GUIDANCE FOR TEMPORARY TRAFFIC MANAGEMENT AT MINOR STATIC ROAD MARKING SITES

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Forward

Due to real and perceived commercial competitive pressures around the lowest price possible, for many years the road marking industry has been undertaking low value short term minor road making activities using methods that do not comply with Approved Codes of Practice (ACoP) or guidance relating to safe temporary traffic management.

Working without lateral safety zones is unacceptable and puts both the workforce and members of the public at an increased risk.

Our workforce is legally and morally entitled to work in a manner that provides for their safety by the provision of appropriate lateral and longitudinal safety zones created by Temporary Traffic Management which is compliant to the codes of practice used by all other industries working on the highway.

The road marking industry has been accepting and condoning poor working practices, poor planning and lax attitudes to lateral safety for decades.

This document sets out a Safe System of Work and suitable level of planning to enable Clients, Designers and Contractors to be able to reference a standard that is relevant and relatable to the road marking industry when undertaking minor road marking operations.

The document should be used so that:

- Clients can specify a clear expectation of safety level and method of work and during procurement.
- Clients can identify contractors still willing to cut corners, not comply with legislation and place their workforce and the public at risk.
- Designers can reference a clear standard when designing safe systems of traffic management.
- Contractors can clearly identify to clients the willingness to work safely to industry and regulatory expectations in tenders and method statements.

The primary aim of this guidance is therefore to promote the implementation of effective temporary traffic management measures that protect the safety of the public and the workforce, by preventing incidents occurring at road marking sites where minor road marking operations, including refreshing of existing road markings are being undertaken.

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GUIDANCE FOR TEMPORARY TRAFFIC MANAGEMENT AT MINOR STATIC ROAD MARKING SITES

This document is authored by the Road Safety Markings Association and published by the RSMA.

It is intended to be read in conjunction with the Traffic *Signs Manual 2009 Chapter 8 Traffic Safety Measures and Signs for Road Works and Temporary Situation.* National Highways, the Department for Regional Development (Northern Ireland), Transport Scotland and the Welsh Assembly Government have been consulted in its preparation in 2021.

It has been designed in accordance with the principles set out in the *Traffic Signs Manual Chapter 8 2009* including the 2020 Update and should be seen as a supplement to achieving the minimum requirements of the code of practice that those documents represent.

Contents

RM1 General

RM1.1 This guidance deals only with the signing, lighting and guarding of minor road marking sites and does not cover hazards such as the presence of overhead electricity lines, preparatory works, the control of material delivery vehicles, or matters relating to noise, dust or fumes, all of which should be considered as part of the site-specific risk assessment for each location.

RM1.2 When undertaking a site-specific risk assessment, the contractor should follow the guidance contained within the *Traffic Signs Manual Chapter 8* as well as this document. The site-specific control measures identified should be documented on a specific risk assessment for the site and the relevant highway/road authority consulted.

RM1.3 All parties including highway/road authorities, clients, designers and contractors have statutory responsibilities for implementing and maintaining safe systems of work. This includes providing adequate lateral and longitudinal safety clearances during highway construction operations, within safe, compliant, signing and lighting and guarding (Temporary Traffic Management) of minor road marking activities and other hazards created because of this operation.

RM1.4 The contractor must undertake a risk assessment before any work is undertaken including producing a site-specific risk assessment for each location of road marking work. The risk assessment should include as a minimum, specific assessments for the marking activity, vehicle positioning, temporary traffic management implementation, operation, and removal alongside consideration of the risk to third parties or the general public for all operations.

RM1.5 Minor road marking operations often require multiple works to be undertaken in each shift by the same crew. Undertaking the site-specific risk assessment in advance is often done on arrival on site by the crew. This is often a better way of assessing risk as it enables a better assessment of traffic volumes which is critical to the approach outlined in this document. Where the assessment is undertaken on site, contractors may choose to implement a practical means of capturing the onsite output of the crews risk assessment, such as taking photos or video of the site setup implemented.

RM1.6 When assessing the risk to the general public, including the young, elderly, cyclists and equestrians, specific consideration must be given to those persons who may have a mobility or sensory impairment that may prevent them from seeing, hearing or passing a marking operation safely. Additional measures such as specifically trained pedestrian marshal(s) may be required.

RM1.7 All risks should be reduced as low as reasonably practical (ALARP) and the chosen method of work must not increase the risk to road users[1] with all risks remaining Generally At Least Equivalent (GALE) to normal conditions.

[1] ***Traffic Signs Manual Chapter 8 2016 Volume 3 Section U2.2.2***

RM1.8 All construction work known as road marking shall be undertaken by a contractor registered to *National Highways Sector Scheme 7, The Application of Road Marking Materials & Road Studs to Paved Surfaces*. Where a package of work involves other contractors for which there is an appropriate Sector Scheme (NHSS), those contractors should comply with the relevant requirements of the applicable scheme for quality management in highway works.

RM2 Introduction

RM2.1 The works operation that is commonly referred to as minor road marking, is a static construction operation comprising a single conspicuous road marking lorry of at least 7.5t Maximum Gross Weight undertaking small areas of simple road markings. Usually, clients will request works at a series of closely related geographic locations in an area to form an economic package of work. Each location will usually take less than 30 minutes and often less than 15 minutes, but will require different layout of traffic management at each location. This document provides guidance on this situation where it is not generally economic to employ a NHSS 12 registered traffic management crew to support the road marking operatives.

RM2.2 The purpose of this guidance document is to promote a uniform approach to standards of temporary signing for minor road marking operations throughout the United Kingdom. The guidance is intended to ensure that signing is to a minimum standard consistent with highway/road authorities and contractor's statutory responsibilities to protect both the public whilst travelling, and their employees when working on the road network including the provision of lateral and longitudinal safety zones.

RM2.3 The traffic management system examples illustrated in *Appendix 2* of this guidance will cover the majority of traffic control arrangements used in connection with minor road marking operations however it must always be remembered that **a risk assessment must be undertaken for each and every site**. Generic risk assessments may be adequate with an onsite prestart point of work risk assessment, provided that the organisations site management quality assurance procedure allows site variations to be made as a result of a pre start risk assessment, undertaken by the trained and competent person(s) responsible for safety on site.

RM2.4 Whatever method of traffic control or management is adopted, the effect that it will have in terms of creating additional hazards or inconvenience to all road users, operatives and adjacent properties, including those on diversionary routes, must be fully considered and the traffic control method adopted based on the least risk for road workers and road users after balancing all the relevant factors.

RM2.5 The *Traffic Signs Manual Chapter 8 volumes 1, 2 and 3,* is the nationally recognised and accepted guidance document detailing the minimum standard for all aspects of the temporary traffic management and signing of temporary hazards at static and mobile roadwork sites. It is designed to give advice to all those involved in the road works to allow them to meet their *minimum* statutory obligations for safety at temporary situations.

RM2.6 Although the *Traffic Signs Manual Chapter 8 volumes 1, 2 and 3* gives authoritative guidance in relation to temporary highway situations, it does not have any

statutory status in England and Wales but all organisations who undertake or are involved in work on the highway/road network, should comply with the principles outlined in the manual. The '*Red Book*' entitled *Safety at Street Works and Road Works* has statutory backing as an Approved Code of Practice (ACoP) for '*Street Works*' in England and Wales, and '*Road Works'* in Scotland. In Northern Ireland the manual does have statutory status under the Roads (NI) Order.

RM2.7 This document supplements the general requirements of the *Traffic Signs Manual Chapter 8 volumes 1, 2 and 3* focusing on minor road marking operations.

RM3 Planning

RM3.1 The roles and responsibilities of the client, designer and principal contractor are defined in the *Construction Design and Management Regulations (CDM) 2015* and complying with *CDM 2015* will help ensure that no-one will be harmed during the work. Clients have an influential role in ensuring that health and safety is adequately managed on highway maintenance projects.

RM3.2 Clients should:

- Appoint competent people at the right time to plan, manage and coordinate the planning and design work.
- Ensure arrangements are in place for proper planning and management of work and that the appointed principal contractor is managing all risks on site.
- Allow adequate time to undertake the work properly without rushing.
- Appoint and provide relevant information to the principal contractor.
- Ensure a construction phase plan is in place explaining how health and safety risks will be managed by the principal contractor during the dressing operations.
- Ensure that members of the public and employees are protected from the risks of construction work.

RM3.3 When planning minor road marking works activities, the requirements of the *Traffic Signs Manual Chapter 8 Volume 3, Section U2.6 Risk Sharing* shall be considered when developing a safe system of work for the works activity.

RM3.4 Highway/road authorities are normally also the ultimate client for road marking operations. The effective management of the general traffic during works operation during the packages road marking operations is one of the top risks that principal contractors must reduce as low as reasonably practicable.

RM3.5 Clients have an influential role in supporting the principal contractor to enable statutory obligations to be met, by ensuring that appropriate statutory traffic orders and permissions are obtained from the highway/road authority in advance of the commencement of packages of minor road marking work. This must be done in a timely manner and made available to allow specific temporary traffic management techniques and the most appropriate traffic control measures to be legally implemented.

RM3.6 This guidance principally covers the work to refresh and renew existing road markings which do not require time to set out the location of. It does not prohibit its use to install new road markings, but it is principally aimed at minor works that will take less than 30 minutes for a particular marking or group of markings. Larger groups of markings and work in one location that will take longer than 30 minutes should be provided with a greater level of traffic management and the installation of new road markings often follows other work that would have utilised full traffic management, usually from a specialist e.g. widening or resurfacing and it is reasonable to expect the traffic management to be retained for completion of the highway by the road marking contractor.

RM3.7 As soon as a road making or area of road markings has been identified as requiring installation or maintenance, an initial site survey should be commissioned by the client or principal designer, to consider the requirements for traffic management. This survey should be undertaken by a competent person experienced in traffic management, holding NHSS 12 Technical Supervisor qualification, or a traffic management designer to allow identification of the traffic management measures that will be required.

RM3.8 Liaison with stakeholders should be undertaken at the earliest opportunity to identify the highway authority requirements and to obtain the necessary Temporary Traffic Regulation Orders (TTRO's) to safely and legally implement the traffic control measures to undertake the planned work. Consideration should be given to seeking the advice of and involving the road marking contractor.

RM3.9 Road markings as a requirement of their purpose are often provided at locations where carriageway width is restricted or where the marking extends the full lateral width across a carriageway or traffic lane. To work on these markings will require the highway to be partially or fully closed to vehicles when undertaking the work, either to maintain lateral safety to the workforce or because there is no suitable location to park the road marking lorry it effectively can only obstruct the highway effectively closing it.

RM3.10 To comply with long standing Highway Law closure of a carriageway to traffic will require a Temporary Traffic Regulation Order for each location. When this is required for road marking it will require a disproportionate use of highway authority budget compared to the actual value of the work at a location and duration of the work location.

RM3.11 This document therefore utilises the accepted documented practice of a well-planned temporary obstruction of the carriageway to complete minor works where lateral safety and a traffic lane past the work area cannot be maintained.

RM3.12 The use of temporary obstruction technique must only be used with the knowledge and agreement of the relevant highway/road authority.

RM3.13 Use of the temporary obstruction technique has in addition to knowledge of its use by the highway authority several supporting controls, which include a short duration of 15 minutes and prior roadside notification.

RM3.14 Whilst some road marking operations can easily be completed within 15 minutes, the majority are more likely to be easily completed within 30 minutes. This guidance varies from the normal process by allowing road marking operations to obstruct the highway for the shortest period required at an individual location up to a maximum of 30 minutes. The RSMA has agreed to implement training that develops crews that are able to work in a manner that minimises the time that the road is obstructed. Appendix 3 has examples and descriptions of locations where obstruction may be commonly expected to the be the solution.

RM4 Minimising Inconvenience

RM4.1 During road marking work operations, the free movement of vehicles is likely to be impaired. Although delays may be of short duration, less than 30 minutes per location and may not impose the same restrictions as other types of roadwork, measures should be taken to ensure that the delay and inconvenience resulting are reduced to a minimum.

RM4.2 The contractor should assist the client to publicise and coordinate the works with other adjacent road or street works to ensure the expeditious movement of traffic on the network as required by the *Traffic Management Act 2004*. Advance notice of the works, particularly if the carriageway will be obstructed, and expected duration should always be given at the roadside using signs to diagram 7003[2] or other similar signage agreed with the client or overseeing organisation.

RM4.3 When the highway is obstructed during a minor road marking operation the contractor shall display a sign with information advising the highway user on the nature of the work and shall only do so when traffic flows are very low.

RM5 Traffic Lane Width

RM5.1 Adequate lane width must be provided for all traffic to safely pass a road marking operation, with sufficient additional lateral width available to segregate the workforce and highway/road user(s) using a lateral safety clearance, to minimise the probability of a collision, maintain traffic flow and maximise safety for all highway users.

RM5.2 Where insufficient width exists to maintain safety for the workforce and traffic, then traffic should be eliminated from passing the works operation. Operatives must not and should not be expected or accepted to work without suitable segregation from passing traffic.

RM5.3 Road marking is typically undertaken using a system of traffic control where alternate directions (Flows) of traffic pass the work area in sequence using stop/go boards (Signs) to direct and control traffic prior to their entry.

[2] ***Traffic Signs Regulations and General Directions 2016***

RM5.4 Where alternate one-way traffic control is introduced, it should be remembered that the *desirable minimum* width for the traffic lane past the works area should not be less than **3.25 metres** for all roads, with an *absolute minimum* of **2.5 metres** being used where buses and larger vehicles are not expected or are very unlikely to use the road during the short duration of the road marking operation.

RM5.5 Where stop/go traffic control is in use, board operators should avoid indicating long 'green' or 'go' periods to moving approaching traffic, to try and reduce the approach speed of that traffic entering the section of carriageway being used for alternate traffic flow and therefore their speed passing the works area. Short and frequent cycles of 'Stop' and 'Go' are recommended as this tends to create a lower passing speed past the works operation.

RM5.6 This guidance does not cover working on high speed roads and the lateral safety clearance may be reduced to **0.5 metres** where traffic speeds are **40 mph or less**[3], though it is strongly recommended on these roads that as much lateral safety width as is available should be maintained[3] where road width(s) permit greater than 0.5 metres.

RM5.7 Where a lateral safety clearance and or a traffic lane of sufficient width cannot be provided past the road marking operation, then the highway authority or overseeing organisation must be consulted and the implementation of a full closure of the road considered.

RM5.8 Where there is insufficient width to undertake the works and maintain traffic past the works operation and the road is unable to be closed using a temporary traffic regulation order, with the agreement of the highway authority, the contractor may consider using a system of work that involves implementing a temporary obstruction of the road following the requirements of that highway authority and this guidance note.

RM5.9 The temporary obstruction of a highway to create a work area is particularly useful on extremely narrow, typically single-track highways with very low traffic flows, locations that narrow for short distances such as traffic calming measures.

RM6 Signing Principles

RM6.1 The purpose of signage is to warn, direct, inform and guide highway/road users safely past an area of temporary hazards, the roadwork.

RM6.2 When planning roadworks the following key questions must be asked:

"Will someone using the road or footway from any direction understand exactly what is happening and what is expected of them?"[4]

"Have I made the site safe to work in and for the general public?" [5]

[3] ***Traffic Signs Manual*** Chapter 8 Volume 1 Section D3.2.7

[4] ***Safety at Street Works and Roadworks, A Code of Practice***. October 2013 Page 4.

RM6.3 This guidance has been created around the standard minimum level of traffic management equipment that can be carried on a single road marking vehicle. This list if standard signage is listed in Appendix 4. Deviation from the level of equipment and the specific type of equipment will make compliance with this guidance much harder and potentially increase risk on site as the equipment is an essential part of delivering this guide.

RM6.4 The warning sign to diagram 7001[5] "*Roadworks Ahead"* with the supplementary information sign to either diagram 7001.5 *"line painting"* should be located in advance of the road marking operation on each approach direction to the area / length being worked on. The distance at which the sign should be placed from this start/finish datum point in each direction is stated in the Table A1.1 in the appendices to the *Traffic Signs Manual Chapter 8 Volumes 1 and 2*. An extract of table A1.1 is reproduced in *Appendix 3* Sign Distances of this document.

RM6.5 Table A1.1 also lists the minimum clear visibility distance that should be provided to the roadworks ahead sign, to assist approaching traffic to observe, decide and react to the information displayed. The correct placement of signs where this distance can be achieved is strongly recommended to assist with maintaining safety for the workforce and the general public, including stationary traffic waiting at a traffic control location.

RM6.6 Where the minimum clear visibility distance to the first diagram 7001 sign cannot be achieved, additional signs to diagram 7001[5] *"Roadworks Ahead"* should be placed out in advance of this first sign of the works.

RM6.7 Once approaching traffic has passed the first advance warning sign, further advanced warning signs specific to the layout, type of traffic control and type of road works operation are placed in advance of the start finish datum in each direction. Further information on typical layouts, signs and sign placement are given in *Appendix 1* Schematic Signing Diagrams.

RM6.8 When the carriageway is obstructed, warning signs to diagram 7012. *"Temporary obstruction 15-minute delay"* must also be placed in advance of the point of any areas of highway /road where this hazard occurs, or may occur, during the road marking operation.

RM6.9 The diagrams provided in *Appendix 1* Schematic Signing Diagrams of this document show examples of minimum signing requirements and sequence of work relating to multiple temporary situations that are commonly undertaken and a minor road marking operation. The sequence associated with each layout is essential for reducing risk in the operation and should be maintained whenever possible.

[5] ***Traffic Signs Regulations and Directions 2016***

RM6.10 Road marking operatives should work

- Within a coned works area with lateral safety zone of at least 0.5m or greater.
- As a pair
- When one person is focused on the task, the other should be assisting but acting as a watchperson looking at traffic movements
- Wear full company standard PPE
- Not wear headphones or clothing that would reduce the ability to hear traffic

RM6.11 All signs must comply with the provisions of the *Traffic Signs Regulations and General Directions* for colour, size, shape, reflectivity, construction and mounting. If a sign is not prescribed within these Regulations, it must only be used at roadworks with the prior approval in writing of the highway authorities' representative or in the case of Trunk Road works, the overseeing organisation. Traffic Signs must comply with the directions (TSRGD 2016) and those that do not, are not permitted to be placed or their placement approved by a highway authority, as this is contrary to the requirements of the *Road Traffic Regulation Act Section 64 and 65*. Highway/road authorities are responsible for ensuring that traffic signs used on the highway comply with the directions.

RM6.12 The sign face of all signs used must be made of retro reflective materials to comply with *Traffic Signs Regulations & General Directions (TSRG) 2016.* The use of signs with a retro reflective sign face material to at least RA2 is mandatory on all high-speed roads but is also strongly recommended as best practice on all roads on which road marking is undertaken.

RM6.13 The sign face material must be mounted on a sheet material that has sufficient structural integrity to remain a flat surface facing oncoming traffic. Where flexible sheet materials, such as canvas or plastic material are used as a sub-base to the retroreflective sign face material, it must be mounted on a supporting structure that will prevent it being deformed from a flat surface by weather or passing traffic.

RM6.14 This guidance uses an extract of Table A1.2 in the appendix to the *Traffic Signs Manual Chapter 8 volumes 1,2 and 3* to create the equipment list in Appendix 4. This minimum size of sign is related to the type of road and the normal mandatory speed of the road on which the signs are to be placed when providing traffic management within the scope of this document.

RM6.15 It is recommended that the minimum size of signs used at all road marking sites should be a *600mm* sized sign which are more suited to being used on low-speed roads where the restricted width of the highway will not allow the safe placement of a 750mm sign.

RM6.16 All signs when placed on the highway must be adequately secured with low level ballast such as sandbags, however where the site is short duration, with low numbers of low speed passing traffic, attended for the entire duration of the sign's placement with the sign in view, sandbags may be omitted. Where they are likely to be dislodged by passing traffic or weather, sandbags or other granular bagged material should be used which should be adequate

to ballast the sign for the short period it will be in place. Lateral clearances of 450mm required by the *Traffic Signs Manual Chapter 8* must be provided.

RM6.17 Traffic signs, barriers and cones must be covered or removed as soon as they cease to be appropriate or relevant, as they constitute an obstruction and are contrary to the provisions of the *Highways Act 1980 Section 174* for which the owner of the sign can be fined. Where equipment is 'lost' this should be documented by the crew after ensuring that it is definitely no longer on site and reported as the financial penalty arising from it being found will easily turn the road marking operation into a loss.

RM6.18 This guidance assumes that no equipment shall be left unattended at the roadside by a road marking crew.

RM6.19 All signs must be labelled on the rear of each sign plate or sign board with the name and contact number of the contractor or owner of the sign.

RM6.20 A *"client authority"* and or *"contractors information board"* must be placed at all locations of street work and road work. The sign should be to diagram 7008[6] or a specific design as required under the contract and may be attached to the side of a road marking vehicle when 'working'. When using the obstruction methodology in this document this side mounted sign should provide client authority name and contact information.

RM7 Single and Dual Carriageways 50 mph or More Including All Motorways

RM7.1 Where the road marking operation is on a road with speed limit of 50 mph or more (*High Speed Roads),* or *any motorway*, the traffic sign size must comply with the requirements of the *Traffic Signs Manual Chapter 8 Table A1.1* and therefore specific signs that are larger in size than *750mm* will be required. This guidance does not cover these roads and a NHSS 12 registered traffic management company should always be contracted to install, maintain, and remove all traffic management measures.

RM8 Personnel Training and Competence

RM8.1 All traffic management arrangements must be installed, maintained, operated and removed by suitably trained competent and authorised persons and organisations registered to a nationally recognised training scheme.

RM8.2 Where traffic management is undertaken by a specialist temporary traffic contractor, the contractor must comply with the requirements of the appropriate National Highways Sector Scheme (NHSS) 12 for quality management of traffic management in connection with highway works.

RM8.3 Where traffic management is being directly undertaken by members of the road marking team, those members who have any involvement with the planning, installation,

[6] ***Traffic Signs Regulations and Directions 2016***

operation, maintenance or removal of the temporary traffic management arrangements, should hold the appropriate *National Highway Sector Scheme (NHSS)* qualification to the task they are undertaking. This training scheme is managed by LANTRA Awards on behalf of the National Highways Sector Scheme 12 committee.

RM8.4 For traffic management complying with this guidance document, the qualification is NHSS 12 'T25' TTM for RSMA Guidance for Minor Road Marking for all staff with those having management or supervisory roles being recommended to hold the NHSS 12 Technical Supervisors qualification.

RM9 Vehicles

RM9.1 This code assumes that the road marking contractor's vehicle will be a road marking lorry with:

- rear mounted yellow and white thermoplastic boilers,
- of a conspicuous yellow colour over the full body and equipment colour.
- Have a company name clearly marked
- Have a rear mounted Highway or Road maintenance sign to Diagram 7404
- Display roof mounted warning beacons visible 360°

RM9.2 The guidance assumes that the lorry shall be at least 7.5t maximum gross weight and that it is adapted to provide accessible storage for the traffic management equipment listed in appendix 4.

RM10 Record Keeping

RM10.1 Comprehensive documented records are required as part of the use of this guidance. Where the use of the obstruction technique is made, the contractor shall record the start and finish time and location of each obstruction. Digital business systems are recommended to automate this documentation which can include photographic evidence of location and work on each road marking site are also being recommended.

Appendix 1 Sign and Cone Spacings Used

When a vehicle is parked such that one side of the road is effectively blocked the sign and cone detail is cones at 1.5m centres. Use of this spacing reduces the possibility of two or more wheeled vehicles pulling through. 3m centres may be used where this is considered unlikely.

When placing cones on a longitudinal run the cone detail is 450mm cones at no greater than 9m centres, a lesser spacing may be used if vehicles may pull into the parking bay e.g. 4.5m or 3m centres. When coning across a junction to close it or narrow it the cone detail is cones at 1.5m centres as indicated in the code of practices 'Safety at street works and road works, the red book' and TSM Chapter 8 detail B.

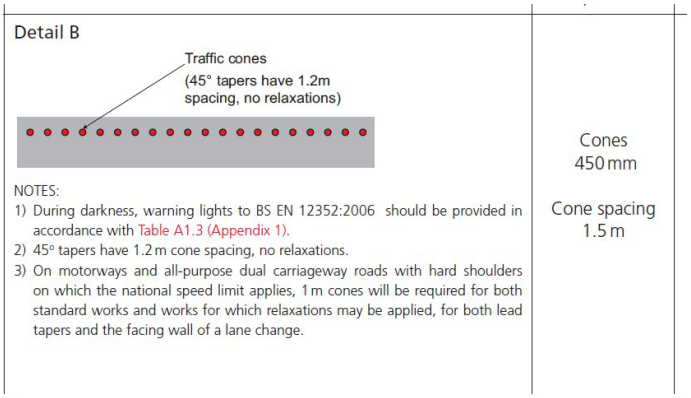


Figure 1 TSM Chapter 8 issued by the Department for Transport - Detail B

The drawings in Appendix 2 all assume that the road is a 30 mph standard urban road as this is the type of road that this technique is primarily aimed at i.e. roads that have lower volumes of traffic. The technique may be used on other roads subject to a competent traffic management designer and these advance signing details must be applied as the starting point.

Permanent speed limit of road	**Traffic signage sequence**			
30				
Both approach sides	0m	In between	20 – 45m	
40				
Side you are working on	0m	In between	In between	45 – 110m
40				
Side you are not working on	0m	In between	In between	45 – 110m

Appendix 2 Schematic Signing Diagrams

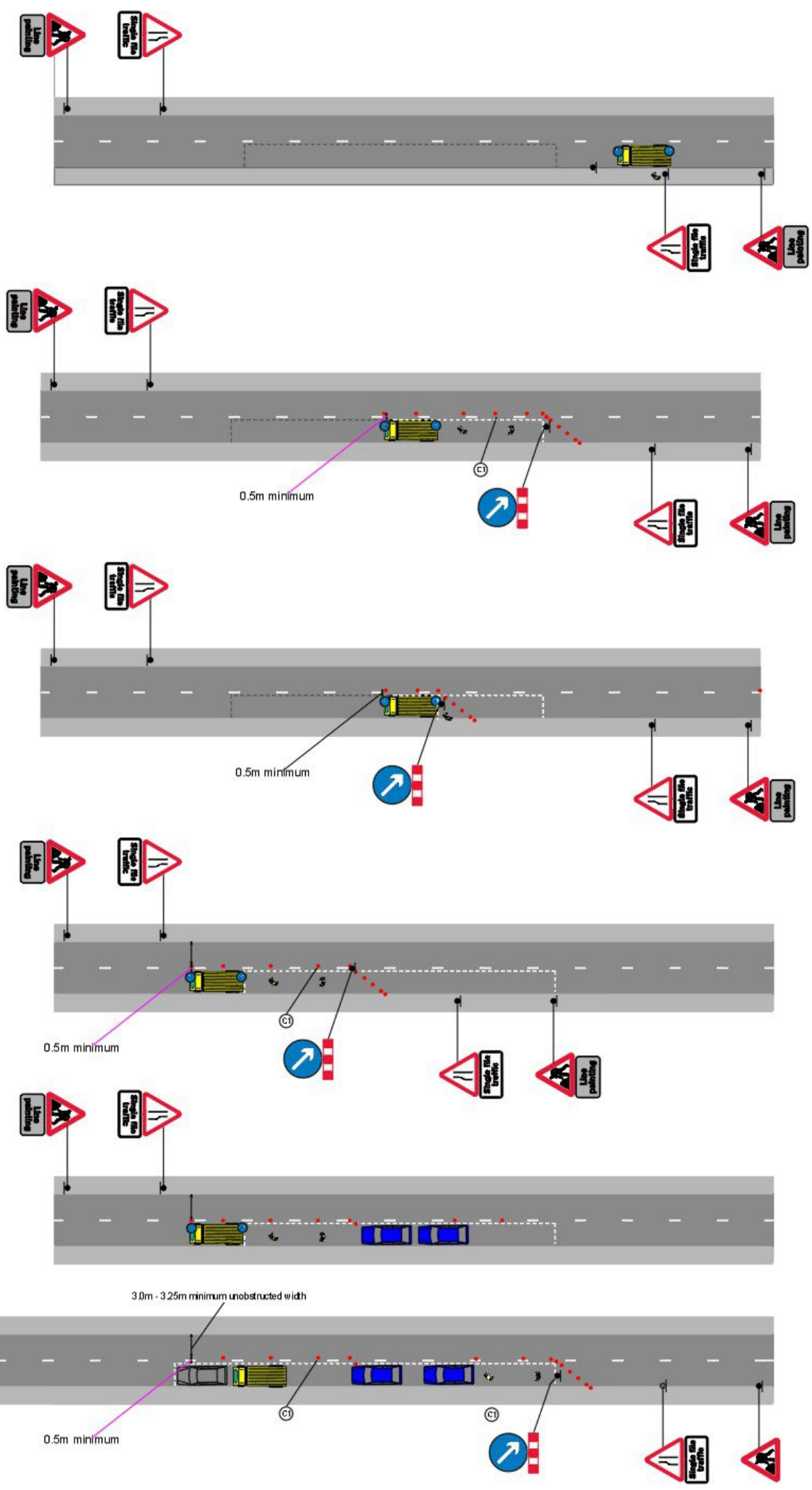
A2.1 Installation and/or Renewal of Parking or Other Bay, 30 mph Single Carriageway Road Using Give and Take

The work to reline a parking bay, taxi or other type of bay can be undertaken with simple traffic management.

The layout as drawn assumes a normal 7.3m wide single carriageway road, the layout could easily be adapted for other types of road.

- Where the road is a one-way street the signs on the left will not be needed.
- Where the road is above 7.3m wide, the longitudinal cones must maintain an open width for traffic of no more than 3.75m until 5.5m can be provided for two-way traffic

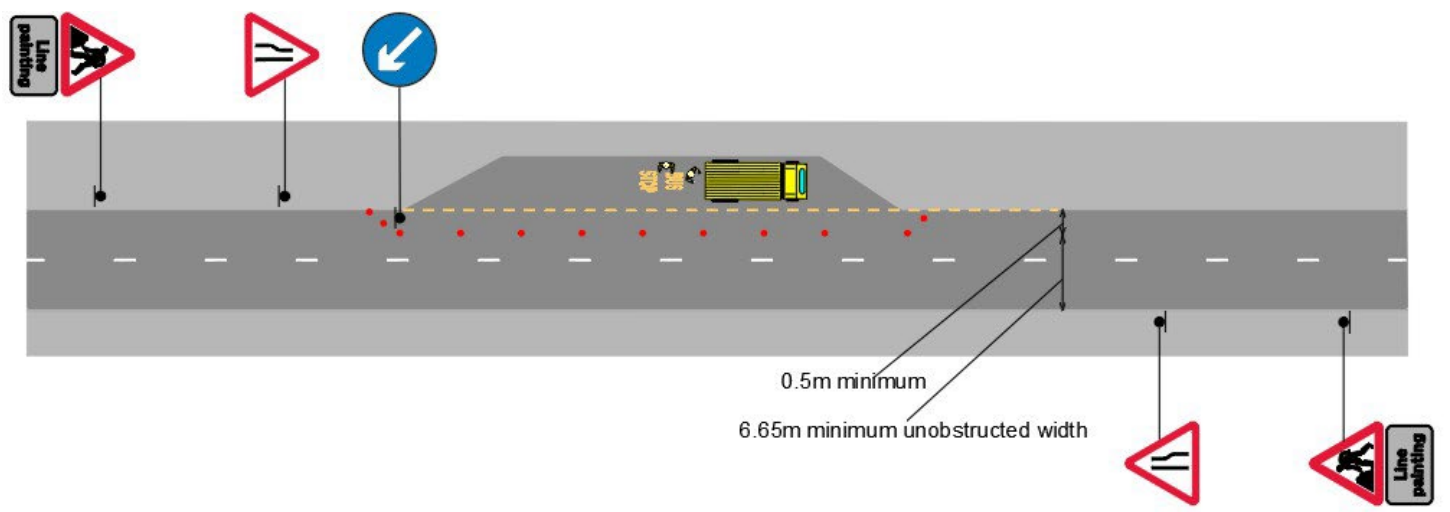
The coned length must at no time exceed 50m.

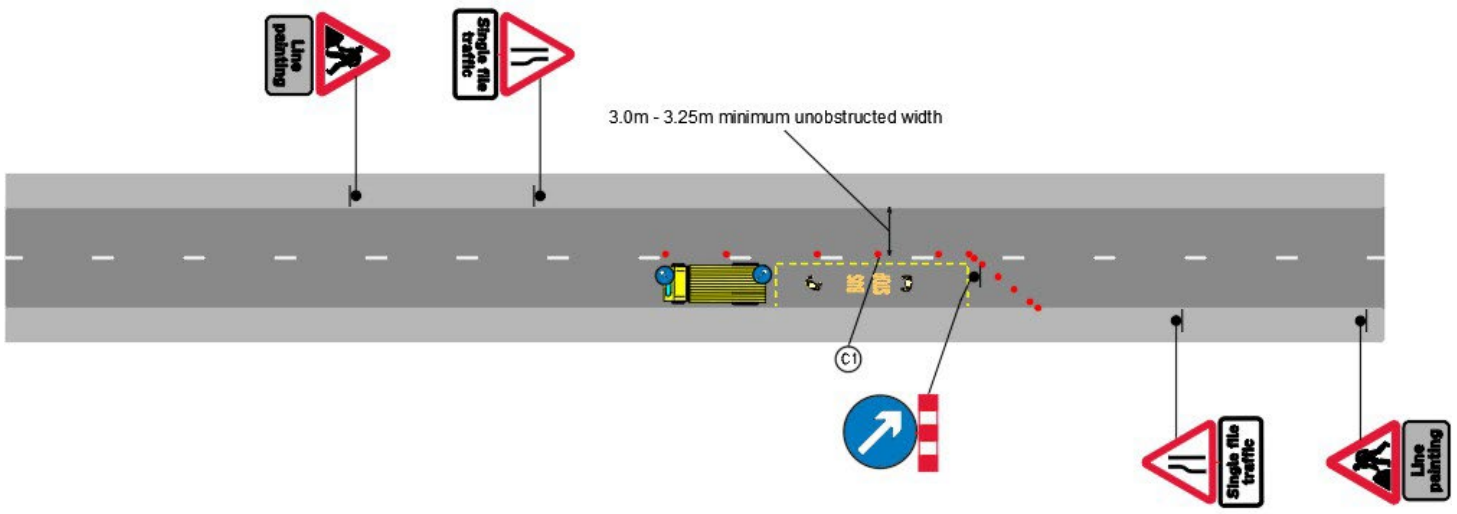


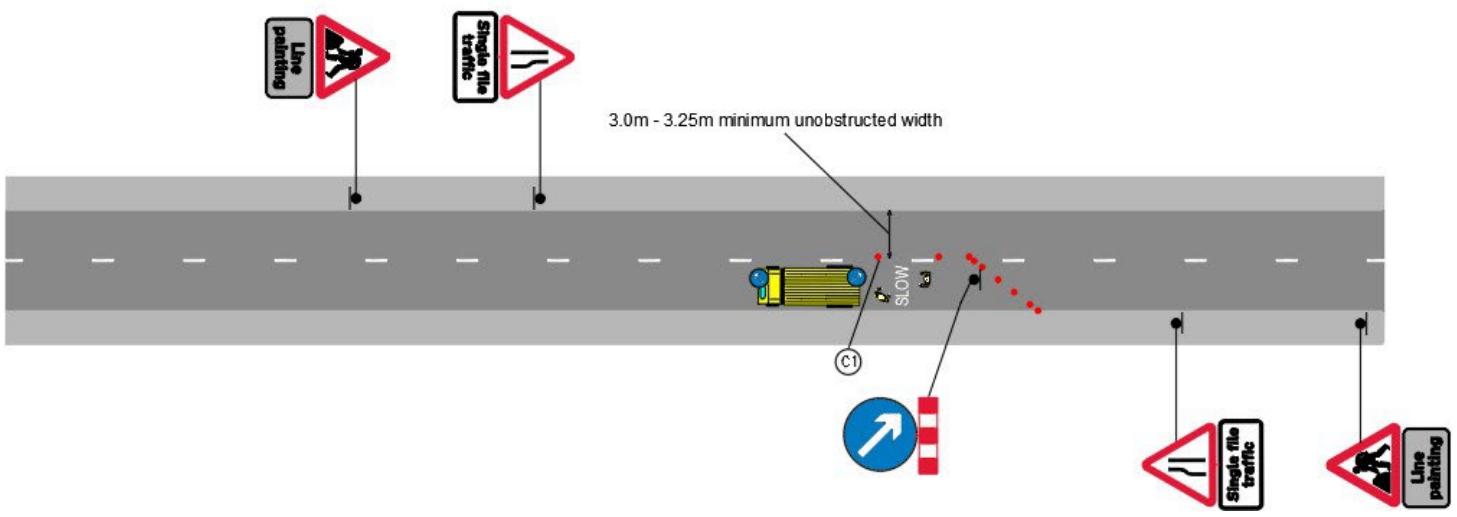
Advanced signs are set up for the full length of works if the road marking lorry can be seen from all approaches.

A2.2 Installation and/or Renewal of Offline Bay or In Road Bay, Symbol or Text, 30 mph Single Carriageway Road

Where the bay is inset, the length can be as long as is required to complete the work in one system.
Where the bay or marking is 'on-line' obstructing traffic passage the coned length of TTM shall be no more than 50m.
The vehicle shall always move and crew work with the flow of traffic.

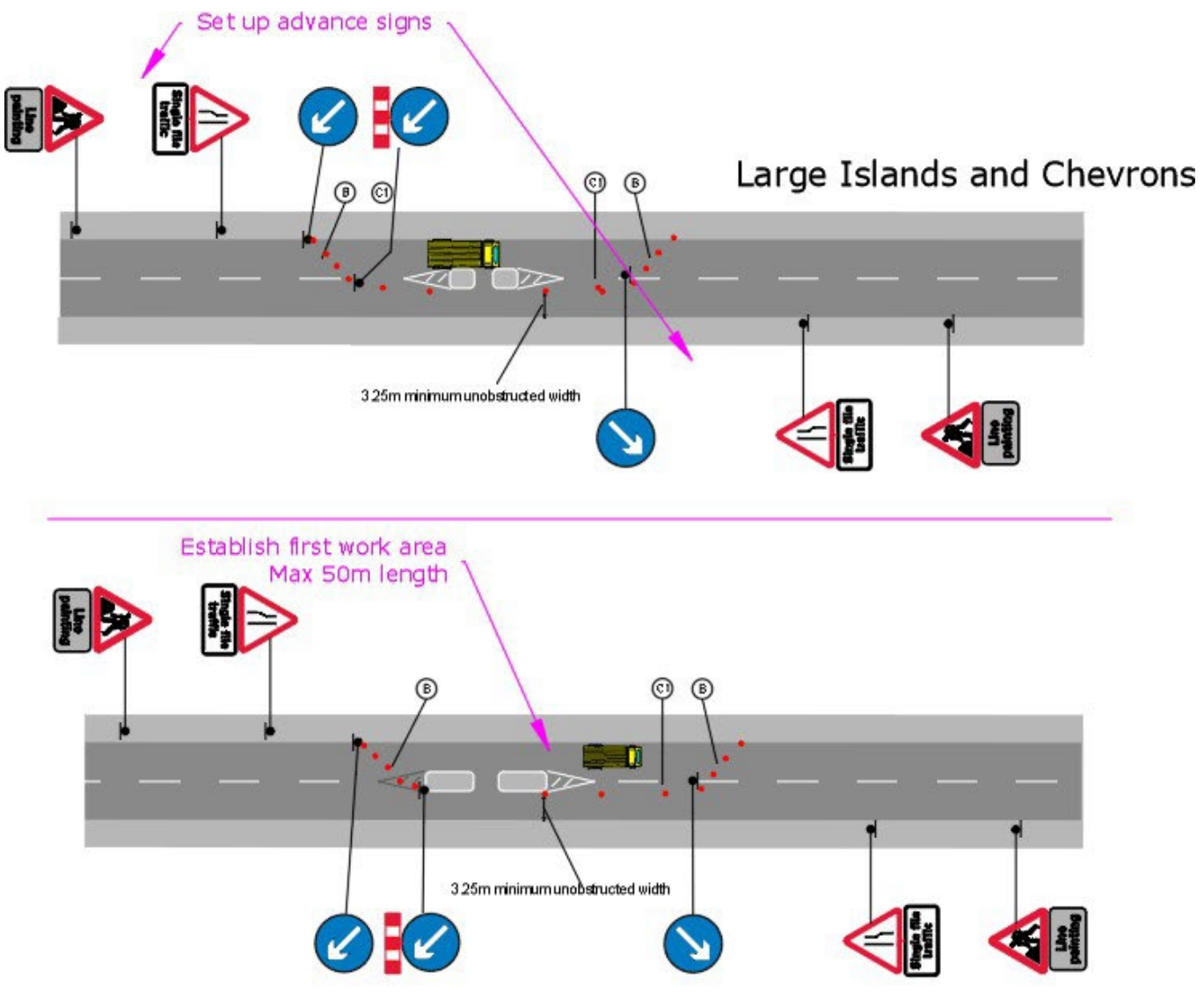


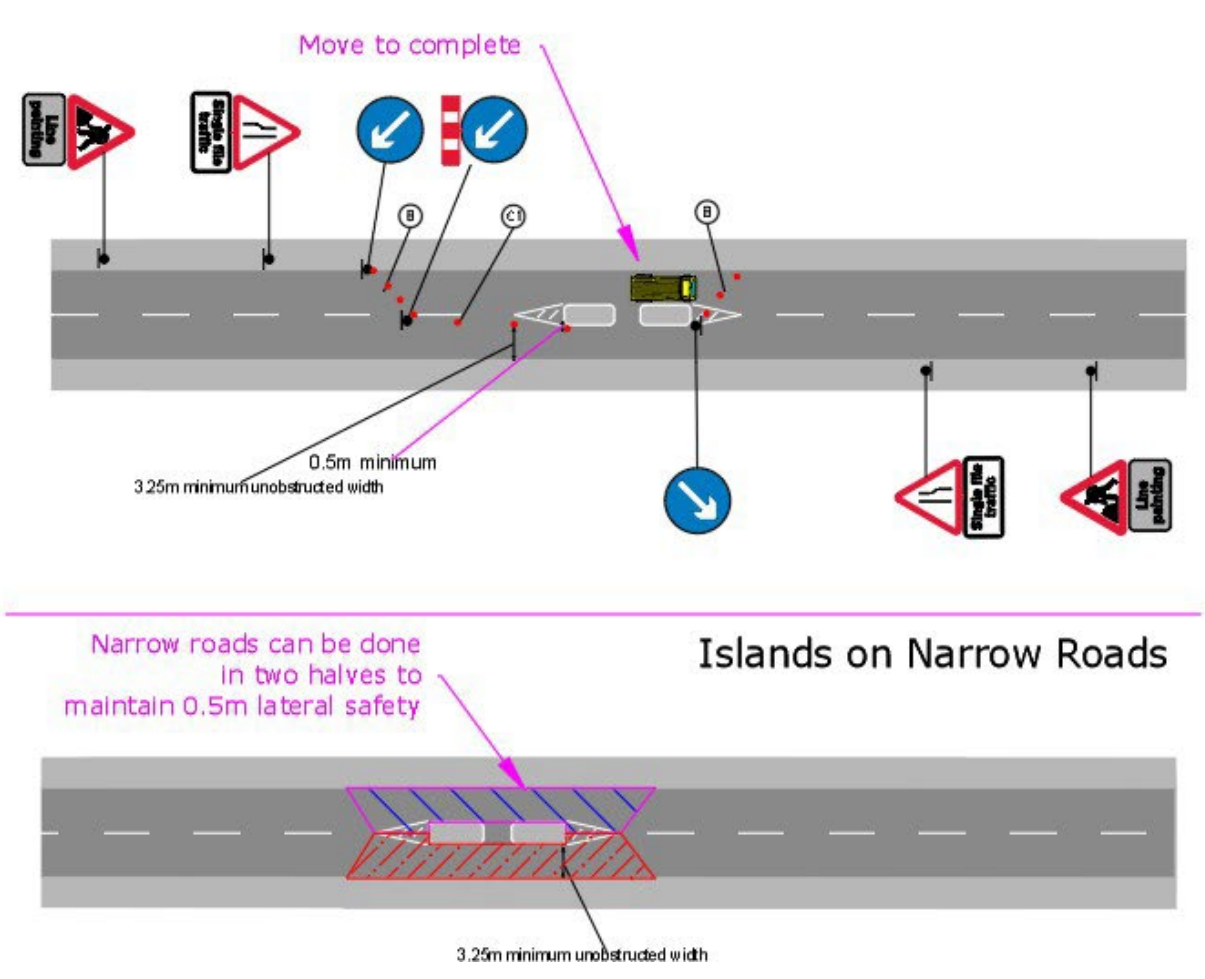




A2.3 Installation and/or Renewal of Traffic Island or Pedestrian Refuge Hatching 30 mph Single Carriageway Road

The coned length of TTM shall be no more than 50m.
The contractor can choose to divide the hatching up into work areas of whole for small arrangements, halves or quarters for longer situations to create the most efficient works operation depending on the width of carriageway remaining and length of hatch.
A carriageway that is narrow and is very lightly trafficked may have the unobstructed width reduced to 2.5m but by definition the island is provided because traffic volumes are higher to improve safety or manage speed.





A2.4 Typical Situations Where Temporary Obstruction Can Be Used

This work arrangement is a version of temporary obstruction and must be used with the knowledge of the highway/road authority on lightly trafficked roads, with generally local traffic and a reasonable alternative route is available. If this system is not possible, then portable traffic signals or stop/go will be the only alternative.
A fully marked conspicuous truck with substantial roof beacons should be used and the crew must not obstruct the road until they are ready to work. It must be obstructed for the shortest possible time period.

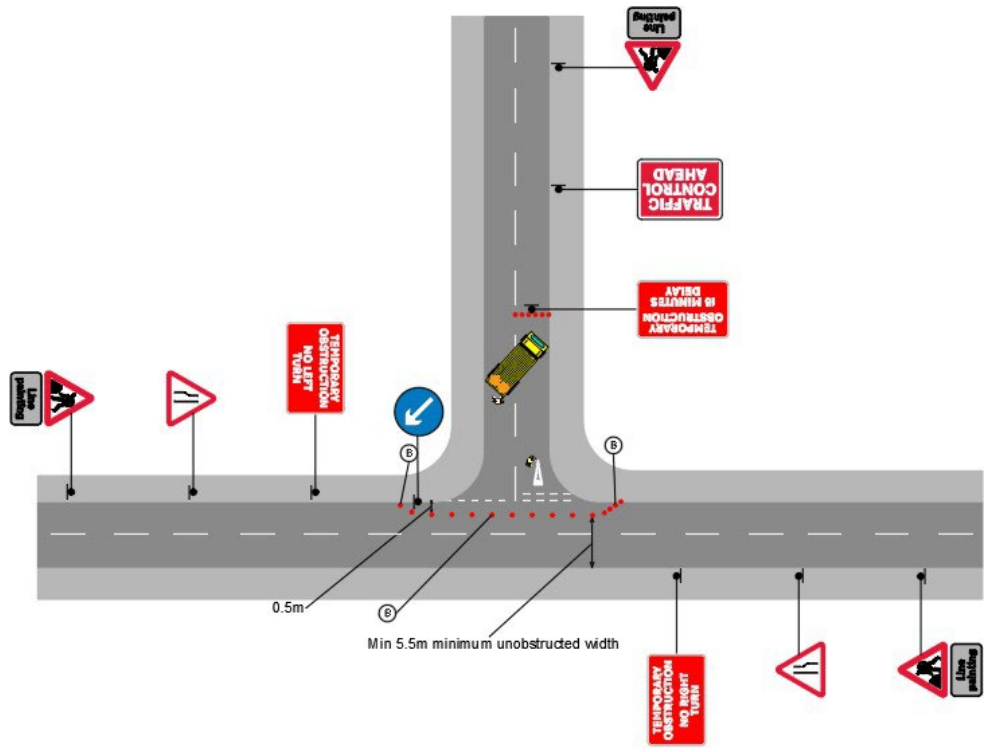


Figure 2 T junction priority

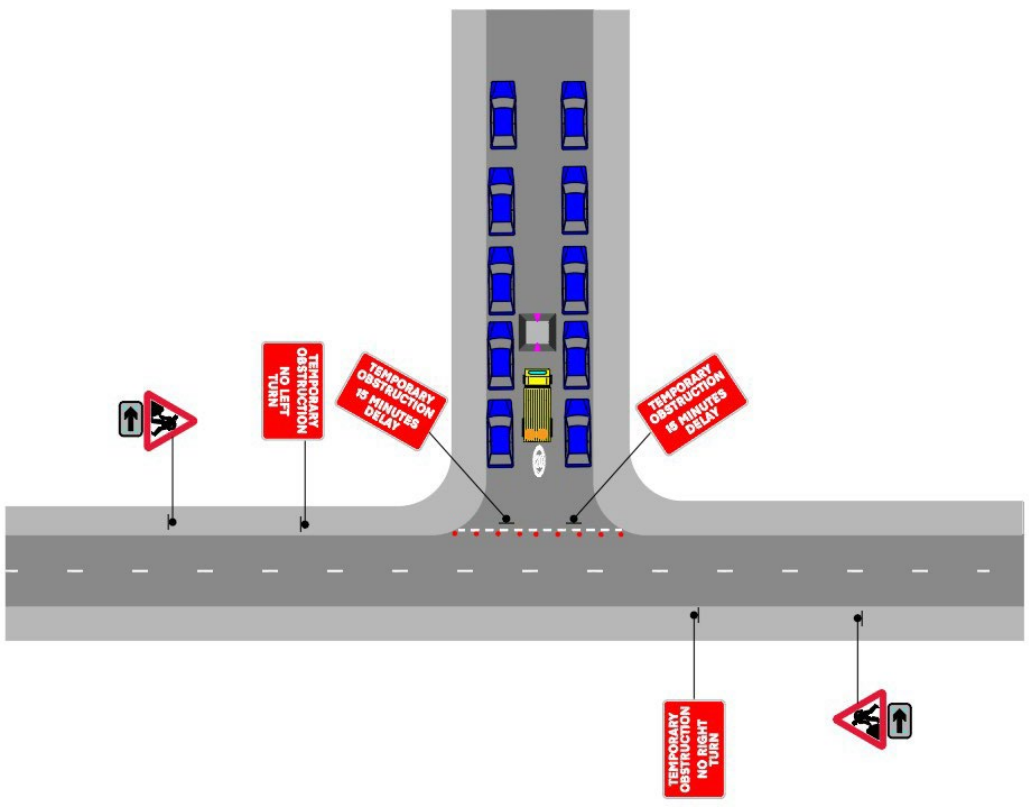


Figure 3 Side road entrance to one way system for roundels and traffic calming triangles or similar features.

When undertaking road marking operations in roads where only a single line of traffic exists without a road closure, there will be no option but to obstruct the way with the lorry.
This means that traffic can only be dissuaded from using the route and if traffic enters the road, they will need to wait at the rear of the work location.
On completion of each location the lorry will need to pull into a gap or drive around to restart the work. Therefore, this method, whilst suitable and possible, shall only be used where a client specifically declines to provide a road closure order or notice or obtaining one is not practicable.

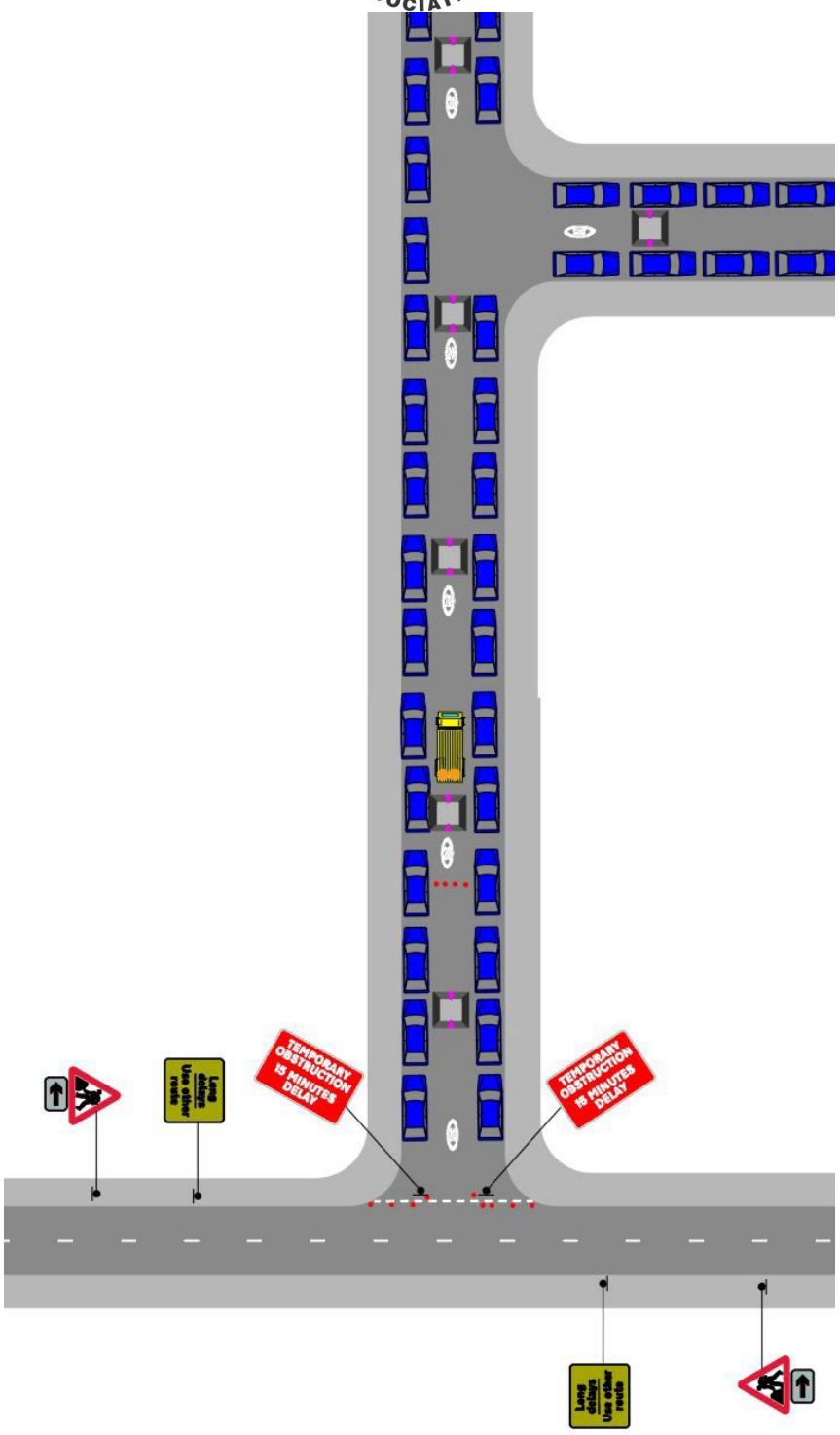


Figure 4 markings within road system

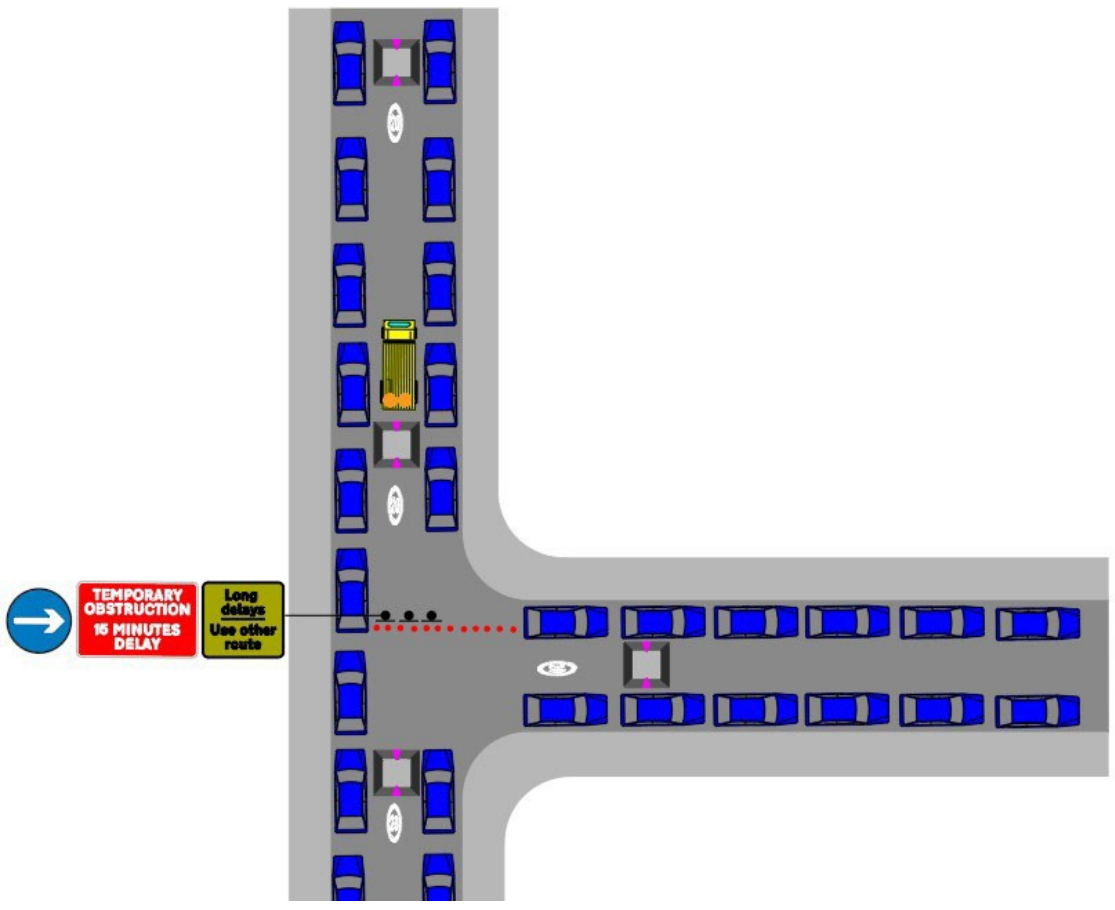
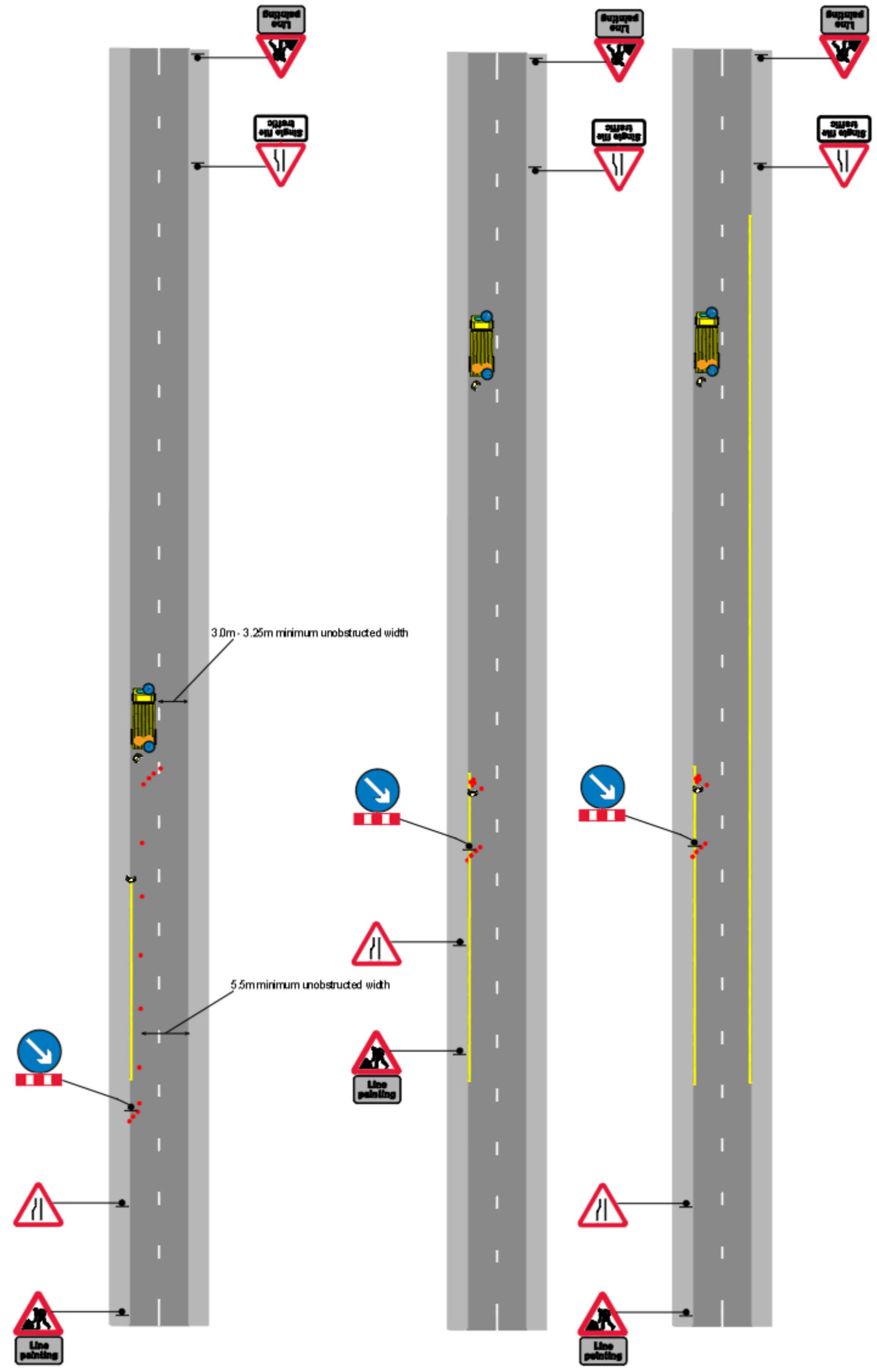


Figure 5 Junctions within side streets to allow in lane works

A2.5 Longitudinal Line Marking Operations



When undertaking longitudinal line marking there is no restriction on the length that can be coned when providing two-way traffic flow, the lorry is the only length of notional give and take working.

This guidance provides 30 cones for suggested length of 250m before moving up, but if the crew is undertaking regular length of renewal, then additional cones can be carried to enable greater length to be placed, so long as two-way traffic can be maintained.

Roads requiring longer lengths of yellow lines are also frequently busier and carry larger vehicles and it is recommended that in these situations stop/go is used to achieve greater safety for operatives and higher production. It may still be possible to undertake long linear lengths with this technique if the works are undertaken off peak.

The principle use of this arrangements is for shorter lengths of marking in quieter roads that are generally provided to maintain visibility, passing spaces or manage localised lengths of marking usually 30 – 100m long.

Appendix 3 Sign Distances

Table extracted from Table A1.1 of Chapter 8 **Type of road (Permanent Speed Limit)**	**Minimum and normal Maximum siting Distance (D) of first sign in advance of start finish datum (metres)**	**Minimum Clear Visibility To first Sign (metres),**	**Minimum Size of Signs (mm)**	**Minimum Height of Cones (mm)**
All-purpose single Carriageway road, urban Restricted to 30 mph or less	20 to 45	60	600	450
All-purpose single Carriageway road restricted to 40 mph or less	45 to 110	60	750	450

NOTES:

1. On roads with speed limits of 50 mph or more, all advance signs should have plates giving the distance to the work in yards or miles.

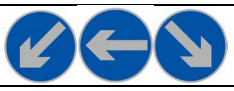
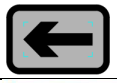
2. Lead-in tapers used with traffic control and all exit tapers shall be about 45^{o} to the kerb line with cones spaced 1.2 metres apart.

3. The maximum spacing distance of cones in longitudinal lengths of coning shall be 9 metres but no less than 2 cones shall be used in any length between tapers.

4. The range of siting distance (D) is given to allow the sign to be placed in the most convenient position bearing in mind available space and visibility for drivers.

Appendix 4 Equipment Specification

The method of working contained in Appendix 1 is based on the concept of adapting the current lorry to have the ability to carry the following minimum level of equipment that has been specifically specified to be the smallest compliant size and specification so that the standard equipment can meet all layouts. All signs must be RA1 reflective.
It is important that when ordering the signs that the supplier follows the instructions and specification otherwise the kit will occupy too much space on the lorry.

Item	Size	Image	Quantity
Traffic cones	450mm high can be used, 750mm are more manageable		30
Micro quick fit frames or self-ballasted vertical supporting signposts	300mm toggle spacing		10
7001 Temporary situations ahead	600mm		2
Road narrows left	600mm		1
Additional plate 'line painting' – 50 x height	490 x 290mm		2
Road narrows right	600mm		1
Add plate 'single file traffic' – 50 x height	405 x 390mm		2
610 arrow also drilled to be 606	600mm		3
7105 road blocked	150mm x 1250mm		2
Arrow plate	360mm x 240mm		2
Temp Obstruction 15 minute- 60 x height	1020 X 620mm		2
Temp Obstruction No left turn - 60 x height	1020 X 620mm		1
Temp Obstruction No Right Turn - 60 x height	1020 X 620mm		1
Long delays use other route - 60 x height	715 x 665mm	 or 	3
Traffic Control Ahead	590 x 390mm		2

Appendix 5 Feedback on This Document

Any observations, feedback or comment **relating to the content of this document or the process described** herein should be addressed (using the form below) to:

CEO

The Road Safety Markings Association

Email: info@rsma.co.uk

Tel: 01427 610101

Issue Identified:

Suggested Action:

Name:

Organisation:

Address:

Contact details:

Date:


ROAD SAFETY MARKINGS ASSOCIATION
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