

Unit 10 Monitoring signing, lighting and guarding

This unit covers the requirements that you must meet when monitoring the signing, lighting and guarding of a work site. **You must ensure that you act in accordance with all current specifications and procedures and that you ensure that safe working practices are followed at all times when carrying out the activities covered in this unit. The Code of Practice specified in this unit is *Safety at Street Works and Road Works - A Code of Practice*, effective from 1 February 2002 (the 'Red Book').**

All traffic signs used must comply with the Traffic Signs Regulations and General Directions (TSRGD) currently in force.

The unit contains the following four elements, which you must cover:

- 10.1 Monitor a work site survey
- 10.2 Monitor site safety
- 10.3 Monitor action taken to protect pedestrians, vehicular traffic and site personnel
- 10.4 Monitor provision of portable traffic signals

In element 10.1, you will monitor a work site survey, to ensure that appropriate provision is made for signing, lighting and guarding activities. You will ensure that the planned provision of footways, traffic lanes and safety zones meets the requirements of the site location and people with special needs, that disruption to traffic is minimised and provision is made for the safe passage of pedestrians. You will also need to check that adequate coverage and safety for persons and vehicles is planned within the confines of the working area. You will need to demonstrate that you know what action must be taken to rectify any deficiencies in planned provision arising from the work site survey, and you must carry out an on-site risk assessment.

In element 10.2, you will monitor the safety of the site, ensuring that health and safety requirements are met in relation to site operations and site conditions. You will need to ensure that the appropriate equipment is available on site and in sound working condition, and that the personal protective equipment being used is suitable to the requirements of the site and the operation. You must check that an on-site risk assessment has been carried out. You will need to show that you know what action must be taken to remedy any risks to site safety.

In element 10.3, you will need to ensure that the action taken to protect pedestrians, vehicular traffic and site personnel is appropriate to the requirements of the prescribed operation, the site location and those with special needs. You will need to ensure that the provision of footways, traffic lanes and safety zones minimises disruption to pedestrians and vehicular traffic and provides for their safety, that adequate safety provision is made and that delay and inconvenience are minimised for pedestrians, vehicles and plant within the confines of the working area. You will need to ensure that personal protective equipment used is suitable to the prescribed operation, and that equipment is inspected prior to use and positioned and removed in the specified sequence. You will need to demonstrate that you know what action must be taken to remedy problems identified with the provision made to protect pedestrians, vehicles and site personnel.

In element 10.4, you will need to ensure that you monitor the provision of portable traffic signals, including both proprietary electrical or engine powered portable traffic signals and Stop/Go boards. You will need to monitor the inspection and testing of signals prior to use, and ensure that they are positioned, adjusted, dismantled and removed in the correct sequence, and that the requirements of the site location and the prevailing traffic conditions are taken into account. You will need to demonstrate that you know what action must be taken to remedy any problems identified with the provision of portable traffic signals.

Please note: *Linear measurements shown on signs (e.g. distance) MUST be in imperial units. Width and height restrictions MUST be imperial, but in these cases metric dimensions may be shown in addition, provided this is done as prescribed in TSRGD.*

All linear measurements used when placing signing, lighting and guarding equipment must be metric.

Location of assessments

For reasons of safety, observed assessments of candidates undertaking the monitoring of signing, lighting and guarding activities must take place at a centre, or a location linked to a centre, that has been approved by the centre's external verifier.

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Element 10.1 Monitor a work site survey

Performance criteria	
<p>You must show that:</p> <p>a) you 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</p> <p>b) you check that the planned provision of footways, traffic lanes and safety zones determined by the site survey meets the requirements of people with special needs</p> <p>c) you 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</p> <p>d) you 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</p> <p>e) you ensure that safe working practices are identified in accordance with current relevant specifications and procedures as specified in the Code of Practice</p> <p>f) you identify problems with planned provision arising from the work site survey and demonstrate that you know the appropriate remedial action to be taken</p> <p>g) you 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 hazards identified</p>	
Knowledge requirements	Related performance criteria
<p>You need to know:</p>	
1 the requirements of the Code of Practice in respect of surveying the work site	all
2 health and safety requirements with regard to surveying the work site	all
3 how to plan provision of footways, traffic lanes and safety zones to meet the requirements of the site location (including as necessary: <ul style="list-style-type: none"> • proximity to schools and hospitals • users of the route (including those with special needs) • weather conditions (including icy roads, heavy rain, snow, fog, etc.) • volume of traffic • speed of traffic • lighting on highways • 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) • different requirements for working during the day and at night • mobile works and minor works • the safety zone (length of lead-in taper of cones (T); sideways clearance (S); longways clearance (L); length of exit taper of cones) 	a
4 how to plan provision of footways, traffic lanes and safety zones to meet the requirements of people with special needs	b
5 how to minimise disruption to traffic and ensure the safe passage of pedestrians when planning provision of footways, traffic lanes and safety zones	c
6 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	d
7 safe working practices for signing, lighting and guarding activities	e
8 problems which occur with planned provision arising from a work site survey and the appropriate remedial action to take	f
9 the purpose of an on-site risk assessment	g

Unit 10 Monitoring signing, lighting and guarding

Element 10.1 Monitor a work site survey

Range to be covered

- I. You must show that you ensure that provision is planned for people with **special needs**, including:
 - i. visually impaired people
 - ii. people with disabilities
 - iii. users of prams and pushchairs
 - iv. users of wheelchairs and other physically impaired people
 - v. cyclists
 - vi. young children
 - vii. horse riders
- II. You must show that the following **safe working practices** are identified:
 - i. safe use of tools and equipment
 - ii. use of appropriate personal protective equipment for signing, lighting and guarding, including, as necessary:
 - high visibility jacket or waistcoat
 - hard hat
 - ear defenders
 - gloves
 - protective footwear
 - waterproof clothing
 - iii. precautions to minimise danger or inconvenience to road users
 - iv. precautions to minimise danger or inconvenience to site personnel
 - v. precautions to minimise damage to equipment or apparatus

Evidence requirements

- Your evidence must cover all the performance criteria, all the knowledge requirements and all the range items listed for this element.
- You must complete the following tasks, for an actual or simulated excavation in a footway, with the conditions listed below:
 - A. Monitor the survey of the work site to determine the requirements of the location.
 - B. Monitor the arrangements made for the movement of pedestrians, vehicles and plant.
 - C. Carry out an on-site risk assessment, which must be documented.

Specification of works

- The work area and working space occupy the whole width of the footway.
- The site length does not exceed 300 metres.
- The working space and safety zones do not exceed 80 metres.
- The carriageway is single 2-way, 2-lane, with a speed limit of 30 mph.
- The unobstructed width of carriageway is between 3.25 and 3.7 metres.
- There are no parked vehicles or works vehicles within the area of the site.
- There must be a safety zone sideways clearance of at least 0.5 metres.
- The duration of the work is in excess of 24 hours.
- There is no alternative footway available for pedestrians.
- The location of the site and the traffic conditions require the use of portable traffic signals.

Assessment Conditions

- The assessment will be undertaken by a qualified assessor, who will observe you monitoring signing, lighting and guarding.
- Where you are observed undertaking the specified tasks in a working environment on or off the highway, the site (on or off the highway) must conform to the specifications listed above. Real equipment must be used that complies with the requirements of the Code of Practice.
- It is recognised that candidates for this unit are sometimes observed monitoring signing, lighting and guarding as shown on video. Where this takes place, the video used must meet the following requirements:
 - a) the signing, lighting and guarding activities shown must conform to the specifications detailed above.
 - b) the activities shown must allow candidates to carry out all the tasks specified above, and must cover the performance standards for this element in full.
- If you are observed at a site off the highway, which is not subject to unpredictable traffic use, **or** if you are observed monitoring signing, lighting and guarding as shown on a videotape, you must provide supplementary evidence of competence from the workplace. This can include a documented observation report, provided by a qualified Street Works supervisor or assessor.

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Element 10.2 Monitor site safety

Performance criteria	
<p>You must show that:</p> <ul style="list-style-type: none"> a) you monitor site operations in accordance with health and safety requirements b) you assess site conditions in accordance with health and safety requirements c) you ensure that checks have been carried out to ensure that appropriate equipment is available and fit for purpose d) you ensure that the appropriate personal protective equipment is being used on site e) you ensure that safe working practices are followed in accordance with the current relevant specifications and procedures specified in the Code of Practice f) you 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 g) you identify risks to site safety, and demonstrate that you know the appropriate remedial action to be taken 	
Knowledge requirements	Related performance criteria
<p>You need to know:</p>	
1 health and safety requirements for site operations	a
2 health and safety requirements for particular site conditions	b
3 the appropriate safety equipment to use during site operations, and how to ensure that it is fit for purpose	c
4 the personal protective equipment to be used to ensure safety of site personnel	d
5 safe working practices for signing, lighting and guarding activities	e
6 the purpose of an on-site risk assessment	f
7 potential risks to site safety, and the appropriate remedial action to take	g
Range to be covered	
<p>I. You must show that you ensure that the following personal protective equipment is used as necessary for signing, lighting and guarding activities:</p> <ul style="list-style-type: none"> i. high visibility jacket or waistcoat ii. hard hat iii. ear defenders iv. gloves v. protective footwear vi. waterproof clothing <p>II. You must show that you ensure that the following equipment is used as necessary:</p> <ul style="list-style-type: none"> i. adequate range of signing, lighting and guarding equipment, including: <ul style="list-style-type: none"> • signs • cones • signals • lamps • footway boards • barriers • portable traffic signals ii. high visibility safety equipment iii. suitable materials to construct ramps <p>III. You must show that safe working practices include the following:</p> <ul style="list-style-type: none"> i. safe use of tools and equipment ii. use of appropriate personal protective equipment iii. precautions to minimise danger or inconvenience to road users iv. precautions to minimise danger or inconvenience to site personnel v. precautions to minimise damage to equipment or apparatus 	

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Element 10.2 Monitor site safety

Evidence requirements

- Your evidence must cover all the performance criteria, all the knowledge requirements and all the range items listed for this element.
- You must provide evidence of monitoring safety on site *throughout* an actual or simulated site situation.

Assessment Conditions

- The assessment will be undertaken by a qualified assessor, who will observe you monitoring signing, lighting and guarding.
- Where you are observed undertaking the specified tasks in a working environment on or off the highway, the site must conform to the specifications listed above. Real equipment must be used that complies with the requirements of the Code of Practice.
- It is recognised that candidates for this unit are sometimes observed monitoring signing, lighting and guarding as shown on video. Where this takes place, the activities shown on the video used must allow candidates to carry out the task specified above, and must cover the performance standards for this element in full.
- If you are observed at a site off the highway, which is not subject to unpredictable traffic use, **or** if you are observed monitoring signing, lighting and guarding as shown on a videotape, you must provide supplementary evidence of competence from the workplace. This can include a documented observation report, provided by a qualified Street Works supervisor or assessor.

Supplementary evidence

Evidence of underpinning knowledge in connection with safe working practices, site conditions and associated health and safety requirements.

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Element 10.3 Monitor action taken to protect pedestrians, vehicular traffic and site personnel

Performance criteria	
<p>You must show that:</p> <ol style="list-style-type: none"> you ensure that personal protective equipment selected and used is checked for suitability to the prescribed operation you 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 you 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 you ensure that equipment selected is checked against the requirements of the location and any special needs you monitor the inspection of equipment prior to use in accordance with health and safety requirements you monitor the positioning of equipment in accordance with the sequence specified you monitor the removal of equipment in accordance with the sequence specified you ensure that safe working practices are followed, in accordance with the current relevant specifications and procedures specified in the Code of Practice you 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 	
Knowledge requirements	Related performance criteria
<p>You need to know:</p> <ol style="list-style-type: none"> the appropriate personal protective equipment to use for the prescribed operation 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 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) the requirements of those with special needs and how to provide for them methods of minimising disruption to pedestrians and vehicular traffic methods of making adequate safety provision for pedestrians, vehicles and plant within the confines of the working area the equipment to use to meet the requirements of the site location and any special needs how to ensure that equipment is fit for purpose the specified sequence for the positioning of equipment the specified sequence for the removal of equipment safe working practices for signing, lighting and guarding activities problems which occur with the action taken to protect pedestrians, vehicular traffic and site personnel, and the appropriate remedial action to take 	
	<p>a</p> <p>b</p> <p>b</p> <p>b</p> <p>b</p> <p>c</p> <p>d</p> <p>e</p> <p>f</p> <p>g</p> <p>h</p> <p>i</p>
Range to be covered	
<ol style="list-style-type: none"> You must show that you ensure that the following personal protective equipment is used as necessary for signing, lighting and guarding: <ol style="list-style-type: none"> high visibility jacket or waistcoat hard hat ear defenders gloves protective footwear waterproof clothing 	

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Element 10.3 Monitor action taken to protect pedestrians, vehicular traffic and site personnel

Range to be covered

- II. You must show that people with **special needs** include the following:
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|---|--------------------|
| i. visually impaired people | v. cyclists |
| ii. people with disabilities | vi. young children |
| iii. users of prams and pushchairs | vii. horse riders |
| iv. users of wheelchairs and other physically impaired people | |
- III. You must show that you ensure that the following **equipment** is used as necessary:
- i. adequate range of signing and guarding equipment, including:
- | | |
|---------|------------------|
| • signs | • footway boards |
| • cones | • barriers |
| • lamps | |
- ii. high visibility safety equipment
- iii. suitable materials to construct ramps
- IV. You must show that the following **safe working practices** are monitored:
- i. safe use of tools and equipment
- ii. use of appropriate protective clothing
- iii. precautions to minimise danger or inconvenience to road users
- iv. precautions to minimise danger or inconvenience to site personnel
- v. precautions to minimise damage to equipment or apparatus

Evidence requirements

- Your evidence must cover all the performance criteria, all the knowledge requirements and all the range items listed for this element.
- You must complete the following tasks, for an actual or simulated excavation in a footway, with the conditions listed below:
 - A. Monitor the selection and use of all appropriate personal protective equipment.
 - B. Monitor the control of the movement of vehicles, plant and pedestrians in the confines of the work area.
 - C. Monitor the construction of footways, traffic lanes and safety zones.
 - D. Monitor the selection and inspection of all signs, cones, lamps, footway boards and barriers.
 - E. Monitor the positioning of all signs, cones, lamps, footway boards and barriers.
 - F. Monitor the dismantling and removal of all signs, cones, lamps, footway boards and barriers.

Specification of works

- The work area and working space occupy the whole width of the footway.
- The site length does not exceed 300 metres.
- The working space and safety zones do not exceed 80 metres.
- The carriageway is single 2-way, 2-lane, with a speed limit of 30 mph.
- The unobstructed width of carriageway is between 3.25 and 3.7 metres.
- There are no parked vehicles or works vehicles within the area of the site.
- There must be a safety zone sideways clearance of at least 0.5 metres.
- The duration of the work is in excess of 24 hours.
- There is no alternative footway available for pedestrians.
- The location of the site and the traffic conditions require the use of portable traffic signals.

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Element 10.3 Monitor action taken to protect pedestrians, vehicular traffic and site personnel

Evidence requirements (contd.)

Assessment Conditions

- The assessment will be undertaken by a qualified assessor, who will observe you monitoring signing, lighting and guarding.
- Where you are observed undertaking the specified tasks in a working environment on or off the highway, the site must conform to the specifications listed above. Real equipment must be used that complies with the requirements of the Code of Practice.
- It is recognised that candidates for this unit are sometimes observed monitoring signing, lighting and guarding as shown on video. Where this takes place, the video used must meet the following requirements:
 - a) the signing, lighting and guarding activities shown must conform to the specifications detailed above
 - b) the activities shown must allow candidates to carry out all the tasks specified above, and must cover the performance standards for this element in full.
- If you are observed at a site off the highway, which is not subject to unpredictable traffic use, **or** if you are observed monitoring signing, lighting and guarding as shown on a videotape, you must provide supplementary evidence of competence from the workplace. This can include a documented observation report, provided by a qualified Street Works supervisor or assessor.

Supplementary evidence

Evidence of underpinning knowledge in connection with the requirements of signing, lighting and guarding of excavations.

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Element 10.4 Monitor provision of portable traffic signals

Performance criteria	
<p>You must show that:</p> <ol style="list-style-type: none"> you monitor the inspection and testing of signals for correct procedures and correct functioning of equipment you monitor the positioning of signals in the correct sequence, and according to the requirements of the site location you monitor the adjustment of signal controls against the traffic conditions prevailing at the time you monitor the dismantling and removal of signals in accordance with the requirements of the Code of Practice you ensure that safe working practices are followed in accordance with current relevant specifications and procedures as specified in the Code of Practice you identify problems with the provision of portable traffic signals and demonstrate that you know the appropriate remedial action to be taken 	
Knowledge requirements	Related performance criteria
<p>You need to know:</p> <ol style="list-style-type: none"> procedures for inspecting and testing signals for correct operation 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 the correct sequence for positioning signals how the prevailing traffic conditions affect the adjustment of signal controls the requirements of the Code of Practice in respect of the dismantling and removal of portable traffic signals safe working practices for the provision of portable traffic signals problems which occur with the provision of portable traffic signals and the appropriate remedial action to take 	<p>a</p> <p>b</p> <p>b</p> <p>c</p> <p>d</p> <p>e</p> <p>f</p>
Range to be covered	
<ol style="list-style-type: none"> You must show that signals include the following: <ol style="list-style-type: none"> proprietary electrical or engine powered portable traffic lights set of Stop/Go boards You must show that safe working practices include the following: <ol style="list-style-type: none"> safe use of tools and equipment use of appropriate personal protective equipment for providing portable traffic signals, including as necessary: <ul style="list-style-type: none"> high visibility jacket or waistcoat hard hat ear defenders gloves protective footwear waterproof clothing precautions to minimise danger or inconvenience to road users precautions to minimise danger or inconvenience to site personnel precautions to minimise damage to equipment or apparatus 	

Unit 10 Monitoring signing, lighting and guarding

Element 10.4 Monitor provision of portable traffic signals

Evidence requirements

- Your evidence must cover all the performance criteria, all the knowledge requirements and all the range items listed for this element.
- You must complete the following tasks, for an actual or simulated excavation in a footway, with the conditions listed below:
 - A. Monitor the inspection and testing of all signal equipment.
 - B. Monitor the positioning of signals and associated equipment.
 - C. Monitor the adjustment of signal controls.
 - D. Monitor the dismantling and removal of signals.

Specification of works

- The work area and working space occupy the whole width of the footway.
- The site length does not exceed 300 metres.
- The working space and safety zones do not exceed 80 metres.
- The carriageway is single 2-way, 2-lane, with a speed limit of 30 mph.
- The unobstructed width of carriageway is between 3.25 and 3.7 metres.
- There are no parked vehicles or works vehicles within the area of the site.
- There must be a safety zone sideways clearance of at least 0.5 metres.
- The duration of the work is in excess of 24 hours.
- There is no alternative footway available for pedestrians.
- The location of the site and the traffic conditions require the use of portable traffic signals.

Assessment Conditions

- The assessment will be undertaken by a qualified assessor, who will observe you monitoring signing, lighting and guarding.
- Where you are observed undertaking the specified tasks in a working environment on or off the highway, the site must conform to the specifications listed above. Real equipment must be used that complies with the requirements of the Code of Practice.
- It is recognised that some supervisors do not monitor the use of portable traffic signals on a regular basis in their workplace. In consequence, candidates who are assessed at a site that is not subject to unpredictable traffic use are not required to provide supplementary evidence of competence from the workplace, although they may do so if they wish. *Candidates must, however, be observed by an assessor against the requirements for element 10.4 in order to gain Unit 10.*
- It is recognised that candidates for this unit are sometimes observed monitoring signing, lighting and guarding as shown on video. Where this takes place, the use of the video must be agreed with the external verifier for the centre, and must meet the following requirements:
 - a) the signing, lighting and guarding activities shown must conform to the specifications detailed above
 - b) the activities shown must allow candidates to carry out all the tasks specified above, and must cover the performance standards for this element in full.
- Where supplementary evidence of competence from the workplace is provided for this element, that includes a documented observation report, this must be provided by a qualified Street Works supervisor or assessor.

Supplementary evidence

Evidence of underpinning knowledge in connection with the requirements for the provision and operation of portable traffic signals.