



THE STREET WORKS SCHEME Document

(Issue 2– January 2016)

About the Centre Guidance Notes

The three awarding bodies for the Street Works qualifications have collaborated to produce this guidance document, to maintain a consistent approach to the delivery of the awards. The standards, questions and assessment recording documents for each of the Street Works units were jointly agreed and generated, and all joint awarding body updates relating to the Street Works qualifications are circulated to centres via joint product update notices, which bear the logos of all three awarding bodies. The jointly-generated assessment documentation should be used by centres delivering the Street Works Scheme.

Please note that each awarding body has its own internal administrative systems, processes and documentation, and these vary between awarding bodies. If you or your centre should have any queries relating to the Street Works Scheme or its administration, please contact your own awarding body for further information and assistance.

CABWI Awarding Body
City & Guilds
Scottish Qualifications Authority

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INTRODUCTION

Requirements for operatives and supervisors

The New Roads and Street Works Act 1991 (NRSWA) requires work involving the installation, renewal, maintenance and inspection of underground apparatus in the highway to be under the control of competent persons. In order to comply with the Act, undertakers must ensure that (except in prescribed cases) the execution of street works is supervised by someone holding a supervisor's qualification that covers the work being undertaken. The supervisor need not be present on site at all times, but must be able to carry out their role adequately. In addition, a person holding an appropriate operative qualification must be present on the site at all times when work activities are in progress.

The Street Works qualifications for operatives and supervisors are listed below. Please note that the supervisor qualifications **do not** replace or subsume the operative qualifications: any individual wishing to undertake a supervisor's role must hold the relevant supervisors' qualifications, and a qualified operative must hold the relevant operatives' qualifications. One person **cannot** cover both an operative role and a supervisor role at the same time.

To become a qualified operative or supervisor, a candidate must gain one or more of the qualifications listed below and must hold the appropriate certificate(s) issued by one of the three Street Works awarding bodies. The qualifications of operatives and supervisors must be registered with the Street Works Qualifications Register, which is administered by SQA in Scotland (see p.24 below). In order for a person to continue to act as a qualified operative or supervisor, this registration must remain current.

Scheme Structure

Candidates wishing to become operatives or supervisors must be assessed for the qualifications that they wish to gain at an approved assessment centre in order to gain their certificates. They may be assessed for individual units or for a combination of units that form a full award, depending upon their requirements.

There are 16 units of competence for operatives and supervisors. Nine units are applicable to operatives and eight to supervisors. One of these units (unit 221) applies to both groups. The units are listed below, with units for operatives marked 'O' and supervisors' units marked 'S'.

<u>Unit</u>	<u>O/S</u>
221 Location and avoidance of underground apparatus	O & S
222 Signing, lighting and guarding	O
223 Excavation in the highway	O
224 Reinstatement and compaction of backfill materials	O
225 Reinstatement of sub-base and base(roadbase) in non-bituminous materials	O
226 Reinstatement of cold-lay bituminous materials	O
227 Reinstatement of hot-lay bituminous materials	O
228 Reinstatement of concrete slabs	O
229 Reinstatement of modular surfaces and concrete footways	O
230 Monitoring signing, lighting and guarding	S
231 Monitoring excavation in the highway	S
232 Monitoring reinstatement and compaction of backfill materials	S
233 Monitoring reinstatement of sub-base and base (roadbase) in non-bituminous materials	S
234 Monitoring reinstatement in bituminous materials	S
235 Monitoring reinstatement of concrete slabs	S
236 Monitoring reinstatement of modular surfaces and concrete footways	S

Unit certification is available for each Street Works unit that a candidate achieves. The achievement of various combinations of units leads to full Street Works awards. There are twelve full qualifications, which are listed below, together with the units required to achieve them.

Full Street Works Qualifications for Operatives

- 1 Excavation in the highway (*units 221, 222 and 223 plus certificate module 925*)
- 2 Excavation, backfilling and reinstatement of construction layers (*units 221, 222, 223, 224, 225 and 226 plus certificate module 926*)
- 3 Reinstatement of construction layers in hot-lay and cold-lay bituminous material (*units 221, 222, 226 and 227 plus certificate module 927*)
- 4 Reinstatement of concrete slabs (*units 221, 222 and 228 plus certificate module 928*)
- 5 Reinstatement of modular surfaces and concrete footways (*units 221, 222 and 229 plus certificate module 929*)
- 6 Signing, Lighting and Guarding (*unit 222 plus certificate module 930*)

Full Street Works Qualifications for Supervisors

- 7 Monitoring excavation in the highway (*units 221, 230 and 231 plus certificate module 931*)
- 8 Monitoring excavation, backfilling and reinstatement of construction layers with bituminous materials (*units 221, 230, 231, 232, 233 and 234 plus certificate module 932*)
- 9 Monitoring reinstatement of bituminous materials (*units 221, 230 and 234 plus certificate module 933*)
- 10 Monitoring reinstatement of concrete slabs (*units 221, 230 and 235 plus certificate module 934*)
- 11 Monitoring reinstatement of modular surfaces and concrete footways (*units 221, 230 and 236 plus certificate module 935*)
- 12 Monitoring Signing, Lighting and Guarding (*unit 230 plus certificate module 936*)

SCHEME ADMINISTRATION AND DELIVERY

1. Overview of Street Works qualifications delivery

The Street Works qualifications are delivered through approved assessment centres, where candidates are required to demonstrate to their assessors that they have the necessary knowledge, understanding and skills to carry out the performance criteria specified in the standards for each unit they wish to achieve.

The awarding bodies have provided the following documents that centres must use in delivering the qualifications:

- units 221-236 (These set out the requirements for each unit.)
- knowledge questions for units 221-236 (Questions to be used in the assessment of knowledge.)
- assessment recording documentation for units 221-236 (to be used by assessors and candidates as appropriate during the assessment process.)

Further guidance on using and completing the documentation is provided later in this document.

Candidates undertaking the qualifications must be assessed by qualified and occupationally competent assessors. The work of the assessors is, in turn, co-ordinated by an Internal Verifier, who is responsible for the management of the scheme within the centre.

An External Verifier, appointed by the awarding body, is allocated to each assessment centre. It is their responsibility to approve centres and to monitor the delivery of the qualifications after approval, to ensure that it meets the requirements of the scheme and the awarding body. The External Verifier visits the centre regularly, identifies and agrees action points with the centre, and reports to the awarding body on the centre's progress.

1.1 Centre approval

All Street Works assessments must be carried out at an assessment centre that has been approved by the awarding body that issues the certificate(s). The three Street Works awarding bodies are:

- CABWI Awarding Body
- The City & Guilds of London Institute
- The Scottish Qualifications Authority.

The centre will need to apply to the awarding body using the appropriate documentation. The awarding body will, using its quality assurance procedures decide if the centre has met with its approval criteria and ensure that the centre has the appropriate facilities and resources to offer the awards.

Each centre must demonstrate that it can provide the following in order to gain approval:

- physical facilities and resources to offer assessment of Street Works units or full awards (these are listed in more detail at Sections 3.4 and 4.4).
- centre co-ordination or administration of the assessments. The centre co-ordinator or administrator will be the main point of contact with the awarding body.
- assessment by qualified assessors who are confirmed as competent by the awarding body to assess candidates
- Internal verification of the assessment process by a qualified Internal Verifier who is confirmed as competent by the awarding body
- secure storage of assessment and verification documents and records associated with the scheme.

The awarding body will inform the centre of the outcome of their approval application.

Please note that centre approval procedures relate to the provision of Street Works assessments and do not apply to the provision of training programmes. It is often the case that assessment centres provide Street Works training, and there should be a clear gap between any training given to candidates and their assessment.

The following sections provide further detail about the resources required by centres in order to deliver the qualifications and the roles and responsibilities of centres and personnel involved in the delivery of the scheme.

2. Roles and responsibilities

2.1 Personnel resource requirements

In order to deliver the Street Works qualifications, a centre needs to demonstrate that it has a minimum of one fully-qualified and occupationally competent assessor and one fully-qualified and occupationally competent Internal Verifier. The optimum number of assessors and Internal Verifiers required to deliver the scheme successfully will vary between centres according to the number of candidates who are assessed at the centre. The awarding bodies have maximum assessor:candidate ratios for some of the units (see Section 3.4, p.15), and these should be taken into account when planning assessments. The External Verifier will monitor a centre's activity levels over a period of time, and will seek to ensure that there are sufficient assessors and Verifiers available to support the candidates being assessed.

The centre must also have the administrative resources to deliver the Street Works qualifications and to communicate effectively with the awarding body.

2.2 Centre/scheme administration

The centre should identify an individual who acts as the main point of contact with the awarding body for the purposes of administering the Street Works scheme. Their role will include:

- co-ordinating assessment arrangements
- ensuring that qualified assessors are available to carry out assessments
- requesting candidate certificates from the awarding body
- maintaining assessment documentation securely
- maintaining assessment records to monitor individual candidate progress and achievement
- liaising with the awarding body to resolve queries relating to the awards
- receiving and disseminating awarding body information and policy guidance
- informing the awarding body of any changes to the centre's arrangements.

This individual may also be part of the centre's assessment and verification team.

2.3 Assessors

Street Works assessors must assess to the most current standards of the appropriate workplace assessment qualification for the nation in which the units are being assessed. These are detailed below:

The minimum qualifications for those assessing the **operative** units (which are delivered primarily through practical observation of candidates) are:

Assess Workplace Competence Using Direct Methods (L&D9D)

Or

Level 3 Award in Assessing Competence in the Work Environment

Or

Level 3 Certificate in Assessing Vocational Achievement

The minimum qualification for those assessing the **supervisor** units (which may be assessed through a combination of different methods) are

Workplace Assessment Using Direct and Indirect Methods

Or

Level 3 Certificate in Assessing Vocational Achievement

Assessors must hold or be working to the standards of the units above, this can be evidenced by holding the unit, or, any of the predecessor units and evidencing Continued Professional Development to the current standards.

All assessors must have sufficient occupational and technical competence to conduct their assessment activities. Assessors will be confirmed as competent by the awarding body's External Verifier, and they must produce evidence to confirm their occupational expertise in the field (e.g. current CVs, Street Works or other certificates confirming proof of their vocational skills, etc.).

The assessor's role involves the following:

- conducting assessments according to the instructions set out in the scheme documents
- judging candidates' performance against the requirements of the units of competence
- observing candidates' performance in line with the requirements of the scheme
- questioning the candidates' knowledge against the scheme requirements
- completing the appropriate assessment records and documentation
- contributing to assessment team meetings and discussions relating to the scheme.

Assessors need to have sufficient time to assess their allocated candidates.

Details of the assessment methods used for the operative and supervisor awards can be found in the relevant sections of this document (Sections 3.1 and 4.1 below).

2.4 Internal Verifiers/Internal Quality Assurers

Street Works Internal Verifiers must work to the most current standards of the appropriate workplace Verifier qualification for the nation in which the units are being assessed. These are detailed below:

Internally Monitor and Maintain the Quality of Workplace Assessment (L&D11)

Or

Level 4 Award in the Internal Quality Assurance of Assessment Process and Practice

Or

Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Process and Practice

Internal Verifiers must hold or be working to the standards of the units above, this can be evidenced by holding the unit, or, any of the predecessor units and evidencing Continued Professional Development to the current standards.

All Internal Verifiers must have sufficient occupational and technical competence to carry out their role. Internal Verifiers will be confirmed as competent by the awarding body's External Verifier, and they must produce evidence to confirm their qualifications and occupational expertise in the field (e.g. current CVs, Street Works or other certificates confirming proof of their vocational skills, etc.).

The Internal Verifier is responsible for managing quality assurance arrangements within the centre, and the role involves:

- co-ordinating and monitoring the assessments carried out at the centre
- ensuring that the Street Works scheme and awarding body requirements are implemented consistently by the assessment team
- sampling the work of all assessors at the centre (this must include observing assessments taking place)
- holding regular assessment team meetings to clarify issues, standards and assessment practice
- identifying and resolving any issues or queries relating to the assessments
- endorsing certificate claims
- monitoring the progress and continuing professional development of the assessment team (including assessor- and IV-candidates)
- maintaining reports and records of their verification activity, that can be audited by the External Verifier
- providing appropriate information and records to the External Verifier to demonstrate that the quality assurance requirements of the awards are met.

The Internal Verifier's role is to manage the quality assurance of the assessment process, and the Internal Verifier should therefore ensure that they have the time, resources and authority to carry out their role effectively.

2.5 Assessor- and IV/IQA-candidates

If the centre has assessors and Internal Verifiers, who are working towards their assessor or Verifier qualifications and already have the appropriate occupational competence, they may be confirmed as competent by the External Verifier as assessor-candidates or IV-candidates. The centre will need to provide evidence that the decisions of assessor-candidates and IV-candidates are monitored closely and endorsed as appropriate by the centre's Internal Verifier.

Please note that this is permitted only if the centre has one fully-qualified assessor and one fully-qualified Internal Verifier in place already, who can monitor the progress of assessor- or IV/IQA-candidates.

Centres should make a decision on how many candidates, Assessor- and IV/IQA-candidates can assess based on the guidance in Sections 3.4 and 4.4 of this document.

The decisions of assessor-candidates and IV/IQA-candidates will be subject to close review by the centre's External Verifier.

The awarding bodies reserve the right to require centres to put an action plan in place to ensure that any assessor- or IV-candidates attain their assessor or Verifier qualifications within appropriate timescales.

2.6 External Verification/External Quality Assurance

External Verifier/External Quality Assurers are appointed by the awarding body to monitor the delivery of the scheme and to provide advice and guidance to assessment centres and personnel. They report to the awarding body and are an important communication link between the awarding body and centres.

Street Works External Verifier/External Quality Assurers must work to the most current standards of the appropriate workplace Verifier qualification for the nation in which the units are being assessed. These are detailed below:

Externally Monitor and Maintain the Quality of Workplace Assessment (L&D12)

Or

Level 4 Award in the External Quality Assurance of Assessment Process and Practice

Or

Level 4 Certificate in Leading the External Quality Assurance of Assessment Process and Practice

External Verifier/External Quality Assurers must hold or be working to the standards of the units above, this can be evidenced by holding the unit, or, any of the predecessor units and evidencing Continued Professional Development to the current standards.

A centre's External Verifier will visit the centre to monitor the centre after approval, through regular visits. Centres will be visited in accordance with the Awarding Bodies risk management system and would normally have at least one verification visit per year, although the number of visits may be increased depending on the centre's circumstances and the levels of activity. For example, if large numbers of candidates are assessed at a centre, the External Verifier may require a higher number of visits, to ensure that sufficient monitoring takes place. If a centre is carrying out assessments in live site situations rather than in simulated situations at a location that it uses on a regular basis, the External Verifier may require more frequent visits, to ensure that the candidates have access to all of the appropriate equipment and facilities to complete the assessments, and that assessments are conducted in a consistent manner.

Please note that, for quality assurance purposes, the awarding bodies reserve the right to make visits to centres at short notice.

The External Verifier's role involves the following activities:

- ensuring that assessments are conducted in line with the requirements of the scheme and the awarding body
- observing assessments taking place
- sampling candidate evidence, assessment records and other documentation relating to the scheme to ensure that assessment decisions are fully auditable and confirm that the scheme requirements are met
- identifying areas where remedial action is required and agreeing an action plan with the centre
- providing advice and support to centres in connection with the scheme and resolving any issues or queries at their centres
- maintaining a record of visits and providing written reports to the awarding body
- ensuring that assessments are administered and co-ordinated in accordance with this document
- ensuring that assessment decisions are sound and that only candidates who have met the relevant standards of competence are recorded as successful
- reviewing Internal verification documentation to ensure that the centre's quality assurance processes are robust.

In order for External Verifiers to carry out their role, centres must provide them with the records and information required as requested. These include details of assessment plans and locations and notes of assessment team meetings.

3. Operative units 221-229: notes for assessors

3.1 Assessment methods

The assessment of Street Works units 221-229 is based on observing the candidate's performance and questioning the candidate to ensure that they can meet the knowledge requirements of the awards. Due to the nature of the Street Works assessment must take place using English, it may therefore be necessary for candidates to undertake additional learning prior to assessment.

There is no time limit specified for assessments, because candidates work at different rates. However, it is expected that any particular task will be completed within a period of time that is acceptable in normal working practice. Assessors should therefore be able to judge an approximate time for each task, but additional time will be needed for oral questioning. Where a candidate is to be assessed for both operative and supervisor units, adequate time must be allocated to complete all assessments in full.

There must be no cross-contamination of evidence between candidates. This means that candidates must carry out all of the tasks specified for any unit they undertake and must each provide evidence to show that they meet the requirements of the standards for each unit. Assessors need to ensure that they assess each candidate's individual competence against all the requirements of each unit.

Please note: A centre must notify the awarding body in advance if it wishes to carry out assessments at any other site(s) than those that have previously been advised and approved by the awarding body.

Observation

Candidate observations may be conducted either in a simulated situation at an approved location, or in the candidate's workplace.

The observation must be carried out by a qualified assessor, who will observe the candidate carrying out the tasks specified in the unit of competence. The following conditions must be met for all observations:

- a) the assessment must take place at a site with physical characteristics that conform to the definition of 'street' at section 48 or 'road' at section 107 of the New Roads and Street works Act 1991.
- b) the resource requirements listed for each unit are met
- c) the candidate uses equipment and materials that comply with the requirements of the relevant Codes of Practice.

Questioning

Candidates must demonstrate that they can cover all the knowledge base Learning Outcomes in the units of competence that they undertake. Questions have been provided for each unit of competence, and assessors must make use of these when carrying out assessments.

Questioning can be carried out either orally, by means of a written question paper, or using a combination of both approaches. Please see Section 5 (p.24) below for further information on the use of the questions.

Workplace evidence

Candidates may also provide supplementary evidence of competence from the workplace to demonstrate their competence. Where this includes a documented observation report that indicates how they have met the requirements of particular units, this must be provided by a Street Works operative or supervisor who is qualified in the same unit(s) or by a qualified Street Works assessor.

3.2 **Assessment decisions**

At the conclusion of the assessment, the assessor needs to make a judgement of the candidate's competence against the requirements of each unit. The assessor may make one of the following decisions:

- the candidate is competent
- the candidate is not yet competent
- there is insufficient evidence available for the assessor to make a fair decision.

Where the candidate is deemed to be not yet competent, or there is not enough evidence available for the assessor to make a decision, the assessor will need to discuss with the candidate what further evidence or, if appropriate, training will be required in order for the candidate to be assessed again.

3.3 **Recording assessments**

The assessment documentation for units 221-229 is derived from the units of competence in excavation and reinstatement. The assessment and verification team must refer to the content of these units when assessing candidates or verifying their evidence.

Separate assessment records must be kept for each candidate, to provide details of the evidence collected and the judgement made. The awarding bodies have produced assessment recording documentation for each unit, which must be completed to provide a record of the assessment undertaken and its outcome.

For units 221-229, the assessor needs to complete the sheets for each assessment, to confirm whether the candidate has carried out the specified tasks correctly. It is important that the assessor identifies both where a candidate has been successful and where the standards were not met, to identify specific areas where further assessment or evidence is required.

The assessor must sign to confirm that they have carried out each assessment where required in the documentation. It is important that there is an audit trail to support the assessment decision taken. When questioning candidates centres must retain a record of the candidate's answer and confirmation of whether it was correct. Where candidates are questioned using written question papers, their assessment records should include the completed papers, to provide a record of their answer.

Candidate Assessment Summary

At the conclusion of the assessment process, the assessor should complete the Candidate Assessment Summary for **all units assessed**. The summary sheet is designed to enable the assessor to check that all of the appropriate evidence is present, and to provide a summary of the evidence available, which is useful to both Internal and External Verifiers. It should include details of:

- the candidate's name
- the assessor's name
- the centre where the candidate was assessed
- the date of assessment
- the location(s) of all assessments for the unit
- the assessment methods used
- any workplace evidence provided
- assessor and candidate comments.

The assessor must also indicate the outcome of the assessment, and should ensure that, where a candidate has not been assessed as competent, they make a note of any areas requiring further attention.

The assessor and candidate must sign the document when it is complete. There is also space for the Internal Verifier and External Verifier to sign the sheet if they sample the assessment record.

3.4 Operative units - resource requirements

This section contains information about physical resources that centres must have access to in order to deliver the Street Works qualifications. It also provides a brief outline of what is expected of a candidate for each unit.

Please refer to Appendix A for guidance on reference documents which should be available to candidates during the assessment process.

Where candidates are required to use equipment, apparatus or materials during practical assessments, real equipment, apparatus and materials must be used, which are appropriate for the unit being assessed and which comply with the requirements of current Codes of Practice.

When assessing candidates for all operative units, please note that the following conditions apply:

- a) **The location used must be large enough to allow each candidate to carry out the required tasks in the minimum area specified for any excavation or reinstatement operation.**
- b) **Centres must ensure candidate numbers comply with the following Assessor/Candidate Ratios**

For unit 222, with a standard set of resources, a maximum of 6 candidates: 1 assessor.

- *With the exception:* Candidates may be assessed as a maximum two per assessor on the practical use of cable location equipment providing that there is no cross contamination of evidence and the location is large enough to cater for them.

For units 221 and 223-229, with standard resources, a maximum of 8 candidates: 1 assessor. External Verifiers will monitor the ratio of candidates to assessors over a period of time, to ensure that there are sufficient assessors available at each centre to assess the numbers of candidates in accordance with the ratios above.

Please Note: Assessors who are newly qualified or in training should only assess 50% of the stated candidate numbers until such time as they are deemed experienced by the Centres Internal Verifier.

- c) Due to the nature of the Street Works assessment must take place using English, it may therefore be necessary for candidates to undertake additional learning prior to assessment.

Unit 221- Location and Avoidance of Underground Apparatus

Resources

- A suitable location where the candidate can demonstrate competence locating a range of services, either on the Highway or an area that closely resembles one.
- Service plans to include gas, water, electricity and telecommunications.
- A range of services commonly found during excavation work on the highway to identify both damaged and undamaged.
- A site that will allow a minimum of three traceable underground services for at least 10 metres is recommended.
- Cable locator (signal generator optional) and Service plans to include BT, Gas, Water and Electric cables.
- All personal protective equipment relevant to the operations being carried out.
- Documents as detailed in Appendix A.

Please note that assessors must identify details of any damaged apparatus prior to assessments taking place, so that they can confirm the accuracy of the candidates' observations. (This is particularly important if assessments are taking place in a live site situation, where the circumstances will vary between assessments)

Unit 222 - Signing, lighting and guarding

Resources

- The site used for assessment may be one of any of the following;
 1. A real road with unpredictable traffic
 2. A simulated road where traffic is predictable
 3. A simulated road where there is no traffic
- For 2 and 3 above further evidence from the workplace must be provided which demonstrates that the full scope of the assessment performance criteria have been met from a real road situation (Workplace Evidence). This must be assessed prior to certification and subject to verification. A full set of temporary signing and guarding for works on a footway.
- Temporary traffic signals, inc Stop/Go boards
- A selection of unsuitable and damaged traffic management equipment (signs, cones, barriers) for candidates to determine suitability for use and selection should be provided.
- All personal protective equipment relevant to the operations being carried out.
- Documents As detailed in Appendix A.

Unit 223 - Excavation in the highway

Resources

- The activities are undertaken either on-site or at a realistic simulated site. Where the site is simulated, there should be a sufficient amount of signing and guarding in place to ascertain work areas.
- Assessments are not to be undertaken on excavations where trench support is needed.
- The candidate will need to carry out an excavation, on a Type 4 carriageway. The area to be excavated must be a minimum of 0.7m² and 650mm deep, and must contain a minimum of one utility service. The area should be marked out to show the position of services are and the extent of the excavation.
- Incorporating a granular base and sub-base
- Where the candidate is going to be assessed for units 224 and 225, the excavated depth should be at least 650mm to allow for a reasonable backfill layer.
- A range of materials (A, B, C, D and E) to identify for re-use or disposal. A minimum of 8 should be used to make an informed assessment decision.
- A suitable exercise/simulation to demonstrate knowledge of carriageway and footway types and their construction.
- All personal protective equipment relevant to the operations being carried out.
- Documents as detailed in Appendix A.

Unit 224 - Reinstatement and compaction of backfill materials

Resources

- The activities are undertaken either on-site or at a realistic simulated site. Where the site is simulated, there should be a sufficient amount of signing and guarding in place to ascertain work areas.
- Assessments are not to be undertaken on excavations where trench support is needed.
- A minimum trench dimension of 0.7m² area and 650mm depth for each operative undertaking assessment. Where more than one operative is undertaking assessment each should reinstate separate trenches to prevent cross-contamination of evidence. It is common for the candidate to use the excavation for unit 223 and the reinstatement to be in a Type 4 Flexible.
- A range of materials (A, B, C, D and E) to identify for re-use or disposal. A minimum of 8 should be used to make an informed assessment decision.
- Incorporating a minimum of one service commonly found within a highway.
- Appropriate hand tools and compaction equipment to select and use. All personal protective equipment relevant to the operations being carried out.
- Documents As detailed in Appendix A.

Unit 225 - Reinstatement and compaction of sub-base and base (roadbase) in non-bituminous materials.

Resources

- The activities are undertaken either on-site or at a realistic simulated site. Where the site is simulated, there should be a sufficient amount of signing and guarding in place to ascertain work areas.
- Assessments are not to be undertaken on excavations where trench support is needed.
- A minimum trench dimension of 1m² area and 450mm depth for each operative undertaking assessment. Where more than one operative is undertaking assessment each should reinstate separate trenches to prevent cross-contamination of evidence.
- It is common for the candidate to use the trench for unit 224 and the reinstatement to be in a Type 4 Flexible Carriageway with a granular base (roadbase).
- A range of materials (A, B, C, D and E) to identify for re-use or disposal. A minimum of 8 should be used to make an informed assessment decision.
- Appropriate hand tools and compaction equipment to select and use.
- All personal protective equipment relevant to the operations being carried out.
- Documents As detailed in Appendix A.

Unit 226 - Reinstatement in cold-lay bituminous materials

Resources

- The activities are undertaken either on-site or at a realistic simulated site. Where the site is simulated, there should be a sufficient amount of signing and guarding in place to ascertain work areas.
- A minimum trench dimension of 1.2m² area (not including iron work) and 100mm depth for each operative undertaking assessment. Where more than one operative is undertaking assessment each should reinstate separate trenches to prevent cross-contamination of evidence.
- It is common for the candidate to use the trench for unit 225 and the reinstatement to be in a Type 4 Flexible Carriageway. However, a flexible footway could also be used. Appropriate hand tools and compaction equipment to select and use.
- The reinstatement of the surface course (wearing course) should be carried out with the specified compaction equipment, i.e. single drum roller 600kg/m minimum weight or plate compactor 1400kg/m².
- Highway ironwork and kerbs or edge restraints for candidates to set line and level.
- All personal protective equipment relevant to the operations being carried out.
- Documents As detailed in Appendix A.

Unit 227 - Reinstatement in hot-lay bituminous materials

Resources

- The activities are undertaken either on-site or at a realistic simulated site. Where the site is simulated, there should be a sufficient amount of signing and guarding in place to ascertain work areas.
- A Type 4 Flexible Carriageway with a minimum trench dimension of 1.2m² area (not including iron work) and 100mm depth for each operative undertaking assessment. Where more than one operative is undertaking assessment each should reinstate separate trenches to prevent cross-contamination of evidence.
- Appropriate hand tools, tool heater, temperature measuring and compaction equipment to select and use.
- The reinstatement of the surface (wearing) course should be carried out with the specified compaction equipment, i.e. single drum roller 600Kg/m minimum weight or plate compactor 1400kg/m².
- A tool heater, thermometer, tack coat and edge joint sealant should also be provided.
- All personal protective equipment relevant to the operations being carried out.
- Documents As detailed in Appendix A.

Unit 228 - Reinstatement of concrete slabs

Resources

- The activities are undertaken either on-site or at a realistic simulated site. Where the site is simulated, there should be a sufficient amount of signing and guarding in place to ascertain work areas.
- A minimum trench dimension of 1.0m² area and 200mm depth in a rigid road should be provided for each operative undertaking assessment and a quantity of GSB Type 1 to make good the sub-base. Where more than one operative is undertaking assessment each should reinstate separate trenches to prevent cross-contamination of evidence.
- Class 40 concrete must be used, in line with the unit requirement.
- Sufficient materials to reinstate the slab using taper edge support or dowel bars.
- A range of hand tools and compaction equipment should be available to the candidate as stated in the Standards. This to include a vibrating poker to compact the concrete, dowel bars (25mm), reinforcement mesh, tie wires and suitable drilling and cutting equipment, polythene sheeting and mixer if not using ready mixed concrete and slump testing equipment.
- All personal protective equipment relevant to the operations being carried out.
- Documents As detailed in Appendix A.

Unit 229 - Reinstatement of modular surfaces and concrete footways

Resources

- The activities are undertaken either on-site or at a realistic simulated site. Where the site is simulated, there should be a sufficient amount of signing and guarding in place to ascertain work areas.
- A minimum trench dimension of 1.5m² area for modular reinstatement; 1.m² for concrete; and a minimum of 6 concrete paving slabs or 1.5m² minimum for each operative undertaking assessment. Where more than one operative is undertaking assessment each should reinstate separate trenches to prevent cross-contamination of evidence.
- Class 30 concrete must be used, in line with the unit requirement.
- A range of hand tools, mixing and compaction equipment should be available to the candidate as stated in the Standards. This to include bedding material, concrete, kiln dried sand, GSB Type 1 and slump testing equipment.
- Sufficient quantities of materials for each candidate.
- All personal protective equipment relevant to the operations being carried out.
- Documents As detailed in Appendix A.

4. Supervisor units 230-236: notes for assessors

4.1 Assessment methods

The assessment of Street Works units 230-236 is through performance evidence, provided by the candidate, which is supplemented by evidence of underpinning knowledge. The assessment documentation provided requires the candidate to provide details of the monitoring activities that they have undertaken and to record the results of their monitoring. Candidate must therefore have the opportunity to watch Street Works operations being carried out and must be able to demonstrate that they can meet the requirements of the monitoring unit(s) that they are undertaking.

Where a candidate is being assessed for both operative and supervisor units, the adequate time must be allocated to ensure that all assessments can be completed in full.

There must be no cross-contamination of evidence between candidates. Candidate must carry out all of the tasks specified for any unit they undertake and must each provide evidence to show that they meet the requirements of the standards for each unit. Assessors need to ensure that they assess each candidate's individual competence against all the requirements of each unit, and that there is sufficient opportunity for the supervisor to make a decision on the activities observed.

Please note: A centre must notify the awarding body in advance if it wishes to carry out assessments at any other site(s) than those that have previously been advised and approved by the awarding body.

Performance evidence

Candidates undertaking the supervisor units will be observed monitoring operatives at work. Observations can take place either in an off-site, simulated situation (i.e. at an assessment centre) or on-site, in a workplace situation. The observation must be carried out by a qualified and occupationally experienced assessor, who will observe the candidate carrying out the tasks specified in the unit of competence.

It is common for candidates taking the supervisor units to provide their performance evidence by monitoring the practical activities carried out by other candidates who are being assessed for the related operative units.

Observations and simulated situations

Where a simulated situation is used for this purpose, it is expected that the same conditions will apply as for simulations of the operative units:

- a) the activity must take place at a site with physical characteristics that conform to the definition of 'street' at section 48 or 'road' at section 107 of the New Roads and Street works Act 1991.
 - b) the resource requirements listed for each unit are met
 - c) equipment and materials, that comply with the requirements of the relevant Codes of Practice.
- The use of a simulated site situation at the assessment centre has the advantage of allowing an assessor to observe candidates monitoring operatives at work, while combining the practical assessment with the assessment of other evidence produced for the supervisor units (including the production of any other workplace evidence and the assessment of underpinning knowledge).

Using video for supervisor assessments

It is recommended that supervisors are assessed while observing operatives working live in a real or simulated site situation. It is not permissible to use Video evidence for Assessment Purposes.

Additional workplace evidence

Where a candidate provides performance evidence from a real site situation, the assessor may not have the opportunity to be present during the monitoring. Further information may be required to enable the assessor to determine the validity of the candidate's evidence against the performance criteria. This can include:

- reports of completed jobs which reflect the site situation
- interviews with the candidate's supervisor or team leader
- the candidate's own report of the job, including details of the site situation
- documented observation reports showing how the candidate has met the requirements of the unit being assessed (please note that observation reports of this kind must be provided by a qualified Street Works supervisor or assessor, as outlined in the units of competence).

Time allocated for assessments

There is no time limit specified for assessments, because candidates work at different rates. However, it is expected that any particular task will be completed within a period of time that is acceptable in normal working practice. Assessors should therefore be able to judge an approximate time for each task, but additional time will be needed for oral questioning and for completion of the relevant assessment documentation by both the candidate and their assessor.

Questioning

Candidates must demonstrate that they can cover the knowledge requirements specified in the units of competence that they undertake. Questions are provided for each unit of competence, and assessors should make use of these when carrying out assessments.

Questioning can be carried out either orally, by means of a written question paper, or using a combination of both approaches. Please see Section 5 (p.24) below for further information on the use of the questions.

4.2 Assessment decisions

At the conclusion of the assessment, the assessor needs to make a judgement of the candidate's competence against the requirements of each unit. As with the operative assessments, the assessor may make one of the following decisions:

- the candidate is competent
- the candidate is not yet competent
- there is insufficient evidence available for the assessor to make a fair decision.

Where the candidate is deemed to be not yet competent, or there is not enough evidence available for the assessor to make a decision, the assessor will need to discuss with the candidate what further evidence or, if appropriate, training will be required in order for the candidate to be assessed again.

4.3 Recording assessments

The assessment documentation for units 230-236 is derived from the units of competence in monitoring excavation and reinstatement. The assessment and verification team must refer to the content of these units when assessing candidates or verifying their evidence.

Separate assessment records must be kept for each candidate, to provide details of the evidence collected and the assessment decision. The awarding bodies have produced assessment recording documentation for each unit, to enable centres to provide a record of the assessment undertaken and its outcome.

The recording documentation for units 230-236 require the candidate to record the details and the outcome of their monitoring activities, and asks specific questions where appropriate, that are derived from the standards for each unit. The candidate can complete the assignments during their observation of operatives at work, and it is expected that the assessor will review the completed assignments alongside any other evidence provided by the candidate, and make their

judgement on this basis. The assessor will need to confirm that the candidate has recorded correctly the details of the activities they have observed and that they have made appropriate recommendations for remedial action required. Assessors may annotate the candidates' completed assignments during the review process where applicable.

The assessor must sign to confirm that they have reviewed each assignment where required in the documentation. It is important that there is an audit trail to support the assessment decision taken.

When questioning candidates centres must retain a record of the candidate's answer and confirmation of whether it was correct. Where candidates are questioned using written question papers, their assessment records should include the completed papers, to provide a record of their answer.

Candidate Assessment Summary

At the conclusion of the assessment process, the assessor must complete the Candidate Assessment Summary for all units assessed. The summary sheet is designed to enable the assessor to check that all of the appropriate evidence is present, and to provide a summary of the evidence available, which is useful to both Internal and External Verifiers. It should include details of:

- the candidate's name
- the assessor's name
- the centre where the candidate was assessed
- the date of assessment
- the location(s) of all assessments for the unit
- checklist of the types of evidence provided
- any workplace evidence provided
- assessor and candidate comments.

The assessor must state the outcome of the assessment, and should ensure that, where a candidate has not been assessed as competent, they make a note of any areas requiring further attention (including recommendations for further training, assessment or provision of evidence).

The assessor and candidate must sign the document when it is complete. There is also space for the Internal Verifier and External Verifier to sign if they sample the assessment record.

4.4 Supervisor units - resource requirements

This section contains information about the physical resources to which a centre must have access in order to deliver the Street Works qualifications for supervisors. It also provides a brief outline of what is expected of a candidate for each unit.

Please refer to Appendix A for guidance on reference documents which should be available to candidates during the assessment process.

Please note that, where equipment, apparatus or materials are used during practical assessments, real equipment, apparatus and materials must be used, which are appropriate for the unit being assessed and which comply with the requirements of current Codes of Practice.

When assessing candidates for all supervisor units, please note that the following conditions apply:

- a) **While being assessed undertaking monitoring activities, the supervisor will not confer with the operative.** The assessor should control this throughout the assessment.
- b) **External Verifiers will monitor the ratio of candidates to assessors over time, to ensure that there are sufficient assessors available at each centre to assess the numbers of candidates. Centres must ensure candidate numbers are no greater than an Assessor/Candidate Ratio of 8 candidates to 1 assessor.**

Please Note: Assessors who are newly qualified or in training should only assess 50% of the stated candidate numbers until such time as they are deemed experienced by the Centres Internal Verifier.

- c) **Physical resource requirements.** When observing operatives undertaking activities, the supervisor must be able to see them working in a typical site situation (either real or simulated). Real tools, equipment and materials must be used that are in accordance with the current Codes of Practice. It is expected that the physical resources observed will match those used for the equivalent operative unit(s), although monitoring activities undertaken by candidates could result in a variety of evidence, obtained from more than one site situation.
- d) **Poor practices and remedial action.** If, during the course of the practical assessment, no poor practices take place, the candidate will be unable to make recommendations for remedial action. In this case, the assessor must build in the opportunity for the candidate to provide the evidence required at the appropriate time (such as, for example, using further performance evidence, or questioning).
- e) **Where competence is not demonstrated the assessor will recommend an action plan for the candidate.** This should identify any gaps in their evidence and identify further training or experience required prior to reassessment.

5. Using the questions

Questions are provided to cover the knowledge and understanding in each unit. The questions are intended for use in candidate assessments, and, in making use of them; centres should take the following into consideration:

- a) Centres may question candidates either orally or using written question papers, or a combination of the two methods.
- b) The requirements for each unit state that the candidate's evidence in total should cover all Learning Outcomes, Assessment Criteria and the Evidence Requirements / Scope. The External Verifier will want to know how the centre intends to assess knowledge as part of the centre approval process and will monitor this during their regular verification visits.
- c) Some knowledge will be evident from the observed assessment of candidates, or may be obtained while discussing their activities with them during assessment. The recording documents make provision for the assessor to make a note of any questions asked orally and the candidate's response. It is expected that both these and any written question papers completed by candidates will be retained at the centre with the candidate's other assessment records. In making a decision on a candidate's competence, the assessor should consider all of the evidence they have produced, and must decide whether they have covered the knowledge requirements for each unit.
- d) There are significant numbers of questions for each unit. Unless otherwise stated in the questions provided all questions should be answered.
- e) For quality assurance purposes, copies of the questions and any responses, must be held securely at the centre and must not be retained by candidates or otherwise provided to them outside the assessment situation.

6. The Street Works Qualifications Register

Those who have gained Street Works qualifications and who wish to undertake roles as qualified operatives or supervisors must be registered on the Street Works Qualifications Register. At present, individuals can only be registered if they have undertaken one of the full awards (see p.5), although this is subject to ongoing review and change. Once registered, a Street Works card will be issued to the individual

The Street Works Qualifications Register holds details of all centres approved by the Street Works awarding bodies. When a new centre is approved, the awarding body provides its name and contact details to the Street Works Qualifications Register. The Register contacts the centre and provides further information regarding the registration process.

The awarding bodies will notify the Street Works Qualifications Register on a regular basis of details of unit and full award certificates that they have issued, but it is the responsibility of individuals or their organisations to apply for their registration card. Applications and all enquiries relating to the Street Works Qualifications Register, its administration and the issuing of Street Works cards should be made to:

Street Works Qualifications Register
The Optima Building
58 Robertson Street
Glasgow
G2 8DQ

Tel: 0845 270 2720
Fax: 0845 213 5000
E-mail: swqr@sqa.org.uk
Website: www.swqr.org.uk

Street Works cards are currently valid for five years, after which re-registration is required. In order to continue to act as a qualified operative or supervisor, individuals must ensure that their registration status at the Street Works Qualifications Register remains current. The re-registration process and requirements are subject to review, but the Register can provide details of the current process.

Appendix A - Required Publications

It is the centre's responsibility to ensure that full, current and clean copies of the listed reference material are made available to each candidate. Please refer to the table below for the specific reference material required for each unit. Centres must ensure they have copies of specifications and codes of practice currently in use in England, Wales, Northern Ireland or Scotland. This will largely depend on the location of the assessment centre.

The reference documents listed may be available for download from the following websites or may be purchased from any good book store. Centres must ensure that only current documents are used.

www.hse.gov.uk
www.dft.gov.uk
www.njug.org.uk
www.scotland.gov.uk
www.northernireland.gov.uk
www.wales.gov.uk

1. Specification for the Reinstatement Openings in Roads/Highways, Approved Code of Practice
2. Safety at Street Works and Road Works, Approved Code of Practice (Department for Transport)
3. An Introduction to Vehicle Actuated Portable Traffic Signals (Department for Transport)
4. Avoiding Danger from Underground Services HSG 47 (Health and Safety Executive)
5. Volume 1: NJUG Guidelines On The Positioning And Colour Coding Of Underground Utilities' Apparatus (National Joint Utilities Group)
6. Roadwork's Theory and Practice
7. Specification for Highway Works, 'Series 1000'
(N.B. This document originates from the Department for Transport/Highways Agency, and may be accessed at the following website: <http://www.dft.gov.uk/ha/standards/mchw/index.htm>. The material featured on this website is subject to Crown copyright protection unless otherwise indicated. You may re-use the Crown copyright protected material (not including the Royal Arms and other departmental or agency logos) free of charge in any format for non-commercial research, private study or Internal circulation within your organisation. The material must be acknowledged as Crown copyright and you must give the title of the source document/publication.)

The following table gives details of which documents are required on a unit by unit basis.

Unit #	Unit title	Reference documents required
221	Location and avoidance of underground apparatus	2,4,5
222	Signing, lighting and guarding	2,3
223	Excavation in the road/highway	1,2,4,5
224	Reinstatement and compaction of backfill materials	1,2,4,5
225	Reinstatement of sub-base and base(roadbase) in non-bituminous materials	1,2,4,5
226	Reinstatement in cold-lay bituminous materials	1,2
227	Reinstatement in hot-lay bituminous materials	1,2
228	Reinstatement of concrete slabs	1,2,6,7
229	Reinstatement of modular surfaces and concrete footways	1,2
230	Monitoring signing, lighting and guarding	2,3
231	Monitoring excavation in the road/highway	1,2,4,5
232	Monitoring reinstatement and compaction of backfill materials	1,2,4,5
233	Monitoring reinstatement of sub-base and base (roadbase) in non-bituminous materials	1,2,4,5
234	Monitoring reinstatement in bituminous materials	1,2
235	Monitoring reinstatement of concrete slabs	1,2,6,7
236	Monitoring reinstatement of modular surfaces and concrete footways	1,2