Portable Temporary Traffic Signals (< 40mph)

RAMS012A-CEN

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1	22/12/2025	Phil Thompson	New draft

Note Under no circumstances is this document to be modified in any way without the QHSE Managers consent. Uncontrolled when Printed or Downloaded

1 Document Summary

1.1 This generic RAMS document covers the installation, operation and collection of temporary traffic signals 40mph and below and includes the optional installation of pedestrian folding signal heads?

1.2 This document has been put together using guidelines set out in the following documents.

- Safety at Street Works and Road Works
- ARTSM Guidance on the Use of Portable Traffic Signals
- Traffic Signs Manual Chapter 8 Part 1 2009
- National Highways Sector Schemes 12D

1.3 This method statement applies to all highways and roads with a speed limit of 40mph and below.

1.4 This Code applies to works carried out by or on behalf of both highway authorities and statutory undertakers.

1.5 Local highway authorities have a statutory duty to co-ordinate all works in the streets for which they are responsible. Similarly, Undertakers have a statutory duty to co-operate with the highway authority and with other undertakers.

1.6 Liaison with the highway authority and other authorities or statutory bodies may be required in planning the works to obtain any necessary licences, approvals and temporary traffic regulation orders/notices in advance of the works commencing. No works are to be installed without the relevant licences and approvals in place.

1.7 No works are to be installed without the relevant licences and approvals in place.

1.8 A Task Briefing will be given for all works, detailing any site-specific information relevant to the specific works being undertaken.

1.9 If any risks, operational or environmental, are identified when carrying out the on site-specific risk assessment that compromises safety you **MUST** inform the Contract Manager immediately and prior to the deployment of any traffic management equipment.

1.10 If at any point throughout your work, you encounter an unsafe situation you **MUST** stop work and contact your manager or supervisor immediately for guidance.

1.11 All Incidents, Collisions, Near Misses and Accidents are to be reported through the Notify IM app immediately.

1.12 All Incidents, Collisions, Near Misses and Accidents are to be reported directly to the client.

1.13 This method statement is to be read in conjunction with RAMS Appendix A (Standard Clauses)

1.14 RAMS Appendix A (Standard Clauses) is to be attached / sent along with this method statement.

Note Any deviation from these RAMS or any linked documents mentioned below, must be agreed with the QHSE Manager.

2 Training

2.1 TM Operatives working under this method statement must have undergone suitable training and competency assessments to satisfy the requirements of the nationally recognised standard.

2-Way phase Temporary Traffic Signals - NHSS 12D M1/M2 Working on Single Carriageways.

3/4-Way phase Temporary Traffic Signals - NHSS 12D M5 Multi Phase Traffic Signals.

3 Vehicle

3.1 At a minimum, a traffic management maintenance/inspection or installation vehicle will be used in accordance with Chapter 8 Traffic Signs Manual.

- Conspicuous colour
- Reflective Markings (Chevrons on the rear of the vehicle)
- Roof mounted 360 beacon + rear strobe LED's
- "HIGHWAY MAINTENANCE" SIGN
- High visibility fluorescent yellow retroreflective strip alongside of the vehicle
- Company Livery
- Work lights
- Reverse Bleeper

3.2 A full digital check shall be carried out and recorded prior to leaving the yard, depot or at the shift changeover point. Any defects are to be reported accordingly.

3.3 The vehicles shall be loaded to ensure the equipment is secure and in such a manner so as to enable safe unloading in the correct order on site.

3.4 All drivers are to have driving licences checked on a regular basis (usually, every 6 months) prior to commencing any work, with a record being kept with the employee's HR Department and made available at request by main client.

3.5 All vehicles should carry a fire extinguisher for minor incidents. Major incidents would require the assistance of the fire service (contactable on 999 or 112 emergency calls only) other means of communication on site will be via a mobile phone, but, not during the installation of any TM equipment.

4 Personal Protective Equipment (PPE)

4.1 Minimum requirements on site for these RAMS for all personnel are:

Hard Hat	Eye Protection	Hi-Vis Clothing	Safety Gloves	Safety Boots
				
Colour dependent on role, with 4-point chin strap that meet EN397 & EN12 492 standards. Head torch to be worn for night working and poor visibility	Safety glasses or goggles To be worn for task specific work or when required by client / site	Long sleeve Hi-Vis Jacket EN 20 471 class 3 Hi-Vis trousers EN ISO 20 471 class 1	Minimum of cut level F	(laced only) metatarsal if required by client / contractor S3 steel toe cap with ankle support

Black	White	Blue
		
SMSTS Managers and SSSTS Supervisors	General use, Managers, Clients and Competent Operatives	Trainee workers and Site visitors

Note The above PPE requirements apply to either Yellow or Orange (this could depend on Client's requirements). PPE is to be clean, fit for purpose and identifiable with the company logo.

5 Portable Temporary Traffic Signal Limitations

5.1 Before setting up any traffic control, a risk assessment must be undertaken following the table of limitations below from the Safety at Street Works and Road Works A Code of Practice 2013 2nd impression (with amendments), June 2014 and Traffic Signs Manual Chapter 8 Part 1 2009 table 5.2 for the operation of Portable Traffic Signals. If these criteria cannot be met, you MUST consult your supervisor or Manager.

Method	Max. Speed Limit	Max. Coned Area Length	Max. Traffic Flow
Portable Traffic Signals	60 mph	300m	No Limit

Note Highway authority permission needed. Signing as per Safety at Street Works and Road Works A Code of Practice 2013 2nd impression (with amendments), June 2014 page 65 Consult your supervisor, manager or other competent person if at or near a railway level crossing. See also Safety at Street Works and Road Works A Code of Practice 2013 2nd impression (with amendments), June 2014 pages 77 to 80.

6 Unobstructed Widths

6.1 Adequate unobstructed road width is required to allow traffic to flow safely past the work site. Where such widths cannot be provided, appropriate traffic control must be considered.

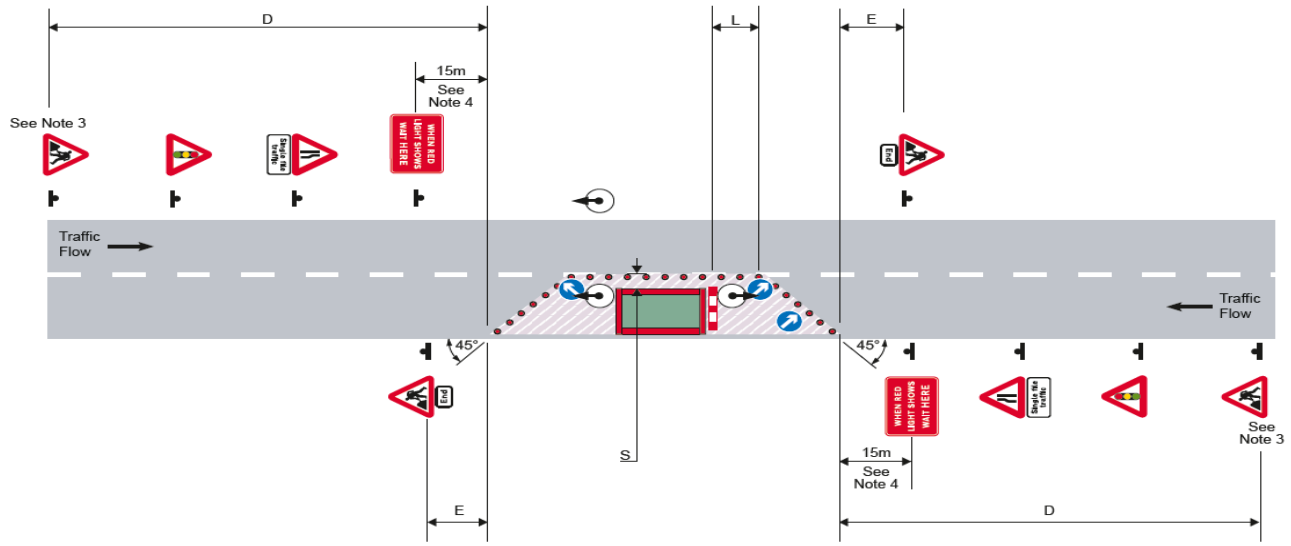
6.2 The standard widths are designed to maintain access for buses and heavy goods vehicles and must be provided wherever practicable. Where this is not practicable, and where your risk assessment concludes that it is appropriate to do so, restricted lane widths are permissible.

Work Type	Standard Normal Traffic inc. Buses & HGVs	Restricted Cars & Light Vehicles Only
2-way working	6.75m minimum	5.5m minimum
Shuttle working	3.25–3.50 m desirable width range 3.0 m absolute minimum	3.25 m desirable minimum width 2.5 m absolute minimum

7 Safety Zones

Speed Limit mph		20	30	40	50	60
Longways clearance (m)	**L**	0.5	0.5	15	30	60
Sideways Safety Zone (m)	**S**	0.5	0.5	0.5	1.2	1.2

Traffic control by portable traffic signals



8 Two Way Shuttle Works with Side Road

8.1 Where a side road is within the works it is possible not to deploy traffic signals. Where the side road has low levels of traffic it is permitted to use "TRAFFIC UNDER SIGNALS CONTROL" and "JOINING TRAFFIC NOT SIGNAL CONTROLLED" signing.

8.2 On side roads where this signing is used, the road must have low levels of traffic.

8.3 If visibility is poor, then signal control of the access is likely to be needed.

8.4 Those waiting at the un-signalled side road access must be able to see the front vehicle at both vehicular signals.

8.5 The use of "TRAFFIC UNDER SIGNALS CONTROL" and "JOINING TRAFFIC NO SIGNAL CONTROLLED" signing must never be used where pedestrian facilities are within the works.

8.6 Always install as per your traffic management plan.

8.7 There must be NO uncontrolled junctions through the controlled length carriageway.

Note The use of "TRAFFIC UNDER SIGNAL CONTROL" and "JOINING TRAFFIC NOT SIGNAL CONTROLLED" signing is not permitted on multiphase traffic signals and must not be used at any point.

9 Red & Green Timings

9.1 Red & Green timings are taken from ARTSM Guidance on the Use of Portable Traffic Signals.

9.2 Always install as per your traffic management plan and follow the timings as prescribed in the Traffic Signal Phase Diagram.

TRAFFIC SIGNAL PHASE DIAGRAM

PHASE		ALL-RED TIME (S)	GREEN TIME (S)
Note: Timings on site may vary			
P1		10	35
P2		10	35

SIGNAL CONTROL SHOULD ALWAYS BE VEHICLE ACTUATED (VA)

10 Works With Pedestrian Crossings

10.1 Where traffic signals are installed in conjunction with a pedestrian crossing, or multiple pedestrian crossings 2 traffic signals must be used on each approach.

10.2 When a pedestrian crossing is used and when no existing drop kerbs are in position pedestrian ramps will be used on both side of the carriageway.

10.3 Pedestrian crossing timings are based on the width of the carriageway. Where multiple pedestrian crossings are used the timings may vary on each crossing point.

10.4 Always install as per your traffic management plan and follow the timings as prescribed in the Pedestrian Crossing Phase Diagram.

PEDESTRIAN CROSSING

CROSSING LENGTH (m)	INVITATION TIME (S)	BLACKOUT TIME (S)	CLEARANCE TIME (S)
KERB ↑ METRES ↓ KERB			
PC1 23m	6	3	3

11 Stop & Go

11.1 Stop & Go boards are to be taken to site and left in a safe location alongside one of the traffic signal heads.

11.2 Stop & Go system to be utilised if any issues arise with the temporary traffic signals.

11.3 Stop & Go to be run in accordance with method statement RAMS013

12 Pre-Works

12.1 Prior to leaving the depot the TM Operative(s) MUST ensure the following:

- They have the correct PPE to undertake the works in accordance with the Task Briefing and any client specific requirements.
- They have in their possession their relevant Lantra training record card.
- All the required documentation is available on the Field Service System for the works they are to undertake.
- They understand what is required of them through the Task Briefing, if in doubt they are to speak to their Supervisor/Manager.

Note Depending on the client's requirements the TMO's working on these works maybe required to attend a daily briefing.

- They understand RAMS and other associated documentation for the works.
- Completed, Vehicle Daily Walk around check, including trailer if required.
- Kit is suitable for the works to be undertaken; defected kit is not to be used.

Note The TM Operative is to ensure that the local depot telephone number is clearly visible on the rear of the site signs. This is to ensure there is a form of contact in the event of traffic light failure.

A full sequence of lights MUST be carried out to ensure that all signal heads are working.

- Kit that is required for the works is as per the traffic management plan and spares.

Note In every traffic light setup, the TM Operative must have Stop/Go boards available, which are to be left on site in case the portable traffic signals break down. These should be placed under or next to each signal head.

- Kit is securely loaded on to the vehicle, vehicle must not be overloaded.
- All traffic light batteries are fully charged.

13 Arriving On Site

13.1 On arriving on site, the TM Operative MUST

- Park your vehicle in a safe area
- Carry out the on-Site Risk Assessment using the Field Service System
- Take Pre installation Photos – from a safe location.

14 Install

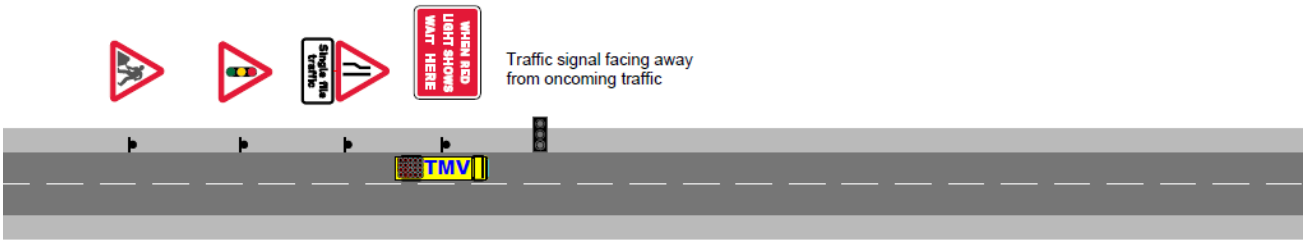
14.1 Upon reaching the site switch on amber beacons, indicate and pull over to left hand verge, and stop at the position of first sign location.

14.2 Exit the vehicle from the near side and begin to install the road works ahead sign.

14.3 Place a minimum of 1no sandbag on to each sign to ensure the sign remains upright. (Additional bags to be added depending on sign size, speed of road and weather conditions).

Note Signs are too be positioned in such a way as not to reduce the minimum footway width to less than 1 metre, or block/restrict cycle lanes. Where minimum distances and a setback of 0.45m from the signs to the carriageway edge cannot be maintained, an alternative location for the sign must be sought. Signs may be placed on the carriageway or half on half off the footway where the carriageway width is not reduced below 6.75m for two-way traffic, and the minimum footway width is not restricted.

14.4 The TM Operative will then proceed along the route towards the proposed site installing the Traffic Lights Ahead, Road Narrows, When Stop Sign Shows Wait Here sign and the portable traffic light(s). The master signal head MUST be positioned at the start taper working up stream.

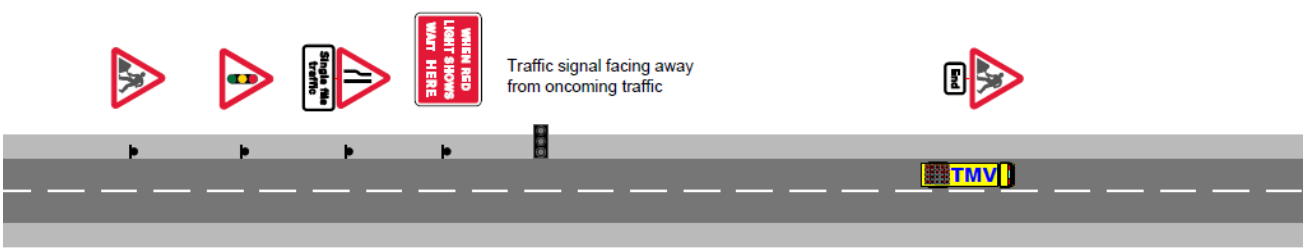


Note For multiphase signals, the TM Operative is to ensure that the appropriate 3/4-way control 'wait here until green light shows' signs are used. Signal heads are to be wheeled off the trailer or lifted off the vehicle (without batteries fitted) and assembled on the floor next to the 'Wait here until green light shows' sign. If the head post is to be attached on site, it must be slotted into the base once batteries have been placed in the base unit for stability. Once the lighting head is installed, the electronics plug to the lighting head is connected and tested prior to positioning in the carriageway.

The lifting bar MUST be used to move the assembled units into position. They should not be pushed by the lighting head.

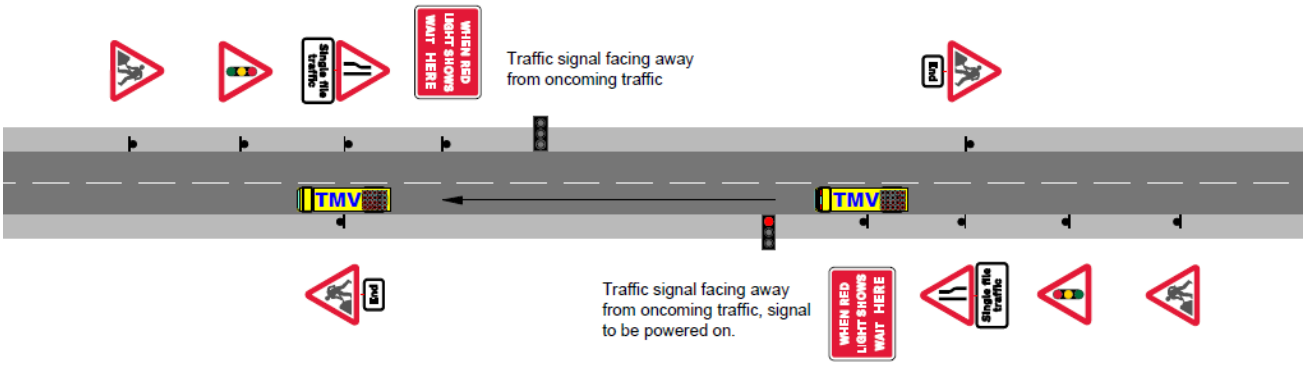
If a pedestrian crossing system is to be installed, the heads should be assembled as described in this document and positioned opposite each other on the carriageway edge. Kerb ramps or drop kerbs must be provided where pedestrian crossing systems are utilised.

14.5 The TM Operative will drive through the works site and install the road works end sign.



Note Additional signs at prescribed distances may be required due to road speed and characteristics of the carriageway. This will be picked up at design stage however, if a sight line or bend in the road hasn't been identified by the desktop survey and design, then this should be noted on the dynamic risk assessment and the additional distance signs added ensuring compliance.

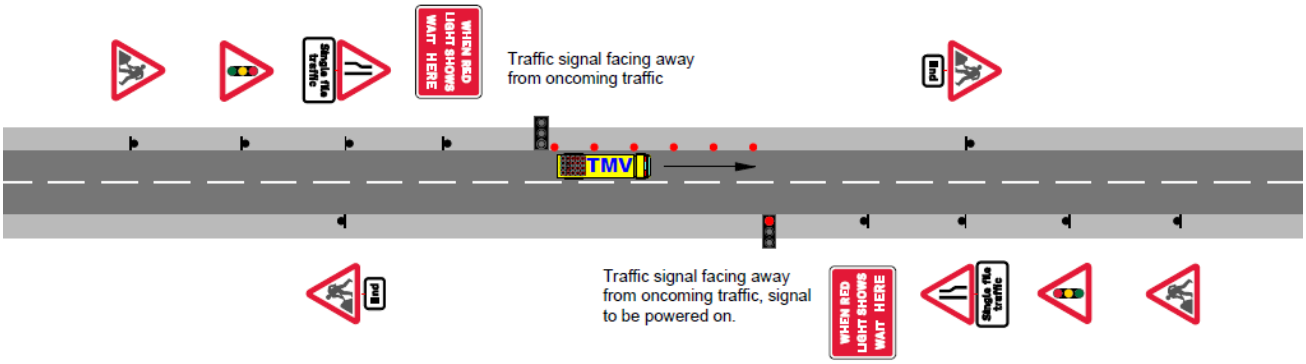
14.6 The TM Operative is to find a safe location to turn around and repeat the above operation on the opposite leg(s) approaching the works area.



14.7 The 'Slave' signal head will be placed on the verge ensuring that it is positioned in such a way that oncoming vehicles cannot see it, usually facing inwards. The TM Operative will power up this unit. The **RED** light will now be displayed.

14.8 Once all approach signage is in place proceed with the flow of traffic and park the traffic management installation vehicle at the start of the works.

14.9 Exit the vehicle from the near side and proceed to remove cones from the traffic management vehicle and place on the nearside verge for the full length of the works including lead in and exit taper cones and signs.



14.10 The TM Operative will return to the Lead Taper, this is where the Master The master signal head **MUST** be positioned at the start taper working up stream. The signals at this point, will all be facing away from oncoming traffic and activated to check the radio connection.

14.11 The TM Operative will power up this unit. The RED light will now be displayed.

14.12 The TM Operative **MUST** then set the traffic signals operation to Vehicle Actuated (VA) setting and set the red and green times based on the length of the site.

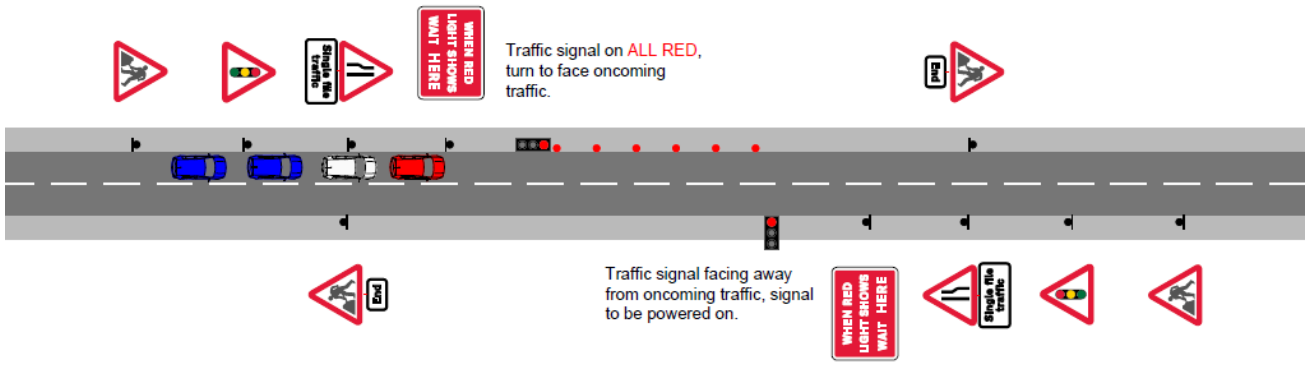
14.13 The TM Operative **MUST** then carry out a full sequence of lights to ensure that all signal heads are working.

14.14 Once the TM Operative is happy that the lights are working correctly, the **'All-Red'** setting will be selected.

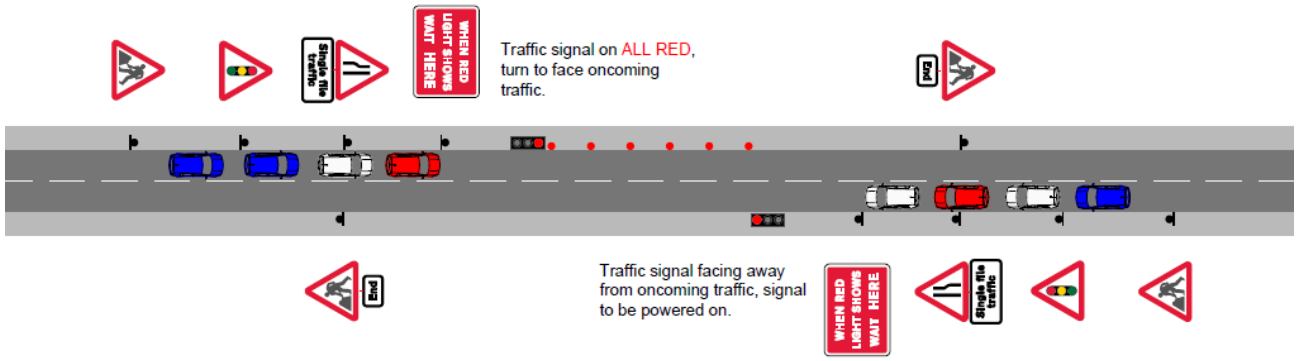
Note The TM Operative Must double check that the lights are on all red before turning the Master Head.

The overseeing authority must be consulted if signals are to be used in any other control function other than Vehicle Actuated. (See MS030)

14.15 The TM Operative will wait for a suitable gap in the traffic then turn the MASTER signal head unit towards the approaching traffic and wait for the first vehicle to stop.



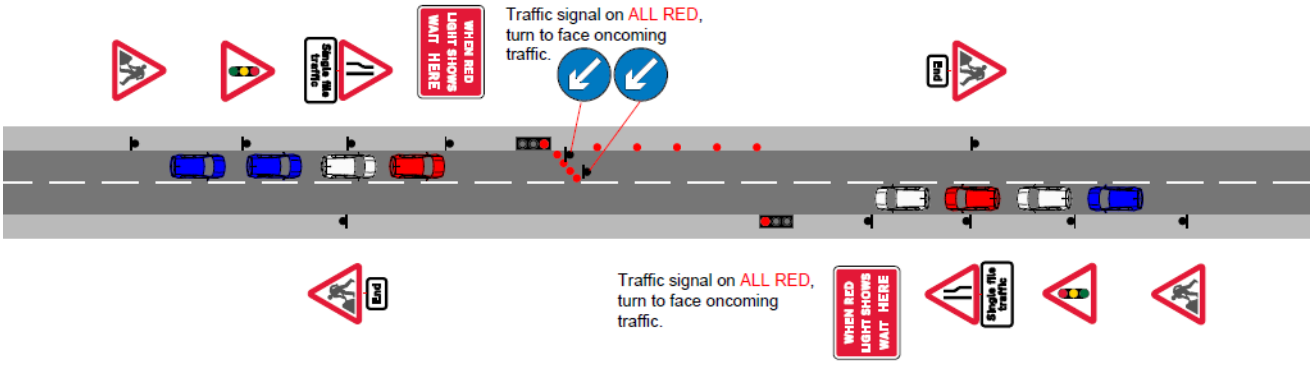
14.16 Once the traffic has stopped the TM Operative will walk to the SLAVE signal head unit, ensuring it is on **RED,** turn it to face oncoming traffic, and wait for the first vehicle to stop.



Note In a multiple TM operative working situation, the additional TM operative(s) can be positioned at the opposite signal head(s) and wait for a suitable gap in the traffic then turn the SLAVE signal head unit towards the approaching traffic and wait for the first vehicle to stop.

If on a multiphase setup in a multiple operative working situation, the TM operatives can share this task between them

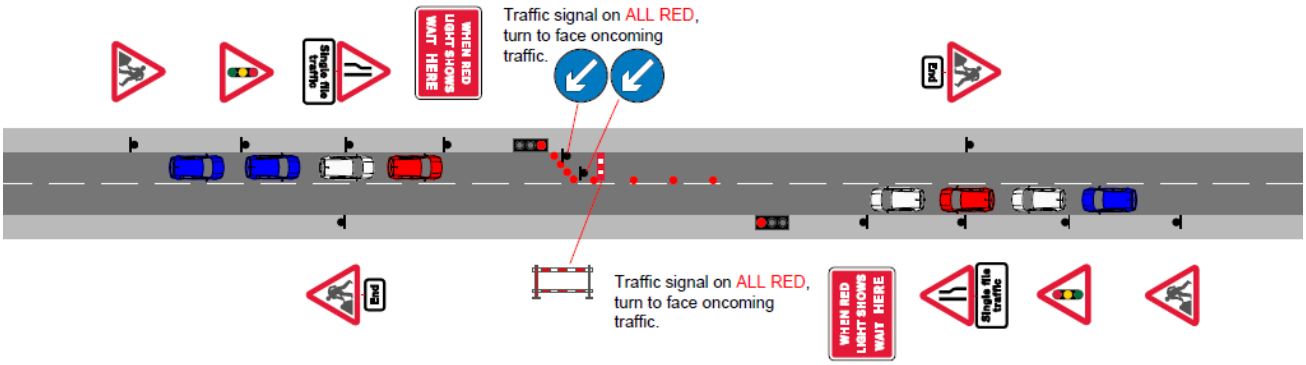
14.17 Once traffic is stationary at each signal head, the TM Operative(s) will install the lead in taper cones and 610 directional arrows.



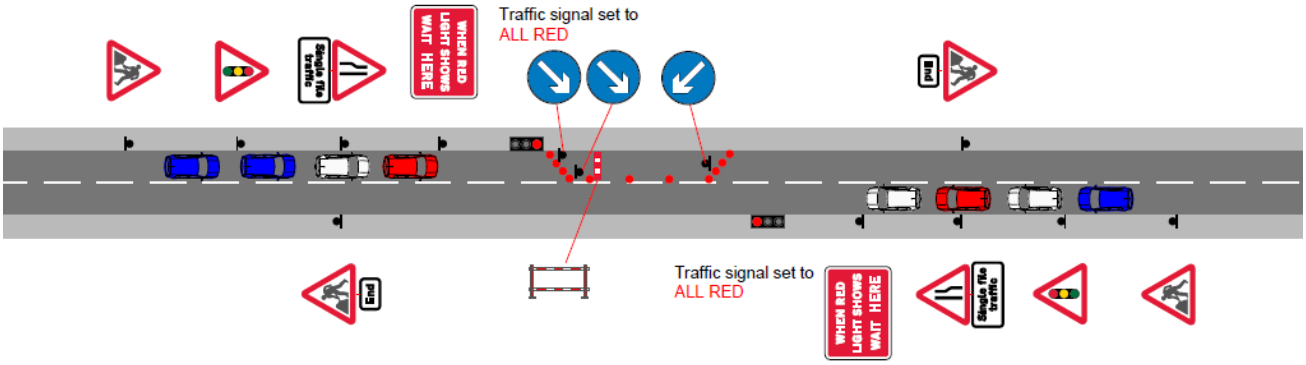
Note If a separation island is required (also known as a bubble or ghost island), this should be built in now. Install the lead taper with cones at a 45-degree angle and erect the directional arrow at the start, mirrored with a second directional arrow c/w Barrier Board on the lead-in taper. Lead out cones should also be at a 45-degree angle. Any separation islands must not extend the total length of the works beyond the maximum working length of 300m between stop signs.

14.18 Once the lead in taper has been installed pedestrian barrier or barrier board is to be installed at the end of the longitudinal (Longways) safety zone in line with the speed of road.

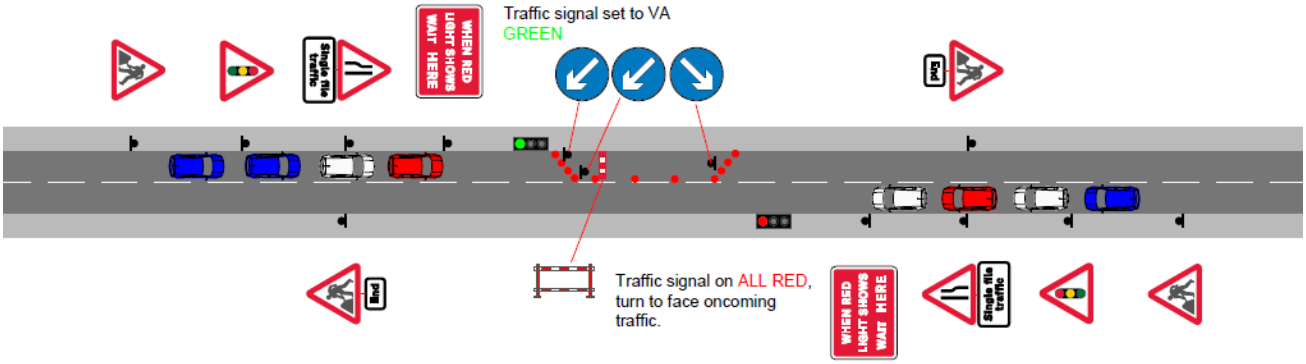
14.19 Ensuring the traffic management vehicle is now in a safe location the TM Operative will walk out longitudinal coning from the nearside verge to the required width for the full length of the work up to the exit taper.



14.20 The TM Operative will then install the exit taper and 610 directional arrow.



14.21 Now that all signs and cones are established, the TM Operative(s) will return to the master box, and select the Vehicle Actuated (VA) setting. Traffic will now flow under the control of the traffic signals.

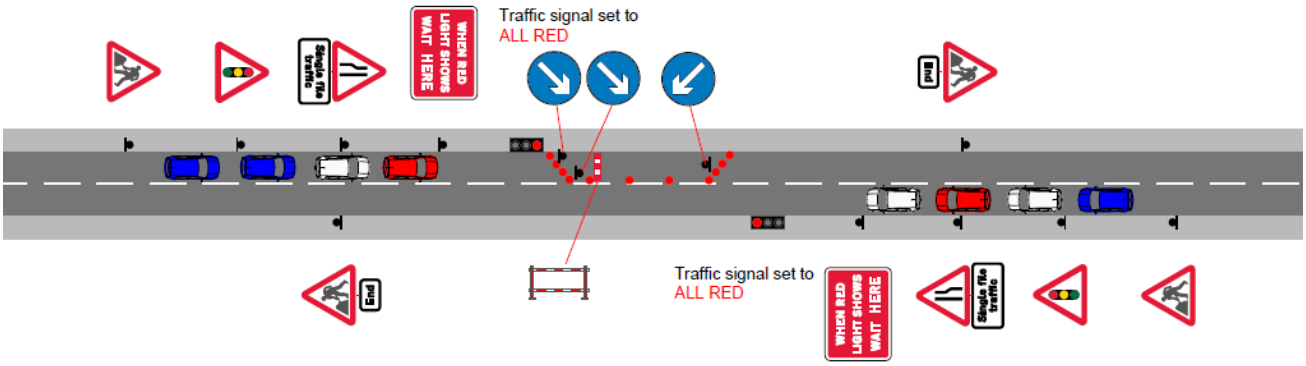


14.22 Take photos of the completed installation from a safe location.

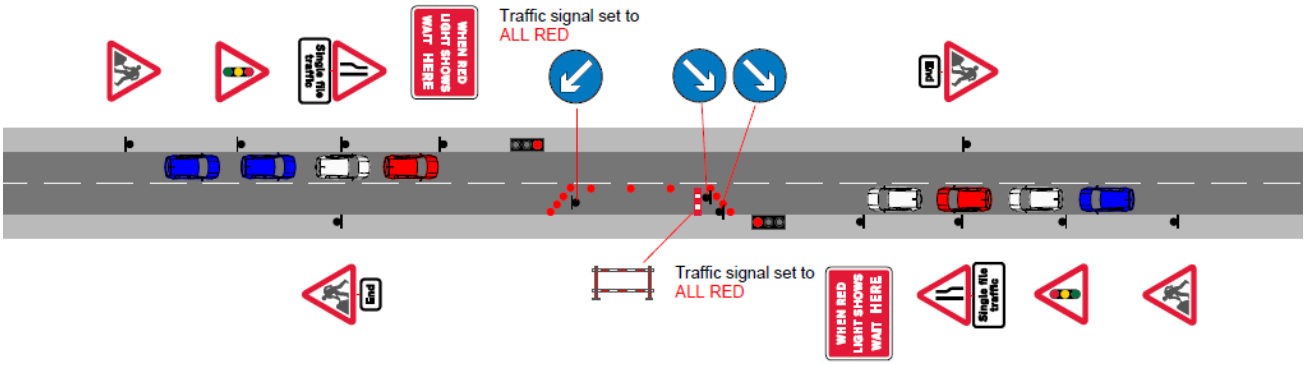
14.23 The above procedure will be repeated in the same manner if the setup is a 3 or 4 way.

15 Switch

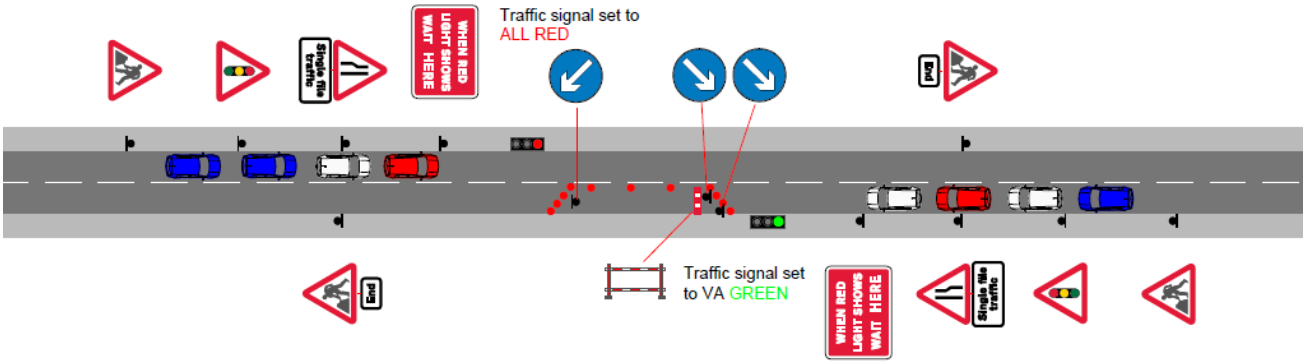
15.1 TM Operative will set the portable traffic lights to **ALL RED**, and check to ensure that they are remaining on all red.



15.2 Once the TM Operative is certain that the portable traffic lights are remaining on **ALL RED**, they will then switch the longitudinal coning, tapers and 610 directional arrows to the opposite carriageway.

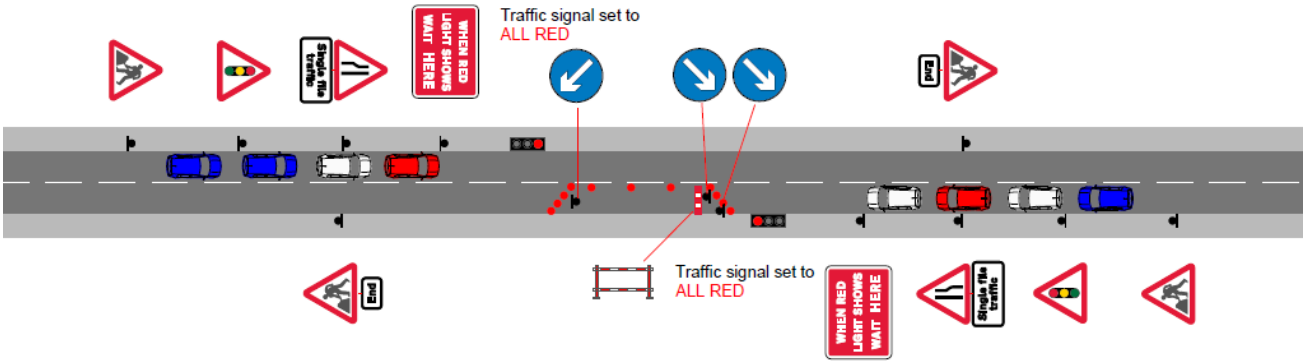


15.3 Once the closure is installed TM Operative returns to the Master head, they can return the portable traffic lights to Vehicle Actuated (VA) and allow the traffic to flow under the control of the traffic signals.

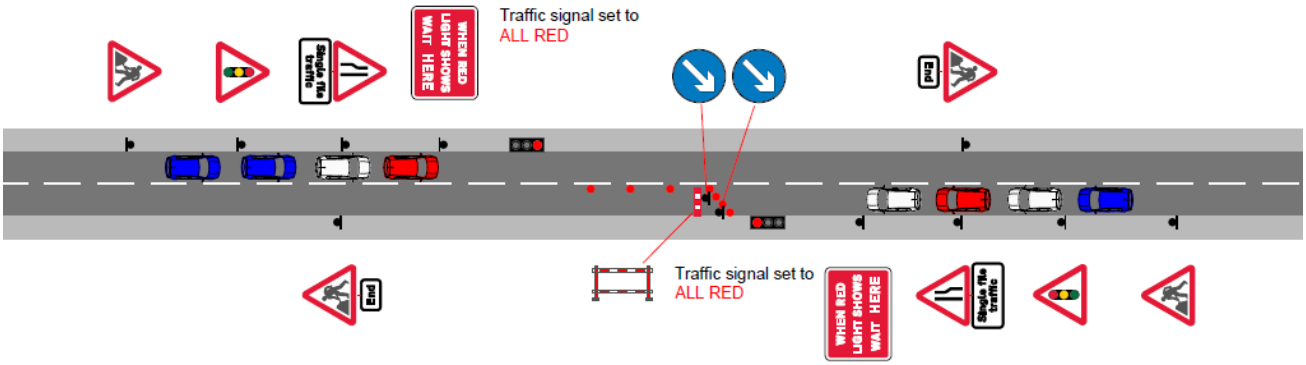


16 Removal

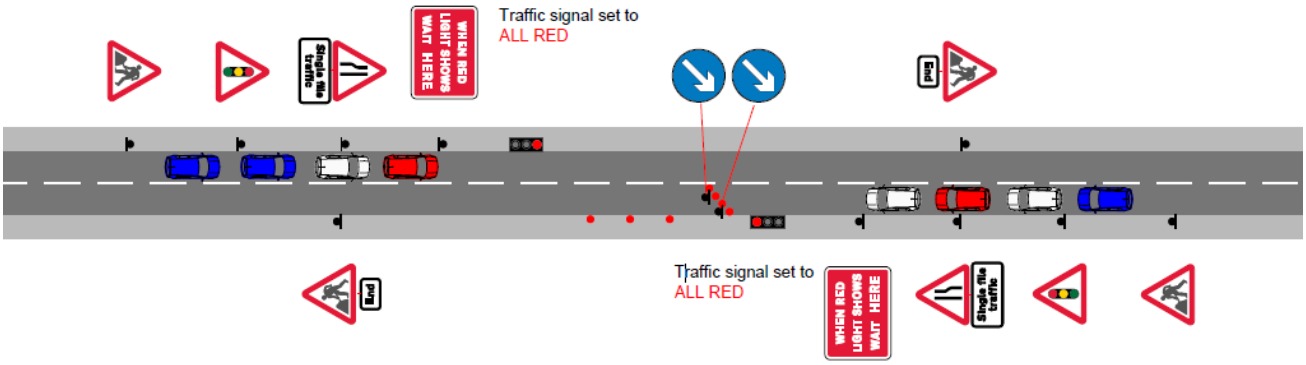
16.1 TM Operative will wait for a suitable gap in the traffic and then set the portable traffic lights to **ALL RED**, and check to ensure that they are remaining on **ALL RED**.



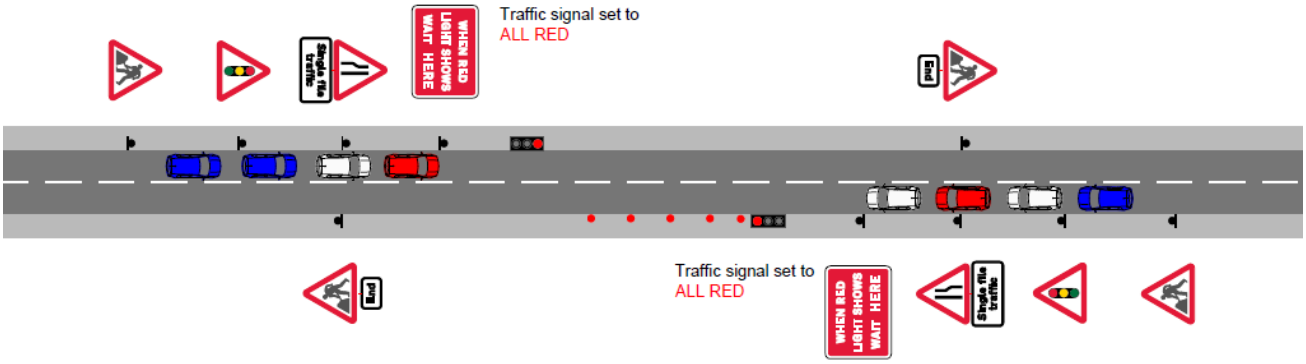
16.2 Once the TM Operative is certain that the portable traffic lights are remaining on **All RED**, The TM Operative will remove the exit taper cones and 610 directional arrows and place them on the nearside verge.



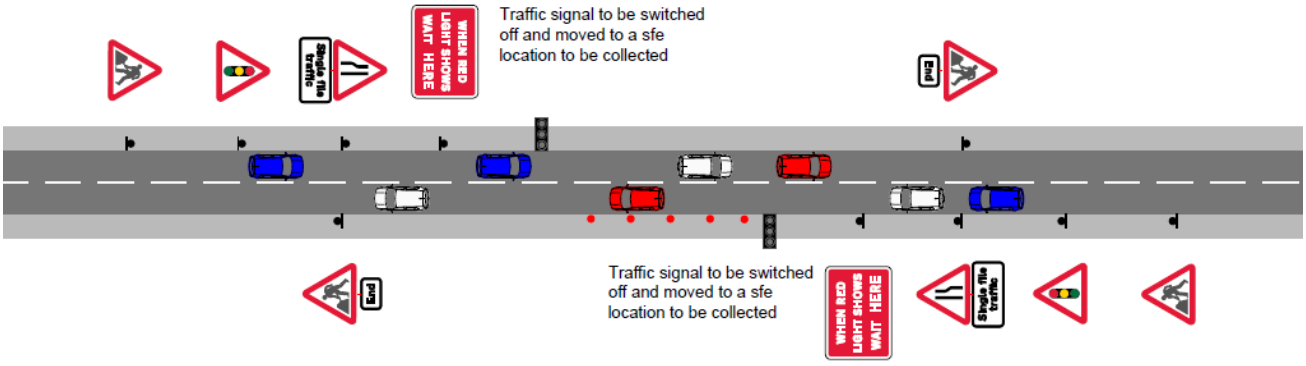
16.3 The TM Operative will then proceed to remove the longitudinal cones to the nearside verge working against the flow of traffic.



16.4 Upon reaching the lead in taper the TM Operative will remove all coning/signage to the nearside verge.



16.5 Once cones, arrows and any works access signs are removed, traffic signal heads can now be switched off and moved on to the footway / footpath or nearside verge allowing traffic to now continue normal operation.

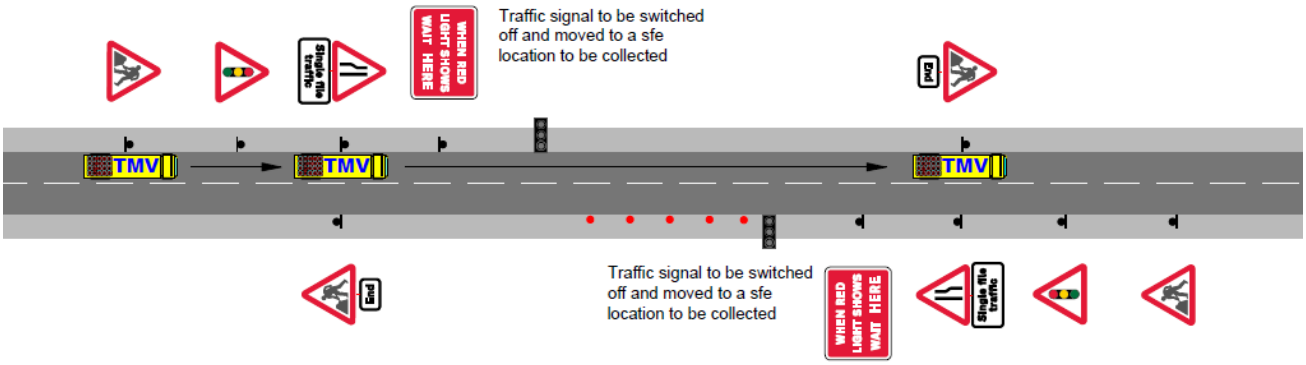


Note Where permanent signals are to be turned back on, a representative of the signal supplier should be on site to switch over to the permanent system as the temporary signals are turned off. Hatton operatives are not permitted to interfere with other equipment providers assets, unless specifically trained and authorised to do so. Unauthorised tampering with permanent signal controllers or other equipment owned by others is strictly not permitted. Our equipment will not be removed until the permanent system can be activated.

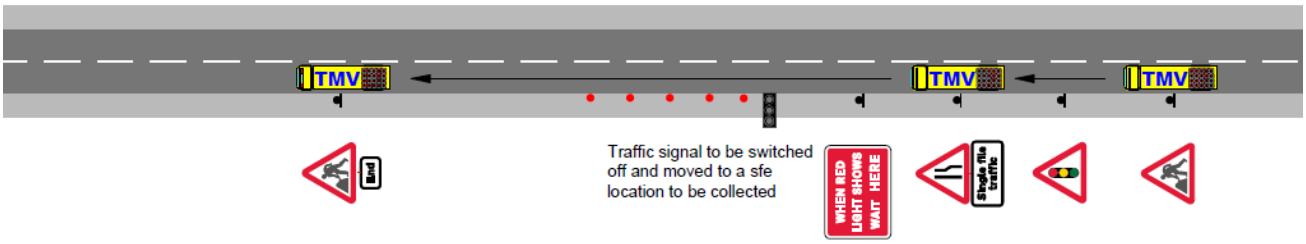
16.6 Proceeding with the flow of traffic find a safe place to turn around and proceed back to the works site.

16.7 Upon reaching site switch on amber beacons, Indicate and pull over to left hand verge, and stop at position of first sign location.

16.8 Exit the vehicle from the near side and begin to remove the road works ahead sign. The TM Operative will then proceed along the route towards the proposed site removing the Traffic Lights Ahead, Road Narrows, When Stop Sign Shows Wait Here sign, portable traffic signal and road works end sign.



16.9 Find a safe location to turn around and repeat the above operation on the opposite leg approaching the works area.



16.10 Traffic Cones/signage that was previously walked off to the verge will be picked up as works progress.

16.11 Take photos of the completed installation from a safe location.

16.12 The above procedure will be repeated in the same manner if the setup is a 3 or 4 way.

Note It is a legal requirement that all equipment is to be removed from site.

17 Multiple Operatives

17.1 In some cases, and depending on the contract, it may be necessary to appoint additional Operatives to a traffic light scheme. In this scenario, the additional Operative(s) **MUST** work side by side with the lead TM Operative following this method statement. Under **no circumstances,** shall both Operatives split up and install separate parts of the site once traffic signals are in position

18 Folding Signal Heads & CCTV Posts

18.1 Folding heads are to be erected as soon as they are off loaded from the vehicle or trailer.

18.2 Install the batteries to maintain the stability of the unit prior to erecting the head.

18.3 Hands are to be kept clear of the hinge point while the top section is swung into position.

18.4 The T-Bolt securing pin is threaded and **MUST** have an M12 Nylock nut screwed on and tightened up.

Note We do not permit the use of the D-Ring Spring clip for securing T Bolt pin on the top section of these heads, as the clip can be tampered with and removed easily. With the spring clip removed, the securing pin can over time in the wind work loose and fall out leaving the top section free to swing down in an uncontrolled manner.

18.5 The post can then be manoeuvred into position using the lifting handle.

18.6 The heads are to be commissioned with the temporary signals in accordance with the manufacturer's instructions

18.7 As part of the installation check, photographs of the Pedestrian Unit Head and Base must include the pin visibly secured with an M12 Nylock nut.

18.8 The unit identification numbers should be recorded on the tablet worksheet with confirmation of the post security.

19 Maintenance During the Works

19.1 A minimum of 3 daily site checks should be completed (Start, middle and end of shift) on fully attended sites to ensure compliance. This can be completed by the client (providing they have a competently trained operative) or by Hatton. This will be agreed at planning stage.

19.2 As a minimum, Hatton will always attend weekly and complete a thorough check and battery exchange as required.

19.3 Any equipment damaged will be replaced and documented and client made aware. Any displaced equipment will be stood up when operations allow.

19.4 Operatives must walk the length of the site visually checking and photographing sections of the site as directed on their field service tablet from a safe location.

19.5 At pedestrian crossing points, maintenance inspections must include photographic evidence of the securing T-Bolt and lock nut in place on all installed Folding Signal Heads or CCTV units.

19.6 Operatives should also record the battery voltage level at each signal head and where voltages are getting low, arrange for a battery replacement as soon as possible to avoid failure of the equipment.

19.7 All signs must be standing and appropriate to the scheme. Un-used signs should be removed from site and recorded on the maintenance job card.

19.8 All cones are to have clean and visible reflective sleeves fitted. Replace any damaged or excessively dirty cones.

20 Linked Documents

Document Name
ARTSM Guidance on the Use of Portable Traffic Signals
Safety at Streetworks and Road Works Code of Practice (Red Book)
Guidance Note GS6 (Fourth edition) Avoiding danger from overhead power lines.
OF20-CEN Task Briefing Sheet
PY002-CEN Vehicle Policy
PY003-CEN Incident Reporting Policy
PR006-CEN Spillage Procedure
PY007-CEN Lone Working Policy
PY036-CEN Health & Well Being Policy
PY051-CEN Working at Height Policy
PY053-CEN Personal Protection Policy (PPE)
RA015-CEN Working Near Water
RAMS025- Works at or near a level crossing in place.
Traffic Signs Manual Chapter 8 Part 1 & Part 2 2009.
Traffic Signs Manual Chapter 8 Part 3 2016
TR001-DHB (Drivers Handbook)

Note All the above documents can be found on the field service tablets or on SharePoint

21 Risk Assessments

21.1 The following risk assessments are based on Generic TM 12D Works; the following operational hazards and risks provide a general indication of what may be encountered during normal TM 12D works and applies to all highways and roads, except motorways and any dual carriageways with a speed limit of 50 mph or more:

- Collision of plant or personnel with moving vehicles, highway traffic or work vehicles
- Working at night
- Manual handling
- Lone working
- Driving
- Noise
- Uneven ground (slips / trips / falls)
- Violence / abuse from members of the public
- Weather conditions & visibility
- Road layout
- Fatigue

21.2 The list is not exhaustive and operational personnel **MUST** carry out an on-site dynamic risk assessment. Risk assessment to be completed on the Field Service tablet before any sector scheme 12D work is undertaken.

21.3 If any risks, operational or environmental are identified when carrying out the on-site dynamic risk assessment, you **MUST** inform your supervisor immediately and prior to the deployment of traffic management equipment.

Note You **MUST** ensure that any risk(s) that have been identified throughout these works are controlled, and if in any doubt **"STOP"** works and contact your supervisor.

21.4 If at any point throughout your work, you encounter an unsafe situation you **MUST** stop work and contact your supervisor immediately for guidance.

21.5 The risk assessments **MUST** be communicated to all personnel undertaking any traffic management 12D works.

- If ANY risk is **HIGH**, do not proceed with the operation, abandon the job, or look at alternative delivery methods.
- If ANY risk is **MEDIUM**, proceed only with caution, introduce additional control measures where possible.
- If All risk is **LOW**, proceed with work.

21.6 Risk Scoring Methodology & Risk Assessments

Likelihood Categories		Severity Score				
Category	**Description**	**1**	**2**	**3**	**4**	**5**
1	Extremely Unlikely	1	2	3	4	5
2	Unlikely	2	4	6	8	10
3	Occasional	3	6	9	12	15
4	Likely	4	8	12	16	20
5	Expected	5	10	15	20	25

Severity Score Description	
1	Minor Injuries/inconveniences. Employee can continue to work - short term local damage
2	Minor Injuries. Operative requires first aid treatment. Stops work - medium term local/short term regional damage.
3	Reportable/LTI or illness - long term local/regional damage
4	Major injury or illness with long term effects - long term widespread damage
5	Fatalities - Widespread permanent damage

Risk	Action Required
Low	Check that no other risks can be eliminated by modifications of design then proceed with design. Record residual risks
Medium	Reduce risks as far as reasonably practical. Consider alternative design or construction method. If alternatives are not available, specify precautions to be adopted. Record residual risks.
High	Seek alternative solutions. If alternatives are not available, specify precautions to be adopted & advise Senior Management & Supervisor (if appropriate). Record residual risks
Examples of Persons at Risk	Inexperienced
	Vulnerable Road Users (VRU's) including Public, Cyclists, Horse riders.
	Lone workers (LW)
	Operative (OP) (TMO or/and Ganger)
	Site Personnel (SP)
	All

21.7 Risk Scoring Methodology & Risk Assessment Works Environmental

Category	Control	Severity Score				
Likelihood	**Description**	**1**	**2**	**3**	**4**	**5**
1	High degree of control	1	2	3	4	5
2	Medium degree of control	2	4	6	8	10
3	Moderate degree of control	3	6	9	12	15
4	Slight degree of control	4	8	12	16	20
5	Negligible degree of control	5	10	15	20	25

Severity Score Description	
1	All aspects fully controlled or have negative effect upon the environment
2	Aspects exist at recognisable levels, which may impact on the environment; but any change is easily recoverable with no lasting effect
3	Will have an effect on the environment - Damage is short term and is always recoverable
4	Major Impact - Damage is not permanent, but may take some time to remedy
5	High Impact - Risk of severe environmental damage

Risk	Action Required
Low	Low impact identified - Control measure to be adopted and monitored
Medium	Medium impact identified - Ensure that the aspect & impact assessment is reviewed, further controls may be necessary
High	High impact identified - Re-evaluate the aspect & impact assessment and develop / determine greater controls
Examples of Receptor	Air (A)
	Land (L)
	Water (W)
	Natural Resources (NR)
	Community/Residence/Pedestrians (CRP)
	Operative (O)
	Ecology /Habitat (EH)
	Carbon Footprint (CF)

Key Environmental Issues	
Local effects of Pollution (air quality, noise, waste, lighting, odour	Carbon emissions and greenhouse effect global warming
Water source and ocean Pollution	Deforestation, soil erosion and land quality
Material resources & Land despoliation, supply chain issues & inequal disruption to impacts	Energy Supplies, innovations in food and fuel
	Agricultural issues arising from global trade

Hazard(s)	At Risk	Risks	PRE-RCM Risk score (L x S)				Risk Control Measures	POST-RCM Risk score (L x S)			
			Likelihood	Severity	Risk Score	Risk Level		Likelihood	Severity	Risk Score	Risk Level
Inexperienced TM operatives implementing TTM	TMO/P/SP	Major Injury or long term health effect	5	4	20	H	a. Structured Induction and Site-Specific Training before being allowed to work b. Buddying system with experienced TMOs or Supervisors c. Daily briefings and toolbox talks with clear role allocation and expectations d. Active supervision and mentoring until competence is demonstrated e. Regular competency checks and feedback loops f. Clear stop work authority, ensuring they know they can speak up if unsure	1	4	4	L
TM vehicles operating on public roads and sites	All	Not distinguishable to other motorists, risk of collision and fatal/serious injury	2	5	10	M	a. All TMIV's are marked and equipped as a minimum to the requirements of Traffic Signs Manual – Chapter 8: Part 2 Operations (2009) b. All TMIV's and TM vehicles are checked prior to their use daily to ensure that everything is in working order.	1	5	5	L
TM vehicles operating on public roads and sites	All	TM vehicle pulling off carriageway or into works area and colliding with other vehicles	2	5	10	M	a. TMIV to use beacons, indicators and use relevant access/exit points. High visibility markings remain facing the flow of traffic.	1	5	5	L

TM Vehicles	All	TM vehicle reversing and picking up TM equipment. Colliding with other vehicles, running over/crushing Operatives	5	4	20	H	a. TMO to check site is clear of other vehicles and any other site personnel/members of the public before commencing any reversing operations. b. Always use a banksman when on clients sites to reverse. c. Where available use reversing aids such as reversing cameras.	1	4	4	L
TM Installation and Removal	TMO/SP	Signs falling on TMO(s)/public/SP	4	4	16	H	a. Set up as per method. b. Only TMO's with 12D sector scheme training to be used. c. PPE to be worn, clean and serviceable. as per PPE section d. Carry out TM works at times of reduced traffic flow. e. Use appropriate manual handling. f. Always work from the safe side and be vigilant of any road user.	1	4	4	L
TM Installation and Removal Erecting signs	TMO/P/SP	Signs falling on TMO(s)/public	4	4	16	H	a. Erect signs on firm, level ground. b. Ensure adequate number of sandbags used to secure frame/sign. c. Ensure that signs are visible to the highway user and do not reduce the footway to less than 1 metre. d. Operatives trained in manual handling techniques.	1	4	4	L
Live traffic during light setup/removal	All	Struck by vehicle, serious injury or fatality	5	4	20	H	a. Use advance signage to warn road users before the setup zone b. Establish a safe working zone using cones and Chapter 8 layouts c. Ensure operatives wear correct high-visibility PPE (Class 3 minimum) d. Always face the oncoming traffic when deploying/removing heads near live carriageways e. Brief operatives on live traffic risks before starting setup	1	4	4	L

Incorrect light phasing/timing	All	Head-on collisions, public injury, reputational damage	3	5	15	H	a. Only trained, competent personnel to program and test light heads b. Phase timings calculated according to traffic flow and visibility c. Trial run conducted before going live d. Use of manufacturer's instructions or pre-approved timing plans	1	5	5	L
Power failure or battery loss	All	Signals fail, uncontrolled junction, increased crash risk	4	4	16	H	a. Fully charge all batteries before deployment b. Use quality-checked battery packs or mains supply (if applicable) c. Keep spare battery packs or alternative power on site d. Regular visual checks and test cycles throughout the shift e. Stop/Go boards to be placed at the traffic lights in the event of TL failure f. Include battery maintenance in daily vehicle/plant checks	1	4	4	L
Poor visibility of lights (e.g. bends, dips, poor lighting)	All	Drivers run the red, risk of vehicle collision	3	5	15	H	a. Place TTLs where drivers have a clear, unobstructed line of sight b. Use repeater heads if visibility is limited due to bends, hills, or lighting c. Install additional warning signs in advance of signal heads d. Check visibility during daylight and low light conditions e. Consider temporary lighting or illumination in poorly lit areas	1	5	5	L
Obstruction of pedestrian paths	All	Slips, trips, impact with equipment	3	3	9	M	a. Ensure TTL heads, barriers, and cables do not block pedestrian footways b. Divert footways only with proper signage and safe alternative routes c. Use ramps or coverings over cables to prevent trips d. Brief site team on pedestrian interaction zones e. Inspect the area regularly to keep access clear	1	3	3	L

Improper placement (e.g. wrong distance between heads)	All	Confusion, driver error, accidents	3	4	12	M	a. Confirm placement using site-specific traffic management drawings b. Double-check signal angle to ensure visibility for all approaches c. Correct distances and placements before go-live	1	4	4	L
Public interference or vandalism	All	Signal moved or switched off, uncontrolled site	3	4	12	M	a. Fit anti-tamper locks or security bolts to TTL units b. Cone or barrier off the signal head to deter tampering c. Place signage warning of legal consequences of interference d. Monitor TTLs regularly during shifts, particularly on overnight setups e. Immediately report and replace damaged or moved equipment	1	4	4	L
Use of Stop/Go Boards	TMO/P/Road users	Operative struck by vehicle while controlling traffic Driver confusion or non-compliance (e.g. ignoring signals) Lack of coordination between ends Fatigue or distraction of the operative Poor visibility or lighting conditions Untrained or unbriefed operatives Slips/trips while crossing or standing in carriageway	4	5	20	H	a. Only trained TMOs operate Stop/Go boards b. PPE to be worn as per these RAMS c. Stand on firm ground, behind taper or cones, facing traffic clearly d. Radios or visual cues between both ends to prevent conflict e. Operatives clearly visible in low light (use head torch & portable lighting if needed) f. Confident handling of board, assertive presence, regular rotation to avoid fatigue g. Stop/Go use should be covered in RAMS and briefed during	1	5	5	L
Contractor's staff straying into the safety zone or carriageway	SP	Serious injury to SP	2	5	10	M	a. Light continuous barrier or second row of traffic cones and safety Line will be placed adjacent to the working space to mark the inside edge of the sideways safety zone (S) and a traffic barrier after the longways safety zone (L) to prevent any possible straying or parking of vehicles/plant in these areas.	1	5	5	L

Vehicle Movement within the Road Closure.	TMO/SP	Collision with Plant or Operatives	2	5	10	M	a. Amber Beacons to be illuminated when driving through the works area. b. Site Speed limit to be kept to 10mph (unless stated otherwise). c. Be aware of plant operating on site. Wait until the plant operator has acknowledged awareness of TMIV or other TM vehicles before passing (particularly excavators when slewing). d. Always gain eye contact with plant operators/signallers/slingers and wait for their instructions. e. Avoid any reversing on site and use a banksman to revers when reversing is required. f. Always use site access and exit points and don't enter/exit site through safety zones.	1	5	5	L
Vehicle Strikes	TMO/SP	Serious injury to TMO & SP	4	4	16	H	a. Use of cones, Barriers and signage to be used. b. Set up as per Section 5, barrier Installation. c. Only TMO's with 12D sector scheme training to be used. d. PPE to be worn, clean and serviceable. as per PPE section	1	4	4	L
Verbal abuse aggression from public	TMO	Stress, injury	4	4	16	H	a. Conflict management training. b. Clear signage to be used. c. TMO not to put themselves in danger, get into a conflict situation. d. TMO to return to their vehicle and lock the door e. Contact supervisor/police if needed f. Report and record all incidents through notify. g. Contact supervisor/police if needed	1	4	4	L
Incorrect access given to unauthorised vehicle	SP/P	Security breach, risk to site works	4	4	16	H	a. TMO to check ID or reason for access b. TMO to use access list if provided c. Escort through works when required d. Supervisor/QHSE team to review process if breached.	1	4	4	L

Trips/slips and falls	TMO/SP	Sprains, bruising, head knocks	3	3	9	M	a. Keep area tidy at all times b. Store any unused TTM equipment on vehicle c. Avoid trailing equipment around access point(s) d. Use cones to mark hazards around near access points. e. PPE to be worn, clean and serviceable. as per PPE section f. Head torch is to be fitted to Hard hat and switched on at night or in inclement weather. g. Mobile lighting to be used when required h. Vehicle work lamps to be used when loading/unloading at night or in inclement weather.	1	3	3	L
Weather exposure (heat, cold, rain)	TMO	Fatigue, dehydration, illness	2	3	6	MO	a. Suitable clothing to be worn, PPE, waterproofs in wet weather. b. Shelter breaks c. Water breaks to be implemented in extreme heat. d. Sun cream to be applied to exposed skin in extreme heat.	1	3	3	L
Manual handling of signage/barriers	TMO	Strain/injury	4	4	16	H	a. Team lifts where needed b. Use of mechanical aids (e.g., Tail lift, sack truck or trolley) c. Manual handling awareness undertaken d. Lightweight equipment to be used were possible	1	4	4	L
Lifting SLG items (signs, cones, frames) by hand	TMO	Manual handling injuries (strain, sprain, back injury)	4	4	16	H	a. TMO carries out a full site risk assessment b. TMO not to proceed with work if site unsafe and report to supervisor. c. Manual handling training d. Team lifting for heavy/bulky items e. Use of mechanical aids (e.g., Tail lift, sack truck or trolley) f. Plan load layout in advance to minimise handling	1	4	4	L
Loading on uneven or unstable ground (site)	TMO	Slips, trips, falls	4	4	16	H	a. Pre-check ground stability b. Maintain clear access and egress c. Use suitable footwear with good grip as per PPE requirements S3 Standard with laces fastened up fully.	1	4	4	L

Lifting above shoulder height onto flatbed	TMO	Musculoskeletal injuries, falling items	4	4	16	H	a. Hard Hat to be worn and fastened up. b. Use drop-down tailgates or steps c. Use two-person lift or mechanical hoist if available d. Store heavier items lower on vehicle	1	4	4	L
Poor visibility during loading (early morning/night)	TMO	Trips, vehicle collisions	4	4	16	H	a. Adequate task lighting, vehicle lights, work lights on rear of vehicle. b. Wear Hi-Vis PPE c. Site lighting in depot d. Position vehicle in well-lit area	1	4	4	L
Traffic movement during site loading	TMO	Hit by vehicle	4	4	16	H	a. Temporary Traffic Management in place b. Use of Lookout/Signaller/2ndTMO c. Exclusion zones around loading areas to be used where required d. Vehicle beacons and hazard lights to be switched on when outside the works area	1	4	4	L
Unsecured items during transit	TMO P	Falling load during transit	3	1	3	L	a. Use of vehicle-specific securing systems (straps, ratchets) b. Regular checks during journey, retighten straps when required c. Use a Load configuration plan	1	1	1	L
Poor visibility/night work	TMO/SP	Reduced safety, increased accident risk	2	4	8	M	a. Use of reflective clothing b. Illuminated signage c. Adequate lighting	1	4	4	L
Fatigue (long hours, low alertness)	TMO	Reduced concentration, increased error risk	3	2	6	M	a. Adequate breaks b. Rotate duties c. Fit-for-work checks d. Avoid excessive overtime e. Reporting of fatigue to supervisor	1	2	2	L
Reinstating moved traffic	TMO	Struck by vehicle, manual handling injury	4	4	16	H	a. Conduct task during low traffic flow b. Use buddy system c. Wear full PPE	1	4	4	L

management equipment							d. Follow safe manual handling practices e. Use IPV				
Environmental Risk assessment											
Use Of Vehicle – C02, S0x, N0x and particulates emissions	A/CRP/O	Air Pollution – Green House gases = Global Warming and Climate Change	2	3	6	M	a. Driver Behaviour Monitored, Speeding, Cornering, harsh braking and vehicle idling b. Euro VI vehicles used c. C02, NOx & PM monitored and reported to Senior Management d. Driving assessments carried out at induction. e. Vehicle policy in place f. Drivers' handbook in place g. TBTs, Alerts and Memos given to Drivers h. Vehicle serviced and maintained regularly i. Vehicles renewed on a 3 yearly cycle	1	3	3	L
Use Of Vehicle – Use of fossil fuels (natural resources)	NR	Material resources & Land despoliation, supply chain issues & inequal disruption to impacts	2	3	6	M	a. TBTs, Alerts and Memos given to Drivers. b. Vehicle serviced and maintained regularly. c. Vehicles renewed on a 3 yearly cycle. d. FORS Silver accreditation in place e. 14001 Accreditation in place. f. Fuel, MPG, Ltrs mileage reports reviewed by Senior Management	1	3	3	L
Refuelling of Vehicle/Plant - Use of fossil fuels (natural resources)	W/L/H	Water source and ocean Pollution, Deforestation, soil erosion and land quality & Biodiversity loss	2	3	6	M	a. Vehicles are filled up in a controlled environment. b. TBT given regarding Spillages/pollution c. Weekly walk around checks are carried out by the DM's	1	3	3	L
Vehicle Plant Maintenance - Use of fossil fuels (natural resources)	L/W/NR/EH	Water source and ocean Pollution, Deforestation, soil erosion and land quality & Biodiversity loss. Material resources & Land despoliation, supply chain issues & inequal disruption to impacts	2	3	6	M	a. Supplier of the vehicle carries out the maintenance and not on our sites. b. Minor top ups carried out on vehicle and plant, Jugs and funnels used c. Servicing's dates are monitored by the TAF at each depot to ensure the vehicles/plant is serviced on time	1	3	3	L

Emissions to land or water from spillage of fuel or oil											
Disposal of Waste - Failure to follow waste hierarchy Failure to comply with Duty of Care Avoidance of disposal of waste	All	Local effects of Pollution (air quality, noise, waste, lighting, odour) Water source and ocean Pollution, Waste and International waste trade Deforestation, soil erosion and land quality, Biodiversity loss	2	3	6	M	a. Waste is collected from site and brought back to the depot to dispose of within the waste receptacles. b. A Contractor GoGreen manages waste. c. Reports are generated by the QHSE Manager and reported on at the Senior Management QHSE meetings d. Weekly walk around checks are carried out within the depots to ensure waste is in the correct areas	1	3	3	L
PPE - Use of fossil fuels (natural resources)	NR	Material resources & Land despoliation, supply chain issues & inequal disruption to impacts	1	2	2	L	a. PPE controlled and supplied b. Stock off PPE kept c. New PPE is swapped for old and recycled through the supplier where it is reused.	1	1	1	L
Site Works – Noise generation	CRP/EH	Local effects of Pollution (noise)	1	2	2	L	a. TM Vehicles have silent night reversing Bleepers fitted. b. TM Operative not to communicate by shouting, radios to be used. c. Vehicle sound systems levels to be low. d. Vehicle horns not to be activated in a built-up area between the hours of 11.30 pm and 7.00 am except when another road user poses a danger.	1	1	1	L
Site Works – Obtrusive Lighting	CRP/EH	Local effects of Pollution (lighting)	1	2	2	L	a. Lighting is only used for short periods of time when laying out a site. b. Head torches are used at night-time and point in the direction of travel. c. TM vehicle head lights are used for traveling only.	1	1	1	L

							d. TM Vehicle work lights are used for loading unloading only and not to be left on. e. TM hazard beacons are only used for warning others of stopping to set up a sight or leaving a site.					