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## Overview

This unit is designed for the candidate to demonstrate competence in monitoring the signing, lighting and guarding of a work site.

This unit will apply to Network Construction Operations at Level 3 and is intended for Construction Supervisors.

There are four elements in this unit

1. Monitor a work site survey
2. Monitor site safety
3. Monitor action taken to protect pedestrians, vehicular traffic and site personnel
4. Monitor provision of portable traffic signals

This unit does not provide the full requirements of the New Roads and Streetworks Act units.

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## Monitoring, signing, lighting & guarding

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### Performance criteria

*You must be able to:*

#### **Monitor a work site survey**

- P1 check that the planned provision of footways, traffic lanes and safety zones determined by the site survey meets with the requirements of the site location and approved procedures and practices
- P2 check that the planned provision of footways, traffic lanes and safety zones determined by the site survey meets the requirements of individuals and organisations with special needs
- P3 check that the planned provision of footways, traffic lanes and safety zones determined by the site survey minimises disruption to traffic and provides for the safe passage of pedestrians
- P4 check that the planned provision for vehicles and plant within the confines of the working area provides for adequate coverage and safety for persons and vehicles in the vicinity
- P5 ensure that safe working practices are identified in accordance with current approved procedures and practices
- P6 identify problems with planned provision arising from the work site survey and demonstrate that you know the appropriate remedial action to be taken
- P7 carry out an on-site risk assessment to ensure that a safe system of working is in place in respect of signing, lighting and guarding and to ensure that provision is made to control any types of hazards identified

*You must be able to:*

#### **Monitor site safety**

- P8 monitor network activity in accordance with approved procedures and practices
- P9 assess site conditions in accordance with approved procedures and practices
- P10 ensure that checks have been carried out to ensure that appropriate equipment, materials and products is available and fit for purpose
- P11 ensure that the appropriate personal protective equipment is being used on site
- P12 ensure that safe working practices are followed in accordance with approved procedures and practices
- P13 ensure that an on-site risk assessment has been carried out to ensure a safe system of working in respect of signing, lighting and guarding
- P14 identify risks to site safety, and demonstrate that you know the appropriate remedial action to be taken

*You must be able to:*

#### **Monitor action taken to protect pedestrians, vehicular traffic and site personnel**

- P15 ensure that personal protective equipment selected and used is checked

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- for suitability to the network activity
- P16 assess the provision of footways, traffic lanes and safety zones against the requirements of the site location, the safety and minimum disruption of vehicular traffic, the safety and minimum disruption of pedestrians and the requirements of people with special needs
  - P17 assess the provision for the control of movement of pedestrians, vehicles and plant within the confines of the working area in terms of minimising delay and inconvenience and making adequate safety provisions
  - P18 ensure that equipment, materials and products selected is checked against the requirements of the location and any special needs
  - P19 monitor the inspection of equipment, materials and products prior to use in accordance with approved procedures and practices
  - P20 monitor the positioning of equipment, materials and products in accordance with the sequence specified
  - P21 monitor the removal of equipment, materials and products in accordance with the sequence specified
  - P22 ensure that safe working practices are followed, in accordance with the current approved procedures and practices
  - P23 identify problems with the action taken to protect pedestrians, vehicular traffic and site personnel and demonstrate that you know the appropriate remedial action to be taken

*You must be able to:*

### **Monitor provision of portable traffic signs**

- P24 monitor the inspection and testing of signals for correct procedures and correct functioning of equipment, materials and products
- P25 monitor the positioning of signals in the correct sequence, and according to the requirements of the site location
- P26 monitor the adjustment of signal controls against the traffic conditions prevailing at the time
- P27 monitor the dismantling and removal of signals in accordance with approved procedures and practices
- P28 ensure that safe working practices are followed in accordance with approved procedures and practices
- P29 identify problems with the provision of portable traffic signals and the appropriate remedial action to be taken

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### Knowledge and understanding

*You need to know and understand:*

#### **Monitor a work site survey**

- K1 the requirements of the Code of Practice in respect of surveying the work site
- K2 health and safety requirements with regard to surveying the work site
- K3 how to plan provision of footways, traffic lanes and safety zones to meet the requirements of the site location (including as necessary:
  - K3.1 proximity to schools and hospitals
  - K3.2 users of the route (including those with special needs)
  - K3.3 weather conditions (including icy roads, heavy rain, snow, fog, etc)
  - K3.4 volume of traffic
  - K3.5 speed of traffic
  - K3.6 lighting on highways
  - K3.7 highway situations (including lack of footways; pedestrianised areas; emergency service access; widths of traffic lanes, footways and safety zones; inadequate lane widths; evidence of serious congestion; private access; bus stops, parking places, etc.; obstruction of driver's view at bends and summits; roundabouts and junctions; footways, ramps, boards and road plates; railway level crossings; tramways; cycle lanes and cycle tracks)
  - K3.8 different requirements for working during the day and at night
  - K3.9 mobile works and minor works
  - K3.10 the safety zone (length of lead-in taper of cones (T); sideways clearance (S); longways clearance (L); length of exit taper of cones)
- K4 how to plan provision of footways, traffic lanes and safety zones to meet the requirements of people with special needs
- K5 how to minimise disruption to traffic and ensure the safe passage of pedestrians when planning provision of footways, traffic lanes and safety zones
- K6 how to plan provision for vehicles and plant within the confines of the working area to ensure adequate coverage and safety for persons and vehicles in the vicinity
- K7 safe working practices for signing, lighting and guarding activities
- K8 problems which occur with planned provision arising from a work site survey and the appropriate remedial action to take
- K9 the purpose of an on-site risk assessment

*You need to know and understand:*

#### **Monitor site safety**

- K10 health and safety requirements for site operations
- K11 health and safety requirements for particular site conditions

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- K12 the appropriate safety equipment to use during site operations, and how to ensure that it is fit for purpose
- K13 the personal protective equipment to be used to ensure safety of site personnel
- K14 safe working practices for signing, lighting and guarding activities
- K15 the purpose of an on-site risk assessment
- K16 potential risks to site safety, and the appropriate remedial action to take

*You need to know and understand:*

### **Monitor action taken to protect pedestrians, vehicular traffic and site personnel**

- K17 the appropriate personal protective equipment to use for the prescribed operation
- K18 the factors governing the provision of footways, traffic lanes and safety zones and the circumstances under which it is necessary to liaise with the highway authority
- K19 the safety implications of the site location for pedestrians and vehicular traffic and the action to take to provide for this (including traffic management measures)
- K20 the requirements of those with special needs and how to provide for them
- K21 methods of minimising disruption to pedestrians and vehicular traffic
- K22 methods of making adequate safety provision for pedestrians, vehicles and plant within the confines of the working area
- K23 the equipment to use to meet the requirements of the site location and any special needs
- K24 how to ensure that equipment is fit for purpose
- K25 the specified sequence for the positioning of equipment
- K26 the specified sequence for the removal of equipment
- K27 safe working practices for signing, lighting and guarding activities
- K28 problems which occur with the action taken to protect pedestrians, vehicular traffic and site personnel, and the appropriate remedial action to take

*You need to know and understand:*

### **Monitor provision of portable traffic signals**

- K29 procedures for inspecting and testing signals for correct operation
- K30 the requirements of the site location, how they affect the positioning of signals and the circumstances under which it is necessary to consult the highway authority
- K31 the correct sequence for positioning signals
- K32 how the prevailing traffic conditions affect the adjustment of signal controls
- K33 the requirements of the code of practice in respect of the dismantling and removal of portable traffic signals
- K34 safe working practices for the provision of portable traffic signals
- K35 problems which occur with the provision of portable traffic signals and the appropriate remedial action to take

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### Additional Information

#### Scope/range related to performance criteria

##### Monitor a work site survey

1. site location: public highway, private property
2. approved procedures and practices: Health, Safety and Environmental related to the individual and others, organisational, regulatory, statutory, emergency, operational, contingency plans, relevant company policies, relevant client policies (internal or external) approved materials and equipment and procedures, and risk assessments
3. individuals and organisations: Customers, contractors, network operatives, colleagues, statutory bodies
4. risks: those which can be eliminated, reduced or remain constant
5. types of hazards: restrictions to access and egress, mis-use of tools and equipment, faulty equipment, hazardous substances, hygiene, interference with and from adjacent activities and other utility apparatus, obstructions and exposed apparatus, structures and services

##### Monitor site safety

6. network activity: routine and non routine activities, response to changed circumstances, works that affect company employees and others
7. approved procedures and practices: Health, Safety and Environmental related to the individual and others, organisational, regulatory, statutory, emergency, operational, contingency plans, relevant company policies, relevant client policies (internal or external) approved materials and equipment and procedures, and risk assessments
8. equipment, materials and products: selection of vehicles, tools, ancillary equipment and machines, valves and fittings, pipes and consumables, health, safety and environmental protection equipment, hazardous and non hazardous materials
9. risks: those which can be eliminated, reduced or remain constant

##### Monitor action taken to protect pedestrians, vehicular traffic and site personnel

10. network activity: routine and non routine activities, response to changed circumstances, works that affect company employees and others
11. equipment, materials and products: selection of vehicles, tools, ancillary equipment and machines, valves and fittings, pipes and consumables, health, safety and environmental protection equipment, hazardous and non hazardous materials
12. approved procedures and practices: Health, Safety and Environmental related to the individual and others, organisational, regulatory, statutory, emergency, operational, contingency plans, relevant company policies, relevant client policies (internal or external) approved materials and

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equipment and procedures, and risk assessments

### **Monitor provision of portable traffic signals**

13. equipment, materials and products: selection of vehicles, tools, ancillary equipment and machines, valves and fittings, pipes and consumables, health, safety and environmental protection equipment, hazardous and non hazardous materials
14. approved procedures and practices: Health, Safety and Environmental related to the individual and others, organisational, regulatory, statutory, emergency, operational, contingency plans, relevant company policies, relevant client policies (internal or external) approved materials and equipment and procedures, and risk assessments

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## Monitoring, signing, lighting & guarding

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**Relevant occupations** Engineering and manufacturing technologies; Engineering

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