

INTRODUCTION

The Street Works Scheme

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, undertakes 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 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 Register, which is administered by SQA in Scotland. In order for a person to continue to act as a qualified operative or supervisor, this registration must remain current.

Unit	O/S
1 Location and avoidance of underground apparatus	O & S
2 Signing, lighting and guarding	O
3 Excavation in the highway	O
4 Reinstatement and compaction of backfill materials	O
005 Reinstatement of sub-base and base (roadbase) in non-bituminous materials	O
006 Reinstatement of cold-lay bituminous materials	O
7 Reinstatement of hot-lay bituminous materials	O
8 Reinstatement of concrete slabs	O
9 Reinstatement of modular surfaces and concrete footways	O
10 Monitoring signing, lighting and guarding	S
11 Monitoring excavation in the highway	S
12 Monitoring reinstatement and compaction of backfill materials	S
013 Monitoring reinstatement of sub-base and base (roadbase) in non-bituminous materials	S
14 Monitoring reinstatement in bituminous materials	S
15 Monitoring reinstatement of concrete slabs	S
016 Monitoring reinstatement of modular surfaces and concrete footways	S

There were 16 units before - now there are 16 certificates, namely LA, O1 to O8, and S1 to S7 (the units have become individual certificates). There are three key certificates and the new certificate structure is as follows:

Common to operatives and supervisors:

LA - Location & avoidance of underground apparatus KEY CERTIFICATE

O-series certificates, for operatives only:

O1 - Signing, lighting and guarding KEY CERTIFICATE

O2 - Excavation in the highway

O3 - Reinstatement and compaction of backfill materials

O4 - Reinstatement of sub-base and base in non-bituminous materials

O5 - Reinstatement in cold lay bituminous materials

O6 - Reinstatement in hot-lay bituminous materials

O7 - Reinstatement of concrete slabs

O8 - Reinstatement of modular surfaces, concrete footways

S-series certificates, for supervisors only:

S1 - Monitoring signing, lighting and guarding KEY CERTIFICATE

S2 - Monitoring excavation in the highway

S3 - Monitoring reinstatement and compaction of backfill materials

S4 - Monitoring reinstatement of sub-base and base in non-bituminous materials

S5 - Monitoring reinstatement in bituminous materials

S6 - Monitoring reinstatement of concrete slabs

S7 - Monitoring reinstatement of modular surfaces, concrete footways

LA and O1 are the only two key certificates for operatives. If you are an operative, you therefore need the following to be qualified to excavate or reinstate:

LA - Location & avoidance of underground apparatus;

O1 - Signing, lighting and guarding; and

The relevant O-certificate(s), from O2 to O8.

LA and S1 are the only two key certificates for supervisors. If you are a supervisor, you therefore need the following to be qualified to monitor excavation or reinstatement:

LA - Location & avoidance of underground apparatus;

S1 - Monitoring signing, lighting and guarding; and

The relevant S-certificate(s), from S2 to S7.

There is no requirement to hold any particular combination of non-key certificates. As long as you hold the key certificates, you can choose to hold as many or as few of the others as you like to suit the work that you do. For example, if you only wanted to be qualified to carry out reinstatement in hot-lay bituminous materials, you would need the two key operative certificates plus certificate O6. This principle applies similarly to supervisors.

Introduction to Streetworks Candidate Preparation Guide.

This guide is intended to be used by employers who wish to prepare their operatives and supervisors for assessment for Streetworks units.

It should be noted that operatives will be required to undertake a practical exercise for each unit. Supervisors are required to observe operatives working on a live or simulated Streetworks site and prepare a report on each activity (unit). The supervisor must provide evidence that they have monitored the activity, identified any areas of poor performance or poor practice, and state what their remedial actions would be.

The guide identifies essential knowledge that the candidates should know prior to attending an assessment. Lack of preparation is likely to reduce the candidates' opportunity to provide sufficient evidence of their competency.

Unless otherwise stated, all of the references to chapters, appendices, guidance notes and page numbers refer to the HAUC Specification for the Reinstatement of Openings in Highways.

Unit 001 Location & Avoidance of Underground Apparatus

Prior to attending for assessment, the candidate should have received training in the following aspects of location and identification of underground apparatus.

- Reading and interpreting utilities plans
- Identification and interpretation of symbols used on utility plans
- Correct use of cable avoidance tool (CAT) or similar
- Correct use of Genny or similar signal generator
- Identification of different types of underground apparatus
- Ability to identify any damage to utility apparatus
- Awareness of the potential dangers from utility apparatus
- Awareness of procedures to be followed if utility apparatus is damaged

It is advised that candidates have had the opportunity to read Health & Safety Executive Guidance Note HSG 47.

The candidate should be aware of the Management of Health & Safety at Work Regulations and the requirements for all work activities to be Risk Assessed

Unit 002 & 010 Signing, Lighting & Guarding

Prior to attending assessment, the candidate should have received training in signing, lighting and guarding of temporary roadworks situations. The candidate should be familiar with the following code of practice and guidance booklet;

- The "Red Book" code of practice for signing, lighting and guarding
- The "Pink Book" Dept of Transport guidance book for the operation of temporary traffic signals
- Awareness of Chapter 8 of the Traffic Signs Manual.

Candidates should be aware of the need to assess the risks associated with working on the highway and be able to complete an on-site risk assessment that will show their ability to;

- Identify and categorise hazards
- Quantify risks
- Suggest and implement appropriate control measures

Unit 002 candidates will be required to set up and remove a roadworks layout that will be explained to the candidate by their assessor. The layout will include the need to provide a temporary pedestrian walkway and control traffic using temporary traffic signals (traffic lights).

Unit 003 & 011 Excavation in the Highway.

Each candidate will be required to undertake a practical exercise that includes;

- Cutting the surface of the carriageway
- Excavating through the carriageway layers
- Selection & storage of materials for re-use or disposal
- Support and protection of any underground apparatus found

The practical exercise must be carried out in accordance with the HAUC Specification for the Reinstatement of Openings in the Highway, (3rd Edition).

Candidates must be familiar with all aspects of excavation & reinstatement in the highway and should have received training on the use and safe operation of plant, tools and equipment, and understand the need to wear the appropriate Personal Protective equipment. Candidates must be aware of their responsibilities to look after themselves and others who may be affected by their actions and omissions at work.

Candidates should be familiar with the requirements of the “HAUC Specification” in particular;

Chapter 1, Operational Principals

- S1.3 Road Categories
- S1. 4 Footway, footpath and cycle track categories
- S1. 5 Excavation and trench categories
- S1. 8 Apparatus within road structures
- S1. 9 Geosynthetic materials
- S1. 10 Trees

Chapter 3, pages 40-42 sections;

- S3.1 Breaking the surface
- S3.2 Excavation
- S3.3 Excavated material
- S3.4 Side support
- S3.5 Drainage
- S3.6 Shallow or aborted excavations

Appendix A1 Backfill materials including;

- A1. 6 Field identification tests

Appendix A2. 8 Identification of the structural layers

Unit 004 & 012 Reinstatement & Compaction of Backfill Materials.

Each operative candidate will be required to undertake a practical assessment that includes;

- Selection & storage of materials for re-use or disposal
- Placing and compaction of reinstatement of materials in the backfill layer
- Selection of appropriate compaction equipment
- Identification of the correct method of reinstatement
- Calculation of layers, their names and functions
- Correct material layer thickness and compaction passes
- Use of the “Clegg tester”

The practical exercise must be carried out in accordance with the HAUC Specification for the Reinstatement of Openings in the Highway, (3rd Edition). Candidates must be familiar with all aspects of excavation & reinstatement in the highway and should have received training on the use and safe operation of plant, tools and equipment, and understand the need to wear the appropriate Personal Protective equipment. Candidates must be aware of their responsibilities to look after themselves and others who may be affected by their actions and omissions at work.

Candidates should be familiar with the requirements of the “HAUC Specification” in particular; Appendix A3 Methods of Reinstatement pages 118-123 and in particular;

- A3. 4 Flexible road type 4, page 122
- A3. 5 Sub-base construction, Flexible roads, page 123

Chapter 5: S. 5 Backfill pages 44-45

Chapter 4. S4. Surround to apparatus, page 43

Chapter 9: S. 9 Verges and unmade ground, pages 74 & 75

Appendix A8 Compaction requirements pages 139, 140 & 142 tables;

- A8. 1 Compaction requirements for granular, cohesive and cement bound materials.
- A8. 2 Compaction requirements for chalk materials

Appendix A9 Alternative reinstatement materials (ARM's) in particular:

- a.) Structural materials for reinstatements (SMR's) parts:
 - i.) Foamed concrete for reinstatements
 - ii.) Flowable SMR's (FSMR's)
 - iii.) Non-flowable SMR's (NFSMR's)

Chapter 10. S10. Compaction requirements. Pages 76-78

The Candidate should also have access to and have read Health and Safety in Construction HSG 150
Download PDF from www.hse.gov.uk

Unit 005 & 013 Reinstatement of Sub-base & Base (road base) in non-bituminous materials.

Each operative candidate will be required to undertake a practical assessment that includes;

- Selection & storage of materials for re-use or disposal
- Placing and compaction of reinstatement materials in the base-course and base (roadbase) layer
- Selection of appropriate compaction equipment
- Identification of the correct method of reinstatement
- Calculation of layers, their names and functions
- Correct material layer thickness and compaction passes
- Use of the “Clegg Tester”

The practical exercise must be carried out in accordance with the HAUC Specification for the Reinstatement of Openings in the Highway, (3rd Edition).

Candidates must be familiar with all aspects of excavation & reinstatement in the highway and should have received training on the use and safe operation of plant, tools and equipment, and understand the need to wear the appropriate Personal Protective equipment. Candidates must be aware of their responsibilities to look after themselves and others who may be affected by their actions and omissions at work.

Candidates should be familiar with the requirements of the “HAUC Specification” in particular; Appendix A3 Methods of Reinstatement pages 118 to 123 and in particular;

A3. 4 Flexible road type 4, page 122

A3. 5 Sub-base construction, Flexible roads, page 123

Chapter 5: S. 5 Backfill pages 44-45

Chapter 4. S4. Surround to apparatus, page 43

Chapter 9: S. 9 Verges and unmade ground, pages 74 & 75.

Chapter 10. S10. Compaction requirements. Pages 76 to 78

Appendix A8 Compaction requirements pages 139, 140 & 142 tables;

A8. 1 Compaction requirements for granular, cohesive and cement bound materials.

A8. 2 Compaction requirements for chalk materials

Appendix A9 Alternative reinstatement materials (ARM's) in particular (pages 143-150):

b.) Structural materials for reinstatements (SMR's) parts:

iv.) Foamed concrete for reinstatements

v.) Flowable SMR's (FSMR's) vi.) Non-flowable SMR's (NFSMR's)

Unit 006 & 014 Reinstatement of cold-lay bituminous materials.

Unit 014 for supervisors covers both hot and cold-lay materials and is therefore included in the skills and knowledge candidate preparation requirements for unit 6 and unit 7.

Each operative candidate will be required to undertake a practical assessment that includes;

- Selection & storage of materials for re-use or disposal
- Placing and compaction of cold-lay bituminous materials in the binder and surface layers
- Selection of appropriate compaction equipment
- Identification of the correct method of reinstatement
- Correct layer thickness and compaction passes
- Finished profile within intervention limits

The practical exercise must be carried out in accordance with the HAUC Specification for the Reinstatement of Openings in the Highway, (3rd Edition).

Candidates must be familiar with all aspects of excavation & reinstatement in the highway and should have received training on the use and safe operation of plant, tools and equipment, and understand the need to wear the appropriate Personal Protective equipment. Candidates must be aware of their responsibilities to look after themselves and others who may be affected by their actions and omissions at work. Candidates should be familiar with the requirements of the "HAUC Specification" in particular;

Chapter 2. S.2 Performance requirements, pages 23 to 39 and in particular;

- S2.2.1 As laid profile
- S2.2.2 Edge depression-intervention
- S2.2.3 Surface depression-intervention
- S2.2.4 Surface crowning-intervention
- S2.2.5 Combined defect-intervention
- S2.2.6 Condition at end of guarantee period

S2.3 Fixed features

- S2.3.1 As-laid profile
- S2.3.2 Intervention

S2.4 Surface regularity, pages 31 S2.6 Skid resistance, pages 34

Appendix 2, A2.4 Cold-lay surfacing materials pages 101

Appendix 8, Table NGA8.3 Compaction requirements for bituminous mixtures page 207

Chapter 6, S6 Flexible and composite roads, pages 47 to 59

Appendix A10 Permanent cold-lay surfacing materials (PCSM's)

Appendix A11 Bitumen binder equivalence, page 158

Unit 007 & 014 Reinstatement of hot-lay bituminous materials.

In addition to the skills and knowledge preparation requirements for unit 6 & 14 above, operative candidates undertaking unit 7, and supervisors undertaking unit 14 will need to be conversant with the following.

Chapter 6, S6 Flexible and composite roads, pages 47 to 59, sections

S6.1.1 General

S6.1.2 Method A – All Permanent Reinstatement

S6.1.3 Method B – Permanent Binder course reinstatement

Appendix A2 Key to materials with particular attention to;

Appendix A2, page 104 section A2.7 Bituminous laying temperatures.

Appendix A8.3 Compaction requirements for bituminous materials.

Appendix A11,

Table A11.1 Permitted surface binder grades, page 159

Unit 008 & 015 Reinstatement of Concrete Slabs.

The practical exercise must be carried out in accordance with the HAUC Specification for the Reinstatement of Openings in the Highway, (3rd Edition).

Candidates must be familiar with all aspects of excavation & reinstatement in the highway and should have received training on the use and safe operation of plant, tools and equipment, and understand the need to wear the appropriate Personal Protective equipment. Candidates must be aware of their responsibilities to look after themselves and others who may be affected by their actions and omissions at work. Candidates should be familiar with the requirements of the “HAUC Specification” in particular;

In addition to the preparation of sub-base as outlined in previous units, the candidate will need to be conversant with the following sections of the HAUC Specification.

Operative candidates are required to;

- Prepare the slab edges. (Rough-cut or Dowel Bar method)
- Check the sub-base
- Cut to size and fit slip membrane
- Lay & compact the correct strength of concrete
- Finish reinstatement surface in accordance with the requirements of the HAUC Specification.
- Place curing membrane

Candidates will need to be conversant with;

Chapter 2. S2 Performance Requirements, pages 23 to 39

Chapter 7. S7. Rigid and Modular Roads, sections;

- Section 7.1 Reinstatement methods, S7.1.1 to S7.1.4. Page 60
- Section 7.2 Sub-base reinstatement, S7.2.1 to S7.3.5. Page 61
- Section 7.3 Concrete road slab reinstatement S7.3.1 to S7.3.5 page 62
- Section 7.4 Edge support preparation S7.4.1 to S7.4.2 page 63
- Section 7.5 Reinforcement. Page 64
- Section 7.6. S7.6.1 Overlays & S7.6.2 Surface Reinstatement. Page 65

Unit 009 & 016 Reinstatement of Modular Surfaces & Concrete Footways.

The practical exercise must be carried out in accordance with the HAUC Specification for the Reinstatement of Openings in the Highway, (3rd Edition).

Candidates must be familiar with all aspects of excavation & reinstatement in the highway and should have received training on the use and safe operation of plant, tools and equipment, and understand the need to wear the appropriate Personal Protective equipment. Candidates must be aware of their responsibilities to look after themselves and others who may be affected by their actions and omissions at work. Candidates should be familiar with the requirements of the “HAUC Specification” in particular;

In addition to the preparation of sub-base as outlined in previous units, the candidate will need to be conversant with the following sections of the HAUC Specification.

Operative candidates are required to reinstate three areas that include a minimum of;

- 1.5m² for concrete paving slab repair

- 1.5m² for block paved repair

- 1.5m² for concrete footway repair

Candidates will need to be conversant with;

- Chapter 2. S2 Performance Requirements, pages 23 to 39

- Chapter 8. S8 Footways, Footpaths and Cycle Tracks. Pages 67 to 73

- Appendix A7.1 Flexible Footways, Footpaths & Cycle Tracks.

- Appendix A7.2 Rigid Footways, Footpaths & Cycle Tracks.

- Appendix A7.3 Modular Footways, Footpaths & Cycle Tracks.

- Appendix A12 reinstatement of Modular Surface Layers.