

Assessment Strategy for Construction and the Built Environment – Plant Operations and Controlling Lifting Operations National Vocational Qualifications (NVQs) and Scottish Vocational Qualifications (SVQs)

Introduction

This assessment strategy provides principles and guidance to awarding organisations so the assessment of units within qualifications denoted as NVQs in the Regulated Qualification Framework (RQF)¹ and SVQs in the Scottish Credit Qualification Framework (SCQF) is valid, effective and consistent, and has credibility across the Construction and Built Environment sector. This is a ConstructionSkills Assessment Strategy covering construction and the built environment – Plant Operations and Controlling Lifting Operations NVQ and SVQ units and qualifications. This assessment strategy further applies where plant or lifting units, based on Plant Operations or Controlling Lifting Operations National Occupational Standards (NOS), are used in other competence-based qualifications destined for use within the construction and built environment sector.

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

This 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 1 provides guidance to help awarding organisations incorporate relevant parts of these principle requirements in their documentation.

Appendix 2 provides additional information relevant to specific NVQ or SVQ qualifications and units, and contains guidance for awarding organisations where National Working Groups or an awarding organisation have identified the need for further clarification. This information covers additional occupational expertise requirements for assessors and verifiers.

Appendix 3 provides additional information on assessment guidance for awarding organisations relevant to specific NVQ or SVQ qualifications and units.

Awarding organisations must make this Strategy and the appendices available to assessors, verifiers, candidates and assessment centres.

¹ Please note that the Consolidated Assessment Strategy will also apply to existing learners currently registered to the Qualifications and Credit Framework (QCF) until they achieve their qualification.

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 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. Members will be expected to provide feedback on 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.
- 1.7 Awarding Organisations must ensure that any endorsements specified by industry are recorded, verifiable and can be demonstrated by the candidate.

2 Additional requirements for assessment in the workplace

2.1 Workplace evidence is the primary source for meeting the requirements of assessment which must be produced through normal performance in the workplace, gained through experience, by using, at least, all of the following three (3) methods:

- observation of performance by the assessor or assessors;
- witness testimony or testimonies by an expert witness/witnesses;
- professional discussion.

2.2 All of these methods are mandated and are in addition to other forms of evidence. Any submitted evidence must support skills, knowledge and understanding attained through performance in the workplace for at least a six (6) month period.

2.3 Observation of a candidate's performance using the machine in the workplace producing the outcome of work, as identified within the relevant NOS, NVQ or SVQs, should be the main method of assessment.

2.3 All witness testimonies must relate to the relevant national occupational standard, plant type and work application.

2.4 The expert witness must know the candidate, have full familiarity of the work activity or activities identified in the testimony, be in a supervisory or mentor position, and have a thorough understanding of the item of plant and the application of work that the testimony relates to. This must be verified by the assessor prior to accepting the evidence.

2.5 Total qualification time (TQT) or credit rating denotes the size of a qualification which gives an indication of the scope of the likely subject coverage, and of the workload and commitment involved in achieving the qualification. Workplace evidence and/or the evidence from the professional discussion, and of workplace performance, should reflect the TQT of the qualification.

2.6 A practical skills-based test (complying with the criteria in 2.8) may be used where plant operators with extensive experience are prevented from gathering direct evidence from the workplace in the normal way because:

- there are serious risks to the candidate, assessor or others involved in the operation
- operational activities occur infrequently or long term outcomes are involved
- there are organisational constraints.

NOTE: The definition of extensive experience would be using the designated machine as a full-time main job function for at least two years within the construction or allied sectors.

2.7 A practical skills-based test can only be used for operators with extensive experience and who do not have any training needs in relation to operating the machine. Any instances where a practical skills-based test is used must be supported by video observation of the candidate operating the machine in the workplace. The assessor must view the video evidence to ensure workplace competence has been demonstrated prior to arranging a practical skills-based test. The video evidence must constitute demonstration of work skills in compliance with the requirements in section 4.

2.8 The practical skills-based test must fully check operating skills which comply with good practice, safe and efficient working practices, legislation and regulations. The test must sufficiently check performance on:

- pre-use checks;
- preparing for and travelling to the working area (if applicable);
- travelling on terrain typical for the type of plant (where relevant);
- setting up and configuring for the required work;
- carrying out a number (two or more) of the core functions of the machine as per guidance in paragraph 4;
- completing the work and undertake cleaning/dismantling duties where applicable
- travelling the machine to an out-of-service area (if applicable);
- complete shut-down, isolation and securing procedures.

2.9 The test specification must identify the required resources and activities to ensure consistency, are fully measurable, and made available to the candidate and assessor prior to the practical skills-based test taking place.

2.10 The grading criteria must ensure that full skills on all areas, have been measured and do not allow errors to be made to ensure competent performance. The test must be conducted in an environment which allows the candidate to perform without being hindered by non-related factors such as other work impinging on the test area, and with machinery that is compliant with current legislation and fit-for-purpose.

2.11 Any practical skills-based test devised as a part of the overall evidence must be submitted to, and pre-approved by the Employer Forum as identified in section 5.

3 Professional Discussion Delivery Guidelines

3.1 The aim of the professional discussion is for the candidate to demonstrate through explanation to their assessor that they have the required capability against the relevant parts of the NOS. The delivery method should be around the candidate explaining what they undertook in the workplace - supported by the working methods that they carried out, and should not be required to provide answers to direct questions – being a separate assessment method.

3.2 The candidate needs to provide sufficiency of expertise based on their experiences within the workplace. This discussion should be used to support the variation and scope of experience that supports workplace observation, witness testimonies and other methods such as photographs etc.

3.3 The discussion should be conducted on a one-to-one basis with the candidate in a suitable and comfortable environment that allows uninterrupted dialogue during the discussion.

3.4 In terms of judging ability and understanding, there should have been ample level of responses against all relevant areas in the NOS, NVQ or SVQs to be considered sufficiently experienced and holding sufficient expertise for the occupation and role. As direct questioning is not the aim of the professional discussion, there should not be a pre-meditated pass or fail marking criteria for the discussion.

4. Core Activity Examples

- 4.1 In quantifying the assessment weighting of the mandated methods, the following examples relate to the core activity for common types of plant used in the construction sector where observation in the workplace of these activities should form the main method of assessment:
- Excavator 360; extracting or excavating materials using a bucket following a pre-given specification.
 - Telescopic Handler; picking up, travelling with and placing loads using the forks or lifting accessories, and placing loads using the machine's extendable boom.
 - Dump Truck; receiving loads, travelling on haul roads including those of uneven terrain, and tipping loads at a variety of locations.
 - Ride-on Roller; compacting a variety of materials over a number of passes following a pre-given specification.

5 Employer Forum for the Plant Operations and Controlling Lifting Operations Assessment Strategy

- 5.1 The forum consists of those involved with plant operations and who represent construction-related federations and associations. The forum will ensure that the content of the assessment strategy meets the needs of the construction and allied sectors in terms of plant operations; ensure fair, suitable and consistent assessment criteria and adjudicate on issues raised by awarding organisations, standard setting bodies or assessment centres.
- 5.2 The forum operates under a Terms of Reference with specified meetings and membership reviewed on a regular basis. The Terms of Reference imposes ongoing dialogue between the Employer Forum and the Built Environment Awarding Body Forum when required.
- 5.3 Any other form of assessment methodologies outside of those listed in the strategy must be approved by the Employer Forum and for Scotland, by SQA Accreditation.

6 Occupational expertise requirements for assessors and verifiers

- 6.1 Awarding organisations must ensure that **assessors**:
- 6.1.1 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 or 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)
- 6.1.2 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
- 6.1.3 only assess in their acknowledged area of occupational competence
- 6.1.4 have a sound, in-depth knowledge of, and uphold the integrity of, the sector's NOS and the Assessment Strategy (this document)

- 6.1.5 are prepared to participate in activities for their continued professional development
- 6.1.6 hold, or are working towards, a qualification as listed within 'Assessing and Assuring Quality of Assessment',

- RQF/QCF Level 3 Award in Assessing Competence in the Work Environment
- RQF/QCF Level 3 Award in Assessing Vocationally Related Achievement
- RQF/QCF Level 3 Certificate in Assessing Vocationally Related Achievement
- RQF/QCF Level 3 Certificate in Assessing Vocational Achievement
- an appropriate Assessor qualification, in the SCQF, as identified by SQA Accreditation

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 current National Occupational Standards (NOS) for Learning and Development.

In Scotland, approval for exemptions must be obtained from SQA Accreditation.

- 6.2 Awarding organisations must ensure that **internal verifiers**:

- 6.2.1 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 or 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)

- 6.2.2 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
- 6.2.3 have a sound, in-depth knowledge of, and uphold the integrity of, the sector's NOS and the Assessment Strategy (this document)
- 6.2.4 are prepared to participate in activities for their continued professional development
- 6.2.5 hold, or are working towards, a qualification as listed in 'Assessing and Assuring Quality of Assessment':
- RQF/QCF Level 4 Award in the Internal Quality Assurance of the Assessment RQF/QCF Process and Practice
 - RQF/QCF Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Process and Practice
 - an appropriate Internal Verifier qualification in the SCQF as identified by SQA Accreditation

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 current 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.

- RQF/QCF Level 3 Award in Assessing Competence in the Work Environment
- RQF/QCF Level 3 Certificate in Assessing Vocational Achievement
- an appropriate Assessor qualification in the SCQF as identified by SQA Accreditation or one of the following
 - A1 Assess candidates using a range of methods
 - D32/33 Assess candidate performance, using differing sources of evidence.

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

6.3.1 have sufficient, verifiable, relevant experience, knowledge and a broad 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 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 or 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)

6.3.2 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

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

6.3.4 are prepared to participate in activities for their continued professional development

6.3.5 hold, or are working towards, a qualification as listed in 'Assessing and Assuring Quality of Assessment':

- RQF/QCF Level 4 Award in the External Quality Assurance of the Assessment Process and Practice
- RQF/QCF Level 4 Certificate in Leading the External Quality Assurance of Assessment
- an appropriate External Verifier qualification in the SCQF as identified by SQA Accreditation

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 current 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:

- RQF/QCF Level 3 Award in Assessing Competence in the Work Environment
- RQF/QCF Level 3 Certificate in Assessing Vocational Achievement

- an appropriate Assessor qualification in the SCQF as identified by SQA Accreditation 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:

- RQF/QCF Level 4 Award in the Internal Quality Assurance of the Assessment Process and Practice
- RQF/QCF Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Process and Practice
- an appropriate Internal Verifier qualification in the SCQF as identified by SQA Accreditation
- VI Conduct internal quality assurance of the assessment process
- D34 Internal verify the assessment process

6.4 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 Assessment Strategy for Plant and Lifting Operations.

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 1

Appendix 1

ConstructionSkills' standard evidence notes for awarding organisations

These guidance notes have been produced to ensure consistency in interpreting the principles set out in section 2 of this ConstructionSkills Assessment Strategy for Plant and Lifting Operations. The notes should help awarding organisations incorporate relevant parts of the assessment strategy principles' requirements in their documentation for construction and built environment – Plant Operations and Controlling Lifting Operations NVQ/SVQs. The following general standard notes are strongly recommended for adoption by awarding organisations in their assessment specification:

Standard note 1:

"Taken as a whole, the evidence must show that the candidate consistently meets all the following performance criteria/learning outcomes and assessment criteria across the scope/range."

Standard note 2:

"There must be workplace evidence against each performance criterion/learning outcome and assessment criterion. Where the workplace evidence does not cover the whole scope/range, knowledge evidence must be provided to cover the remaining items of scope/range for each relevant performance criterion/learning outcome and assessment criterion."

Standard note 3:

"Knowledge evidence may be established from questioning the candidate or professional interview assessment, that has been matched to the requirements of the National Occupational Standards. Such assessments should also have their own independent external assessment, moderation or verification. A candidate's knowledge and understanding can also be demonstrated through presented performance evidence."

Standard note 4:

Simulations are not considered to be acceptable for producing this evidence. However a practical skills-based test for an operator with extensive experience is an acceptable alternative for producing evidence where the operator is prevented from gathering direct evidence from the workplace in the normal way. Section 2 of the Plant Operations and Controlling Lifting Operations National Vocational Qualifications (NVQs) and Scottish Vocational Qualifications (SVQs) contains further details on the use and content of a practical skill-based test.

APPENDIX 2

Appendix 2

The information in Appendix 2 provides additional occupational expertise requirements for assessors and verifiers for specific NVQs or SVQs.

Additional information for:	Page No.
Plant Operations	12
Controlling Lifting Operations	13 & 14

Plant Operations

Clarification and guidance

This additional information has been produced to ensure consistency in interpreting the occupational expertise requirements for assessors as described in paragraph 6.1 of the ConstructionSkills' Assessment Strategy for Plant and Lifting Operations. This should help awarding organisations incorporate relevant parts of the assessment strategy principles' requirements in their documentation for Plant Operations NVQ/SVQ units and qualifications

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 or plant type for which they wish to assess. The awarding organisation must ensure that all assessors are competent on each endorsement or plant type category for which they intend to assess.

Supplementary guidance

In order to meet contractual and regulative requirements, many sectors of industry, particularly construction, 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 bearing the CSCS logo, 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.

Controlling Lifting Operations

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 6.1 of the ConstructionSkills' Assessment Strategy for Plant and Lifting Operations. This should help awarding organisations incorporate relevant parts of the assessment strategy principles' requirements in their documentation for the Controlling Lifting Operations NVQ/SVQ units and qualifications

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 category 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.

Clarification on NOS, NVQ or SVQ Units 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, NVQ or SVQ Units), however, use terminology particular to, or make reference to, the construction sector, limiting the scope of the standards. Clarification of terminology has been produced (page 14) 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, NVQ or SVQ Units terminology for planning and supervising lifting operations.

Clarification of NOS/Unit 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 VR705 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 components part 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 components part 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 3

ADDITIONAL INFORMATION ON ASSESSMENT GUIDANCE FOR AWARDING ORGANISATIONS RELEVANT TO SPECIFIC NVQ OR SVQ QUALIFICATIONS AND UNITS

The information below should help awarding organisations incorporate relevant parts of the assessment strategy principles' requirements in their documentation for construction and built environment NVQs. The following guidance is strongly recommended for adoption by awarding organisations in their assessment methodology.

Additional Information on the Assessment of CITB NVQ Units only

- CITB NVQ Unit Ref: 641 - Assessment Criteria 2.3 and 2.4
 - 2.3 – 'List the current Health and Safety Executive top ten safety risks' should be assessed as 'List the current common safety risks'.
 - 2.4 – 'List the current Health and Safety Executive top five health risks' should be assessed as 'List the current common health risks

- All CITB NVQ units – Assessment Criteria 1.4
 - 1.4 – 'State why and when health and safety control equipment, identified by the principles of protection' should be assessed as 'State why and when health and safety control equipment, identified by the principles of prevention'