Design Manual for Roads and Bridges

General Principles and Scheme Governance
General information

# GG 116
# Requirements and guidance on temporary traffic management short term lane closures for relaxation works, types 0, 1 and 2

Revision 0

**Summary**
This document provides requirements and guidance on temporary traffic management short term lane closures for relaxation works, types 0, 1 and 2

**Application by Overseeing Organisations**
Any specific requirements for Overseeing Organisations alternative or supplementary to those given in this document are given in National Application Annexes to this document.

**Feedback and Enquiries**
Users of this document are encouraged to raise any enquiries and/or provide feedback on the content and usage of this document to the dedicated Highways England team. The email address for all enquiries and feedback is: Standards_Enquiries@highwaysengland.co.uk

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# Release notes

| Version | Date | Details of amendments |
|---|---|---|
| 0 | Mar 2020 | GG 116 is a new document. This full document has been written in compliance with the new Highways England drafting rules. |

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# Foreword

## Publishing information

This document is published by Highways England.

## Contractual and legal considerations

This document forms part of the works specification. It does not purport to include all the necessary provisions of a contract. Users are responsible for applying all appropriate documents applicable to their contract.

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# Introduction

## Background

This document contains requirements and guidance on temporary traffic management short term lane closures for relaxation works, types 0, 1 and 2

## Assumptions made in the preparation of this document

The assumptions made in GG 101 [Ref 1.N] apply to this document.

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# 1. Scope

## Aspects covered

1.1 The national requirements for temporary traffic management short term lane closures for relaxation works, types 0, 1 and 2 set out in the National Application Annexes shall be followed.

## Implementation

1.2 This document shall be implemented forthwith on all schemes involving temporary traffic management short term lane closures types 0, 1 and 2 on the Overseeing Organisations' motorway and all-purpose trunk roads according to the implementation requirements of GG 101 [Ref 1.N].

## Use of GG 101

1.3 The requirements contained in GG 101 [Ref 1.N] shall be followed in respect of activities covered by this document.

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# 2. Normative references

The following documents, in whole or in part, are normative references for this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

| | |
|---|---|
| Ref 1.N | Highways England. GG 101, 'Introduction to the Design Manual for Roads and Bridges' |

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General Principles and Scheme Governance
General information

# GG 116
# England National Application Annex to GG 116 Requirements and guidance on temporary traffic management short term lane closures for relaxation works, types 0, 1 and 2

Revision 0

**Summary**
This National Application Annex contains the Highways England specific requirements for the use of impact protection vehicles (IPVs) for short term closure (STC) of single lanes where "relaxation scheme" road works criteria apply. This document also introduces optional alternative temporary traffic management (TTM) techniques which reduces the requirement for traffic management operatives to undertake live lane working.

**Feedback and Enquiries**
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# Foreword

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# Introduction

## Background

The techniques within this document have been developed to reduce health and safety risks associated with activities traditionally undertaken using live lane working. Providing physical protection to road workers and directing traffic safely around the works location using an impact protection vehicle (IPV) using this short-term closure (STC) technique can significantly reduce road worker risk without adversely affecting road user safety.

Research and on-road use has shown that the three STC techniques detailed in this document provide, under relaxation conditions, adequate warning to road users that the lane is closed and provides a substantial increase in safety for road workers. This is achieved by removing the requirement for road workers to cross the live carriageway to undertake fixed, short-term responsive works which presents a lower risk option when compared with live lane working. This is in part largely due to lower consequence severity if an IPV were to be struck compared with a road worker.

The service provider should determine the most suitable temporary traffic management (TTM) for any given situation, to minimise safety risks to road workers, and whilst managing safety risks to road users to an acceptable or tolerable/ALARP level. This is in accordance with the general principles applied in the Traffic Signs Manual Chapter 8 ( TSM Chapter 8 [Ref 6.N]). This document builds upon the guidance given in the TSM Chapter 8 [Ref 6.N], interim advice regarding the use of IPVs and guidance relating to relaxation scheme traffic management.

## Assumptions made in the preparation of this document

The assumptions made in GG 101 [Ref 2.N] apply to this document.

The assumptions made in GG 104 [Ref 3.N] apply to this document.

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# Abbreviations

**Abbreviations**

| Abbreviation | Definition |
|---|---|
| ALARP | As low as reasonably practicable |
| IPV | Impact protection vehicle |
| STC | Short term closure |
| TTM | Temporary traffic management |

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# Terms and definitions

**Terms**

| Term | Definition |
|---|---|
| As low as reasonably practicable (ALARP) | Reasonably practicable involves weighing a risk against the trouble, time and money needed to control it. Thus, ALARP describes the level to which we expect to see workplace risks controlled. |
| Impact protection vehicle (IPV) | A vehicle, in accordance with TSM Chapter 8 [Ref 6.N] Section O.5 fitted with appropriate signing and lorry mounted crash cushion, which is used to provide protection to road workers and guidance to road users. |
| Small-scale planned maintenance activity | Works that are pre-planned and can be completed in a short period of time; such works can typically be carried out either by live lane working or involve carriageway crossings in preference to using either a mobile lane closures or relaxation scheme lane closures due to the scale of works involved. |
| STC type 0 | A TTM technique that can be used for small scale planned maintenance activity that can be completed in less than 5 minutes, using a stationary IPV in the live lane to protect the workforce and direct traffic around the work location plus an optional 'Workforce In Road Slow' warning sign. |
| STC type 1 | A TTM technique that can be used to protect planned maintenance activity that can be completed in less than 20 minutes, using a stationary IPV in the live lane to protect the workforce and direct traffic around the work location with one lane closed warning ('wicket') sign and a 'Workforce In Road Slow' warning sign. |
| STC type 2 | A TTM technique that can be used to protect planned maintenance activity that can be completed in less than 45 minutes, using a stationary IPV in the live lane to protect the workforce and direct traffic around the work location with two lane closed warning ('wicket') signs. |
| Works vehicle | A vehicle being used for traffic authority purposes where the vehicle is being used in connection with the execution of works on the road and meets the conspicuity and roof-mounted beacon in accordance with TSM Chapter 8 [Ref 6.N] Section O5. |

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# E/1. Planning

E/1.1 Before carrying out any work, all risks associated with the work activity shall be assessed and used to select a method of work that results in risk that is ALARP for all parties affected.

E/1.2 A suitable and sufficient risk assessment must be undertaken and appropriately documented by a competent person, who is responsible for planning and carrying out the work in accordance with HASAWA 1974 c.37 [Ref 1.N], Section 2 and MHSWR 1999, Section 3 [Ref 4.N].

*NOTE* *For the purpose of this document, 'suitable and sufficient risk assessment' is defined in GG 104 [Ref 3.N], which sets out the framework and approach for safety risk assessment to be applied when undertaking any activity that does, or can have, an impact on safety on Highways England's motorway and all-purpose trunk roads, either directly or indirectly.*

E/1.2.1 As part of the risk based design, the use of the short-term closure technique should be assessed as a potential mitigation measure for works of up to 45 minutes duration where the risk assessment identifies the need to eliminate live lane working in a nearside or offside lane on a dual carriageway under relaxation scheme conditions (in accordance with TSM Chapter 8 [Ref 6.N] paragraph D/O1.6.3) to achieve a risk level that is ALARP.

E/1.2.2 Where the short-term closure technique (STC) is assessed and determined to be unsuitable for use in the situation being assessed, other alternatives to live lane working that would achieve a risk level that is ALARP should be evaluated.

E/1.3 The STC technique shall only be used for the short-term lane closure of live lanes at distinct and separate locations, with each closure planned individually.

E/1.3.1 Where STC is being assessed for use at a number of sites that are near to each other, the risk based design should evaluate the risks of the use of STC against the use of other TTM techniques to achieve a risk that is ALARP.

E/1.4 The principles within the Traffic Signs Manual Chapter 8 ( TSM Chapter 8 [Ref 6.N]) shall be applied in respect of the safety zone or minimum lateral clearance required when working within a short term closure.

E/1.4.1 Where a safe lateral clearance cannot be achieved, other traffic management measures should be assessed for their suitability and implemented accordingly.

E/1.5 Information that helps to ensure the safety of those involved with the use of the STC technique shall be provided to those undertaking the STC and working within the closed lane(s) prior to commencement of the works.

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# E/2. Traffic management

E/2.1 All STC type techniques shall only be used where risk assessment indicates their use results in a risk that is ALARP for all parties affected.

E/2.1.1 Risk based planning for the use of STC should include contingency arrangements in case planned work takes longer than anticipated, in order that STC duration are not exceeded.

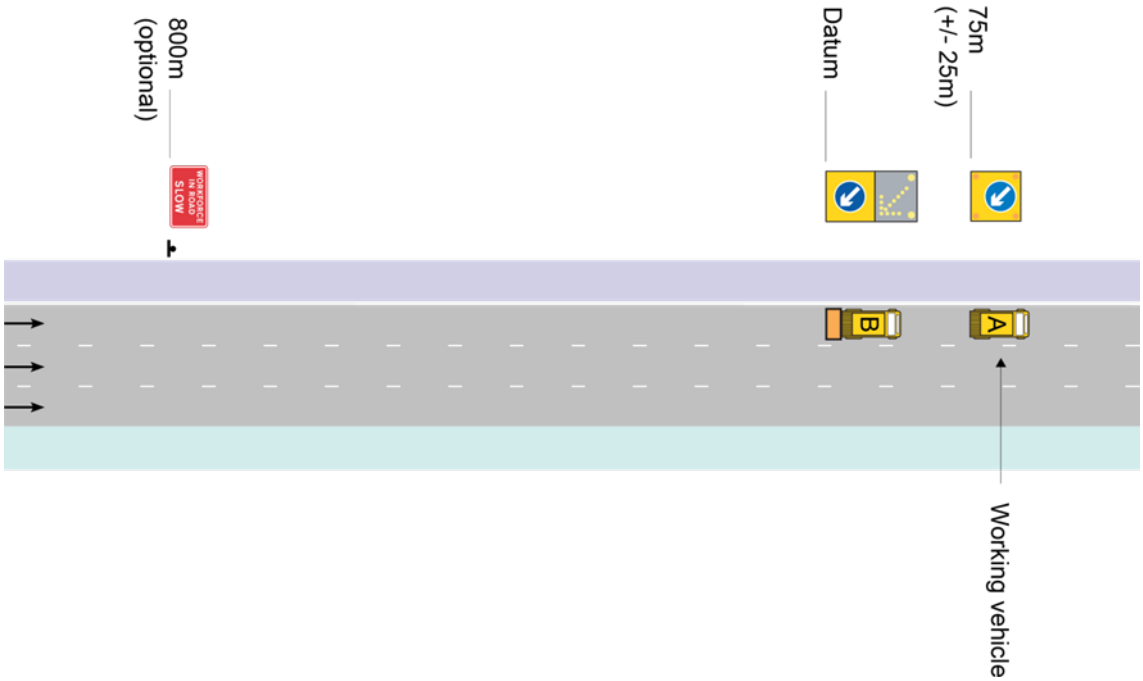
E/2.2 For all STC type techniques, no more than one works vehicle shall be positioned downstream of the IPV.

E/2.2.1 For all STC type techniques, the works vehicle should be positioned 75m +/- 25m downstream of the IPV and both the works vehicle and the IPV display the correct signing to guide traffic safely past the work location.

## Short term closure - type 0

E/2.3 The STC type 0 technique shall only be used for works that require the closure to be in place for less than 5 minutes (including any contingency time for completion of the works).

**Figure E/2.3 Plan STC 0: Short term closure technique – type 0**




E/2.4 The STC type 0 technique traffic management shall be as shown in Figure E/2.3.

E/2.4.1 Where used, the optional 'workforce in road slow' sign ( TSRGD [Ref 5.N] S.I. No. 362 diagram P7001.3) shown in Figure E/2.3 should be placed in a safe location at or around 800m before the IPV.

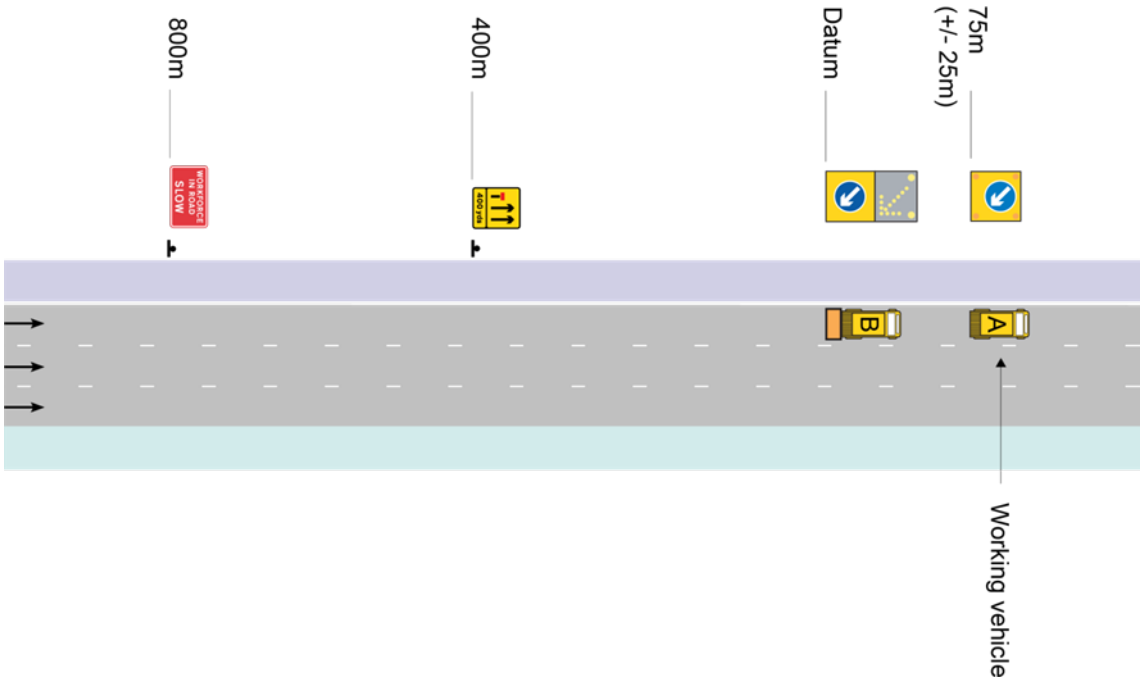
## Short term closure - type 1

E/2.5 The STC type 1 technique shall only be used for works that require the closure to be in place for 20 minutes or less (including any contingency time for completion of the works).



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**Figure E/2.5 Plan STC 1: Short term closure technique – type 1**




E/2.6 The STC type 1 technique traffic management shall be as shown in Figure E/2.5.

E/2.6.1 The 'workforce in road slow' ( TSRGD [Ref 5.N] S.I. No. 362 diagram P7001.3) sign shown in Figure E/2.5 should be placed in a safe location 800m before the IPV.

E/2.6.2 A temporary lane availability ('wicket') sign ( TSRGD [Ref 5.N] S.I. No. 362 diagram 7202.1) showing the correct number of arrows and the correct lane closed symbol plus 400 yards as the distance on the bottom panel should be placed 400m before the IPV.

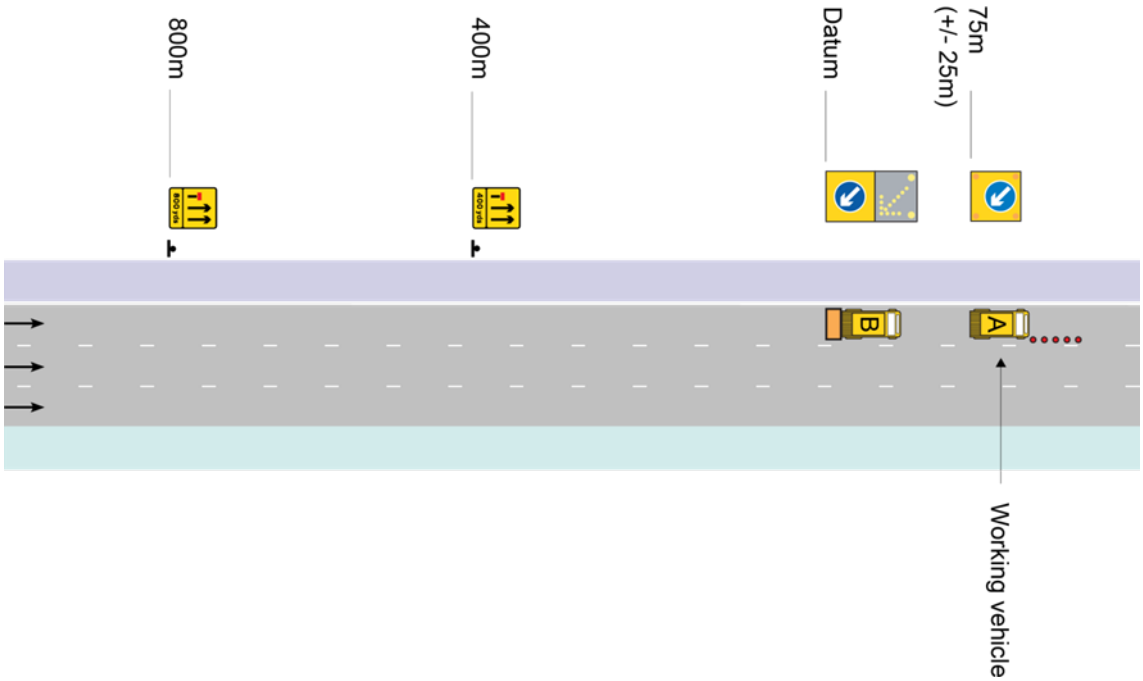
## Short term closure - type 2

E/2.7 The STC type 2 technique shall only be used for works that require the closure to be in place for 45 minutes or less (including any contingency time for completion of the works).



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**Figure E/2.7 Plan STC 2: Short term closure technique – type 2**




E/2.8 The STC type 2 technique traffic management shall be as shown in Figure E/2.7.

E/2.8.1 A temporary lane availability ('wicket') sign ( TSRGD [Ref 5.N] S.I. No. 362 diagram 7202.1) showing the correct number of arrows and the correct lane closed symbol plus 800 yards as the distance on the bottom panel should be placed 800m before the IPV.

E/2.8.2 A temporary lane availability ('wicket') sign ( TSRGD [Ref 5.N] S.I. No. 362 diagram 7202.1) showing the correct number of arrows and the correct lane closed symbol plus 400 yards as the distance on the bottom panel should be placed 400m before the IPV.

E/2.8.3 Work zone delineation should be present to separate the work zone from the main carriageway, with cones separated at 9m centres for a maximum longitudinal distance of 36m (as per TSM Chapter 8 [Ref 6.N] Part 1 – Detail C, Method C1).



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# E/3. Normative references

The following documents, in whole or in part, are normative references for this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

| | |
|---|---|
| Ref 1.N | The National Archives. legislation.gov.uk. HASAWA 1974 c.37, 'Health and Safety at Work etc. Act 1974' |
| Ref 2.N | Highways England. GG 101, 'Introduction to the Design Manual for Roads and Bridges' |
| Ref 3.N | Highways England. GG 104, 'Requirements for safety risk assessment' |
| Ref 4.N | Legislation.gov.uk. MHSWR 1999, Section 3, 'The Management of Health and Safety at Work Regulations 1999, Section 3' |
| Ref 5.N | The Stationery Office. TSRGD, 'The Traffic Signs Regulations and General Directions 2016' |
| Ref 6.N | TSO. Department for Transport. TSM Chapter 8, 'Traffic Signs Manual Chapter 8 - Road works and temporary situations' |

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Department for Infrastructure
An Roinn Bonneagair

General Principles and Scheme Governance
General information

# GG 116
# Northern Ireland National Application Annex to GG 116 Requirements and guidance on temporary traffic management short term lane closures for relaxation works, types 0, 1 and 2

Revision 0

**Summary**
This National Application Annex contains the Department for Infrastructure, Northern Ireland specific requirements related to temporary traffic management short term lane closures for relaxation works, types 0, 1 and 2.

**Feedback and Enquiries**
Users of this document are encouraged to raise any enquiries and/or provide feedback on the content and usage of this document to the dedicated team in the Department for Infrastructure, Northern Ireland. The email address for all enquiries and feedback is: dcu@infrastructure-ni.gov.uk

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# Release notes

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| 0 | Mar 2020 | Department for Infrastructure Northern Ireland National Application Annex to GG 116. |

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# Foreword

## Publishing information

This document is published by Highways England on behalf of Department for Infrastructure, Northern Ireland.

## Contractual and legal considerations

This document forms part of the works specification. It does not purport to include all the necessary provisions of a contract. Users are responsible for applying all appropriate documents applicable to their contract.

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# Introduction

## Background

This National Application Annex contains the Department for Infrastructure, Northern Ireland specific requirements related to temporary traffic management short term lane closures for relaxation works, types 0, 1 and 2.

## Assumptions made in the preparation of this document

The assumptions made in GG 101 [Ref 1.N] apply to this document.

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# NI/1. Applicability

NI/1.1 The requirements in GG 116 shall not apply in Northern Ireland.

NI/1.1.1 The Department for Infrastructure should be contacted for further guidance and advice related to temporary traffic management short term lane closures for relaxation works, types 0, 1 and 2.

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# NI/2. Normative references

The following documents, in whole or in part, are normative references for this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

| | |
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| Ref 1.N | Highways England. GG 101, 'Introduction to the Design Manual for Roads and Bridges' |

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General Principles and Scheme Governance
General information

# GG 116
# Scotland National Application Annex to GG 116 Requirements and guidance on temporary traffic management short term lane closures for relaxation works, types 0, 1 and 2

Revision 0

**Summary**
There are no specific requirements for Transport Scotland supplementary or alternative to those given in GG 116.

**Feedback and Enquiries**
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Llywodraeth Cymru
Welsh Government

General Principles and Scheme Governance
General information

# GG 116
# Wales National Application Annex to GG 116 Requirements and guidance on temporary traffic management short term lane closures for relaxation works, types 0, 1 and 2

Revision 0

**Summary**
There are no specific requirements for Welsh Government supplementary or alternative to those given in GG 116.

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