner is expected to meet to achieve the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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, manufacturers' information and oral/written instructions			
		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: <ul style="list-style-type: none"> drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, electronic data, oral/written procedures and current regulations 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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 environment, whilst working: <ul style="list-style-type: none"> in the workplace, below ground level, in confined spaces, 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 reports			
		2.4	Describe the types of fire extinguishers available when applying reinforced bitumen membrane systems and describe how and when they are used			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when applying reinforced bitumen membrane systems	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when applying reinforced bitumen membrane systems			
		3.2	Demonstrate compliance with given information and relevant legislation when applying reinforced bitumen membrane systems in relation: <ul style="list-style-type: none"> • safe use of access equipment • safe use and handling of materials, tools and equipment • safe storage and distribution of materials, tools and equipment • specific risks to health 			
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to applying reinforced bitumen membrane systems, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV) 			
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions			
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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 and equipment			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> bitumen, reinforced bitumen membrane, 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 equipment 			
		4.3	Describe how the resources should be used correctly and how 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			
		4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to apply reinforced bitumen membrane systems			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Minimise the risk of damage to the work and surrounding area when applying reinforced bitumen membrane systems	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures			
		5.2	Minimise damage and maintain a clean work space			
		5.3	Dispose of waste in accordance with current legislation			
		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 out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and 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 purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> types of progress charts, timetables and estimated times organisational procedures for reporting circumstances which will affect the work programme 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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: <ul style="list-style-type: none"> measuring, cutting, marking out, fitting, positioning and securing 			
		7.2	Use and maintain hand tools, power tools and ancillary equipment			
		7.3	Install vapour control layers and insulation			
		7.4	Apply one of the following methods of attachment for reinforced bitumen membrane systems: pour and roll, torch-on, cold applied, self-adhesive or hot melt to given working instructions relating to the following: <ul style="list-style-type: none"> base layers cap sheets edges and upstands penetrations, pipes and vents perimeters, rainwater outlets 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<p>7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • install vapour control layers • install insulation materials • use bitumen boilers (according to the system) • use gas torches • install base 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) 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<p>7.6 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • install to perimeters (eaves, 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 method • apply membrane by torch-on method • apply membrane by cold applied and/or self-adhesive and/or hot melt methods • take into account the effects of temperature and weather conditions 			
		<p>7.7 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • implement snagging procedures and appropriate remedial work, including preparation for test procedures • use hand tools, power tools and equipment • work at height • use access equipment 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.8	Describe the needs of other occupations and how to effectively communicate within a team applying reinforced bitumen membrane systems			
		7.9	Describe how to maintain the tools and equipment used when applying reinforced bitumen membrane systems			

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)

Unit 7:

Applying Single Ply Membrane Systems in the Workplace

Unit reference number: L/506/2617

Level: 2

Credit value: 17

Guided learning hours: 57

Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in applying single ply membrane systems in the workplace within the relevant sector of industry.

Unit assessment requirements/evidence requirements

This unit must be assessed in a work environment, in accordance with:

- the Additional Requirements for Qualifications using the title NVQ
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

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

Workplace evidence of skills cannot be simulated.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements the learner is expected to meet to achieve the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when applying single ply membrane systems	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and oral/written instructions			
		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: <ul style="list-style-type: none"> drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, electronic data, oral/written procedures and current regulations 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when applying single ply membrane systems	2.1	Describe their responsibilities regarding potential accidents, health hazards and the environment, whilst working: <ul style="list-style-type: none"> in the workplace, below ground level, at height, in confined spaces, 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 reports			
		2.4	Describe the types of fire extinguishers available when applying single ply membrane systems and describe how and when they are used			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when applying single ply membrane systems	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when applying single ply membrane systems			
		3.2	Demonstrate compliance with given information and relevant legislation when applying single ply membrane systems in relation to: <ul style="list-style-type: none"> • safe use of access equipment • safe use and handling of materials, tools and equipment • safe storage and distribution of materials, tools and equipment • specific risks to health 			
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used relating to applying single ply membrane systems, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV) 			
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions			
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Select the required quantity and quality of resources for the methods of work to apply single ply membrane systems	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> mechanical fixings, vapour control layers, insulation, waterproof membranes, water control membranes, ballast, solvents, adhesives, pedestrian surfacing, protection layers, separation layers, filter and drainage layers, outlets, gutters, pipes, vents, flashings, trims, movement joints, rooflights, associated materials, components, fixings and fittings hand and/or power tools and equipment 			
		4.3	Describe how the resources should be used correctly and how 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			
		4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to apply single ply membrane systems			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Minimise the risk of damage to the work and surrounding area when applying single ply membrane systems	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures			
		5.2	Minimise damage and maintain a clean work space			
		5.3	Dispose of waste in accordance with current legislation			
		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 out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance			
6	Complete the work within the allocated time when applying single ply membrane systems	6.1	Demonstrate completion of the work within the allocated time			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> types of progress charts, timetables and estimated times organisational procedures for reporting circumstances which will affect the work programme 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
7	Comply with the given contract information to apply single ply membrane systems to the required specification	7.1	Demonstrate the following work skills when applying single ply membrane systems: <ul style="list-style-type: none"> measuring, cutting, marking out, fitting, positioning and securing 			
		7.2	Use and maintain hand tools, power tools and ancillary equipment			
		7.3	Install vapour control layers and insulation (warm roofs and inverted roofs)			
		7.4	Apply adhered and mechanically fixed (thermoplastic or elastomeric) single ply membrane systems to given working instructions relating to the following <ul style="list-style-type: none"> protection layers separation layers water control membranes (inverted roofs only) edges and upstands penetrations, pipes and vents perimeters, rainwater outlets 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<p>7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • install vapour control layers • install insulation materials • install protection layers • install separation layers • apply single ply membrane adhered systems • apply single ply membrane mechanically fixed systems • apply single ply membrane ballasted systems • 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) 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<p>7.6 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • install to perimeters (eaves, 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 • use hot air and solvent weld • take into account the effects of temperature and weather conditions 			
		<p>7.7 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • implement snagging procedures and appropriate remedial work, including preparation for test procedures • use hand tools, power tools and equipment • work at height • use access equipment 			
		<p>7.8 Describe the needs of other occupations and how to effectively communicate within a team when applying single ply membrane systems</p>			
		<p>7.9 Describe how to maintain the tools and equipment used when applying single ply membrane systems</p>			

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)

Unit 8:

Applying Liquid Membrane Systems in the Workplace

Unit reference number: Y/506/2619

Level: 2

Credit value: 17

Guided learning hours: 57

Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in applying liquid membrane systems in the workplace within the relevant sector of industry.

Unit assessment requirements/evidence requirements

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ
- the ConstructionSkills 'Consolidated Assessment Strategy for Construction and the Built Environment.

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

Workplace evidence of skills cannot be simulated.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements the learner is expected to meet to achieve the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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, manufacturers' information and oral/written instructions			
		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: <ul style="list-style-type: none"> drawings, specifications, schedules, method statements, risk assessments, manufacturers' information electronic data, and oral/written procedures and current legislation 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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 environment whilst working: <ul style="list-style-type: none"> in the workplace, below ground level, in confined spaces, 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 reports			
		2.4	Describe the types of fire extinguishers available when applying liquid membrane systems and describe how and when they are used			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when applying liquid membrane systems	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when applying liquid membrane systems			
		3.2	Demonstrate compliance with given information and relevant legislation when applying liquid membrane systems in relation to: <ul style="list-style-type: none"> • safe use of access equipment • safe use and handling of materials, tools and equipment • safe storage and distribution of materials, tools and equipment • specific risks to health 			
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to applying liquid membrane systems, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV) 			
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given working instructions			
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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, fixings, tools and equipment			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> single pack, multi pack and heated liquid components, vapour control layers, insulation, preparation coats, base coats, top coats, 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 tools and/or power tools and equipment 			
		4.3	Describe how the resources should be used correctly and how 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			
		4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to apply liquid membrane systems			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Minimise the risk of damage to the work and surrounding area when applying liquid membrane systems	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures			
		5.2	Minimise damage and maintain a clean work space			
		5.3	Dispose of waste in accordance with current legislation			
		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 out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and 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 purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> types of progress charts, timetables and estimated times organisational procedures for reporting circumstances which will affect the work programme 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
7	Comply with the given contract information to apply liquid membrane systems to the required specification	7.1	Demonstrate the following work skills when applying liquid membrane systems: <ul style="list-style-type: none"> • mixing, brushing, rolling, measuring, cutting, positioning and securing 			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment			
		7.3	Install vapour control layers and insulation			
		7.4	Apply liquid membrane systems incorporating reinforcement to given working instructions relating to the following: <ul style="list-style-type: none"> • liquid component preparation • base coats • multiple and/or finishing coats • edges and upstands • penetrations, pipes and vents • perimeters, rainwater outlets 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<p>7.5 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • install vapour control layers • install insulation • 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 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<p>7.6 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • 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, 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 			
		<p>7.7 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • take into account the effects of temperature and weather conditions • implement snagging procedures and appropriate remedial work, including preparation for test procedures • use hand tools, power tools and equipment • work at height • use access equipment 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.8	Describe the needs of other occupations and how to effectively communicate within a team when applying liquid membrane systems		
		7.9	Describe how to maintain the tools and equipment used when applying liquid membrane systems		

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)

Unit 9:

Installing Decking for Flat Roof Coverings in the Workplace

Unit reference number: F/506/2615

Level: 2

Credit value: 13

Guided learning hours: 43

Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in installing decking for flat roof coverings in the workplace within the relevant sector of industry.

Unit assessment requirements/evidence requirements

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ
- the ConstructionSkills 'Consolidated Assessment Strategy for Construction and the Built Environment.

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

Workplace evidence of skills cannot be simulated.

This unit must be assessed against the endorsements detailed within the relevant Rule of Combination (RoC). Please refer to the RoC applicable to the qualification/occupational area in which the candidate is being assessed.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements the learner is expected to meet to achieve the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when installing decking for flat roof coverings	1.1	Interpret and extract relevant information from drawings, specifications, schedules, manufacturers' information and oral/written instructions			
		1.2	Comply with information and/or instructions derived from risk assessments and method statement			
		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: <ul style="list-style-type: none"> drawings, specifications, schedules, manufacturers' information, regulations governing buildings and oral/written procedures for dealing with damaged and incorrect materials and/or resources 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when installing decking for flat roof coverings	2.1	Describe their responsibilities under current legislation and official guidance whilst working: <ul style="list-style-type: none"> in the workplace, 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 reports			
3	Maintain safe and healthy working practices when installing decking for flat roof coverings	3.1	Use personal protective equipment (PPE) and access equipment safely to carry out the activity in accordance with current legislation and organisational requirements when installing decking for flat roof coverings.			
		3.2	Safely use and store the hand tools, portable power tools and ancillary equipment used in accordance with current legislation and organisational requirements			
		3.3	Explain why and when personal protective equipment (PPE) should be used, relating to installing decking for flat roof coverings, and the types, purpose and limitations of each type			
		3.4	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Select the required quantity and quality of resources for the methods of work to install decking for flat roof coverings	4.1	Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> particle boards, plywood, timber, single-skin metal sheeting, fixings and associated components hand and/or powered tools and equipment 			
		4.2	Select resources associated with own work in relation to materials, components, fixings, tools and equipment			
		4.3	Describe how the resources should be used correctly and how 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 method of work			
		4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to install decking for flat roof coverings			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Minimise the risk of damage to the work and surrounding area when installing decking for flat roof coverings	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures			
		5.2	Minimise damage and maintain a clean work space			
		5.3	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions			
		5.4	Dispose of waste in accordance with current legislation			
		5.5	Explain why the disposal of waste should be carried out in relation to the work			
6	Complete the work within the allocated time when installing decking for flat roof coverings	6.1	Demonstrate completion of the work within the allocated time			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> types of work schedules/diaries, progress charts, timetables and estimated times organisational procedures for reporting circumstances which will affect the work programme 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
7	Comply with the given contract information to install decking for flat roof coverings to the required specification	7.1	Demonstrate the following work skills when installing decking for flat roof coverings: <ul style="list-style-type: none"> measuring, cutting, marking out, fitting, positioning and securing 			
		7.2	Use and maintain hand tools, portable power tools and ancillary equipment			
		7.3	Install boarded timber roof decks and/or boarded single-skin metal roof decks to given working instructions and form: <ul style="list-style-type: none"> perimeters openings falls outlets penetrations 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • install decking material • create falls • form outlets • form perimeter details • negotiate penetrations • form openings • ensure deck is secure and fit for purpose • use hand tools, power tools and equipment • work at height • use access equipment 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to effectively communicate within a team when installing decking for flat roof coverings			
		7.6	Describe how to maintain the tools and equipment used when installing decking for flat roof coverings			

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)

Unit 10: Installing Support Systems for Green Roofs in the Workplace

Unit reference number: L/506/2620

Level: 2

Credit value: 12

Guided learning hours: 40

Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in installing support systems for green roofs in the workplace within the relevant sector of industry.

Unit assessment requirements/evidence requirements

This unit must be assessed in a work environment, in accordance with:

- the Additional Requirements for Qualifications using the title NVQ
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

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

Workplace evidence of skills cannot be simulated.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements the learner is expected to meet to achieve the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when installing support systems for green roofs	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information			
		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: <ul style="list-style-type: none"> drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, electronic data and current regulations and official guidance associated with green roofs 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when installing support systems for green roofs	2.1	Describe their responsibilities regarding potential accidents and health hazards and the environment, whilst working: <ul style="list-style-type: none"> in the workplace, below ground level, in confined spaces, 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 reports			
		2.4	Describe the types of fire extinguishers available when installing support systems for green roofs and describe how and when they are used			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe and healthy working practices when installing support systems for green roofs	3.1	Use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when installing support systems for green roofs			
		3.2	Demonstrate compliance with given information and relevant legislation when installing support systems for green roofs in relation to: <ul style="list-style-type: none"> • safe use of access equipment • safe use and handling of materials, tools and equipment • safe storage and distribution of materials, tools and equipment • specific risks to health 			
		3.3	Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to installing support systems for green roofs, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV) 			
		3.4	Describe how the relevant health and safety control equipment should be used in accordance with the given instructions			
		3.5	Describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related activities			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Select the required quantity and quality of resources for the methods of work to install support systems for green roofs	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> drains, resistance layers, filters, irrigation systems, protection layers, substrate, associated materials, components, fixings and fittings hand and/or power tools and equipment 			
		4.3	Describe how the resources should be used correctly and how 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			
		4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to install support systems for green roofs			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Minimise the risk of damage to the work and surrounding area when installing support systems for green roofs	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures			
		5.2	Minimise damage and maintain a clean work space			
		5.3	Dispose of waste in accordance with current legislation			
		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 out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance			
6	Complete the work within the allocated time when installing support systems for green roofs	6.1	Demonstrate completion of the work within the allocated time			
		6.2	Describe the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> types of progress charts, timetables and estimated times organisational procedures for reporting circumstances which will affect the work programme 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
7	Comply with the given contract information to install support systems for green roofs to the required specification	7.1	Demonstrate the following work skills when installing support systems for green roofs: <ul style="list-style-type: none"> measuring, marking out, laying, fitting, joining, sealing, finishing, positioning and securing 			
		7.2	Use and maintain hand tools, power tools and ancillary equipment			
		7.3	Prepare and install support systems for green roofs to given working instruction for four of the following components: <ul style="list-style-type: none"> root/rhizome resistant layer protection layer irrigation system drainage system filter layer substrate 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		<p>7.4 Describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> • ensure the integrity of roof structure • protect underlying roof membrane(s) • ensure appropriate layering of the green roof support system; root/rhizome resistant layers, protection layers, irrigation systems, drainage systems, filter layers and substrate • install measures to prevent slippage • identify the differences between intensive and extensive green roofs • identify the differences between intensive and extensive green roofs • use hand tools, power tools and equipment • work at height • use access equipment 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		7.5	Describe the needs of other occupations and how to effectively communicate within a team when installing support systems for green roofs			
		7.6	Describe how to maintain the tools and equipment used when installing support systems for green roofs			

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)

Unit 11: Installing Solar Collectors to Roofs in the Workplace

Unit reference number: K/503/2959

Level: 2

Credit value: 6

Guided learning hours: 20

Unit summary

The aim of this unit is to illustrate the skills, knowledge and understanding required to confirm competence in installing solar collectors to roofs in the workplace within the relevant sector of industry.

Unit assessment requirements/evidence requirements

This unit must be assessed in a work environment, in accordance with:

- the Additional Requirements for Qualifications using the title NVQ
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

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

Workplace evidence of skills cannot be simulated.

This unit must be assessed against one of the following endorsements:

- Photo voltaic
- Solar thermal.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements the learner is expected to meet to achieve the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources when installing solar collectors to roofs	1.1	Interpret and extract relevant information from drawings, specifications, schedules, 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: <ul style="list-style-type: none"> drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and regulations governing buildings 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Know how to comply with relevant legislation and official guidance when installing solar collectors to roofs	2.1	Describe their responsibilities under current legislation and official guidance whilst working: <ul style="list-style-type: none"> in the workplace, below ground level, in confined spaces, 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 reports			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Maintain safe working practices when installing solar collectors to roofs	3.1	Use health and safety control equipment and access equipment safely to carry out the activity in accordance with legislation and organisational requirements when installing solar collectors to roofs			
		3.2	<p>Explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to installing solar collectors to roofs, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:</p> <ul style="list-style-type: none"> • collective protective measures • personal protective equipment (PPE) • respiratory protective equipment (RPE) • local exhaust ventilation (LEV) 			
		3.3	Describe how the relevant health and safety control equipment should be used in accordance with the given instructions			
		3.4	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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Select the required quantity and quality of resources for the methods of work to install solar collectors to roofs	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment			
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> • solar collector installation kits • hand and/or powered tools and equipment 			
		4.3	Describe how the resources should be used correctly and how 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 method of work			
		4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to install solar collectors to roofs			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Minimise the risk of damage to the work and surrounding area when installing solar collectors to roofs	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures			
		5.2	Minimise damage and maintain a clean work space			
		5.3	Dispose of waste in accordance with legislation			
		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 out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			
6	Complete the work within the allocated time when installing solar collectors to roofs	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: <ul style="list-style-type: none"> types of progress charts, timetables and estimated times organisational procedures for reporting circumstances which will affect the work programme 			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
7	Comply with the given contract information to installing solar collectors to roofs to the required specification	7.1	Demonstrate the following work skills when installing solar collectors to roofs: <ul style="list-style-type: none"> removing, measuring, marking out, cutting, fitting, fixing, positioning, securing and replacing 			
		7.2	Prepare for and install solar collectors to roof to given working instructions for one of the following: <ul style="list-style-type: none"> integrated photo voltaic mounted photo voltaic integrated solar thermal mounted solar thermal 			
		7.3	Reinstate roof coverings to given working instructions			
		7.4	Safely use and handle materials			
		7.5	Safely use hand tools, portable power tools and ancillary equipment			
		7.6	Safely store the materials, tools and equipment used when installing solar collectors to roofs			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.7 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> • assess the installation area • check the direction the roof is facing • remove or leave out waterproofing elements • mark out for installation using given templates or dimensions • prepare and weatherproof penetrations • fix additional supports • secure fixtures, fittings and collector 			

Learning outcomes		Assessment criteria	Evidence type	Portfolio reference	Date
		7.8 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> • reinstate roof covering including flashings • install solar panels during construction and as retrofit to existing buildings • use hand tools, power tools and equipment • work at height • use access equipment 			
		7.9 Describe the needs of other occupations and how to effectively communicate within a team when installing solar collectors to roofs			
		7.10 Describe how to maintain the tools and equipment used when installing solar collectors to roofs			

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)

12 Further information and useful publications

To get in touch with us visit our 'Contact us' pages:

- Edexcel, BTEC and Pearson Work Based Learning contact details: qualifications.pearson.com/en/support/contact-us.html
- books, software and online resources for UK schools and colleges: www.pearsonschoolsandfecolleges.co.uk

Key publications

- *Adjustments for candidates with disabilities and learning difficulties, Access and Arrangements and Reasonable Adjustments, General and Vocational qualifications* (Joint Council for Qualifications (JCQ))
- *Supplementary guidance for reasonable adjustments and special consideration in vocational internally assessed units* (Pearson)
- *General and Vocational qualifications, Suspected Malpractice in Examination and Assessments: Policies and Procedures* (JCQ)
- *Equality Policy* (Pearson)
- *Recognition of Prior Learning Policy and Process* (Pearson)
- *UK Information Manual* (Pearson)
- *Pearson Edexcel NVQs, SVQs and competence-based qualifications – Delivery Requirements and Quality Assurance Guidance* (Pearson)

All of these publications are available on our website: qualifications.pearson.com

Further information and publications on the delivery and quality assurance of NVQ/Competence-based qualifications are available at our website on the Delivering BTEC pages. Our publications catalogue lists all the material available to support our qualifications. To access the catalogue and order publications, please go to the resources page of our website.

13 Professional development and training

Professional development and training

Pearson supports customers with training related to our qualifications. This support is available through a choice of training options offered on our website.

The support we offer focuses on a range of issues, such as:

- planning for the delivery of a new programme
- planning for assessment and grading
- developing effective assignments
- building your team and teamwork skills
- developing learner-centred learning and teaching approaches
- building in effective and efficient quality assurance systems.

The national programme of training we offer is on our website. You can request centre-based training through the website or you can contact one of our advisers in the Training from Pearson UK team via Customer Services to discuss your training needs.

Training and support for the lifetime of the qualifications

Training and networks: our training programme ranges from free introductory events through sector-specific opportunities to detailed training on all aspects of delivery, assignments and assessment. We also host some regional network events to allow you to share your experiences, ideas and best practice with colleagues in your region.

Regional support: our team of Regional Quality Managers, based around the country, are responsible for providing quality assurance support and guidance to anyone managing and delivering NVQs/Competence-based qualifications. The Regional Quality Managers can support you at all stages of the standard verification process as well as in finding resolutions of actions and recommendations as required.

To get in touch with our dedicated support teams please visit our website at: qualifications.pearson.com/en/support/contact-us.html

Online support: find the answers to your questions in *Knowledge Base*, a searchable database of FAQs and useful videos that we have put together with the help of our subject advisors to support you in your role. Whether you are a teacher, administrator, Assessment Associate (AA) or training provider, you will find answers to your questions. If you are unable to find the information you need please send us your query and our qualification or administrative experts will get back to you.

14 Contact us

We have a dedicated Account Support team, across the UK, to give you more personalised support and advice. To contact your Account Specialist:

Email: wblcustomerservices@pearson.com

Telephone: 0844 576 0045

If you are new to Pearson and would like to become an approved centre, please contact us by:

Email: wbl@pearson.com

Telephone: 0844 576 0045

Annexe A: Consolidated Assessment Strategy for Construction and the Built Environment

Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional. Units and Qualifications with NVQ in the title and SVQs.

Introduction

This assessment strategy provides principles and guidance to awarding organisations so the assessment of units and qualifications with NVQ in the title and SVQs is valid, effective and consistent, and has credibility across the Construction and Built Environment sector. This is a consolidated ConstructionSkills Assessment Strategy covering construction and the built environment – craft, supervisory, technical, managerial and professional NVQ and SVQ units and qualifications. This assessment strategy is one of the strands of the ConstructionSkills' Construction Qualification Strategy.

These principles are in addition to the requirements that awarding organisations must meet for the delivery of NVQ and SVQ units and qualifications as required by the qualification regulators' documentation.

This consolidated assessment strategy provides the overarching principles as systems may vary from one awarding organisation to another. Awarding organisations must consistently put these principles into practice.

Appendix A provides guidance to help awarding organisations incorporate relevant parts of these principle requirements in their documentation.

Appendix B provides a list of sub annexes relevant to specific NVQ or SVQ qualifications and units, these sub annexes contain additional information for awarding organisations where National Working Groups or Awarding Body Fora have identified the need for specific clarification. Clarification may be about the terminology of the content of the unit (ref. section 2.1), or specific occupational expertise requirements for assessors and verifiers (ref. section 4).

Awarding organisations must make this Strategy and the relevant annexes available to assessors, verifiers and candidates.

Principles

1 External quality control of assessment

1.1 Awarding organisations must use risk management for external quality control of assessment. They must evaluate all external verification reports and other data relating to assessment centres. Awarding organisations must address any risks relating to quality control, considering the sector assessment strategy requirements for:

- workplace evidence
- the use of simulation
- the occupational competence of assessors and verifiers.

- 1.2 The monitoring and standardisation of assessment decisions must be achieved by robust and strong internal and external verification systems that meet the requirements of the qualification regulators' documentation.
- 1.3 Awarding organisations must be members of the sector's Built Environment Awarding Body Forum, of which the qualification regulators are members. Members will be expected to provide feedback on National Occupational Standards (NOS), NVQ or SVQ units and qualifications, including aspects informing incremental change.
- 1.4 The Forum will, in respect of this strategy:
- build on the good relationships with awarding organisations
 - provide opportunities to identify and address particular issues of external quality control
 - contribute to improving quality and consistency
 - support awarding organisations to monitor assessment centres' performance to identify areas and levels of risk
 - provide information and statistics about take-up and completion, as well as trends and developments that can be used by ConstructionSkills and awarding organisations to identify any problem areas and agree remedial action
 - discuss matters concerning quality assurance, as well as providing the opportunity to identify issues arising from implementation of NOS and related vocational qualifications
 - inform the continuous improvement of NOS, and awards derived from them
 - identify and share best practices to build a whole industry approach to pursue excellence in education and work-based learning and assessment process to achieve competence.
- 1.5 Awarding organisations and their partners, assessment centres, verifiers and assessors must maintain robust and transparent operational arrangements. They must preserve independence in assessment, certification and quality assurance processes. Awarding organisations must ensure clear separation of their NVQ/SVQ assessment responsibilities from their industry, training, membership, certification, accreditation and commercial interests and resolve any conflicts of interest.
- 1.6 Where e-assessment is used, it must meet the requirements of the qualification regulators' documentation.

2 Aspects to be assessed through performance in the workplace

- 2.1 Direct evidence produced through normal performance in the workplace is the primary source for meeting the requirements. This includes naturally occurring documentary evidence (hard copy and electronic), direct observation of activities and witness testimony as relevant. ConstructionSkills' National Working Groups will specify any exceptions to this position (see section 3).

- 2.2 Workplace evidence must be supported by the required evidence of knowledge and understanding. This evidence may be identified by:
- questioning the candidate
 - recognised industry education and training programme assessment or professional interview assessment that has been matched to NOS requirements
 - performance evidence
- 2.3 A holistic approach towards the collection of evidence should be encouraged. The focus should be on assessing activities generated by the whole work experience rather than focusing on specific tasks. This would show how evidence requirements could be met across the qualification to make the most efficient use of evidence. Annex A suggests standard evidence notes for awarding organisations.

3 How simulated working conditions may be used to assess competence

- 3.1 Simulations (designed situations for producing artificially generated evidence) may only be used where candidates are prevented from gathering direct evidence from the workplace in the normal way because:
- there are hazards
 - it is difficult to distinguish individual performance in team situations
 - circumstances occur infrequently or long term results are involved
 - confidentiality is important
 - there are organisational constraints.
- 3.2 Any instances where simulation is considered to be acceptable as an alternative (to direct workplace evidence) means of generating evidence, will be determined by the relevant ConstructionSkills National Working Group and stated in the unit. Annex A suggests standard evidence notes for awarding organisations.
- 3.3 The ConstructionSkills National Working Group will determine and specify on the required realistic working environment and context to be adopted. This could include appropriate:
- tools, equipment and instruments
 - materials
 - types of contingencies
 - standards and quality specifications
 - real timescales
 - quantities of work
 - physical conditions
 - relationships with people
 - types of interaction
 - communication methods and media
 - information and data.

- 3.4 Where simulated evidence is stated as acceptable in the unit, the circumstances and requirements for the simulation needs to be confirmed by discussions between the candidate and the assessor, and which are then agreed by the internal and external verifiers.
- 3.5 Where other Standard Setting Bodies' units are imported into a ConstructionSkills suite, the evidence requirements of the originating body will be adopted and specified.

4 Occupational expertise requirements for assessors and verifiers

4.1 Awarding organisations must ensure that **assessors**:

4.1.1 have sufficient, verifiable, relevant current industry experience, knowledge and understanding of the occupational working area at, or above, the level being assessed. This must be of sufficient depth to be effective and reliable when judging candidates' competence. Assessors' experience, knowledge and understanding could be verified by a combination of:

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

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

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

4.1.3 only assess in their acknowledged area of occupational competence

4.1.4 have a sound, in-depth knowledge of, and uphold the integrity of, the sector's NOS and this Assessment Strategy (this document)

4.1.5 are prepared to participate in training activities for their continued professional development

4.1.6 hold, or are working towards, a qualification as listed within 'Assessing and Assuring Quality of Assessment', either in the Qualification Framework, or the Scottish Credit and Qualifications Framework (SCQF):

- Level 3 Award in Assessing Competence in the Work Environment
- Level 3 Certificate in Assessing Vocational Achievement
- SVQ (SCQF level) Assessing Competence in the Work Environment
- SVQ (SCQF level) Assessing Vocational Achievement

or hold one of the following

- A1 Assess candidates using a range of methods
- D32/33 Assess candidate performance, using differing sources of evidence

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

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

4.2 Awarding organisations must ensure that **internal verifiers**:

4.2.1 have sufficient, verifiable, relevant up to date experience, knowledge and understanding of the occupational working area at, or above, the level being verified. This must be of sufficient depth to be effective and reliable when verifying judgements about assessors' assessment processes and decisions. Internal verifiers' experience, knowledge and understanding could be verified by a combination of:

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

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

4.2.2 have expertise so they have up to date experience, knowledge and understanding of the particular aspects of work they are verifying. This could be verified by records of continuing professional development achievements

4.2.3 have a sound, in-depth knowledge of, and uphold the integrity of, the NOS and this Assessment Strategy (this document)

4.2.4 are prepared to participate in training activities for their continued professional development

4.2.5 hold, or are working towards, a qualification as listed in 'Assessing and Assuring Quality of Assessment', either in the Qualification Framework, or the Scottish Credit and Qualifications Framework (SCQF):

- Level 4 Award in the Internal Quality Assurance of the Assessment Process and Practice
- Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Process and Practice
- SVQ(SCQF level) in the Internal Quality Assurance of the Assessment Process and Practice
- SVQ (SCQF level) in Leading the Internal Quality Assurance of Assessment Process and Practice

or hold one of the following

- VI Conduct internal quality assurance of the assessment process
- D34 Internal verify the assessment process

Holders of V1/D34 must quality assure to the reviewed National Occupational Standards (NOS) for Learning and Development.

It is strongly recommended that within the role of Internal Quality Assurance one of the following qualifications is held.

- Level 3 Award in Assessing Competence in the Work Environment
- Level 3 Certificate in Assessing Vocational Achievement
- SVQ (SCQF level) Assessing Competence in the Work Environment

- SVQ (SCQF level) Assessing Vocational Achievement

or one of the following

- A1 Assess candidates using a range of methods
- D32/33 Assess candidate performance, using differing sources of evidence

4.3 Awarding organisations must ensure that **external verifiers**:

4.3.1 the occupational working area at, or above, the level being verified. This must be of sufficient depth to be effective and reliable when verifying judgements about internal verification and assessment processes and decisions. External verifiers' experience, knowledge and understanding could be verified by a combination of:

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

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

4.3.2 have sufficient expertise so they have an up to date experience, knowledge and understanding of the particular aspects of work they are verifying. This could be verified by records of continuing professional development achievements

4.3.3 have a sound, in-depth knowledge of, and uphold the integrity of, the NOS and this Assessment Strategy (this document)

4.3.4 are prepared to participate in training activities for their continued professional development

4.3.5 hold, or are working towards, a qualification as listed in 'Assessing and Assuring Quality of Assessment', either in the Qualification Framework, or the Scottish Credit and Qualifications Framework (SCQF):

- Level 4 Award in the External Quality Assurance of the Assessment Process and Practice
- Level 4 Certificate in Leading the External Quality Assurance of Assessment
- SVQ (SCQF level) in the External Quality Assurance of the Assessment Process and Practice
- SVQ (SCQF) in Leading the External Quality Assurance of Assessment

or hold one of the following

- V2 Conduct external quality assurance of the assessment process
- D35 Externally verify the assessment process

Holders of V2/D35 must quality assure to the reviewed National Occupational Standards (NOS) for Learning and Development.

It is strongly recommended that within the role of External Quality Assurance one of the following qualifications is held at Level 3 and Level 4.

Level 3:

- Level 3 Award in Assessing Competence in the Work Environment
- Level 3 Certificate in Assessing Vocational Achievement
- SVQ (SCQF level) Assessing Competence in the Work Environment
- SVQ (SCQF level) Assessing Vocational Achievement

or one of the following

- A1 Assess candidates using a range of methods
- D32/33 Assess candidate performance, using differing sources of evidence

Level 4:

- Level 4 Award in the Internal Quality Assurance of the Assessment Process and Practice
- Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Process and Practice
- SVQ(SCQF level) in the Internal Quality Assurance of the Assessment Process and Practice
- SVQ (SCQF level) in Leading the Internal Quality Assurance of Assessment Process and Practice
- VI Conduct internal quality assurance of the assessment process
- D34 Internal verify the assessment process

4.4 Selection and appointment of assessors and verifiers

All applicants should be advised that they may be interviewed. Applicants' CVs should be profiled against the activities and range of the NVQ/SVQ(s) they will assess/verify to check that the applicant has the relevant current experience, knowledge and understanding of the occupational working area:

- at, or above, the level they will be assessing
- of sufficient depth to credibly verify judgements and assessments
- to uphold the integrity of the NOS and this Consolidated Assessment Strategy.

All assessors should have experience as well as, not in lieu of, qualifications. Where there seem to be gaps in a potentially suitable applicant's experience and knowledge, the applicant should be interviewed. Successful applicants' CVs, profiling, reasons for not needing to interview and interview records should be available for audit.

Appendix B1

Additional Information to the Consolidated Assessment Strategy from the National Working Group for Controlling Lifting Operations

Part A: Clarification and guidance notes

This additional information has been produced to ensure consistency in interpreting the occupational expertise requirements for assessors as described in paragraph 4.1 of the ConstructionSkills' Consolidated Assessment Strategy. This should help awarding organisations incorporate relevant parts of the assessment strategy principles' requirements in their documentation for the Controlling Lifting Operations units and qualifications with NVQ in the title and SVQs.

Additional requirements for assessors of planning and supervising lifting operations

Assessors must be competent and have an up-to-date working knowledge of the occupation and sector. Assessors must have had active involvement in lifting operations and on each endorsement for which they wish to assess. The awarding body must ensure that all assessors are competent on each endorsement for which they intend to assess.

Supplementary guidance

In order to meet contractual and regulative requirements, many sectors of industry require lift planners and supervisors to possess certification from recognised industry approved bodies. The awarding body should ideally encourage all assessors to hold appropriate registration cards or certificates to support industry initiatives for a qualified workforce.

Where lifting experience was gained within the armed forces, applicants for assessor status should ideally gain external work experience within industry, or be able to demonstrate knowledge of relevant industry working practices outside the armed forces.

Part B: Clarification on standards (NOS) content terminology

Various sectors of industry, supported by the Health and Safety Executive, requested national occupational standards for the safety critical occupations of lift planner and lift supervisor. Standards from the suite of National Occupational Standards for Construction Site Supervision and Construction Site Management were identified by the National Working Group (NWG) as conveniently defining the job roles of planner and supervisor.

Certain standards (NOS), however, use terminology particular to, or make reference to, the construction sector, limiting the scope of the standards. Clarification of NOS terminology has been produced (Annex B1, page ii), by the NWG, for awarding organisations, which provides interpretation and meaning of selected words that are used in lifting operations within other industrial sectors. Provision of this clarification further avoids a proliferation of new standards.

Awarding organisations need to ensure that candidates, employers, assessment centres, assessors and those involved in the verification process for this qualification are informed of the clarification of NOS terminology for planning and supervising lifting operations.

Clarification of NOS terminology for controlling lifting operations

'construction operations'	Includes lifting operations within other sectors of industry.
'decision-makers'	This refers to the client, customer or their representative, senior/contracts manager, project team, consultants or in VR 705 the lift planner.
'ensure notice has been given to all the people who will be affected'	This means as dictated by the lift plan.
'lines' 'levels', 'angles'	This includes load levels, ground levels, lines for placing loads and lifting accessory angles.
'near neighbours'	This can include other structures and a workforce in a different part of the project.
'organise and control the site'	The lifting activity and the immediate surrounding area.
'position, align and/or level the work'	This refers to items being moved and placed and the equipment used to attach and move the loads.
'produce clear requests for plant, equipment or machinery'	This means those specified by the lift plan.
'place and maintain notices'	This means ensuring that the correct notices (for the lifting activity) are in place prior to the commencement of the lifting activity, and checked throughout the duration of the activity.
'plan how the work will be undertaken'	This means as dictated by the lift plan.
'programmes and schedules'	This refers to either component parts of, or the complete lift plan.
'project'	A lifting operation that is taking place within an overall contract, project or work activity.
'project plan'	This refers to either component parts of, or the complete lift plan.
'site'	A lifting operation that is taking place within an overall contract, project or work activity.
'site plan'	This refers to either components part of, or the complete lift plan.
'vehicular access'	This can comprise of all forms of transport, including waterborne and airborne craft.

Appendix B2

Additional Information to the Consolidated Assessment Strategy from the Awarding Body Forum for Plant Operations

Clarification and guidance notes

Aspects to be assessed through performance in the workplace

This additional information has been produced to ensure consistency in aspects to be assessed through performance in the workplace as described in paragraph 2.1 of the ConstructionSkills' Consolidated Assessment Strategy. This should help awarding organisations incorporate the guidance into their assessment methodology for Plant Operations units and qualifications with NVQ in the title and SVQ in the SCQF.

Additional requirements for assessment in the workplace

Direct evidence produced through normal performance in the workplace is the primary source for meeting the requirements. This direct evidence must be met using a combination of the following methods.

- direct observation by the assessor
- witness testimony by an expert witness related to the occupational area
- professional discussion.

Workplace evidence must be supported by the required evidence of knowledge and understanding gained from at least three month's work-based experience.

Occupational expertise requirements for assessors

This additional information has been produced to ensure consistency in interpreting the occupational expertise requirements for assessors as described in paragraph 4.1 of the ConstructionSkills' Consolidated Assessment Strategy. This should help awarding organisations incorporate relevant parts of the assessment strategy principles' requirements in their documentation for Plant Operations units and qualifications with NVQ in the title and SVQs.

Additional requirements for assessors of plant operations

Assessors must be competent and have an up-to-date working knowledge of the occupation and sector. Assessors must have had active involvement in plant operations and on each endorsement for which they wish to assess. The awarding organisation must ensure that all assessors are competent on each endorsement for which they intend to assess in accordance with requirements of the qualification regulators' guidance for England, Northern Ireland, Scotland and Wales.

Supplementary guidance

In order to meet contractual and regulative requirements, many sectors of industry require operators of plant and equipment to possess certification from recognised industry approved bodies. The awarding organisation should ideally encourage all assessors to hold appropriate registration cards or certificates to support industry initiatives for a qualified workforce.

Where plant operating experience was gained within the armed forces, applicants for assessor status should ideally gain external work experience within industry, or be able to demonstrate knowledge of relevant industry working practices outside the armed forces.

Appendix C

Guidance on the use of simulation

Introduction

National Occupational Standards (NOS) are developed by Sector Skills Councils (SSCs) and describe the level of occupational competence required of a particular job role. NOS are then used to build National and Scottish Vocational Qualifications (N/SVQs) that are competence based qualifications and demand assessment in a workplace environment.

Assessment of N/SVQs through simulation is indicated where the achievement of valid and reliable assessment calls for evidence of performance under workplace conditions, but where it will be difficult to assess through normal working practice. This will usually apply as a result of one or more of the following constraints:

- activities which are inherently hazardous and where mistakes made in carrying them out would pose unacceptable risks to the candidate, other people, animals or property (e.g. electricity and gas sectors, fire service etc.)
- the costs incurred would be unacceptably high if mistakes were made during an activity and a candidate would therefore be required to 'prove' competence before progressing onto the actual work (e.g. handling rare or precious objects)
- situations where the qualities and outcomes of the candidate's behaviour are almost impossible to distinguish from those of their peers or colleagues, making authenticity uncertain (e.g. in some teamwork contexts)
- activities or situations which are sufficiently rare (e.g. where processes, such as a 'shut-down', may only occur on an annual basis)
- when the collection and/or review of evidence of workplace performance would intrude unacceptably on personal privacy or confidentiality, or would significantly alter the nature of an interaction or relationship (e.g. in some health care settings)
- a requirement to work with new techniques and/or work practices which may not be available in all workplaces.

Where permitted, simulation can take one or a combination of the two following forms:

- the candidate is presented with an activity to perform using equipment and/or in a location which replicates that found in the workplace
- the candidate is presented with a situation to which they must respond; taking and playing the role they would expect to play in the workplace.

It is a SSC's responsibility to define the acceptability of evidence from simulation in the context of National Occupational Standards (NOS) and National and Scottish Vocational Qualifications (N/SVQs). The ConstructionSkills Consolidated Assessment Strategy provides this guidance.

Guidance on the acceptable use and characteristics of simulation within N/SVQs during the current economic climate

Due to the current economic climate and its impact on construction industry apprentices, ConstructionSkills as the SSC for construction has agreed that there can be some flexibility around the use of simulation when assessing construction craft NVQs. This is set out as follows and applies up until the end of December 2011.

In situations where a displaced or employed apprentice (this does not apply to full-time learners) will not be able to demonstrate evidence in the workplace within an acceptable time span, Awarding Bodies can arrange with their centres to apply the following principles.

- 1 Units cannot be assessed using simulation alone – there must be some supporting work-based evidence.
- 2 A centre's strategy for simulation must be examined and approved by the external verifier.
- 3 The location and environment of simulation must be agreed with the internal verifier prior to taking place, and must be checked by the internal verifier.
- 4 The **nature of the contingency** and the **physical environment must be realistic** and candidates should not be given any indication as to exactly what contingencies they may come across.
- 5 All simulations must be planned, developed and documented by the centre in a way that ensures the simulation correctly reflects what the unit seeks to assess, and all simulations must follow these documented plans.
- 6 There should be a range of simulation to cover the same aspect of the unit so that the risk of candidates successfully colluding is reduced.
- 7 All simulation must reflect the urgency with which the activity would normally be carried out and the normal time needed to complete it, including the usual complexity of factors affecting the activity.
- 8 All simulation should involve the same personnel as would normally be included (e.g. bricklayer, supervisor, labourer etc.) and also similar realistic facilities.
- 9 Any instances of insufficient work-based evidence must be supported by adequate supplementary evidence which might include questioning; interviews with professional discussion; work projects; case studies; special assignments; self-testimony.

ConstructionSkills would strongly recommend that centres explore strategies with the candidate's employers for obtaining work-based evidence before considering the use of simulation. Examples might include using Group Training Associations, thereby carrying out real jobs within the college/training centre and/or involvement with community projects.

Group Training Association (GTA) is the government term for a training group which also shares apprentices. The GTA model is where a number of like minded employers come together to create a separate business entity, which sources appropriate training and delivers apprenticeships by providing work experience across the range of engaged businesses.

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