INTERIM ADVICE NOTE 162/12

Highways Agency policy for the use of Variable Signs and Signals (VSS)

Summary
To provide a copy of the updated Highways Agency Variable Signs and Signals (VSS) policy.

Instructions for Use

This IAN is applicable to the use of any variable sign or signal located on the English strategic road network or any variable sign or signal that is operated by or on behalf of the Highways Agency.

This updated policy supersedes the two documents below:

1) Policy and Procedures for the use of Matrix Signals by the Regional Control Centres

and

2) Policy and Procedures for the use of Variable Message Signs by the Regional Control Centres.

1. Introduction

The new 'Highways Agency policy for the use of Variable Signs and Signals VSS' reflects the updated operational policy guidance for variable signs and signals operated by or behalf of the Highways Agency.

This policy governs the use of both fixed and portable variable message signs and signals.

2. Purpose and required actions

All variable signs and signals used or operated by, or on behalf of, the Highways Agency from the 23 December 2011 will adhere to the policy criteria provided at Annex 1.

The annex only supersedes the following documents:

> "Policy and Procedures for the use of Matrix Signals by the Regional Control Centres" (date?) and
>
> "Policy and Procedures for the use of Variable Message Signs by the Regional Control Centres" (date?)

HA service providers should be aware of the advice and requirements given in Annex 1 of this document for the planning and delivery of works and services for the HA.

It does not supersede any requirements or advice given in other HA documents for the provision of temporary traffic signs or signals or permanent traffic signs or signals.

3. Withdrawal conditions

The policy detailed will be refreshed annually, with all future versions published via an updated version of this Interim Advice Note.

4. Contact details

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Annex 1: Highways Agency policy for the use of Variable Signs and Signals (VSS)

HIGHWAYS AGENCY

Safe roads, reliable journeys, informed travellers

Highways Agency policy for the use of Variable Signs and Signals (VSS)

Date: 23 December 2011 **Version: 1.01**

An executive agency of the Department for Transport

Document control

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Author	Darren Evans (WM)
Owner	Damian Morris
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Revision history

Version	Date	Description	Author
0.1	February 2007	VMS and Matrix policies.	VMS Policy Team
0.2	13 December 2010	First draft of new VSS document.	Darren Evans (WM)
0.3	21 March 2011	Second draft, based on CAB feedback.	Darren Evans (WM)
0.4	7 June 2011	Third draft, based on CAB feedback.	Darren Evans (WM)
0.5	15 July 2011	Minor modifications based on Simon Sheldon-Wilson feedback.	Darren Evans (WM)
0.6	12 August 2011	Minor modifications.	Darren Evans (WM)
0.99	23 September 2011	Final draft, but requires updates to meet requirements of writing and visual identity guides.	Darren Evans (WM)
1.0	28 October December 2011	Final version ready for issue on 23 Dec.	Darren Evans (WM)
1.01	23 December 2011	Minor modifications based on feedback from version 1 prior to formal publication.	Darren Evans (WM)

Reviewer list

Name	Version
Change Advisory Board (CAB)	0.2
VSS project team	0.3
Simon Sheldon-Wilson	0.4
Damian Morris	ALL

Approvals

Name	Title	Version
Damian Morris	Head of Traffic and Information Policy	1.01
Simon Sheldon-Wilson	Highways Agency Director, Traffic Management Directorate	1.01

KEY DOCUMENTS

This document is aligned with;

1) Motorway Traffic Regulations 1982
2) Road Traffic Regulation Act (RTRA)1984
3) The Design and use of Directional Informatory Signs – Local Transport Note 1/94
4) The Design Manual for Roads and Bridges (DMRB)
5) The Traffic Signs Regulations and General Directions (TSRGD) 2002
6) Traffic Management Act 2004
7) Traffic Signs Manual: Chapter 8

RELATED DOCUMENTS

This document should be read in conjunction with;

8) Highways Agency Area Management Memo 09 (AMM09)
9) National Traffic Control Centre – Approval of VMS Messages (TCC-SYS-0027)

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Annex A: Types of signs and signals

Annex B: Authorised signals

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- **Use of VSS to provide tactical road works information**
- **VSS unconfirmed incident legend**
- **VSS congestion information where two routes of a similar length have the same end point**
- **Use of VSS to provide information to 'trapped traffic'**
- **Legend set review**

Annex G: Contacts

1 *INTRODUCTION*

This document defines the policy relating to the Highways Agency operation of electronic Variable Message Signs (VMS) and electronic light emitting Matrix signals – known together as Variable Signs and Signals (VSS). It has been produced by the policy owner Traffic Management Directorate (TMD), and reviewed via the VSS Change Advisory Board (CAB).

VSS provide the capability to display a wide range of warning messages and other traffic information. The purpose of VSS is to enable Highways Agency control room operators to meet the Agency's obligations as a network operator. These obligations include incident management, reducing congestion, informing motorists, improving network performance and ensuring the safety of road users and workforce.

VSS shall only be used for the management of temporary situations. Events which require long term signing in a static location shall always be shown on permanent traffic (hard) signs.

VSS are "traffic signs" as defined in section 64 of the Road Traffic Regulation Act (RTRA) 1984. Every sign or signal used by the Highways Agency must either be prescribed in the Traffic Signs Regulations and General Directions (TSRGD) 2002, or approved for use by special authorisation.

The underlying purpose of the RTRA is the regulation of traffic and equipment placed on a road under the powers contained in the RTRA – therefore traffic signs must not be used for any other purpose than to convey road traffic messages to drivers, no matter the reason. Additionally VMS legends must only be used to provide road users with information that is relevant to their current or future journey.

Schedule 11 of the TSRGD details all of the signal displays authorised for use – examples of which can be found in Annex B

Schedule 15 of the TSRGD details all of the legends to be displayed on VMS – the Highways Agency via its delegated authority has expanded this list, details of which can be found in sections 6, 7 and Annex C.

Special authorisation must only be undertaken by the appropriate Highways Agency authorising officers, who have delegated powers from the Department for Transport (DfT) on behalf of the Secretary of State for Transport. The full list of Highways Agency authorising officers is found at Annex E.

This document provides high level VSS policy statements that shall be followed. Subject to these the operational decisions when to use VSS are the responsibility of the relevant Highways Agency control room and its operators.

2 SCOPE

A VSS is any discontinuous variable sign or signal, whether fixed or portable, that is either located on the strategic road network or is operated by or on behalf of the Highways Agency. The uses of continuous VMS are outside the scope of this document.

This updated policy supersedes the two policy documents below, which are no longer in use:

1) Policy and Procedures for the Use of Matrix Signals by the Regional Control Centres, Issue 3, 2007

and

2) Policy and Procedures for the Use of Variable Message Signs by the Regional Control Centres, Issue 3, 2007.

This policy has removed all reference to the procedural text previously contained with the two documents above, as procedures are out of scope of this policy document.

All VMS legends detailed in this policy are authorised for use on either fixed or portable VMS.

It is not within the scope of this policy to specify safe locations for the placement of VSS. This is the responsibility of the team installing the VSS equipment.

Sections of the motorway network operated as either managed or controlled motorways are outside the scope of this policy document, as separate policy and procedure documents have been produced.

The use of mandatory speed signals are outside the scope of this document.

Schedule 12, part 5 of the TSRGD provides details for the “Signs Mounted on Road Works Vehicles”. These types of signs are out of scope of this document.

LED signs used at road works, which either improve offside sign visibility, or allow signs to switch between diagrams showing lane closures and narrow lanes are outside the scope of this document.

3 *KEY DEFINITIONS*

Within sections 4 to 7 of this document the word “must” or “must not” is used to indicate a legal requirement which must be complied with.

The word “shall” or “shall not” indicates an essential (or mandatory) requirement of compliance with this document, and “should” or “should not” indicates a course of action that is strongly recommended. The word “may” is used to indicate an option, which requires consideration depending on the circumstances.

Authorising officer – Designated person with authority to authorise non-prescribed traffic signs.

Confirmed report – An incident reported by someone who is a trusted source of information.

Congestion – Travel time is between 7m 30s and 12m 29s above journey profile.

Delays – Travel time is between 12m 30s and 24m 59s above journey profile.

Event – An issue which has/or may have a negative impact upon normal journey profile.

Gap (in VMS infrastructure) – A section of road, where a significant distance exists between permanently located VMS.

Incident – An unplanned obstruction in the highway which is likely to place road users at risk. It includes, but is not limited to, road traffic accidents, broken-down or abandoned vehicles, or debris in the carriageway.

Journey profile – The travel time between 2 locations at agreed times of the day.

Legend – An authorised combination of words, numbers and symbols displayed on VMS to communicate information to road users.

Long delays – Travel time is 25 minutes or more above journey profile.

Long-term signing – Any legend intended to be displayed permanently for a period of two or more weeks.

Paired VMS – Two consecutive VMS which either display the same legend, or two legends which contain related/similar information.

Strategic VSS – Signs mainly located outside of the tactical VSS area, which warn drivers further away of the reason for any tactical VSS.

Tactical VSS – Signs and signals which are located a maximum of 5km or 2 junctions from either the scene of an incident (or other event which drivers need to be informed of), or from the rear of any queues which have formed as a result of the incident.

Unconfirmed report – An incident reported by anyone other than an agreed approved source.

4 SIGNS AND SIGNALS POLICY GUIDANCE NOTES

4.1 INTRODUCTION

This document provides high level VSS policy statements that shall be followed. Subject to these the operational decisions when to use VSS are the responsibility of the relevant Highways Agency control room and its operators.

4.2 FIXED OR PORTABLE?

The most visible type of VMS to drivers are fixed VMS and these shall always be used before a portable VMS is considered. If a decision is made that a portable VMS is to be used on a motorway it shall only be used when (1) filling in a gap in the fixed VMS infrastructure, (2) to guarantee the 24/7 availability of a legend or (3) for use as permitted with Traffic Signs Manual: Chapter 8.

On A-roads where fixed VMS are not widely available then portable VMS shall be used under the direction of the relevant control room (subject to all policies detailed in this document), or as described within the Traffic Signs Manual: Chapter 8.

Portable VMS are located on a verge, and not above a carriageway. Due to this all legends shown on portable VMS shall not contain more than 4 units of information as the verge location limits the amount of time drivers have to read and absorb the information displayed.

4.3 LOCATION OF LEGENDS

If a VMS is located within 1km of an exit's final 'nose' road marking, unless it is necessary to instruct drivers to change lanes to avoid an incident, this VMS shall not display any legend which encourage drivers to change lanes, as doing so this close to an exit is proven to be unsafe.

Similarly any VMS located 1km after the first entry 'nose' road marking shall not display lane change information unless required for incident management.

Additionally only tactical legends or strategic diversion legends shall be displayed within this area, and all other legends such as campaigns, future notification of road works, special events, etc should not be used.

4.4 THE USE OF JUNCTION NUMBERS

Junction numbers have only been authorised by DfT for use on motorways and the A14. VMS must not be used to display information about junction numbers on any other road than a motorway or the A14.

Where junction numbers are not authorised for use, the information to be displayed in a legend shall be the road number which the A-road intersects with, or a place name, which shall match the place name shown on the primary or non-primary route directional signs.

Whenever possible legends should contain both a road number and a place name. If this cannot be achieved, consideration should be given to pairing the legends with the first displaying the road number and the second the place name.

4.5 *DIVERSIONS*

If an incident/event has occurred that has resulted in a short duration road closure it is often not preferable to divert motorists off the strategic road network due to the adverse effect the extra traffic can inflict on the surrounding roads and communities.

When there is a need for a diversion to be communicated to drivers, the diversion shall be approved for use. Drivers shall not be diverted off the strategic road network on to roads which the Highways Agency is not responsible for without the prior agreement of the 'other' road authority.

4.6 *HEIGHT/WIDTH RESTRICTIONS*

When a temporary height/width restriction is to be advised using VMS, imperial measurements must be used. Wherever possible, the metric equivalent shall also be displayed within the same VMS legend but this must be as additional information and not as a replacement of the imperial measurement.

4.7 *FLASHING/SCROLLING VMS LEGENDS*

VMS must not be used to display scrolling, alternating or sequential legends on the same panel, nor anything whilst in transit. There are two agreed exceptions to this requirement with these being:

- Variable Message Panel (VMP) located in the rear of Traffic Officer vehicles – see Annex C.14.

- Trapped traffic legends – See Annex F.4.

4.8 *TELEPHONE NUMBER/EMAIL ADDRESSES*

Email addresses must not be used in VMS legends, and telephone numbers must only be used when providing road works signage as detailed in diagram 7006.1 of the TSRGD.

Telephone numbers may be used in future legends developed for trapped traffic – See Annex F.4

4.9 ***DESIGN PRINCIPLES OF LEGENDS***

VMS legends must be suitable for all drivers to read, and due to limited availability shall focus on providing information that benefits the largest number of customers using the road network.

A risk based approach has been taken to ensure that all legends and guiding principles found within this policy document are appropriate for use. Research carried out in 2010 by Nottingham University on behalf of the Highways Agency has proven that it is appropriate to display legends on fixed VMS which contain a maximum of 7 pieces of information, using an absolute maximum of 10 words, although best practice is that legends should be restricted to a maximum of 8 words.

Portable VMS are located on a verge, and not above a carriageway. Due to this all legends shown on portable VMS shall not contain more than 4 units of information as the verge location limits the amount of time drivers have to read and absorb the information displayed.

Volume 8, Section 2 (TD33/05) of the Design Manual for Roads and Bridges (DMRB) provides more detailed guidance on the maximum number of words which are permitted for use in VMS legends.

A piece of information can contain more than one word. For example ‘HARD SHOULDER’ and ‘JCT 25’ each represent one piece of information but contain two words.

When constructing legends the order and principle of LPEG shall be followed, although not all of the 4 principles are required for every legend – for example tactical legends mainly focus on the Problem (ACCIDENT) and Guidance (SLOW DOWN).

Location – Where is the problem? (M6 J32/M25 J20-21)
Problem – What is the problem? (Accident/Major Event/Closed)
Effect – What has the problem caused? (Delays/Long Delays/45 MIN DELAY)
Guidance – What should be done? (Slow Down/Use M1/Follow Diversion)

The TSRGD prescribes how flashing amber lamps are to be used to support certain VMS legends. Flashing amber lamps should only be used in tactical legends which contain an imperative i.e. SLOW DOWN, and also in strategic legends which detail a full motorway closure. All other legends should not use flashing amber lights.

The flashing red and amber elements of a variable signal shall only be used as described in Schedule 11 of the TSRGD.

4.10 *UPPER OR MIXED CASE TEXT?*

All legends detailed in Annex C of this policy are authorised for use on either fixed or portable VMS in upper case format.

When legends are displayed on an MS4 they are also authorised for use in mixed case text. The below rules shall be followed when modifying text from upper to mixed case.

Font: Text to be used shall be Transport Mixed (TM) Case 380mm equivalent

General rule: Text on an MS4 is presented in sentence case (e.g. Debris on slip road). When a pictogram is used the text the pictogram represents shall be removed, unless doing so means no text will be displayed on the VMS.

Exceptions: The following should remain in Transport Upper (TU) case text:

Urgent warnings:

- **SLOW DOWN** - (e.g. Fog SLOW DOWN)
- **SLOW** - (e.g. Animals in road – SLOW)
- **ONCOMING VEHICLE**

Geographical:

- **M*** - motorway numbers (M* East accident)
- **A*** - A road identifier (e.g. A* Closed after J*)
- ***NOTE: text following a motorway or A road identifier is* displayed in sentence case (e.g. M* Closed use A*)**
- **B*** - B road identifier (e.g. A* Closed use B*)
- **N,E,S,W** – abbreviations for carriageway direction that are displayed in brackets (e.g. Exit closed to A*(E))
- **J*** - Junction identifier (Long delays at J* exit)
- **JCT** –the abbreviation junction is displayed with a capital J

Acronyms:

- **FM** - used for travel information signs (e.g. Travel news tune ***.*FM)
- **HGVs** – (e.g. HGVs leave motorway)
- **LPG** – (e.g. No LPG at service area)
- **LRP** – (e.g. No LRP at service area)

4.11 ***PICTOGRAMS***

Pictograms are a graphical representation of a tactical legend. Currently 15 pictograms are authorised for use on an MS4 type VMS and these are shown in Annexes C.8 and C.9.

Pictograms shall only be used for tactical purposes and all tactical incident pictograms (Annex C.8) must be shown within a red warning triangle. Tactical emergency diversion route pictograms (Annex C.9) must not be shown with a red warning triangle.

When a pictogram is used the text the pictogram represents shall be removed, unless doing so means no text will be displayed on the VMS.

Pictograms shall always be displayed using a height dimension of 1500mm (1.5 metres). The VMS authorising officer has concluded that it is not appropriate to display pictograms with smaller height dimensions until the legibility has been tested in more detail.

4.12 *OVERUSE OF VMS LEGENDS*

A number of studies have found that displaying the same legend too many times can result in drivers ignoring legends due to familiarity and/or information overload.

A report prepared by the Organisation for Economic Co-operation and Development (OECD) in 1987 titled 'dynamic traffic management in urban and suburban road systems' stated that "careful attention should be paid not to exceed the perception limitations of motorists. This can be achieved by obeying the following guidelines:

- try to limit the number of signs as much as possible;
- do not give too much information on one sign;
- try to use symbols instead of words, if possible (also of importance for foreign drivers);
- give information in a concise way; do not divert the driver's attention for too long;
- try to adhere to uniform solutions in order to improve recognition;
- repeat information (information could be partially missed the first time and visual information is easily forgotten after a short time);
- try to eliminate irrelevant information in order to reduce the amount of information drivers have to assimilate

The Transport Research Board (2008) conducted an extensive study in the USA and found that there were no adverse comments from the public when variable message signs are left blank. Moreover, they found that drivers pay more attention when a legend is displayed if they have previously been blank, hence frequent display of non-essential legends will result in drivers ignoring more important legends.

Tactical incident legends provide information about an immediate incident/event and therefore there is no limit on the number of times that a legend can be shown in the tactical area but overuse should be considered when setting legends for the reasons stated above.

Agreed European best practice is to only display strategic legends twice between junctions, as these are usually displayed over a wide area meaning drivers have more than one opportunity to view them.

Where possible it is advised that legends should be 'paired' to ensure drivers have two opportunities to read a legend. If this approach is adopted, it reduces the need for multiple signs to be used displaying the same legend.

4.13 *ROUTINE CONGESTION*

Congestion is defined as an increase in travel time of at least 7 minutes 30 seconds above journey profile. Therefore, unless a location specific policy exception has been authorised, routine slow moving traffic (e.g. rush hour traffic) which does not increase journey time above this threshold shall not be advised of via VSS - queue protection legends shall still be used to protect the rear of any queues formed.

5 *RELATIONSHIP BETWEEN TACTICAL/STRATEGIC SIGNS AND SIGNALS*

There are two categories of usage for signs and signals, with these being **tactical** or **strategic**. In simple terms tactical signs and signals shall be set in an area which is a maximum of 5km or 2 junctions from either the scene of an incident (or other event which drivers need to be informed of), or from the rear of any queues which have formed as a result of the incident.

Tactical VSS shall always focus on providing queue protection legends which warn drivers of an incident that is immediately ahead. Other incidents which have occurred further along the motorway shall be signed for using strategic legends. Once drivers have passed the original incident location then new tactical signs and signals relating to other incidents shall be set. This is to ensure that tactical legends which relate to different incidents are not mixed, as this can provide confusing and inconsistent information to drivers.

With the exception of tactical diversion legends, all legends which advise drivers to use an alternative route due to an incident/event are strategic.

Strategic VMS (signals shall not be used for strategic use) shall only be set outside of the tactical signing area and not within the tactical signing area except in the below circumstances where there is a requirement to display a strategic legend in the tactical incident area;

- In circumstances where drivers who have joined the motorway within the tactical signing area need to be made aware of the strategic information as to do so any further along their journey would not allow them to act on the information provided.

- A travel time or delay time message – see section 7.4

- A security legend – see section 7.15 and Annex C.11

All other strategic legends such as campaigns, notification of future road works etc shall be removed from a tactical incident signing area until the incident has ended and the tactical signs removed.

Specific uses of tactical and strategic VSS are detailed in sections 6 and 7.

6 *TACTICAL SIGNS AND SIGNALS POLICY REQUIREMENTS*

6.1 *INTRODUCTION*

This document provides high level VSS policy statements that shall be followed. Subject to these the operational decisions when to use VSS are the responsibility of the relevant Highways Agency control room and its operators.

Tactical VSS enable control rooms to provide early warnings of incidents on the strategic road network which require drivers to stop, change lanes or reduce speed.

Where possible all tactical signals shall be supplemented by a VMS legend to provide drivers with information stating why the signals have been set. VMS legends are listed in this section when appropriate – the full national tactical legend set authorised for use can be found in Annex C.

All tactical incident legends have been designed to fit on VMS that are only capable of displaying the minimum number of characters (2 lines of 12), even if a larger sign is available – this is to ensure 100% availability to operators.

As tactical legends provide information about an immediate incident/event no flexibility can be granted in the construction of these and only legends approved by the authorising officer shall be used.

6.2 *LANE CLOSURES*

When traffic/police officers are deployed or working on the carriageway, less restrictive signals must never be implemented without the consent of the officer in charge of the scene.

Lane closures shall not be implemented that result in central lane(s) being closed with the outer and inner lanes remaining open. Lane closures must always provide safe refuge for the workforce on the carriageway, via either the hard shoulder, or alternatively the central reservation.

6.3 *ADVISORY SPEEDS*

Maximum advisory speeds must only be displayed using 60mph down to 20mph in decrements of 10mph providing the restriction is not equal to, or higher than, the permanent speed restriction on that section of road.

Decrements of greater than 10mph should only be used where the spacing between signals is greater than 800 metres, and here the advice is that, where possible, speeds should not be reduced by more than 20mph at a time (e.g. 60mph to 40mph), although the Design Manual for Roads and Bridges (DMRB) does state that “a 30mph speed reduction is considered safe”.

Signals on gantries above individual lanes shall either be ‘all on’ or ‘all off’ and when ‘all on’ any advisory speed shown shall be equalised with the lowest speed taking priority (e.g. 40mph, 60mph, 60mph shall be displayed as 40mph, 40mph, 40mph). An exception to this equalised rule is on a gantry located at a parallel diverge. For example using figure 6.1 below signals 1 and 2 could display 20mph whilst 3, 4 and 5 could display 40mph.

Figure 6.1: Parallel Diverge Signals

6.4 *INCIDENT MANAGEMENT*

If an incident is reported by anyone other than an approved source agreed by the traffic officer service (police officer, traffic officer, incident support unit at the scene, MAC or TechMAC, NTOC/NTIC or identified via CCTV) it is an 'unconfirmed' report. Until such information can be verified, a maximum speed of 50mph shall be displayed together with the legend "INCIDENT SLOW DOWN" where VMS is available.

If however an operator is reasonably satisfied with the accuracy of the information supplied (e.g. information received from a motorway telephone or several calls received from different sources giving the same incident location and description) then appropriate **non-lane specific** tactical signs and signals should be set. Depending upon the nature of the incident reported it may be that the setting of signs and signals is required on both carriageways.

Once the exact details of an incident have been confirmed via one of the approved sources, the incident becomes a confirmed report, and appropriate lane specific signs and signals should be set as required.

There are only two exceptions to the above with these being mobile incidents relating to either 'oncoming vehicles' or 'pedestrians/animals in road', both of which shall be dealt with as detailed below.

ONCOMING VEHICLE

A vehicle travelling against the flow of traffic creates extreme danger, so it shall be treated as a confirmed incident no matter the information source. A blanket 20mph speed restriction shall be set in both directions of the reported location and the 'ONCOMING VEHICLE' legend displayed where possible. The rationale for this action is that the driver of the oncoming vehicle could have their attention drawn to the VSS set on the opposing carriageway.

PEDESTRIANS AND/OR ANIMALS IN ROAD

Unless it is considered that a pedestrian is walking to an emergency phone, a 50mph advisory speed restriction shall be set because pedestrians and animals are likely to act unpredictably. In addition operators should consider:

- Setting signals on the approach to the location on both carriageways.
- Using the prescribed legend to support the signals.

6.5 *USE OF END*

The “END” legend shall always be displayed once drivers have driven through an incident location to inform them that the reason for any signs and signals has now ended. “END” shall always be displayed when tactical signs and signals have been set except when:

- a FOG signal is set;
- a further incident has occurred up to 2km further along the motorway from an incident, and drivers will soon encounter new incident VSS;
- within 2.5km of the start of Chapter 8 road works signing;
- within road works;

Where an “END” signal is displayed on VSS infrastructure that has the capability of displaying both a sign and signal simultaneously, the sign aspect should remain blank until the “END” has been cleared/removed. This is to ensure conflicting information is not displayed which can confuse drivers.

Signals that display “End” shall be shown for a maximum of 3 minutes after tactical signals have been removed.

6.6 *POLICE PURSUITS*

The ‘Tactics Directory for Police Pursuits’ states that where VSS exist, then officers must request “low speed matrix and consider the use of a suitable VMS message if available”.

The use of VSS for this reason or the exact legend(s) to be used have not been formally agreed with the police.

Due to this only existing tactical VSS legends shall be used and this shall only be when a formal instruction is received from a police force. In accepting this instruction the call sign and/or collar number of the requesting officer shall be recorded.

6.7 *SEVERE WEATHER*

Non-visible weather conditions.

Advisory speed limits and associated legends shall be used to advise drivers of **weather conditions that they cannot see** (e.g. strong winds, ice) both on the approach to (around 2km before) and through the weather zone as required.

“RISK OF ICE” signs and associated signals shall only be set when (1) the temperature has dropped to a point where ‘salting’ is of limited effectiveness for whatever reason, (2) there is freezing rain (or rain falling on extremely cold surfaces), (3) the icy road condition is verified by the Police, ToS or an Area Team or (4) a section of road which requires salting has not yet been salted due to operational constraints.

In icy conditions, when only an MS1 is available, advisory speed signals shall take priority over the displaying of the legend “ICE”.

Visible weather conditions

Weather conditions that are visible to drivers do not require advisory speed signals to be set, unless required for high structures or other known localised conditions.

In foggy conditions, signs should be activated on unconfirmed reports and verified as soon as possible for accuracy and continued use.

VMS legends should be used up to 2km in advance of the weather zone to warn drivers of the soon to be experienced weather conditions.

Legends for visible weather shall only be set within the weather zone on VMS directly after each junction/entry - providing the VMS is located within an estimated 1km of the junction/entry. This is because while the weather conditions on a local road will have been the same, at higher motorway speeds the driving conditions can be worse meaning there is a need to warn new drivers to the road of the weather conditions.

6.8 *UP AND OVER*

When an incident takes place within a junction (between the slips) that blocks the carriageway and results in traffic being diverted 'up and over', drivers can still continue on their journey subject to a minor diversion. Due to this an 'up and over' shall only be considered as a closure from a tactical point of view as there is a requirement to warn motorists that they need to leave the motorway.

Strategically an 'up and over' shall only be considered a potential disruption to traffic and not a full motorway closure as drivers can still continue on their journey subject to the minor diversion.

If however the exit and entry slip roads cannot cope with the volume of traffic being diverted, and there is a significant increase to journey time then strategic legends should be used which both warn of the delays and/or advise an alternate route. These strategic legends shall not advise that the motorway is closed as drivers can still continue 'up and over' and they have been informed of the delays and/or offered an alternative route.

6.9 *MOTORWAY INCIDENT DETECTION AND AUTOMATIC SIGNALLING (MIDAS)*

MIDAS is an automated incident management safety-related system that takes information from loop detectors in the road sub-surface providing both flow and speed data. This information is processed and when slow moving or stationary traffic is detected in any lane it automatically set VSS to warn drivers.

Even though MIDAS is a safety related system, if a more appropriate tactical incident management legend (a higher priority legend) giving better information is available, the MIDAS legend should be overwritten where possible.

Additionally when drivers are in slow moving traffic MIDAS legends (which are now stating the obvious to drivers) may be cleared/removed until the traffic begins to return to a speed which requires the automatic queue protection.

The signs and signals information that is displayed by the MIDAS system can be found in Annex C.4.

6.10 *TACTICAL ROAD WORKS INFORMATION*

In addition to the legends found within Annexes C.1 and C.6, the road works policy detailed in the 2007 “Policy and Procedures for the use of Matrix Signals by the Regional Control Centres” is currently being updated.

Until updates are agreed this 2007 policy shall still be used, although where any discrepancies exist between this 2007 policy and the guidance provided in traffic officer procedure CCF302 (The Use of Signals, VMS and MIDAS at Short Duration Static Road Works), the CCF302 guidance shall supersede the 2007 policy as required.

See Annex F.1 for the 2007 road works policy statement.

Portable VMS shall be use as described within the Traffic Signs Manual: Chapter 8. Additionally, if deemed appropriate by the road works scheme designer, portable VMS may be used to display a legend providing a travel time through the works (see section 7.4).

6.11 *TESTING OF VSS EQUIPMENT*

When VSS need to be tested by engineers in a live traffic environment the below legends shall be used as described.

SIGNAL[S]
UNDER TEST – Used to warn drivers that either a signal incorporated as part of the sign, or signals located on the same gantry are being tested. This legend shall be used when both the sign and signal are being tested simultaneously.

SIGNAL TEST[S] – Used to warn drivers that either a signal incorporated as part of the sign, or signals located on the same gantry are being tested. This legend shall be used when both the sign and signal are being tested simultaneously.

SIGN
UNDER TEST – Used to warn drivers that the sign is being tested. Not to be used for signal tests.

SIGN TEST - Used to warn drivers that the sign is being tested. Not to be used for signal tests.

During testing any lines of the VMS not displaying a legend shall either be left blank or display the ‘CHECKERBOARD’ test pattern.

FOR INFORMATION: Within a controlled/managed motorways environment the legend "LANE SIGNALS UNDER TEST" may be used for signal tests, but only when the lane signals are displaying a test pattern. The legend shall not be used in the vicinity of signals displaying mandatory speed limits.

7 STRATEGIC SIGNS POLICY REQUIREMENTS

7.1 INTRODUCTION

This document provides high level VSS policy statements that shall be followed. Subject to these the operational decisions when to use VSS are the responsibility of the relevant Highways Agency control room and its operators.

Strategic VMS are used to provide information to road users in advance of any incidents/events affecting either the road they are travelling on or other routes

Due to the number of potential legends it is not practical for this document to list all approved strategic legends. Instead a sample of the most commonly used legends are provided (Annex C) with the full list found within related document 9.

All examples provided in this section have assumed that a 3x18 sized VMS is available. Where smaller sized VMS are to be used, legends shall be modified as appropriate and the order of information shall be maintained where possible.

7.2 FUTURE NOTIFICATION OF ROAD WORKS

To help road users plan their journey VMS shall be used to warn of future road works that require a full road closure and are expected to either cause delays, or require the use of an alternative route which may not be suitable for all types of vehicle. These legends should only be displayed a maximum of 1 week prior to the road works taking place. Road works legends should display information in the order below.

1 – *Place/Location*
2 – *Date(s) of Closure*
3 – *Times of Closure**

* Times of closure are limited to one of “NIGHT CLOSURE”, “NIGHT CLOSURES”, “WEEKEND CLOSURE” or “WEEKEND CLOSURES”.

Unless a strategic diversion is required, future road works legends shall be displayed a maximum of 5km or two junctions from the road works to ensure relevance.

On A-roads where fixed VMS are not always available then portable VMS may be used to perform this task, as described within the Traffic Signs Manual: Chapter 8.

In advance of road works being set out, legends may be used to warn strategically of closures so that drivers have either the opportunity to consider modifying their route or an advance warning of any expected delay.

7.3 DUAL LEGENDS

Where multiple incidents/events have occurred and more than one strategic legend needs to be displayed on the same sign, two legends may be shown on a 3x18 VMS providing the middle line is left blank. Information about the closest incident/event should always be displayed on line 1. An example is shown below.

7.4 *TRAVEL TIME MESSAGES (TTVMS)*

Travel time messages provide travel time information to a destination located on the road being travelled upon. Legends are based on a combination of historic and current traffic data. If a traffic event causes delays on the network above an agreed threshold the legend shall automatically switch from a travel time to an estimated delay time legend.

When a delay time legend is displayed the authorised 'delay reason(s)' include "ACCIDENT", "ROAD WORKS", "OBSTRUCTION", "FLOODS", "INCIDENT", "STRONG WINDS" ,"LARGE LOAD" or "SEVERE WEATHER"

When a TTVMS legend is located on an 'A' road where junction numbers are not authorised for use, the junction number shall be replaced with a place name, which shall match the place name shown on the primary or non-primary route directional signs.

TTVMS legends show average journey times, and it is reasonable to expect that actual speeds will vary over the TTVMS distance displayed. This is not a problem with TTVMS legends but the way averages are calculated, and it shall therefore not be viewed as a fault with the system.

Legends must not show an average journey time which is only achievable by driving faster than the legal limit for the section of road being travelled upon.

Examples of how a legend shall be constructed are shown below.

7.5 *GRAPHICAL ROUTE INFORMATION PANEL (GRIP)*

Graphical Route Information Panel (GRIP) legends provide drivers with a graphical representation of the traffic conditions on the strategic road network ahead, highlighting any areas where delays are occurring.

GRIP legends shall always be supported with the use of other text based legends warning drivers of the delays.

Due to the graphical requirements of these legends, GRIP signs can only be displayed upon MS4 type VMS. An example of a GRIP legend is below.

7.6 *LONG DELAYS*

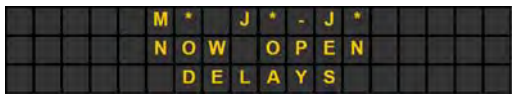
When “LONG DELAYS” are being experienced, every effort shall be made to include the actual delay time in non TTVMS legends. While it shall be acceptable to initially use the term “LONG DELAYS”, once detailed information about the likely duration of an incident /event becomes available then the delay time shall be shown instead.

Where possible the delay time shall match the delay time shown on any relevant TTVMS legends. If TTVMS legends relating to this incident/event are not in use, due to the varying nature of delay times the unit of time used shall be displayed in 15 min variations e.g. 30 MIN, 45 MIN, 1HR, 1HR 15 MIN, and 1HR 30 MIN.

7.7 *NOW OPEN*

Feedback to the Highways Agency is that many drivers do not realise that the change from “CLOSED” to “LONG DELAYS” in a VMS legend actually means that the road has now reopened.

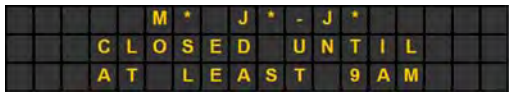
Due to this the term “NOW OPEN” is authorised for use in strategic VMS legends. This legend should only be displayed for a maximum of 30 minutes once a road has reopened as this is enough time for road users to see this legend at any location on the network. Examples of suitable legends are below.



“LONG DELAYS” is only to be used as described in section 7.6 above.

7.8 TIME TO REOPEN

If an incident has occurred and a section of motorway is expected to be closed for more than 8 hours then a legend based on the below examples should be used whenever practical to inform drivers of the expected time to reopen.



7.9 *OTHER ROAD AUTHORITY LEGENDS*

The Traffic Management Act 2004 places a legal requirement on the Highways Agency to facilitate the movement of traffic on all roads. To support this Highways Agency VMS should be used to display information about traffic conditions on other roads.

These legends should only include information about delays/events no further than 10km from the relevant motorway junction, or A road exit, to ensure relevance.

If these legends are to be set remotely via 3rd party access, the authorising officer shall agree the legends for use by each local authority and agree the VMS they shall be used on. The 3rd party legends shall not include information which instructs drivers to modify their route on the strategic road network. Only a Highways Agency control room can make this decision as only they have the required traffic data to make these decisions.

7.10 *MULTI-MODAL LEGENDS*

Legislation (RTRA) defines VSS as being used for the regulation of traffic and not for any other purpose. It is though acceptable to warn of any delays users may experience when using other modes of transport as detailed below.

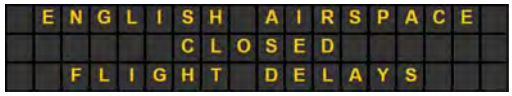
AIRPORT LEGENDS

Information about the closure of airport terminals or car parks may be shown, **but only** on VMS located on roads where drivers are either using a dedicated airport approach, or at targeted locations where the information is needed as drivers are required to use another access route to the airport.

If an airport is closed, then VMS should be used to warn drivers of this strategically, although the legends shall only be set once the airport itself formally requests the legend is displayed. This type of legend is traffic related as it will mean people on route to the airport could be required to change their journey plans.

If an airport remains open but is experiencing delays in processing passengers due to flight delays, then VMS legends shall not be used as this information is not traffic related as it does not require drivers to do anything different, as they are still to proceed to the airport as normal.

If a closure of airspace happens then the below legends should be used to warn drivers of this. These legends should only be used if a significant closure of airspace is expected i.e. 2 or more hours. The decision when to set these legends needs to be made at an operational level using agreed procedures.



PARK AND RIDE LEGENDS

Information about the closure of a park and ride facility located close to the strategic road network may be displayed providing the closure is unexpected, and not a business as usual closure. A business as usual closure would be where the facility is closed as normal outside its regular opening hours. An unexpected closure might be a security issue, or flooding.

When a park and ride facility is full and alternative facilities exist within a reasonable distance then legends may be used to advise of the alternative, but only if the alternative is known to have sufficient spare capacity available.

In addition drivers can be advised of park and ride facilities as part of special event legends (see section 7.13), providing the park and ride facilities are temporary. Any permanent park and ride facilities must be signed for using permanent traffic (hard) signs.

TRAIN STATION CLOSURES/RAIL DISRUPTION

Information about the closure of a major rail station (Birmingham New Street, Manchester Piccadilly etc) is permitted providing the closure is unexpected, and not a business as usual closure. A business as usual closure would be where the facility is closed as normal outside its regular opening hours. An unexpected closure might be a security issue, or flooding.

Alternatives shall not be offered as it is unlikely that any one station will have the spare capacity for such a large amount of people.

When multiple train cancellations or significant delays of 2 hours or more hours are being experienced on a major train route, then legends may be set to warn of this but only at the request of the relevant rail authority.

PORT DISRUPTIONS

With the large number of freight vehicles using the trunk road network, delays at sea ports can cause severe traffic delays. Due to this a number of legends have been developed to advise freight drivers of the delays. The most commonly known of these is the ‘Operation Stack’ legend set.

7.11 *TOLL ROADS*

When strategic diversions are advised, they shall not instruct drivers to use a toll road, as due to cost implications the choice to use a toll road is the decision of drivers. Strategic diversion legends, space permitting, should include information about the status of a toll road, providing it is not an advised route

If a toll road temporarily allows free usage of the road, and a VMS legend is required to inform drivers of this the term “CHARGES SUSPENDED” shall be used within the legend. “TOLL SUSPENDED” shall not be used as this could be interpreted by some drivers as meaning the toll road is closed.

Once any charges are re-introduced the term “CHARGES REINTRODUCED” shall be used within a legend to advise drivers of the charges being reinstated.

7.12 ***CAMPAIGNS***

VMS may be used to display legends which support proactive national road safety campaigns. In addition campaign legends may be used which provide information to drivers that is related to a driver behaviour not governed by traffic legislation e.g. the dropping of litter from vehicles.

Campaign legends must not include information which encourages drivers to consider an act which could be detrimental to their safety if carried out immediately e.g. a legend of “are your children belted up” may distract some drivers as it may encourage them to check that children in the rear of their car have their seat belts on.

Approval for the use of VMS to support internal campaigns must only be given by the VMS authorising officer, and will only be given if they are satisfied that a suitable communications strategy is in place, which supports a proven business requirement.

When used campaign legends shall meet the following requirements;

- Only to be displayed on a maximum of 5% of suitability located VMS – see section 4.3.
- A maximum of two categories of national legends shall be displayed each calendar month across the entire strategic road network.
- One additional ‘at request’ legend may be displayed in each RCC region when required.

The full list of currently authorised campaign legends is found in Annex C.13. To ensure VMS are not overused, as described in section 4.12, a maximum of 6 national campaigns shall be supported via VMS each calendar year.

7.13 ***SPECIAL EVENTS***

In addition to the required temporary traffic (hard) signs VMS may also be used to warn drivers of special events if it can be demonstrated from historical information that the event is proven to cause delays to through traffic. For any new events where historical information is not available then the criteria shown in Annex D shall be applied to inform the decision.

The RTRA does not allow VMS to be used for advertising. Therefore the term "Major Event" shall be used, and not the name of an event, in all special event legends unless one of the below criteria can be met.

A) More than one special event is taking place within a reasonable distance of another, which requires each special event to have an individual distinct legend.

B) The use of "MAJOR EVENT" does not give a clear understanding of the traffic problems an event will cause, or the event is expected to cause disruption at more than one location.

   For example, the use of TRUCKFEST gives some indication of the types of vehicles that will be going to the event.

C) The VMS is being used to support during-event signing, and the use of the event name will help road users to complete their journey safely and efficiently. It is then acceptable to use the name of a special event, even if the special event name was not authorised for use in pre-event signing.

   Due to concerns over advertising only the Authorising Officer can approve the use of an event name for use in event pre-signing.

Special event legends shall only be displayed a maximum of 5km or two junctions from the location of the expected delays. The only exception to this rule is when a strategic diversion is advised as part of the during event signing – these shall be shown in the appropriate location no matter the distance from the event.

Where the delays are expected to take place off the strategic road network, special event legends shall only be permitted about events which are located no further than 10km from the closest junction/exit, unless approval is granted by the authorising officer.

Pre-event signing may be used for a maximum of two weeks before an event to warn drivers of the expected delays, although the norm shall be considered to be one week.

During-event legends shall not be used where there are already permanent local direction signs in place, unless alternative route legends are to be displayed to assist with traffic management.

Seasonal Christmas delays at major retail parks shall not ordinarily be considered a special event as these types of seasonal delays will be anticipated by drivers.

Only the authorising officer can approve the use of Highways Agency VMS to display pre-signing legends for delays associated with retail parks.

Special events which are expected to cause disruption within a major conurbation should be advised to drivers via VMS using the below order of information, but only at the agreement of the relevant local authority - The legend shall not be used without this agreement.

1 - Place/Location
2 - Major Event/Date(s)
3 - Expect Delays

Examples of appropriate legends are below.

Where it is believed by the authorising officer that drivers will have a reasonable awareness of a special event due to press coverage, the authorising officer reserves the right to request the removal of any legends from use.

7.14 POSTPONED/CANCELLED EVENTS

Where legends have been used to advise drivers of a future event (road works or special event) and this event is either cancelled or postponed within 24 hours of the event commencing then legends may be set using either the term “cancelled” or “postponed” to inform drivers of the change.

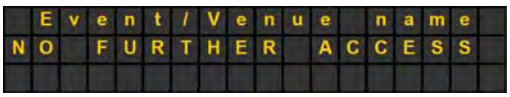
Due to the number of road works cancelled at short notice, VMS should not be used to warn of the cancellation/postponement unless the road works needed drivers to use a diversion.

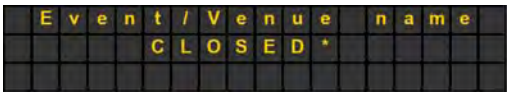
If a special event that, while attracting a large number of visitors was not expected to cause delays, is cancelled/postponed at short notice legends using the event name may be used to warn of this, even if event pre-signing was not needed. These legends should not be used where outdoor events have been cancelled due to expected poor weather as in these circumstances it is the responsibility of the driver to check before their journey.

If a major attraction (theme park, zoo etc) is closed due to unforeseen circumstances (power cut, security alert etc) then due to the number of people likely to visit, a legend using the attraction name may be set to warn of the closure.

If an attraction is expected to be closed for more than one day, legends shall only be used to warn of the closure on the first day as it is the responsibility of the attraction to provide long-term closure information to customers.

Certain special events such as county shows have a limited capacity and often sell out on the day. In such circumstances it is acceptable to warn drivers of this via VMS if it is anticipated that delays will occur due to queuing traffic being turned away from the special event venue. In these circumstances one of the below legends shall be used.





*Closed is only to be set at the agreement of event organisers

7.15 *SECURITY ALERTS*

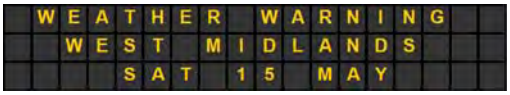
If a non traffic incident has occurred and the police believe loss of life is a possibility, security warnings have been developed to warn drivers as they will need to alter their journey, or in extreme incidents avoid an area. Due to the sensitivity of this type of incident, legends have been agreed and they should not be modified. The legends to be used in these scenarios can be found in Annex C.11.

7.16 *AREA WIDE SEVERE WEATHER WARNINGS*

When severe weather is experienced either nationally or locally, strategic legends based on the below examples should be used to warn drivers, both the day before (advanced warning) and during the severe weather conditions.

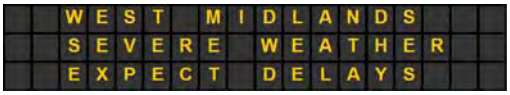
ADVANCED WARNING

WEATHER WARNING
Location
SAT 15 MAY



DURING

Location
SEVERE WEATHER
EXPECT DELAYS



If the advanced warning is only required to warn of “STRONG WINDS”, then this should be advised of within the legend instead of the term “WEATHER WARNING”. For all other types of weather “WEATHER WARNING” should be used.

In addition there could be a scenario where there is a need to replace the term “EXPECT DELAYS” with “AVOID AREA”. These legends shall only be used once the relevant local authority(s) have been informed and approval for use has been granted by Highways Agency Gold Command or equivalent.

7.17 UNAVAILABLE VSS

If VSS unexpectedly become unavailable for use the below legend should be set to warn drivers. The term “SIGNALS” is to be used and not ”SIGNS” as “NO SIGNS” could be interpreted as meaning there are no signs at all, which would include permanent traffic (hard) signs.

If the VSS have become unavailable due to cable theft or vandalism then the term “DUE TO VANDALISM” may be also included if deemed appropriate. This should only be included when the police have been informed of the reason for the lack of signals and the Highways Agency press office made aware.

ANNEX A: TYPES OF SIGNS AND SIGNALS

The types of VSS available on motorway and trunk road carriageways can be broadly subdivided into six categories as follows:

- MS1 – found as: post mounted central reservation matrix; gantry mounted matrix over each lane; or post mounted entry slip road matrix. Though the functionality is much the same, it should be noted that both gantry and entry slip road signals are capable of displaying mandatory signals. This is not the case on the central reservation matrix;

- EMS & MS2 – these are 2x12 or 3x18 character message signs that can be either gantry or cantilever mounted. Cantilever signs often have an equivalent of a matrix signal incorporated on the end of the sign.

- MS3 – these are either 2x16 or 3x18 character message signs normally cantilever mounted. Some have an equivalent of a matrix signal incorporated as part of the sign, (i.e. reducing the sign to 2x12 or 3x14 when in use);

- MS4 – these are either configured as 2x12 or 4x15 character message signs and are normally cantilever mounted, they can be configured to include the ability to display matrix signals and to show pictograms;

- Portable VMS (pVMS) – these are either 2x12 or 4x12 character message signs which can be transported to required locations as and when required;

- Traffic Officer vehicles also contain a small Variable Message Panel which have the capability to display legends to drivers. These legends and the criteria for use can be found in Annex C.14.

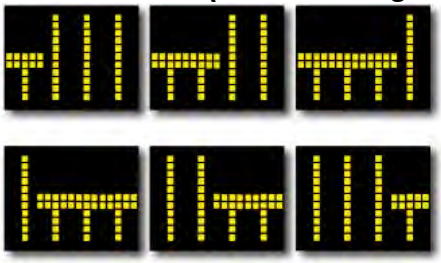
ANNEX B: AUTHORISED SIGNALS

Schedule 11 of the TSRGD 2002 provides a set of signal settings for use on motorway and all purpose dual carriageway roads. Examples of these are shown below – see Schedule 11 for the exact design of these signals.

Maximum speed advised

Lane Closures (3-lane and 2-lane carriageways)

Lane Closures (4-lane carriageways)



Lane Divert Left (LDL) ***Lane Divert Right (LDR)*** ***M/way Divert Left (MDVL)***

(LDL and LDR must only be displayed on gantry signals as they are lane specific)

'STOP' aspect on gantry signals (Mandatory) ***'STOP' aspect on entry slip signals and at closure of junction (Mandatory)***

End of restriction ***Fog*** ***Ice***

ANNEX C – AUTHORISED VARIABLE MESSAGE SIGN LEGENDS

The legends below in Annex C1 to C14 are all authorised for use on the strategic road network. Any criteria for use is shown when appropriate.

All route numbers have been presented as “N*” unless otherwise stated.
All junction numbers have been presented “J*”.

“N” is limited to “M”, “A” and “B”.
Unless stated differently the “*” is limited to characters/numerals and may refer to more than one character/numeral as required.

The brackets for A* (M) motorways must not be shown within legends.

C.1 TACTICAL INCIDENT MANAGEMENT LEGENDS

LEGEND		Criteria for use
ACCIDENT SLOW DOWN		To warn drivers of accidents on the main carriageway.
ACCIDENT ON SLIP ROAD		To warn drivers of accident on the off-slip
ACCIDENT-USE HARDSHOULDER		To support the emergency use of the hard shoulder as a temporary running lane, only when determined by the officer in charge of the scene. Only to be used immediately before or after the commencement of the temporary use of the hard shoulder and must be used in conjunction with hard signing (see Section 8 of *Police Standard National Motorway Manual*)
ANIMALS IN ROAD – SLOW		Due to the unpredictability of stray animals, operators should set these legends on both carriageways on the approach to the location. Consideration should also be given to a low speed setting on the matrix.
CONGESTION SLOW DOWN		This legend may be used to protect the tailback of traffic but requires monitoring to ensure continued validity.
DEBRIS IN ROAD – SLOW		This legend is used when potentially hazardous objects are located on the carriageway. It is suggested that for large objects and stranded vehicles a more appropriate legend would be OBSTRUCTION SLOW DOWN or STRANDED VEHICLE-SLOW.

C.1 TACTICAL INCIDENT MANAGEMENT LEGENDS

LEGEND		Criteria for use
DEBRIS ON SLIP ROAD		This legend is used when potentially hazardous objects are located on the slip road. It is suggested that for large objects and stranded vehicles a more appropriate legend would be OBSTRUCTION ON SLIP ROAD.
DO NOT USE HARDSHOULDER		To be used when motorists are illegally using the hard shoulder as a running lane or when there is an incident on the hard shoulder during planned use as a running lane during road works and after the hard shoulder has been used as a running lane to further advise motorists that the temporary arrangement has been withdrawn.
INCIDENT SLOW DOWN		Set for unconfirmed incidents. The duration of this setting should be as short as possible but the legend will remain displayed until precise details are confirmed.
LANE * CLOSED-SLOW		A temporary lane closure in support of incident management. This legend must **not** be used where a lane drop / gain is in close proximity (to avoid potential confusion over lane numbering). This legend must **not** be used where matrix signals have already been set to provide lane closure information. Distance from the actual closure should be considered so as not to reduce road capacity over too long a distance.
LANES *** CLOSED-SLOW		Temporary closure of up to three lanes in support of incident management. This legend must **not** be used where a lane drop/gain is in close proximity (to avoid potential confusion over lane numbering). This legend must **not** be used where matrix signals have already been set to provide lane closure information. Distance from the actual closure should be considered so as not to reduce road capacity over too long a distance.
LANE CLOSURE ON SLIP ROAD		To be used to support a temporary physical lane closure on the next available slip road.
LANE CLOSURE SLOW DOWN		To be used to support a temporary physical lane closure where a lane drop / gain is in close proximity and lane numbering is not clear.

C.1 TACTICAL INCIDENT MANAGEMENT LEGENDS

LEGEND		Criteria for use
MOBILE WORKS SLOW DOWN		This legend should only be used after consultation with the Highways Agency's Managing Agent and agreed segments of road in which the Mobile Lane Closure (MLC) will operate are determined. The sign will only be displayed within the predetermined segments. To be used in conjunction with signals where available. Where CCTV is available more precise monitoring of the MLC's progress and use of the legend can be undertaken by control room operators when other demands permit.
OBSTRUCTION ON SLIP ROAD		To be used where there is a large object obstructing the slip road and the resulting tail back is not then affecting the main carriageway.
OBSTRUCTION SLOW DOWN		Legend only to be used when no other specific legend is suitable for the main carriageway.
ONCOMING VEHICLE		A vehicle travelling against the flow of traffic creates extreme danger, its movement is unpredictable and signalling systems must be used immediately to warn of its presence irrespective of whether the report is confirmed or unconfirmed. A blanket 20mph maximum speed advised should be set in the vicinity of the reported location and the 'oncoming vehicle' legend displayed on both carriageways. Operators MUST attempt to monitor the progress of the vehicle. It is imperative that signals and any legends are regularly updated.
PEDESTRIANS IN ROAD-SLOW		This legend should be set where, by virtue of their actions, pedestrians appear likely to act unpredictably. Operators should consider setting these legends on the approach to the location on both carriageways. Consideration should also be given to a low speed setting on the signals.
QUEUE ON SLIP ROAD		This legend may be used to protect the tailback of traffic on the off-slip, but then requires regular monitoring to ensure continued validity.
QUEUE SLOW DOWN		This legend may be used to protect the tailback of traffic but then requires regular monitoring to ensure continued validity.

C.1 TACTICAL INCIDENT MANAGEMENT LEGENDS

LEGEND		Criteria for use
REJOIN MAIN CARRIAGEWAY		This legend caters for the temporary use of the hard shoulder but must be used in conjunction with hard signing and should only be used in close proximity to the hard signing. It can also be used where traffic has been diverted temporarily onto a dedicated vehicle lane (e.g. bus lane).
SKID RISK SLOW DOWN		This legend caters for incident-related temporary skid risk such as an oil spillage. Maximum speed advised may be set after advice has been sought from the officers at the scene. The incident will need to be continuously monitored. This legend must not be used for a skid risk generated from design or structural defects. Hard signing should be used instead in such a situation
SLIP ROAD CLOSED-SLOW		This legend is to be used to give advance warning of a slip road closure within a tactical environment.
SLOW MOVING LARGE LOAD		This legend will only be used to support a police or TO escort of an abnormal load which is likely to have a serious adverse affect on traffic flows. The control room operator should be regularly updated with progress allowing a more precise use of the legend.
SMOKE SLOW DOWN		This legend can be used for smoke originating either inside or outside the boundaries of the road. Consideration should be given to the use of this legend on both carriageways, but should be monitored to ensure continued validity.
STRANDED VEHICLE-SLOW		To be used when there is a vehicle stranded either on the main carriageway or other parts of the road where danger or adverse driver reaction is likely. This excludes vehicles correctly positioned on the hard shoulder.
VEHICLE FIRE SLOW DOWN		This legend may be used when a vehicle fire has been confirmed by CCTV or an officer at the scene. This may be before officer arrives on the scene. Signalling for lane closure(s) may also be applied if available / applicable. Regular monitoring is required.

C.1 TACTICAL INCIDENT MANAGEMENT LEGENDS

LEGEND		Criteria for use
WORKFORCE IN ROAD – SLOW		Only to be used for the setting up, altering or removal of traffic management measures on the main carriageway. At all other times Chapter 8 'hard signing' is to be used. It will only be activated when the workforce is on the scene and they have contacted the control room. Similarly it should only be removed when the workforce report completion of their traffic management task. It should not be removed, even if another incident occurs within the immediate vicinity, until the safety of the workforce can be ensured.
WORKFORCE ON SLIP ROAD		Only to be used for the setting up, altering or removal of traffic management measures on the slip road. At all other times Chapter 8 'hard signing' is to be used. It will only be activated when the workforce is on the scene and they have contacted the control room. Similarly it should only be removed when the workforce report completion of their traffic management task. It should not be removed, even if another incident occurs in close proximity on the main carriageway or the off-slip until the safety of the workforce can be ensured.

C.2 (a) TACTICAL WEATHER LEGENDS

LEGEND		Criteria for Use
FLOODS SLOW DOWN		A confirmed incident of standing water which presents a road safety hazard.
FOG SLOW DOWN		To be only used where blanket fog is confirmed to be present, or is set automatically by fog detection equipment. When set manually the need for continued use must be carefully monitored. N.B. care is needed when using CCTV to determine visibility as it can distort or enhance perception of fog density.
FOG PATCHES SLOW DOWN		To be used where there is intermittent or moving fog, particularly where control room or operational staff are not in a position to continuously monitor visibility. This legend can also be set automatically by fog detection equipment. N.B. care is needed when using CCTV to determine visibility as it can distort or enhance perception of fog density.
RISK OF ICE SLOW DOWN		See section 6.7
SALT SPREADING		This legend should only be used after consultation with the Highways Agency Managing Agent and agreed segments of road in which the salting lorry / lorries will operate are determined. It is not ordinarily used with signals but is intended to provide warning to road users. Where CCTV is available, more precise monitoring of the salting lorry's progress and use of the legend can be undertaken by a control room operator when other demands permit.
SPRAY SLOW DOWN		To be only used in situations where a sudden or sporadic loss of visibility is likely due to surface water. In addition, this legend MUST NOT be used in a blanket fashion, overriding other important legends. As a general guideline, the setting of one VMS down stream of entry slips maybe considered suitable for this legend.
SNOW SLOW DOWN		This legend can only be used when snow is confirmed to be falling and affecting visibility, or has visibly settled on the carriageway.

C.2 (a) TACTICAL WEATHER LEGENDS		
LEGEND		**Criteria for Use**
SNOW PLOUGH SLOW DOWN		This legend should only be used after consultation with the Highways Agency Managing Agent and agreed segments of road in which the snow plough will operate are determined. The sign will only be displayed within the predetermined segments. It is not ordinarily used with signals but is intended to provide prior warning to road users. Where CCTV is available, more precise monitoring of the snow plough's progress and use of the legend can be undertaken by control room operators when other demands permit.
STRONG WINDS FOR ** MILES		This legend is only to be used for indicating strong winds which are prevalent for a section of road, immediately following the sign, and will generally be on sections that are known regularly to suffer from strong winds, e.g. an unsheltered section of road between more sheltered sections.
STRONG WINDS ON BRIDGE		To be used only to indicate that winds are strong on the following bridge. As for other wind legends, the bridge in question should be known to regularly suffer very strong winds.
STRONG WINDS SLOW DOWN		To be used where strong or gusting winds are likely to cause danger to any class of vehicle.
SURFACE WATER – SLOW		This legend can only be used when a significant amount of surface water is on the carriageway, such that vehicles may be at risk of aquaplaning/ skidding.

C.2 (b) STRATEGIC WEATHER LEGENDS

LEGEND		Criteria for Use
N* CLOSED TO HIGH SIDED VEHS		This legend is used to inform drivers that a section of road, either motorway or trunk road, is closed to high sided vehicles due to strong crosswinds. To be used in conjunction with other wind legend for use on 2x16 and 3x18 VMS only.
N* J*-J* FLOODS		This legend must only be used when an incidence of deep standing water, which presents a significant road safety hazard, is confirmed between two junctions upon the named road.
N* J*-J* FOG PATCHES		This legend must only be used when an incidence of fog patches, which presents a significant road safety hazard due to reduced visibility, is confirmed between two junctions upon the named road. It should be noted that fog conditions can change rapidly, therefore additional care needs to be taken to ensure suitability of the legend.
N* J*-J* RISK OF ICE		This legend must only be used when an incidence of ice on the carriageway, which presents a significant road safety hazard due to slippery conditions combined with lack of road surface treatment, is **confirmed** between two junctions upon the named road, e.g. freezing rain – See section 6.7.
N* J*-J* SNOW		This legend must only be used when an incidence of snow, which presents a significant road safety hazard due to settling or severity of fall, is confirmed between two junctions upon the named road.
N* J*-J* STRONG WINDS		This legend must only be used when an incidence of strong winds, which presents a significant road safety hazard, is confirmed between two junctions upon the named road. This legend should only be used when other wind legends are not appropriate.
N* J*-J* SURFACE WATER		This legend must only be used when an incidence of surface water, which presents a significant road safety hazard due to the risk of vehicles aquaplaning, is confirmed between two junctions upon the named road.
STRONG WINDS ON [*NAME*] BRIDGE DELAYS POSSIBLE		This legend may only be set by the NTIC on strategic VMS. These legends are to indicate strong winds affecting traffic on an important (and well known by name) bridge and can be set both tactically and strategically as necessary, e.g. when there is a likelihood of delay to traffic.

C.2 (b) STRATEGIC WEATHER LEGENDS		
LEGEND		**Criteria for Use**
STRONG WINDS ON [*NAME*] BRIDGE EXPECT DELAYS		This legend may only be set by the NTIC on strategic VMS. These legends are to indicate strong winds affecting traffic on an important (and well known by name) bridge and can be set both tactically and strategically as necessary, e.g. when there is a likelihood of delay to traffic.

C.3 TACTICAL BUS LANE LEGENDS		
LEGEND		**Criteria for Use**
BUS LANE CLOSED		Indicates that all classes of traffic are precluded from using the bus lane.
OBSTRUCTION USE BUS LANE		**This legend must only be set and removed by the RCC operator under the authority of a police constable or TO. The authority shall be recorded in the Command & Control log.** This legend can be used where an obstruction restricts the use of one or more running lanes and traffic volume is such that, in exceptional cases, the use of the bus lane by all classes of traffic is necessary.

C.4 MIDAS LEGENDS

In addition to the below legends MIDAS can also display advisory speed limits ranging from 60mph to 40mph

Legend		Criteria for use
CONGESTION STAY IN LANE		This legend is exclusively used on Controlled Motorways and is not to be used on the approach to a junction.
CONGESTION CAUTION		This legend is exclusively used on Controlled Motorways.
CONGESTION AFTER JCT		This legend is exclusively used on Controlled Motorways.
QUEUE CAUTION		This legend is exclusively used within the MIDAS system where traffic is either slow moving or stationary.
QUEUE AHEAD		This legend is exclusively used within the MIDAS system where traffic is either slow moving or stationary.
QUEUE AFTER JCT		This legend is exclusively used within the MIDAS system where traffic is either slow moving or stationary.
QUEUE ON SLIP ROAD		This legend is used within the MIDAS system where traffic is either slow moving or stationary on the slip road. Note: this legend is the only one on this page which is also available for manual setting by operators.

C.5 TACTICAL DIVERSION LEGENDS

Line 1	Line 2 options	Criteria for use
DIVERSION	AT N* J* FOLLOW (CIRCLE) FOLLOW (SQUARE) FOLLOW (TRIANGLE) FOLLOW (DIAMOND)	See Annex C.9 for pictograms available for use when “FOLLOW” legends are displayed on an MS4.
HGVS	FOLLOW (CIRCLE) FOLLOW (SQUARE) FOLLOW (TRIANGLE) FOLLOW (DIAMOND)	See Annex C.9 for pictograms available for use when “FOLLOW” legends are displayed on an MS4.
HGVS - LEAVE	AT N* J* MOTORWAY	None
WINDS - HGVS	FOLLOW (CIRCLE) FOLLOW (SQUARE) FOLLOW (TRIANGLE) FOLLOW (DIAMOND)	See Annex C.9 for pictograms available for use when “FOLLOW” legends are displayed on an MS4.
HIGH SIDED VEHS	FOLLOW (CIRCLE) FOLLOW (SQUARE) FOLLOW (TRIANGLE) FOLLOW (DIAMOND)	Only for use with 2 x 16 and 3 x18 VMS. Note: For MS3s this legends will not be displayed on the sign when the matrix signal is set. See Annex C.9 for pictograms available for use when “FOLLOW” legends are displayed on an MS4.
N* CLOSED	USE N*	Shall use road numbers rather than names. If A627 (M) type road number, then it shall be shown as A627M

C.6 DRIVER INFORMATION LEGENDS (Link Legends)

Line 1	Line 2 options	Criteria for use
ACCIDENT	AFTER J* AFTER J* EXIT	None
CONGESTION	AFTER J* AT J* EXIT AT TOLL J*-J*	None
EXIT CLOSED	TO N* (E) TO N* (W) TO N* (N) TO N* (S) AT J*	None
EXITS CLOSED	AT J* & J*	This is the closure of two consecutive junctions only.
LONG DELAYS	AFTER J* AT J* EXIT AT TOLL J*-J*	None
NO PHONES	AWAIT PATROL J*-J* FOR ** MILES	The AWAIT PATROL legend can only be used when dedicated patrols have been allocated to this task.
NEXT SERVICE	AREA CLOSED	This legend shall, ordinarily, be used only after consultation with the service area. Additional service area legends also exist – see Annex C.12.
NO DIESEL AT NO FUEL AT NO LPG AT NO LRP AT NO PETROL AT NO UNLEADED	NEXT SERVICES	This legend shall, ordinarily, be used only after consultation with the service area. Additional service area legends also exist – see Annex C.12.

C.6 DRIVER INFORMATION LEGENDS (Link Legends)

NO DIESEL NO FUEL NO LPG NO LRP NO PETROL NO UNLEADED	AT SERVICES	This legend shall, ordinarily, be used only after consultation with the service area. Additional service area legends also exist – see Annex C.12.

The following two legends shall only be used by operators to support major road works. These legends should be displayed on VMS located up to 2km in advance of the start of the works. It should be noted that these legends do not form part of Chapter 8 and shall not be used in conjunction with mobile works or workforce in road/on slip road legends.

C.7 DRIVER INFORMATION LEGENDS (Network Legends)

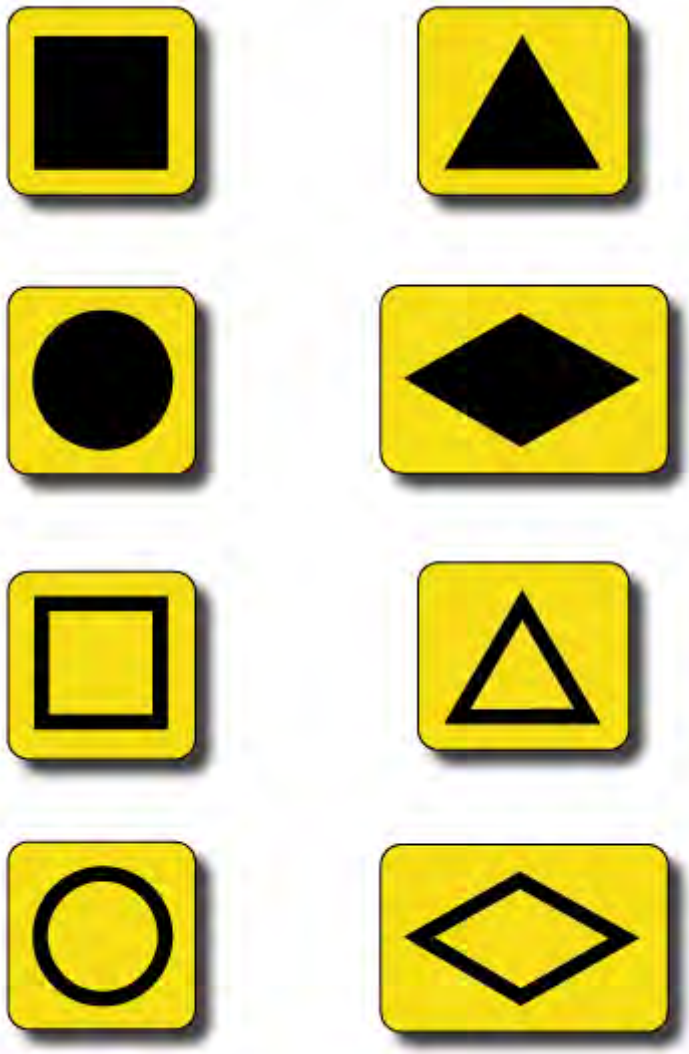
Line 1	Line 2 options	Criteria for use
N* EAST N* WEST N* NORTH N* SOUTH N* J* N* J*-* N* J* & *	ACCIDENT CLOSED CONGESTION LONG DELAYS	None
N* J*	EXIT CLOSED	None
N* CLOSED	AFTER J* J*-J* AFTER N* AT N* AT J* & *	None

C.8 TACTICAL INCIDENT PICTOGRAMS

The meaning of the pictogram should not be displayed at the same time the pictogram is displayed.

Text Meaning	Pictogram	Text Meaning	Pictogram
Accident		Road works	
Strong winds		Skid risk	
Incident		Snow	
Queue			

C.9 TACTICAL EMERGENCY DIVERSION ROUTE PICTOGRAMS



C.10 STRATEGIC DRIVER INFORMATION LEGENDS

Line 1	Line 2 options	Criteria for use
N*	CLOSED	None
N* CLOSED N* ACCIDENT N* DELAYS	AT N* AFTER N*	None
N* CLOSED	J* to N* N* to J*	None
N* J*-N* N* J*-J* N* J*	ACCIDENT CLOSED CONGESTION DELAYS LARGE LOAD LONG DELAYS	None
ACCIDENT LARGE LOAD CONGESTION DELAYS LONG DELAYS	AFTER N* AFTER J*	None
N*	ENTRY CLOSED ENTRY DELAYS	None
N* / N*	EXIT CLOSED EXIT DELAYS	These are link legends used on the approach to a roundabout.

Below are examples of driver information legends shown on a 3x18 VMS.

C.11 SECURITY LEGENDS

	Low						High
Level of response	**1 SECURITY ALERT (Police activity such as investigating suspect packages or premises etc)**		**2 LOCALISED INCIDENT (Police dealing with effects of single location or localised event(s). Minimum disruption to area)**		**3 MORE WIDESPREAD OR SERIOUS INCIDENT (Police dealing with effects of multiple incidents. Significant disruption)**		**4 VERY SERIOUS INCIDENTS (Widespread multiple incidents with serious disruption and multiple casualties)**
	SECURITY ALERT		INCIDENT		MAJOR INCIDENT		Major Incident
Implications	Delays Possible	Expect delays	Delays Possible	Expect delays	Delays Possible	Expect delays	Avoid Area
	Legend(s)						
2x12 Legends to be paired as shown	N/A	N/A	INCIDENT C. LONDON	INCIDENT C. LONDON	INCIDENT C. LONDON	INCIDENT C. LONDON	INCIDENT SOUTH LONDON
			C. LONDON DELAYS	C. LONDON EXPECT DELAY	C. LONDON DELAYS	C. LONDON EXPECT DELAY	SOUTH LONDON AVOID AREA*
2x16 Legends to be paired as shown	SECURITY ALERT WEST LONDON	SECURITY ALERT WEST LONDON	INCIDENT EAST LONDON	INCIDENT EAST LONDON*	INCIDENT EAST LONDON	INCIDENT EAST LONDON	MAJOR INCIDENT AVOID E. LONDON
	WEST LONDON DELAYS POSSIBLE	WEST LONDON EXPECT DELAYS	EAST LONDON DELAYS POSSIBLE	EAST LONDON EXPECT DELAYS	EAST LONDON DELAYS POSSIBLE	EAST LONDON EXPECT DELAYS	MAJOR INCIDENT TURN ON RADIO
3X18 Legends to be paired as shown	SECURITY ALERT CENTRAL LONDON DELAYS POSSIBLE	SECURITY ALERT CENTRAL LONDON EXPECT DELAYS	INCIDENT CENTRAL LONDON DELAYS POSSIBLE	INCIDENT CENTRAL LONDON EXPECT DELAYS	MAJOR INCIDENT CENTRAL LONDON DELAYS POSSIBLE	MAJOR INCIDENT CENTRAL LONDON EXPECT DELAYS	MAJOR INCIDENT AVOID WEST LONDON TURN ON RADIO
							AVOID WEST LONDON AREA CLOSED TURN ON RADIO

All 2*12 and 2*16 legends must be paired as shown above.
The location above can be changed when required e.g. Central Birmingham, North Birmingham or Manchester.
Level 5 “Operation Sassoon” not shown. * To be used when only one 2 x 12 VMS available.
ALL LEGENDS ARE ONLY TO BE USED ONCE INSTRUCTION IS RECEIVED VIA HA GOLD COMMAND OR EOUIVALENT.

C.12 NO FUEL AT MOTORWAY SERVICE AREA LEGENDS

L1			N	O		*	*	*	*	*	*	*	*	*	*	*		
L2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
L3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

a) The variable element of L1 (*) will display one of the below within each legend:

"DIESEL AT", "FUEL AT", "LPG AT", "LRP AT", PETROL AT" or "UNLEADED AT"

b) The variable element of L2 (*) will display one of the below within each legend:

BALDOCK
BIRCH
BIRCHANGER GREEN
BLYTH
BOLTON WEST
BRIDGWATER
BURTON-IN-KENDAL
BURTONWOOD
CHARNOCK RICHARD
CHERWELL VALLEY
CHESTER
CHIEVELEY
CLACKET LANE
CORLEY
DONCASTER NORTH
DONINGTON
DURHAM
EXETER
FERRYBRIDGE
FLEET
FRANKLEY
GORDANO
HARTSHEAD MOOR
HESTON
HILTON PARK
HOPWOOD PARK
KEELE
KILLINGTON LAKE
KNUTSFORD
LANCASTER (FORTON)
LEICESTER FOREST E
LEIGH DELAMERE
LONDON GATEWAY
MAINDSTONE
MEDWAY
MEMBURY
MICHAELWOOD
NEWPORT PAGNELL
NORTHAMPTON
NORTON CANES
OXFORD
PEASE POTTAGE
PETERBOROUGH
READING
ROWNHAMS
SANDBACH
SEDGEMOOR
SEVERN VIEW
SOUTH MIMMS
SOUTHWAITE
STAFFORD
STRENSHAM
TAMWORTH
TAUNTON DEANE
TEBAY
TELFORD
THURROCK
TIBSHELF
TODDINGTON
TROWELL
WARWICK
WASHINGTON
WATFORD GAP
WINCHESTER
WOODALL
WOOLLEY EDGE

c) The variable element of line L3 (*) will first display either "SERVICES" or "SVCS", a blank character and then one of the below:

A* J*
M* J*

d) An example of an acceptable legend is:

		N	O		U	N	L	E	A	D	E	D		A	T			
			W	O	O	L	L	E	Y		E	D	G	E				
		S	E	R	V	I	C	E	S		M	1		J	3	8		

C.13 CAMPAIGN LEGENDS		
Legends set as part of a rolling national programme.		**Legends set only on request.**
DON'T HOG THE MIDDLE LANE KEEP LEFT UNLESS OVERTAKING		CHECK YOUR FUEL LEVEL
LOOK OUT FOR BIKES THINK BIKE THINK BIKER		DRUG DRIVING COSTS LIVES
DON'T DRINK AND DRIVE		TAKE EXTRA CARE WHILE TOWING
DON'T DRIVE TIRED		DON'T PHONE WHILE DRIVING
KEEP YOUR DISTANCE WATCH YOUR SPEED		
IS YOUR VEHICLE READY FOR WINTER		

C.14 TRAFFIC OFFICER VEHICLE VMP LEGENDS		
LEGEND		**Criteria for use**
DON'T PASS		May only be used on a moving or stationary TO vehicle when carrying out a rolling road block.
STAY BACK		May only be used on a moving or stationary TO vehicle when carrying out a rolling road block.
WIDE LOAD		May only be used when actively involved in escorting an abnormal load.
LONG LOAD		May only be used when actively involved in escorting an abnormal load.
SLOW DOWN		May only be used on a moving TO Vehicle.
INCIDENT		May only be used on a stationary TO vehicle when traffic is stationary or slow moving.
THANK YOU		May only be used on a moving or stationary TO vehicle and only displayed for a short time, as the TO vehicle leaves a cleared incident i.e. a Rolling Road Block.
Scrolling Chevrons		May only be used on a moving or stationary TO vehicle in the following circumstances; • On a moving TO vehicle to indicate to motorists following that they wish them to move out of their current lane because of an incident or obstruction on the carriageway immediately ahead. • On a moving TO vehicle, stopping at an incident in a live lane, to indicate to motorists following that they wish them to move out of their current lane because of an incident or obstruction on the carriageway immediately ahead, and before the TO has been able to exit the vehicle and place ETM. • On a stationary TO vehicle, together with other warning lights, when due to inclement weather i.e. high winds, ETM cannot be placed and this is the only available alternative to warn drives of an obstruction/incident. • On a stationary TO vehicle, in conjunction with vehicle mounted warning lights, as an additional method to direct motorists to move out of their current lane as the result of an incident or obstruction on the carriageway ahead. If ETM is being set out, the scrolling arrows should be turned off once the ETM set out is complete.

ANNEX D – SPECIAL EVENT CRITERIA

Evidence required to determine if VMS use will be considered for special event signing.		
Category	**Evidence**	**Secondary evidence**
Event location	• **The event is located on or adjacent to the strategic road network.**	• **The event is located close to the strategic road network.**
Nature of the event	• **At least 75% of attendees are expected to arrive within a one hour period.** • **The majority of attendees are expected to arrive or leave the event during peak hours i.e. rush hour.** • **Predicted attendance is greater than 25,000 visitors per day if close to motorway.** • **Predicted attendance is greater than 15,000 visitors per day if close to trunk road.**	• **The attendees will be arriving in vehicles which in large quantities can cause delays e.g. horse drawn vehicles.**
Surrounding road network	• **Other events up to two junctions away are already causing road users to experience congestion on their journey e.g. road works**	
Alternative transport options	• **The event is being held in location which means less than 25% of attendees are expected to arrive by public transport.**	
Other factors	• **There is a DfT or Highways Agency Board requirement for signing.**	• **The event is nationally or internationally important.**

ANNEX E - SIGNS AND SIGNALS AUTHORISATIONS FOR THE HIGHWAYS AGENCY NETWORK: HIGHWAYS AGENCY PROCEDURE NOTE.

Guiding principles

(A) The Highways Agency "Designated Authorising Officer" shall be a specified official, as listed below. This may be varied from time to time by the Highways Agency in accordance with staff changes and organisational changes. The Highways Agency will advise DfT of changes to the "Designated Authorising Officers".

(B) The Designated Authorising Officers will sign authorisations for non-prescribed traffic signs (including road markings and traffic signals) on motorways and all purpose trunk roads. Before doing so, the HA will undertake consultation with DfT on the following:

- **any issues that are likely to be politically sensitive.**
- **any enforcement issues.**
- **development of any new regulatory signs.**
- **development of dynamic road markings, also known as "variable light emitting road markings".**
- **tunnel signals and gantry signals,.**

(C) Copies of all authorisations will be provided to DfT.

(D) Type Approval of road studs is the responsibility of DfT.

Designated Authorising Officers:

Permanent signs and road markings Sandra Brown or Graham Harper:
Motorways and all purpose trunk roads. Permanent signs and road markings, whether fixed or variable. This shall include variations to regulatory and warning signs but not new regulatory roundel or triangular warning signs. This shall exclude fixed or variable road studs.

Temporary signs and road markings: Sandra Brown or Graham Harper or Matthew Youell:
Motorways and all purpose trunk roads. This shall include temporary road works signs, and temporary signs covered by Schedule 7 Part VIII in the TSRGD 2002.

Light emitting Variable Message Signs: Damian Morris or Darren Evans (WM):
Motorways and all purpose trunk roads. This shall include permanent and temporary light emitting VMS legends. This shall exclude new pictograms.

Signals: Ben Catchesides or Stuart Beale:
Motorways and all purpose trunk roads. This shall be confined to tunnel signals, gantry signals and the use of tall signal poles.

Speed limits: The HA will not authorise any new speed limit sign, without prior DfT agreement to the design and use of the new speed limit signs, as the policy lead on these rests with DfT RUS Division who must always be consulted upon any proposals for non-prescribed speed limit signing.

ANNEX F: POLICY AREAS IN DEVELOPMENT FOR FUTURE VERSION(S)

In addition to the Variable Signs and Signals policies detailed within the document a number of policy areas are still in development for inclusion in future versions.

Currently 4 significant areas are being developed and they are:

F.1 USE OF VSS TO PROVIDE TACTICAL ROAD WORKS INFORMATION.

In addition to the legends found within Annexes C.1 and C.6, the road works policy detailed in the 2007 “policy and procedures for the use of Matrix Signals by the Regional Control Centres” is currently being updated. Until updates are agreed this 2007 policy shall still be used, although some sections may have been superseded via a more recently issued traffic officer procedure.

This road works policy is below

The safe planning and operation of road works is the responsibility of the contractors and the Highways Agency. Chapter 8 of the Traffic Signs Manual and the standard on mobile lane closures (TD49) set out safe working practices to accommodate the works in its entirety.

Road Works with MIDAS – When maintenance works are undertaken using slow moving works vehicles the automated system can generate signals and signs which are in conflict with the signed temporary speed limits and Chapter 8 hard signing. The agents planning, designing and executing the works are required, by law, to make arrangements for the execution of working methods that ensure the safety of road users, the workforce and any other parties affected by the works.

Road Works without MIDAS – Where MIDAS is not in operation, signals should only be used, in relation to static road works, for the setting up, altering or removal of traffic management measures. They should not ordinarily be used at other times as reliance may be placed on them by the workforce which, in emergencies, would preclude their use to manage an incident. Chapter 8 “hard signing” is the only appropriate means of continuously warning of the presence of road works. However where the safety of the workforce or the public is in question due to some unforeseen event the signals can be used whilst the traffic management is altered to safely address the changed circumstances. Where weather conditions deteriorate to such an extent that signals would ordinarily be set to advise of danger, they can quite properly be used in the area of road works for the duration of the bad weather only. The HDS function should be used to match any speed restriction through the road works.

Signalling will only be activated when the workforce is on the scene and they have contacted the operator by emergency roadside telephones or some other form of communication agreed locally. Similarly signals should only be removed when the workforce report completion of their traffic management tasks thus ensuring the continued safety of the workforce in the carriageway. Where the

workforce is reliant on the signals for their safety they must be advised before amending the protective signals other than the implementation of a lower speed limit.

When road works are in operation within an area covered by gantry signals extreme caution must be exercised to ensure that running lanes remain contiguous with the signals. Often lane width changes and hardshoulder running may alter the carriageway configuration to such an extent that signals could inadvertently convey a wholly inappropriate instruction. This is particularly important to bear this in mind where a contraflow is in operation at the road works. The highway operators and contracts must have regard to this in the planning stages of the works and implement measures to avoid this occurring.

The use of matrix signals in support of mobile lane closures will always be advantageous where co-ordinated support can be arranged e.g. mobile telephone contact, viewing CCTV etc.

DISABLING HIOCC FOR OVERNIGHT TRAFFIC MANAGEMENT

HIOCC (high occupancy algorithm) alerts can cause problems when overnight traffic management occurs, and there are coned off lanes in which the contractor's vehicles are moving slowly. These are likely to be detected and signals and signs will be set that affect all lanes.

In order to prevent this, HIOCC should be disabled in areas where traffic management is going to occur.

It is important that this happens before the traffic management starts, as it is important to prevent signals from being set initially. Particular care is needed when cone laying vehicles are in use, as they are extremely likely to set off HIOCC. As an approximate guide, it is suggested that HIOCC is disabled half an hour before traffic management is expected, and is cleared half an hour after it has completed.

Once HIOCC has been disabled the MIDAS system will no longer be able to detect queues and incidents. Overnight traffic numbers are unlikely to be sufficient to trigger other detection algorithms (speed and flow) which need large flows of vehicles before activating. It is therefore important that operators are aware of the change so that they can closely monitor the areas where HIOCC has been disabled. HIOCC should be re-enabled as soon as possible.

Users should be aware that if HIOCC at a site has been disabled from the Engineers Console then it is not possible to enable it from an OIF. Therefore some sites may not be enabled when a range of sites are re-enabled from an OIF (Disabled sites will be displayed in purple on the map).

DISABLING HOICC FOR LONG-TERM TRAFFIC MANAGEMENT

HIOCC alerts can cause problems when long-term road works are in progress, and there are coned off lanes in which contractor's vehicles are moving slowly, or traffic flow breakdown occurs in a contra-flow lane. These are likely to be detected and signals and signs will be set that affect all of the lanes. In addition, for long-term traffic management where there are usually fixed speed restrictions imposed (40/50mph) and therefore it is undesirable for MIDAS to be setting 60mph on signals lying within the road works area.

In order to prevent this, HIOCC should be disabled in area where traffic management is going to occur.

Once HIOCC has been disabled the MIDAS system will no longer be able to detect queues and incidents. It is therefore important that the operators are aware of the changes so that they can closely monitor the areas where HIOCC has been disabled. HIOCC should be re-enabled as soon as the traffic management has been removed.

Users should be aware that if HIOCC at a site has been disabled from the Engineers Console then it is not possible to enable it from an OIF. Therefore some sites may not be enabled when a range of sites are re-enabled from an OIF (Disabled sites will be displayed in purple on the map)

Note, in Controlled Motorway areas where signals and signs are set in response to traffic congestion, then the speed and flow algorithms will also need to be disabled as well as HIOCC. Again these should be re-enabled as soon as the traffic management has been removed.

Users should be aware that speed and slow algorithms at a site can only be disabled/enabled from the Engineers Console.

F.2 VSS UNCONFIRMED INCIDENT LEGEND

As detailed in section 6.4, the legend "INCIDENT SLOW DOWN" is used to warn drivers of an unconfirmed incident. Research is currently being undertaken to determine if this legend should be changed to make it clearer to drivers that the legend is warning of a possible incident/event and not a confirmed one.

F.3 VSS CONGESTION INFORMATION WHERE TWO ROUTES OF A SIMILAR LENGTH HAVE THE SAME END POINT

As detailed in section 4.13, the Highways Agency VSS policy, it has been agreed that drivers will not be advised of routine congestion via VMS legends. However where there are two routes of a similar length which have the same end point further work is required to define whether routine congestion signs should be set as a viable alternative route is available to drivers. The obvious example of this scenario is the M6 and M6 Toll.

F.4 USE OF VSS TO PROVIDE INFORMATION TO 'TRAPPED TRAFFIC'

When traffic is trapped due to a full road closure, legends to communicate specific information to drivers are being considered.

F.5 LEGEND SET REVIEW

The legends provided within this policy document are based on the information contained with the document 'Policy and Procedures for the use of Variable Message Signs by the Regional Control Centres (V3)'.

These legends will be reviewed and updated in the next version of this policy.

Until this review is complete, and any changes implemented, the legends currently available to Highways Agency control rooms are to be used as deemed appropriate even if they are not shown within an Annex of this policy document.

Annex G

VSS policy contacts

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