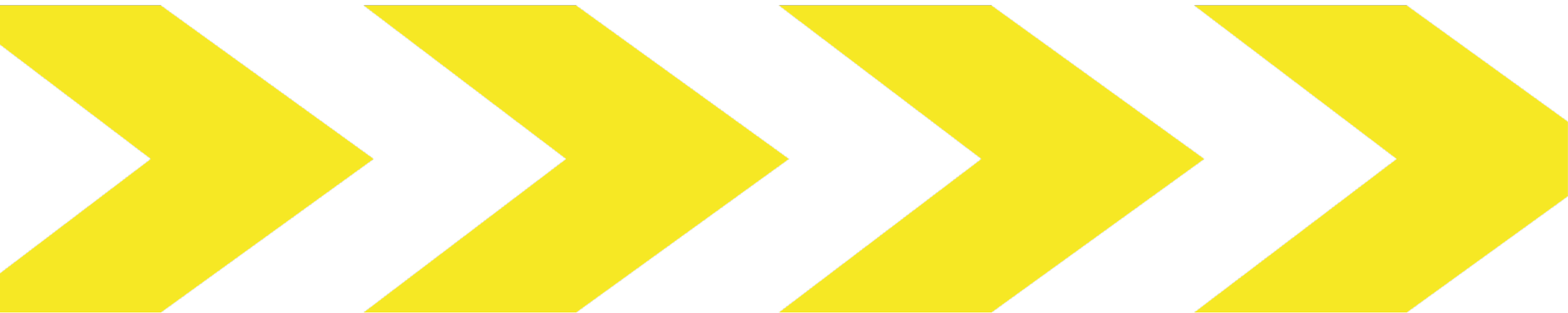




IPV and Incursions Working group RtB document on incursions

Background and documents



Incursions are unacceptable

Incursions are classified as:

- Intentional Incursion where the road user seeks to gain a benefit.
- Intentional Incursion where the road user is seeking information.
- Intentional Incursion where the road user is seeking refuge.
- Unintentional incursion where a road user follows a works vehicle into the works in error, also known as a follow in.
- Unintentional incursion where a road user enters the works area because of confusion.
- Unintentional Incursion where a road user enters the works area or traffic management because of a collision or to avoid a collision.

Tampering with TTM measures by unauthorised staff significantly raises the probability of an unintentional or intentional incursion during the immediate period following the tampering and moving a device is a prosecutable offence in law that could result in a criminal conviction.

All risks must be:

- **Eliminated** wherever possible.
- **Reduced** to an acceptable level
- **Isolated** so that the risk cannot be realised.
- **Controls** implemented for residual risks that cannot be eliminated or reduced completely.

A key objective is that no road user is harmed when travelling alongside or around our work area and that they are provided with sufficient information at the appropriate time to clearly understand the action required of them and the route they should take to avoid, intentionally or unintentionally, an incursion into our work area, which puts them and the safety of our workforce at risk.

The TTM drawings illustrate the design solutions being provided to manage the hazards, traffic, and all measures must be detailed on the drawings, for instance, the means of access to private frontages, where bridleways or footpaths intersect the carriageway and will generate non vehicle based traffic.

The design risk assessment must be robust in its nature, all aspects of the traffic movements must be assessed, considered and risk process ERIC followed with the outputs included in a design that creates a SSOW for the traffic management, a composite design that is illustrated by the TTM drawings. The Principal Contractor must allow sufficient time to allow design development activities.

Its just TM ---- TM is engineering

- Traffic passing several times around a roundabout or repassing a closure point several times.
- Traffic or users stopping at closure point to ask 'which way'.
- Traffic continually approaching an intermediate closure point down a link between the diversion route and the closed carriageway.
- Traffic entering a works access or egress in non-breakdown situations.
- Users regularly and constantly vocally or visually providing negative feedback to staff on site.
- Client receiving customer feedback through contact channels.
- Traffic queues negotiating the closure point
- Issues with sat nav.

It's a failure of the design stage

How many of you consider traffic management a headache?

RtB 27 Prevention of Incursions

Updates



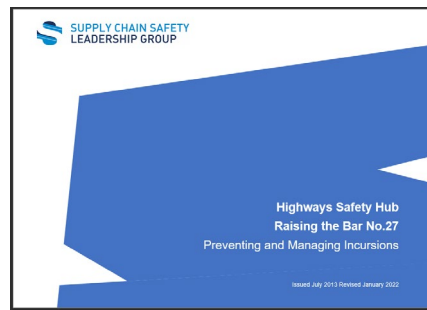
The Delivery hub health, safety and environment
Raising the bar 27
Managing temporary traffic management incursions

Issued July 2013 Revised June 2018

Brings In

- Prevention at source
 - Elimination by design not reliance on controls
 - PDCA quality cycle implemented to stop incursions at source
- CCTV is great but if an incursion gets that far we have failed
- Moves thinking higher on safety
 - Eliminating operatives
 - Removed first control measure of an operative as a bouncer
 - Providing a standard approach to additional signs
 - Prescribes lawful readable signs
- Removed concept customer largely at fault

History



Created by industry working group

- Lead by Balfour Beatty
- Proposed to IPV incursions working group
 - Adopted as a significant advance
- Extensive document
 - Widens scope of thinking to
 - Single carriageways
 - More type of junctions
 - Services
 - And exit slip roads
 - Design
 - Words
 - A3 flash card sign design library can be expanded

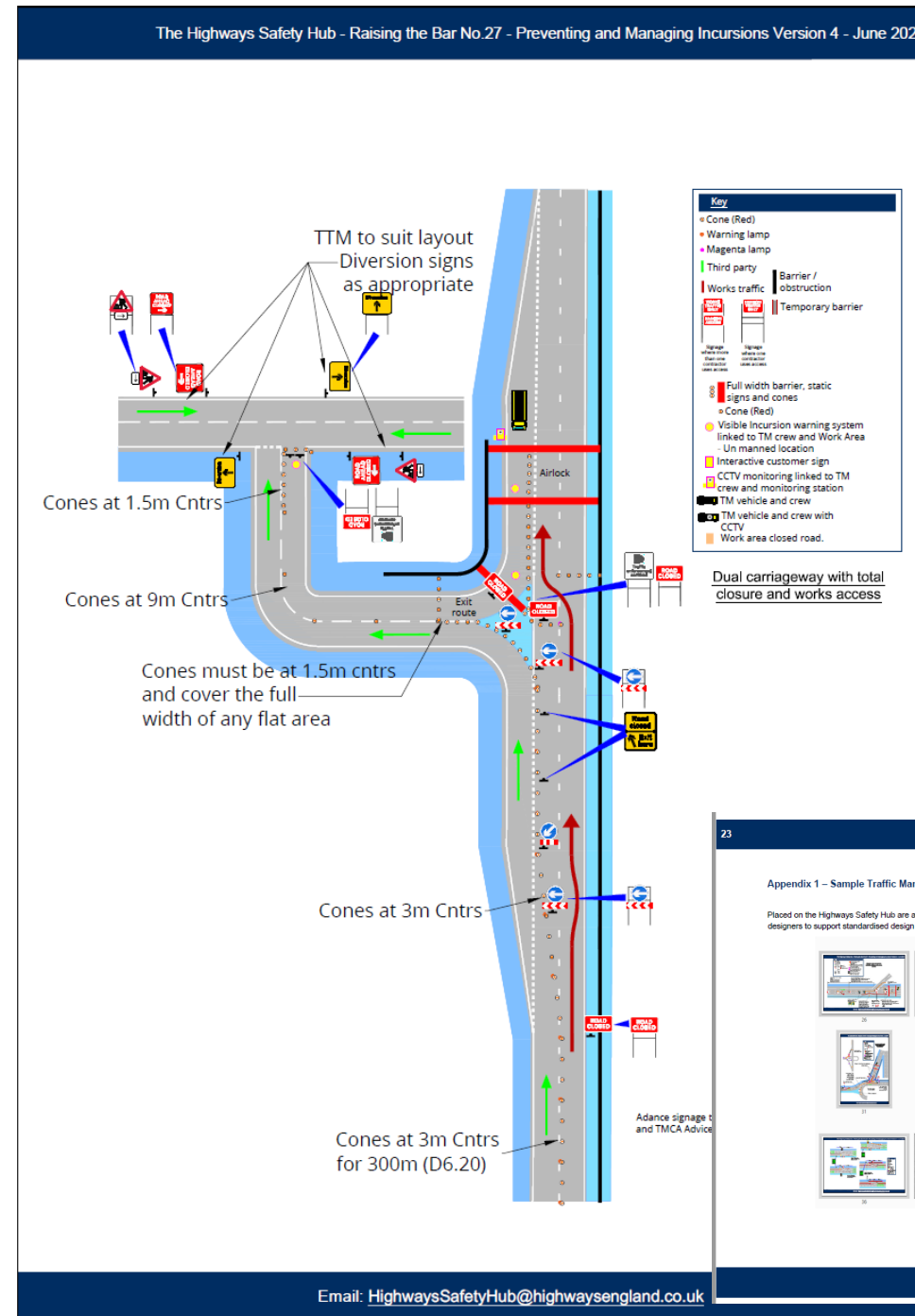
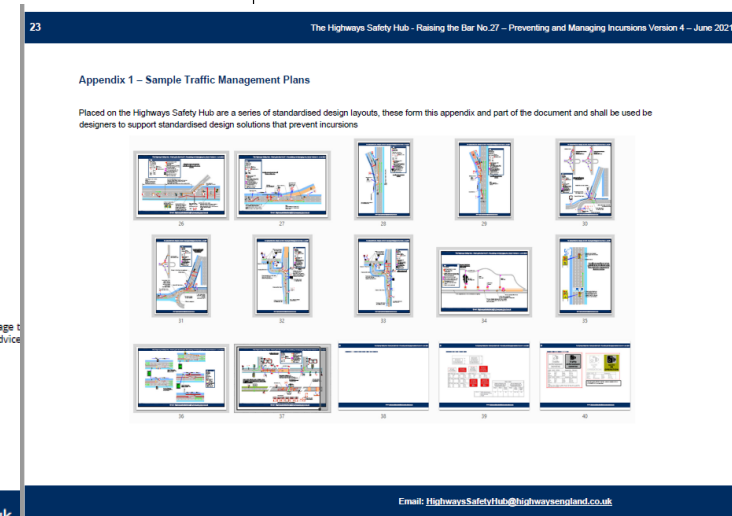


Figure 5 Sign to Diagram 878



NOTES: High Speed Lane and Road Closure

1. All Traffic Management will be set out in accordance with the requirements of the Traffic signs Manual Chapter 8 (Pt1&2 2009 & Pt3 2020), and the applicable company RAM's for the works.
2. All initial tapers and stepped tapers will be highlighted with Backlit sequential lamps.
3. Sizes and spacing of Cones, and Lamp spacing's to be in accordance with TSM Ch8 Table A1.3. (Lamps may be omitted on longitudinal runs subject to the requirements of Ch8 Pt3 U2.14 and a site specific risk assessment)
4. All signs shall be to class RA2 as per the requirements of BS EN 12899-1
5. All signs frames will be secured with a minimum of 2 sand bags with additional added according to sign size and expected weather conditions.
6. Exact locations of signs are to be determined on site and will be positioned as to not obstruct any other sign, footpath or visibility.
7. Works access and egress are indicative, exact locations to be agreed on site. Desirable minimum Lengths of 30m for an access and 54m for an exit should be provided.
8. Longitudinal safety zones must be installed as per the speed of the road (TSM Ch8 Pt1 Table 3.1).
9. Minimum lateral safety Zones of 1.2m must be provided and highlighted in all works areas.
10. Absolute minimum lane widths of 3m (2.5m for light vehicles only) must be provided.
11. Sign to diagram 7001-3A must be set out in line with TSM prior to the start of works.
12. For carriageway and slip road closure conning to 'detail B' should be provided from the first sign indicating the closure ahead to 20m after the back of chevron.
13. Airlocks shall be installed in line with RIB 27
14. All diversion signs shall be in place and route checked before the closure is brought into effect.
15. Diversion signs where possible to be placed in a suitable location where it can be read in conjunction with a permanent directional sign.
16. TSCO or foreman to confirm carriageway is clear of workforce or obstructions prior to removing closure.
17. All trigger and start of diversion signs to be removed or covered in between works periods



Minimum 100m length of run of cones at 3m centres, lamped at 18 centres (omitted on design for clarity - as well as all the approach detail, such as works access etc.).
Remainder 200m at 9m centres and lamped.
No relaxations permitted.
300m used where practical and where vehicles capacity permit

300m

Must close-cone any flat area to prevent cut in
(All exit and end signs have been omitted for clarity. Please refer to TSM; Chapter 8; Part 1)

Intellicone®
(IIPAWS)
warning system
CCTV unit
(Intellicam®
shown here)



ROAD
CLOSED

AIRLOCK

When not a works access, cones shall be at 1.5m centres plus barrier (Nissen)
Lamped Nissen barrier must be a continuous length between obstructions such as barrier on each side with no gaps.
Operatives to maintain access and egress, and control Intellicone warning system to alert workers.

ROAD
CLOSED

Lateral wall of cones at 1.5m centres or two lateral walls to create a traffic chicane to slow traffic and present boxed of wall to intentional incursion traffic
(Mandatory requirement)

Road
closed
Exit
here

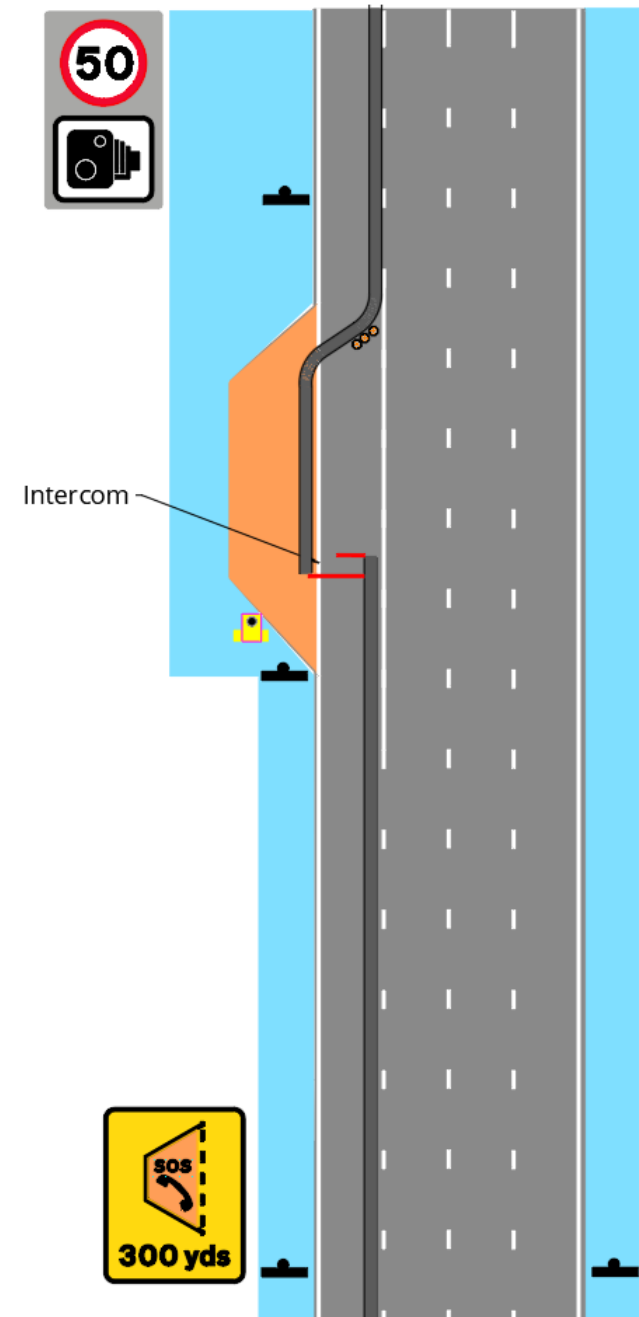
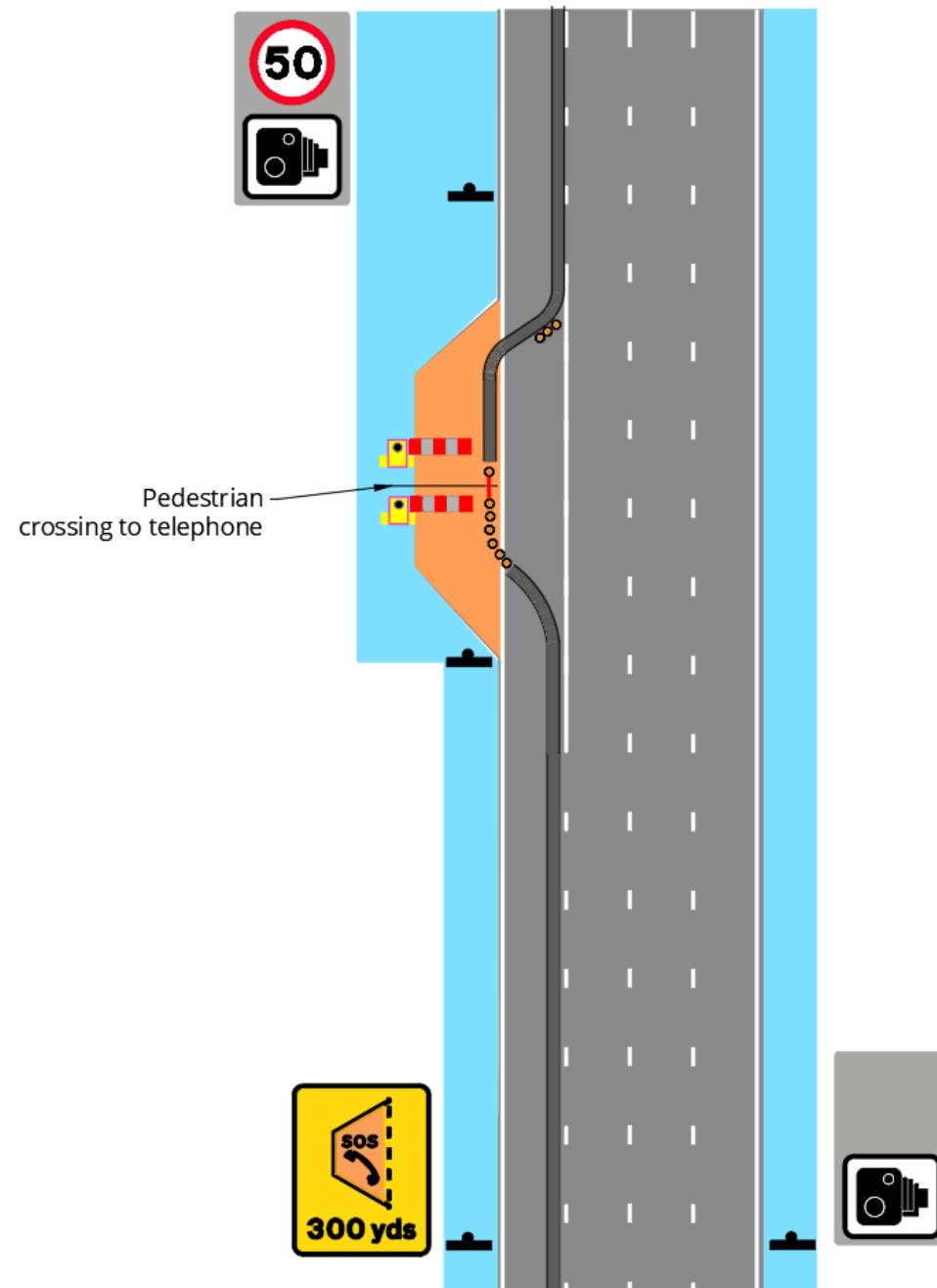
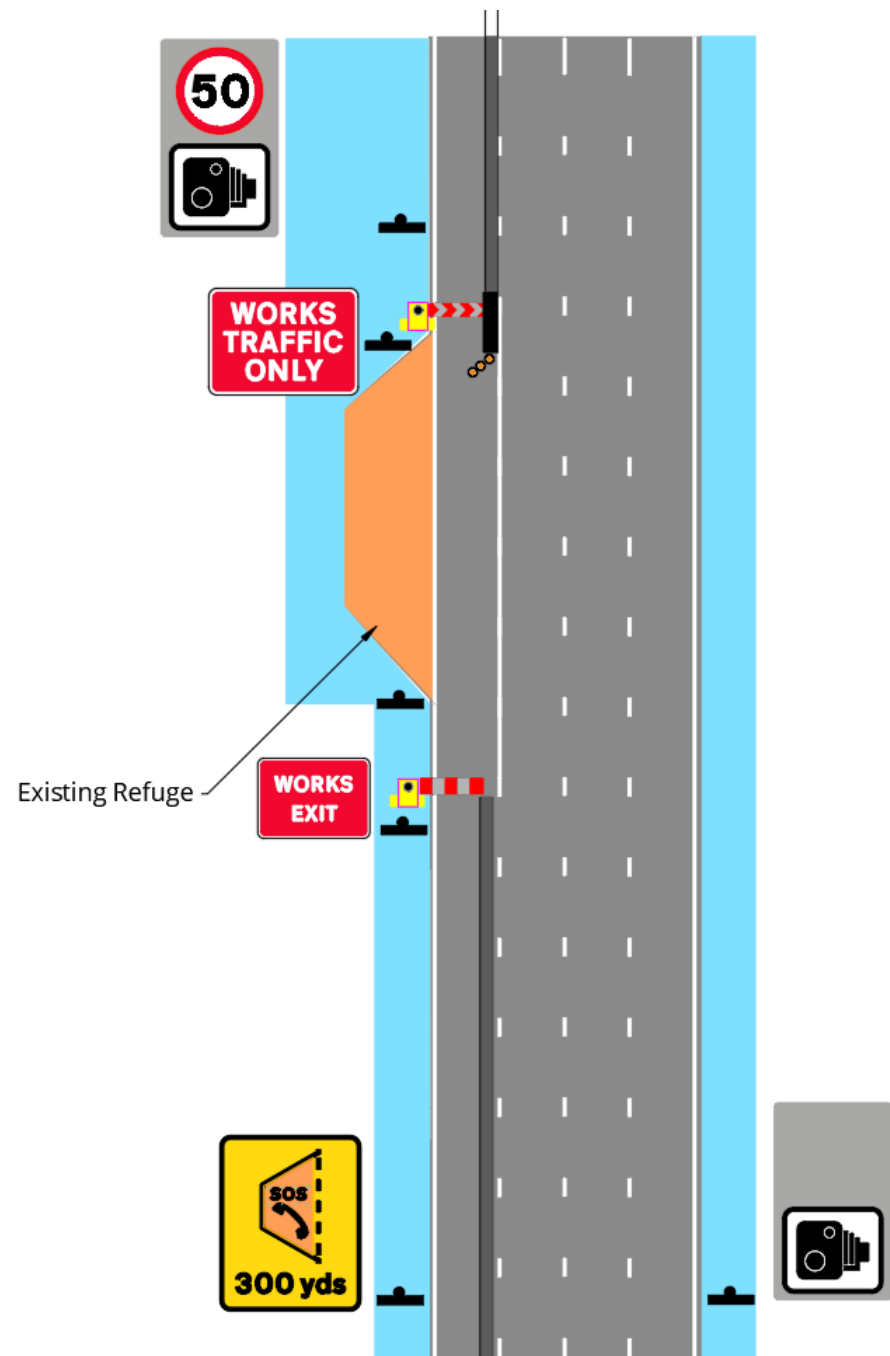
At least 2 no signs of the advised diversion information 100m apart.

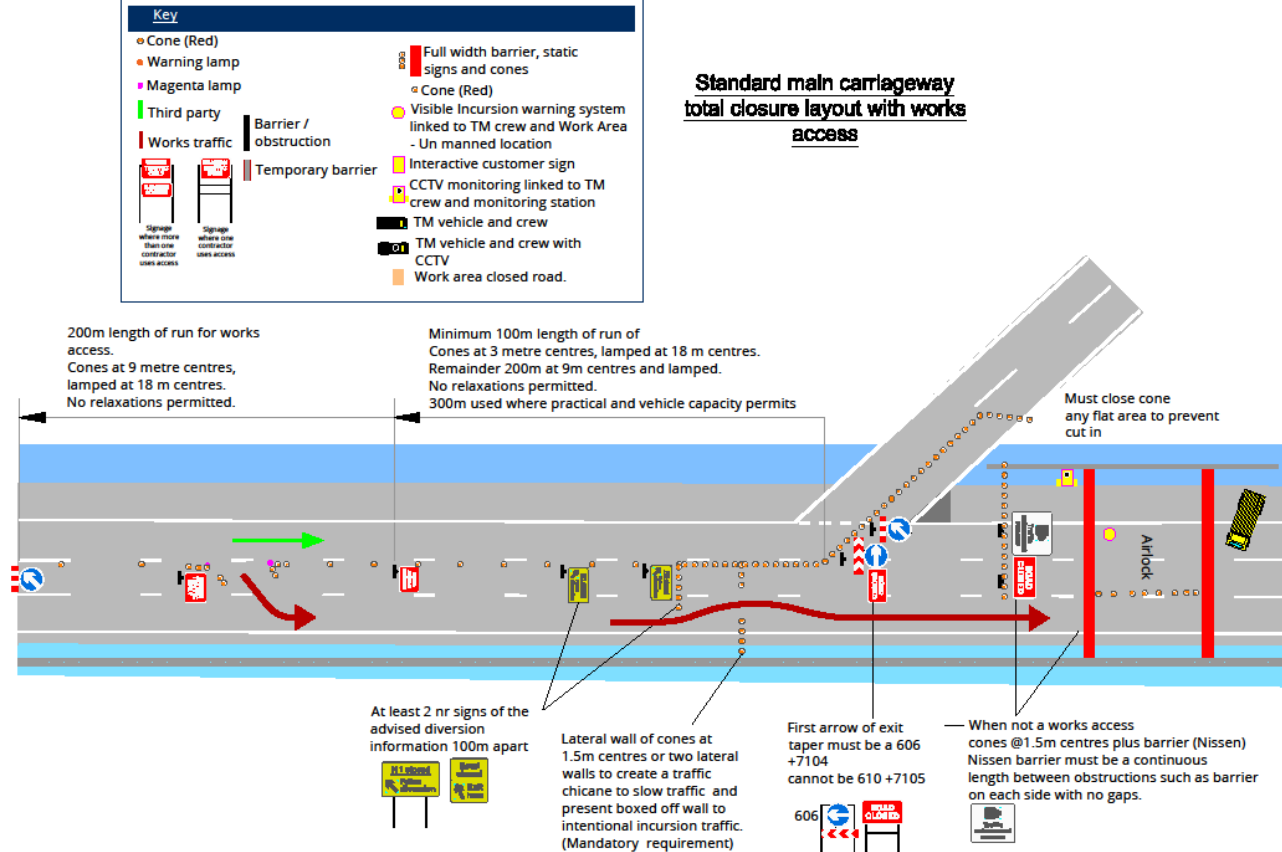
Road
closed
Exit
here

ROAD
AHEAD
CLOSED

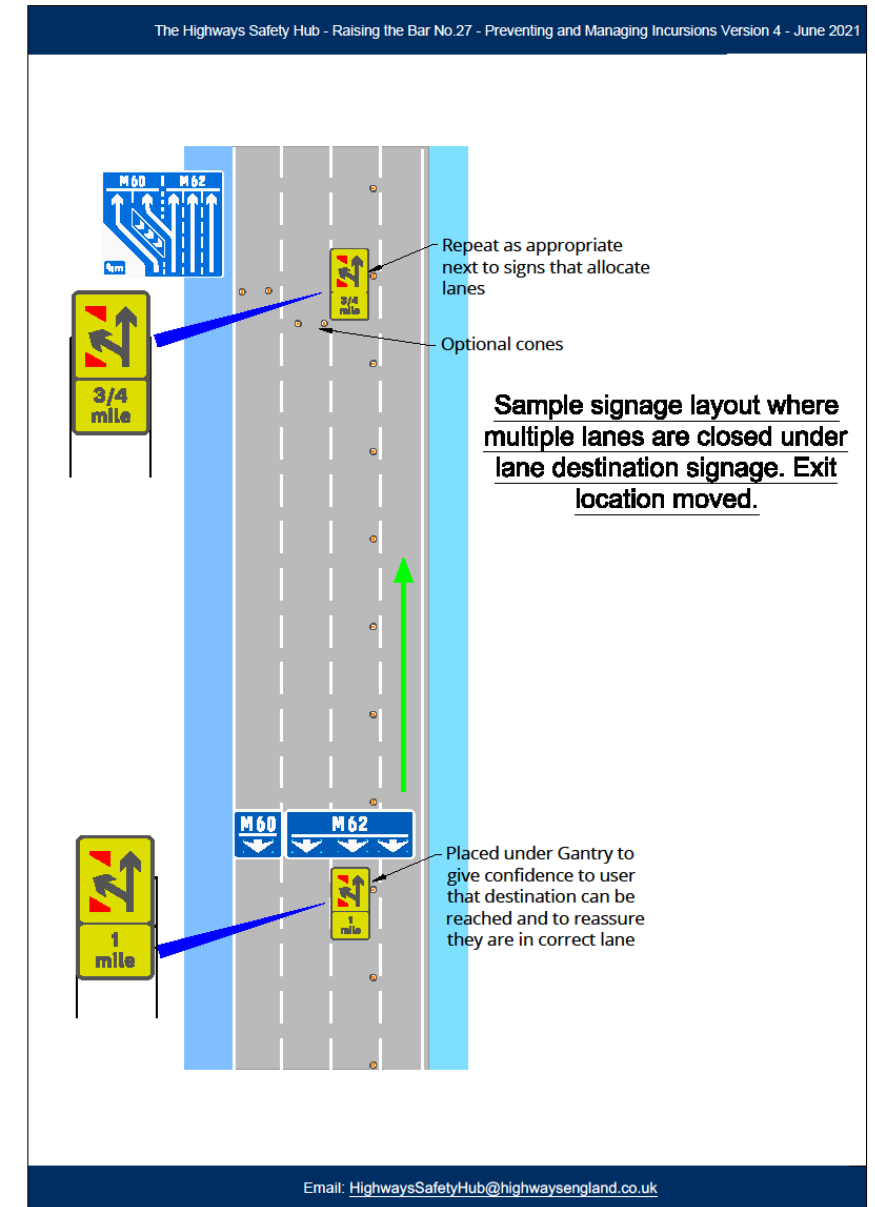
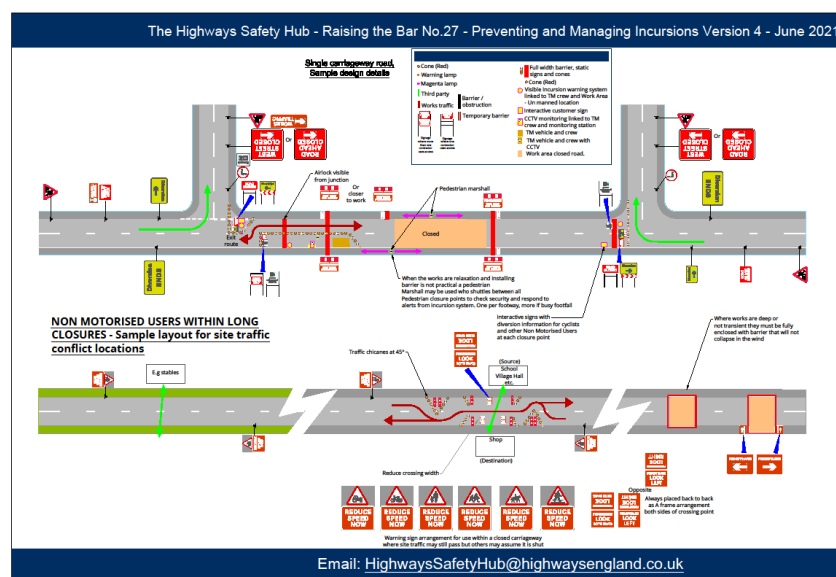
This drawing is for reference only.
Works site / traffic management furniture, equipment such as sand bags, fencing, barriers etc are omitted for clarity.

Signs distances, sizes, frames and signals may vary
(see TSRGD & Traffic Signs Manual; Chapter 8 for details)

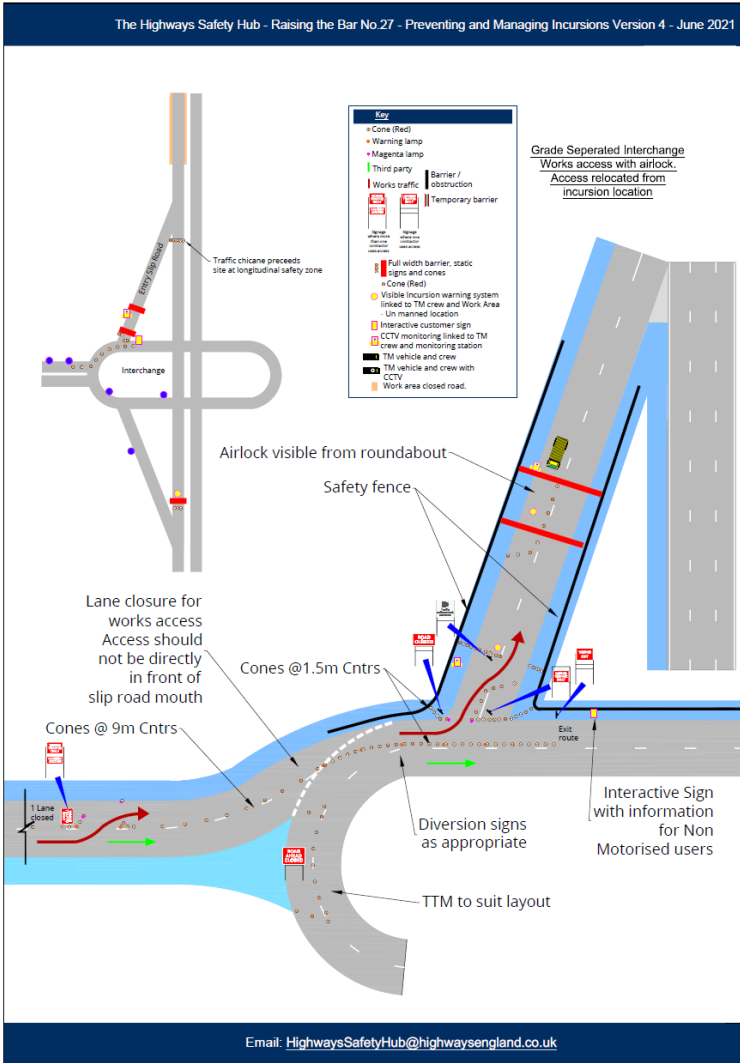




Email: HighwaysSafetyHub@highwaysengland.co.uk



Think about it!!!



Plant Vehicle / Person Risk

Blind spots

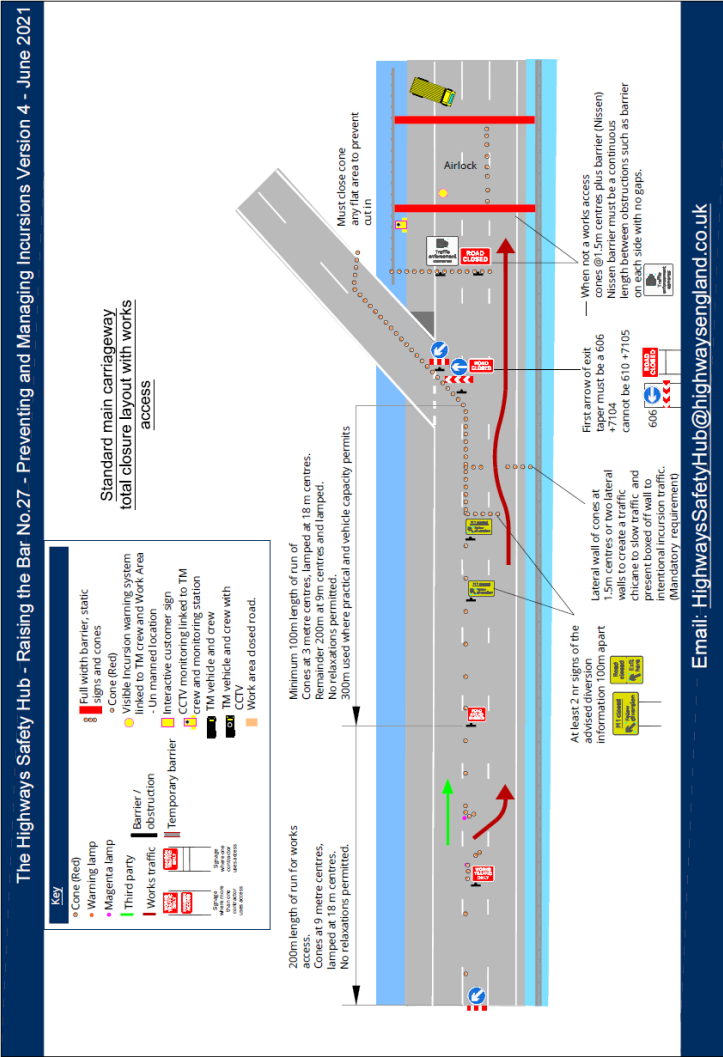
- Make eye contact with driver – walk where you can be seen

Blind spots:

- Reversing should be avoided
 - Or banks person used
- Make sure you can see your colleagues if opening a gate.
 - automated barriers on busy sites
- Stand in a safe place behind cones
- Make sure a head torch is worn
 - Front white
 - Back red.

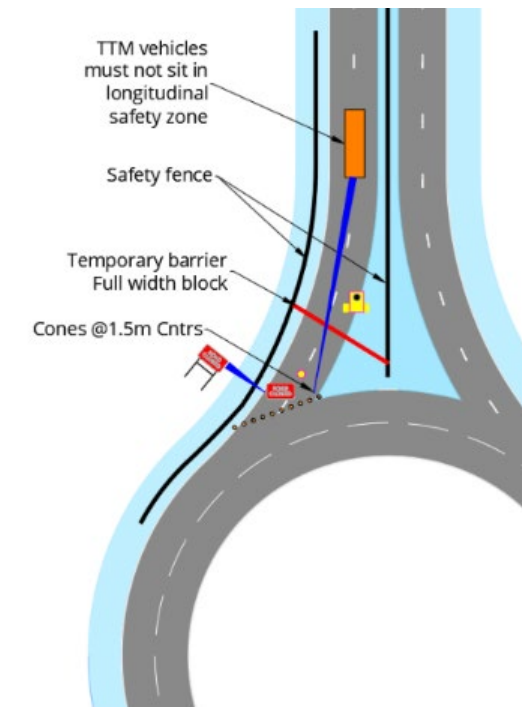
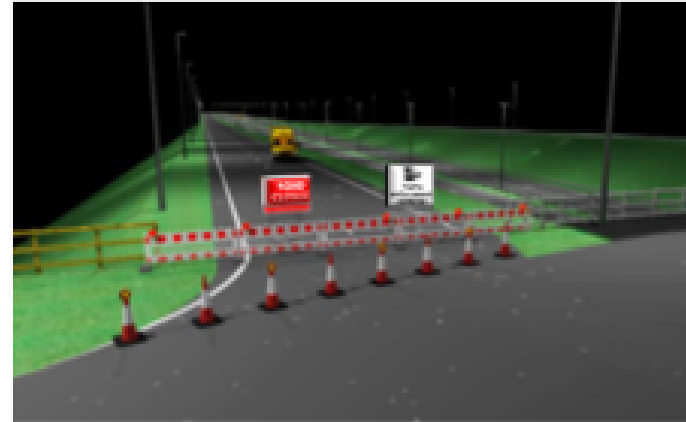
Vehicle cameras reduce the risk but the operative will not know if they are working or operational.

v1 09 2021 © Lantra



Never use operatives and vehicles at the point of conflict

The use of operatives sat in vans in effect acting as 'bouncers' shall be the last resort as a control measure. An operative wearing a bodycam will always be intimidating to a member of the public who may already be stressed and therefore technologies that allow remote monitoring, good information and barriers should always be the focus for preventing incursions.




The 5%!!! We cannot control



Never do this... think work equipment regs



Useful resources and ‘RegTTME’



Safety Hub

@safetyhub1617

128 subscribers

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VIDEOS

PLAYLISTS

COMMUNITY


CHANNELS

ABOUT



VIDEO 5 Entering & Exiting Established Traffic Management


Safety Hub • 4.9K views • 4 years ago



TRAFFIC MANAGEMENT INCURSIONS TRAINING VIDEOS

3 Implement a Traffic Management Design

Safety Hub • 1.2K views • 3 years ago




Traffic Management Incursions Training Videos

Safety Hub

Respect Our Roadworkers • 1:11

1 Definition of an Incursion • 2:49


VIEW FULL PLAYLIST



TRAFFIC MANAGEMENT INCURSIONS TRAINING VIDEOS


Respect Our Roadworkers

Safety Hub • 9.2K views • 3 years ago



VIDEO 6 Installing a Chicane & Switches


Safety Hub • 597 views • 4 years ago



TRAFFIC MANAGEMENT INCURSIONS TRAINING VIDEOS

1 Definition of an Incursion

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Full details

Training Facilities

Terms & Conditions

Full Details

The only UK course specifically for temporary traffic management designers, engineers and practitioners working in the planning and design of temporary situations on highways.

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Agree & Close

Engineering, including design,
knowledge and competence

Insert footer here

13

Raising the bar higher using Raising the Bar

2021 Delivered

RtB27 Prevention of Incursions – in publication

- Prevention by design concept not by additional controls
- PDCA quality cycle implemented to stop incursions at source
- Removed concept customer largely at fault
- Removed first control measure of an operative as a bouncer
- Library of design advice to get uniformity

RtB29 Traffic Management Attenuator Testing

First national testing and inspection standard for attenuators on IPV's

2022 work

RtB39 Traffic Safety and Control at Roadworks – in draft

To improve inspection standards and uniformity of service reinforcing new TSCO/TSS training course – set out engineering structure

2023 delivery

RtB?? Reducing risk at hard shoulder closures –(Working title being drafted)

Support understanding of GG115, use of IPV's and design decision making in response to a spate of significant events

RtB?? TTM design process and standards - Planned

To improve industry understanding and allocate suitable time and resources to key customer safety messages and incursion prevention

The Highways Safety Hub - Raising the Bar No.27 - Preventing and Managing Incursions Version 4 - June 2021

Cones at 1.5m Cntrs
Cones at 9m Cntrs
Cones must be at 1.5m cntrs and cover the full width of any flat area
Cones at 3m Cntrs
Cones at 3m Cntrs for 300m (D6.20)

Email: HighwaysSafetyHub@highwaysengland.co.uk

Appendix 1 - Sample Traffic Management Plans

Placed on the Highways Safety Hub is a series of standardised design layouts, these form this appendix and part of the document and shall be used as a guide to the design of traffic management plans for roadworks.

Highways Safety Hub
Raising the Bar No.39(?)
Traffic Safety and Control at Roadworks

Not yet issued. July 2021 for comment

Highways Safety Hub
Raising the Bar No.37
Part [] – IPV Inspection & Testing

Issued <<Date>> Revised <<Date if applicable>>

Highways Safety Hub
Raising the Bar No.39(?)
Traffic Safety and Control at Roadworks

Not yet issued. July 2021 for comment