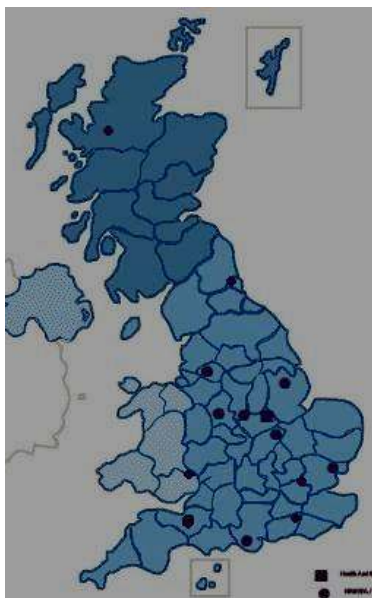


NRSWA TRAINING



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NRSWA



We offer NRSWA courses at the following locations:

- Chesterfield
- Coventry
- Essex
- Gwent-Wales
- Lincolnshire
- London
- Manchester
- Newcastle-Upon-Tyne
- Northampton
- Nottingham
- Scotland
- Somerset
- Sussex

Courses can be offered on our Public open courses or if you have a sufficient number of attendees private or in house courses.

Courses fees include city & guild certification & issue of Scotvec card (registration onto the Streetworks register) The main purpose of the register is to maintain the national database of supervisors & operatives currently practicing street works, & issue a valid identity card that may be requested by authorised persons or organisations, such as highway & street works inspectors

Courses offer combinations of the units listed below for both operative & supervisor. Operatives those who carryout excavation & reinstatement in the highways are offered courses that combine units 1-9 of competence. Supervisors those who supervise the excavation & reinstatement in the highways by operatives are offered courses that combine units 1 & 10-16 of competence. Courses do entail some reading & writing. If you have any learning difficulties let us know in advance so we can make the trainer aware.

See course details for units at time of booking as units covered at each centre differ. Units can be taken singularly or together as a 5 day course.

Operative Units of Competence

Units 1-9

- Unit 1- Location & avoidance of underground apparatus
- Unit 2- Signing, lighting & guarding
- Unit 3- Excavation in the highway
- Unit 4- Reinstatement & compaction of backfill materials
- Unit 5- Reinstatement of sub & road base in non bituminous material
- Unit 6- Reinstatement of cold lay bituminous materials
- Unit 7- Reinstatement of hot lay bituminous materials
- Unit 8- Reinstatement of concrete slabs
- Unit 9- Reinstatement of modular surfaces & concrete footways

Combinations of units varies per centre, most popular combination is units 1-6 & 9

Unit 2

- Unit 2- Signing, lighting & guarding

Supervisor Units of Competence

Units 1 & 10-16

- Unit 1- Location & avoidance of underground apparatus
- Unit 10-Monitoring signing, lighting & guarding
- Unit 11-Monitoring excavation in the highway
- Unit 12-Monitoring reinstatement & compaction of backfill layer
- Unit 13-Monitoring reinstatement of sub & road base in non bituminous material
- Unit 14-Monitoring reinstatement of bituminous materials
- Unit 15-Monitoring reinstatement of concrete slabs
- Unit 16-Monitoring reinstatement of modular surfaces & concrete footways

Combinations of units varies per centre, most popular combination is units 1, 10-14 & 16



Unit 1-Location & Avoidance of Underground Services

Resources

A suitable location where candidates can demonstrate competence locating a range of services, either on or off site.

Cable locator (signal generator optional) & Utility plans to include BT, Gas, Water & Electric cables.

A minimum of three services to locate & trace, i.e. BT, Gas, Water & Electric cables.

A range of services for candidates to identify, both damaged & undamaged. This range should include all mentioned in the standards as well as the more modern ones.

Assessment

Candidates may be assessed two per assessor providing that there is no cross contamination of evidence & the location is large enough to cater for them. All the performance criteria must be assessed to make a judgement of candidates competence.

The candidate must be able to:

- Interpret utility plans & point out on the ground where the services are & interpret the symbols on the plans.
- Recognise a range of services commonly found when carrying out excavations.
- Identify the risks of damage to services & the implications of such damage to Gas, Water & Electricity.
- Use cable location equipment to find & trace underground services. (At least three to include BT & Electric cables).
- Describe services that cannot be found with conventional cable location equipment.
- Conduct the activities safely.
- Provide sufficient knowledge evidence by way of oral or written questions.

Unit 2-Signing, lighting & guarding

Resources

A suitable location, that is either a real road with unpredictable traffic & pedestrians or a realistic simulation. Where assessments are carried out on simulated site candidates will need to produce evidence from work place showing that activities assessed have been carried out on a real road. Work place evidence is expected to be provided after the initial assessment.

A full set of temporary signing & guarding for works on a footway. Temporary traffic signals. A selection of inappropriate signs, i.e. damaged or of the wrong type.

Assessment

Candidates may be assessed two per assessor providing there is no cross contamination of evidence & location is large enough to cater for them. Assessor must control site to ensure where two candidates are being assessed, they both demonstrate competence. Care should be taken to ensure where candidates are assessed in two's that they are not being lead.

The candidate must be able to:

- Produce plan of intended site showing position of signs, guarding & traffic signals. Plan must include all relevant distances, sizes, & dimensions required.
- Produce list of equipment for intended site.
- Demonstrate sequence of setting out the advance signing, safety zones & pedestrian walkways.
- Demonstrate positioning, testing, adjusting, commissioning & decommissioning of temporary traffic signals.
- Answer a range of questions to demonstrate knowledge of subject.
- Conduct activities safely wearing appropriate safety wear.
- Provide sufficient knowledge evidence by way of oral or written questions.

Evidence from workplace must be signed by a suitably qualified person & returned to the assessment centre for validation before registering candidates. This evidence must contain at least: site plans, site job number/ description of job, witness testimony & include the use of traffic signals. Evidence from workplace is verified prior to registering candidates for this unit.



Unit 3-Excavation in the highway

Resources

The activities are undertaken either on-site or a realistic simulated site. Where the site is simulated, there should be sufficient amount of signing & guarding in place to ascertain work areas.

Assessments are not to be undertaken on excavations where trench support is needed.

The area to be excavated must contain at least one utility service & be minimum of 0.7m² & 600mm deep in modular or flexible carriageway. Area should be marked out to show where the services are & extent of the excavation. Where candidates are going to be assessed for units 4 & 5, excavated depth should be at least 650mm to allow for reasonable backfill layer.

At least 8 material samples to include class A, B, C, D & E.

Assessment

A suitable exercise/simulation to demonstrate knowledge of carriageway type & their construction. Candidates are to be assessed individually, i.e. one to a hole. Where this is not practicable due to space constraints, then it is acceptable for two to excavate one hole provided excavation is enlarged to cater for this & candidates are both given the opportunity to demonstrate competence for all performance criteria.

The candidate must be able to:

- Use a disc cutter or roadsaw safely to cut full depth of surfacing layers, straight & with no over cutting. Appropriate personal protective equipment must be selected & worn.
- Remove, clean & stack for reuse or disposal modular paving.
- Use a breaker to break-up surfacing layers safely. Appropriate personal protective equipment must be selected & worn.
- Excavate trench with appropriate tools & select material for reuse or disposal. Excavate with care to expose services.
- Identify types of carriageways & construction layers for flexible, composite, rigid & modular carriageways & flexible, rigid & modular footways.
- Support & protect underground services.
- Identify a range of backfill materials classes A, B, C, D & E. Field test materials for suitability, & state why they could not be used.
- Follow safe working practices in accordance with current legislation.
- Provide sufficient knowledge evidence by way of oral or written questions.

Unit 4-Reinstatement & compaction of backfill materials

Resources

The activities are undertaken either on-site or a realistic simulated site. Where the site is simulated, there should be sufficient amount of signing & guarding in place to ascertain work areas.

Assessments are not to be undertaken on excavations where trench support is needed. A trench with sufficient depth to reinstate should be provided (at least 650mm).

It is common for candidates to use the excavation for unit 3 & reinstatement to be in type 4 flexible or modular carriageway.

The trench should contain at least one service to reinstate around. A range of hand tools & compaction equipment should be available to candidates as stated in the standards.

Assessment

Candidates are to be assessed individually, i.e. one to a hole. Where this is not practicable due to space constraints, then it is acceptable for two to excavate one hole provided the excavation is enlarged to cater for this & candidates are both given the opportunity to demonstrate competence for all performance criteria.

The candidate must be able to:

- Identify the main types of footway & carriageway & their construction layers.
- Follow safe working practices, including selection & use of personal protective equipment & use of plant equipment.
- Identify a range of backfill materials classes A, B, C, D & E. Field-test the materials for suitability & state reasons why they could not be used.
- Unload & store imported materials safely.
- Construct the backfill layer to the correct level.
- Protect underground services with finefill material & methods of compacting the material.
- Dispose of any unsuitable materials safely.
- Keep the site clean & safe.
- Provide sufficient knowledge evidence by way of oral or written questions.



Unit 5-Reinstatement & compaction of subbase & roadbase in non-bituminous materials.

Resources

The activities are undertaken either on-site or a realistic simulated site. Where the site is simulated, there should be sufficient amount of signing & guarding in place to ascertain work areas.

Assessments are not to be undertaken on excavations where trench support is needed.

A trench with sufficient depth to reinstate should be provided (at least 430mm for a type 4 flexible carriageway with a granular roadbase). It is common for the candidate to use the trench for unit 4 & reinstatement to be in a type 4 flexible carriageway.

The trench should contain at least one service to reinstate around, this may have been covered in Unit 3. A range of hand tools & compaction equipment should be available to the candidate as stated in the Standards & a quantity of GSB Type 1.

Assessment

Candidates are to be assessed individually, i.e. one to a hole. Where this is not practicable due to space constraints, then it is acceptable for two to excavate one hole provided the excavation is enlarged to cater for this & candidates are both given the opportunity to demonstrate competence for all performance criteria.

The candidate must be able to:

- Make good any defects in the pavement structure to receive subsequent layers
- Confirm the backfill layer to be correct.
- Follow safe working practices, including the selection & use of personal protective equipment & use of plant equipment. Identify what imported & excavated materials are suitable for use or disposal.
- Unload & store materials safely.
- Select suitable compaction equipment for the reinstatement.
- Construct the pavement layers correctly.
- Dispose of surplus materials safely.
- Keep the site clean & safe.
- Provide sufficient knowledge evidence by way of oral or written questions.

Unit 6-Reinstatement in cold-lay bituminous materials

Resources

The activities are undertaken either on-site or a realistic simulated site. Where the site is simulated, there should be sufficient amount of signing & guarding in place to ascertain work areas.

A cavity with sufficient depth to reinstate the base course & wearing course should be provided (at least 100mm for a type 4 flexible carriageway with granular roadbase). It is common for candidates to use the trench for unit 5 & reinstatement to be in a type 4 flexible carriageway.

A range of hand tools & compaction equipment should be available to candidates as stated in the standards.

The reinstatement of wearing course should be carried out with specified compaction equipment, i.e. single drum roller 650Kg/m minimum weight or plate compactor 1400kg/m².

Highway ironwork & kerbs or edge restraints.

Candidates are to be assessed individually, i.e. one to a hole. Minimum area for the reinstatement should be at least 1.2m²

The candidate must be able to:

- Make good any defects in the pavement structure to receive subsequent layers.
- Re-position highway ironwork to line & level & any adjacent pavement edge restraint or kerbs.
- Follow safe working practices, including selection & use of personal protective equipment & use of plant equipment.
- Apply edge joint sealant.
- Spread cold bituminous material evenly with sufficient surcharge to allow for compaction.
- Construct the pavement layers correctly with the correct amount of compaction.
- Dispose of surplus materials safely.
- Keep the site clean & safe.
- Provide sufficient knowledge evidence by way of oral or written questions.



Unit 7 - Reinstatement in hot-lay bituminous materials

Resources

The activities are undertaken either on-site or 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 cavity with sufficient depth to reinstate the base course and wearing course using a method 'A' repair should be provided (at least 250mm for a type 3 flexible carriageway with a granular road base). The area should be at least 1.2m².

Base course = 20mm nominal size dense base course material or 50/20 hot rolled asphalt (HRA) base course.

Wearing course = 30/14 HRA & pre-coated chippings.

Note: Wearing course material can be used in place of dense base course were the trench cavity is less than 300mm wide & not more than 2m². Where HRA is not readily available to the centre an alternative material may be used with permission of the External Verifier. Evidence of competence laying HRA must be sought from the work place where other hot-lay materials are used.

A range of hand tools & compaction equipment should be available to candidates as stated in the standards.

The reinstatement of the wearing course should be carried out with the specified compaction equipment, i.e. single drum roller 650Kg/m minimum weight or plate compactor 1400kg/m².

A tool heater, thermometer, tack coat & edge joint sealant should also be provided.

Assessment

Candidates are to be assessed individually, i.e. one to a hole. Minimum area for the reinstatement should be 1.2m² for both base course & wearing course surfacing materials, the area should be enlarged to accommodate ironwork.

The candidate must be able to:

- Use the appropriate equipment to remove the temporary reinstatement to correct depth to receive subsequent layers. Trim back where necessary.
- Make good any defects in the pavement structure to receive subsequent layers.
- Re-position highway ironwork to line & level & any adjacent pavement edge restraint or kerbs.
- Follow safe working practices, including the selection & use of personal protective equipment & use of plant equipment.
- Control material & hand tool temperature for optimum workability.
- Apply edge joint sealant.
- Spread, level & compact the base course material to the correct layer thickness.
- Apply tack coat.
- Spread, level & compact the wearing course material & lay pre-coated chippings correctly.
- Dispose of surplus material safely.
- Keep the site clean & tidy.
- Provide sufficient knowledge evidence by way of oral or written questions in relation to temperature control & rates of spread for materials used & skid resistance.



Unit 8 - Reinstatement of concrete slabs

Resources

The activities are undertaken either on-site or a realistic simulated site. Where the site is simulated, there should be a sufficient amount of signing & guarding in place to ascertain work areas.

A cavity with a depth of at least 200mm in a rigid road should be provided & a quantity of GSB Type 1 to make good the sub-base.

Assessment

One candidate to each reinstatement.

A range of hand tools & compaction equipment should be available to candidates 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 & cutting equipment, polythene sheeting & mixer if not using ready mixed concrete.

The candidate must be able to:

- Select & use the appropriate personal protective equipment correctly.
- Prepare cavity to receive reinstatement.
- Make good the sub-base layer, mark out & drill for dowel bars to the correct depth & positioning.
- Cut dowel bars & mesh reinforcing to correct length & size.
- Use a pavement saw to ensure correct edge is achieved. Rough cut remaining depth to expose reinforcing in accordance with specifications.
- Position dowel bars & tie reinforcing securely.
- Place slip membrane correctly.
- Replace any missing or damaged joints in the slab to match existing.
- Place & compact concrete to required level.
- Ensure that skid resistance is achieved.
- Use approved curing procedures.
- Dispose of surplus material safely.
- Follow safe working practices, including the selection & use of personal protective equipment & use of plant equipment.
- Provide sufficient knowledge evidence by way of oral or written questions.

Unit 9 - Reinstatement of modular surfaces & concrete footways

Resources

The activities are undertaken either on-site or a realistic simulated site. Where the site is simulated, there should be a sufficient amount of signing & guarding in place to ascertain work areas.

Three areas to reinstate that include:

- 1.5m² for concrete slab repair
- 1.5m² for block paving repair
- 1m² for concrete footway repair.

A range of hand tools & compaction equipment should be available to candidates as stated in the standards. Bedding material, concrete, kiln dried sand & GSB Type 1.

Sufficient quantities of paving slabs, concrete & block paving for each candidate.

Assessment

The candidate must be able to:

- Select & use appropriate personal protective equipment correctly.
- Prepare cavity to receive reinstatement.
- Make good the sub-base layer to receive the reinstatement.
- Remove, clean, store for reuse or dispose of slabs, blocks & concrete.
- Lay & compact bedding materials to correct levels for slabs & modular reinstatement.
- Position & compact block paving correctly to match bond pattern the existing surface using specified technique & equipment.
- Position concrete slabs to match the correct bond pattern.
- Place & compact concrete to correct levels & ensure textured finish is achieved.
- Apply jointing materials.
- Dispose of unsuitable & surplus materials safely.
- Keep the site clean & tidy.
- Provide sufficient knowledge evidence by way of oral or written questions.



Supervisor Units

Supervisors are assessed through their observation of an operative undertaking the activities appropriate to each unit of competence & completing awarding body unit papers. Supervisor should be encouraged to provide sufficient evidence of competence through the following means.

- Identifying good practices & methods.
- Interpreting specifications & codes of practice to ensure that good practice & quality is maintained.
- Identifying & recommending remedial action for unspecified or unsafe practises.
- Knowledge evidence using Part B question papers or assessor devised questions.

In addition to unit papers, provided sufficient evidence of designing reinstatements from specifications. At no time though out the assessment should the supervisor confer with the operative. The Assessor will control this.

Assessors should ensure there is sufficient opportunity for supervisor to make a decision on activities observed.

Where poor practices are not observed the assessor would need to build it in at the appropriate time so as to give the supervisor opportunity to provide the evidence required.

The marking guide should be used when confirming part B question paper.

In addition to completing unit papers provided by awarding body, & to ensure that all performance criteria, range statements & knowledge evidence is met, supervisor will need to produce (as a minimum) the following evidence of competence under each following unit.

The centre, by way of case study or assignment should provide supplementary evidence documentation to ensure that all performance criteria can be assessed.

NOTE: Unit 1-Location & Avoidance of Underground Services is the same as operatives unit.

Unit 10 - Monitoring Signing, Lighting & Guarding

The candidate must be able to:

- Provide detailed plan for an intended site, preferably from a real road, showing all distances & dimensions in accordance with the Safety at Streetworks & Road Works Code of Practice.
- Make formative decisions & recommend remedial action from a given plan.
- Observe an operative surveying a work site & record observations & remedial action required from the site plan.
- Observe an operative setting up & taking down a site.
- Record observations made & explain reasons for agreeing or disagreeing with site operations & working practices.
- Explain any remedial action required.
- Complete the part B question paper.
- Provide evidence from the work place where the assessment is carried out on a simulated site. A simple statement from the employer would not be sufficient to infer competence.

Unit 11 - Monitoring Excavation in the Highway

The candidate must be able to:

- Observe an operative excavating a trench where services are present.
- Record observations made & explain reasons for agreeing or disagreeing with site operations & working practices.
- Explain any remedial action required.
- Complete the part B question paper.
- Identify a range of backfill materials class A-E
- Field tests a range of backfill materials & confirms their suitability or unsuitability & explains why.
- Identify carriageway/footway types & layer construction.

Unit 12 - Monitoring the reinstatement of backfill materials

The candidate must be able to:

- Provide a reinstatement design & method statement from specifications.
- Observe an operative reinstating backfill layer where services are present in modular or type 3/4 flexible carriageway in accordance with specifications.
- Record observations made & explain reasons for agreeing or disagreeing with site operations & working practices.
- Explain any remedial action required.
- Complete part B question paper.
- Calculate material quantities.
- Identify a range of backfill materials class A-E
- Identify carriageway/footway types & layer construction.
- Field tests a range of backfill materials & confirms their suitability or unsuitability & explains why.



Unit 13 - Monitoring the reinstatement of sub-base & road base in non-bituminous materials

The candidate must be able to:

- Provide reinstatement design & method statement from specifications.
- Observe an operative reinstating sub & road base layers for modular or type 3/4 flexible carriageway in accordance with specifications.
- Record observations made & explain reasons for agreeing or disagreeing with site operations & working practices.
- Confirm suitability of compaction equipment selected.
- Explain any remedial action required.
- Complete part B question paper.
- Calculate material quantities.
- Identify a range of backfill materials class A to E
- Identify carriageway/footway types & layer construction.
- Field tests a range of backfill materials & confirms their suitability or unsuitability & explains why.

Unit 14 - monitoring reinstatement in bituminous materials

Where candidates observe a cold-lay reinstatement there must be sufficient knowledge evidence to confirm competence with hot-lay materials including HRA.

The candidate must be able to:

- Provide a reinstatement design & method statement from specifications for cold-lay & hot-lay reinstatements. Hot-lay should include laying & rolling temperatures as well as rates of spread.
- Observe an operative reinstating base course & wearing course layers for type 3/4 flexible carriageway in accordance with specifications & confirm that they are within permitted tolerances.
- Confirm that pavement edge restraints/kerbs are at correct levels & free from defects.
- Record observations made & explain reasons for agreeing or disagreeing with site operations & working practices.
- Confirm the suitability of compaction equipment selected & materials used.
- Explain any remedial action required.
- Complete part B question paper.
- Calculate material quantities & rates of spread for bituminous materials.

Unit 15 - Monitoring reinstatement of concrete slabs

The candidate must be able to:

- Provide a reinstatement design & method statement from specifications for concrete slab reinstatements.
- Observe an operative reinstating the slab in accordance with specifications & confirm that the reinstatement is within permitted tolerances & skid resistance is achieved.
- Confirm the quality & workability of concrete (slump/cube test).
- Record observations made & explain reasons for agreeing or disagreeing with site operations & working practices.
- Confirm the suitability of compaction equipment selected.
- Explain any remedial action required.
- Complete part B question paper.
- Calculate material quantities.

Unit 16 - Monitoring Reinstatement of Modular Surfaces & Concrete Footways

The candidate must be able to:

- Provide a reinstatement design & method statement from the specifications for modular surface & concrete footway reinstatement.
- Observe an operative reinstating modular surface, concrete slabs and concrete footways in accordance with the specifications and confirm that the reinstatement is within permitted tolerances.
- Confirm that pavement edge restraints/kerbs are at correct levels & free from defects.
- Record observations made and explain reasons for agreeing or disagreeing with site operations and working practices.
- Confirm the suitability of compaction equipment selected.
- Explain any remedial action required.
- Complete the part B question paper.
- Calculate material quantities for modular, slabs and concrete reinstatements.



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