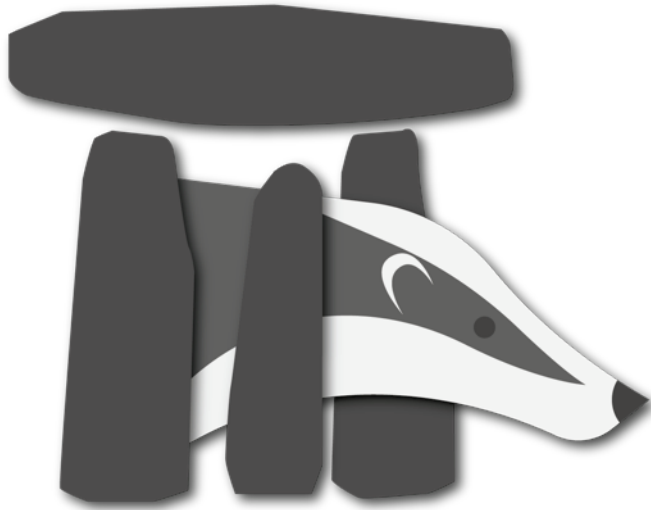




QS-12A

Outline Traffic Signs Strategy for the whole scheme

1. Your *outline traffic signs strategy for the whole Scheme* shall provide the following information as a minimum:

- 1.1. your methodology for developing the traffic signs strategy as required by Scope;
- 1.2. how a safe design for traffic signs will be developed that is in accordance with the Scheme's Design Vision and Design Principles, in particular references P-SL01, P-SL02 and P-SL03 of Table 4.1 of the OEMP, and including:
 - 1.2.1 how lighting for traffic signs will be minimised;
 - 1.2.2 how the traffic signs design will 'declutter' the Site;
- 1.3. a summary of any required non-prescribed and non-conforming traffic signs, including the application process to seek permission for these;
- 1.4. the consultation and approval process that will be undertaken when developing the traffic signs strategy as required by Scope.



1. Outline Traffic Signs Strategy for the whole scheme

1.1 Methodology

Our traffic signs strategy addresses the scheme Transport and Economic Growth objectives while considering the Cultural Heritage and Environment & Community objectives.

Our strategy will achieve the objective of providing a high performing dual carriageway to improve safety on the A303 by providing a coherent and unambiguous system of signing.

In accordance with Volume 2, Part 2 Clause 11.1.1, this will address the potential safety issue of conflicting requirements of through traffic on an improved high-speed route, with local traffic and with visitors to the iconic Stonehenge site and WHS area. NMU requirements will be carefully considered to ensure they have a safe route avoiding the tunnel.

Whilst meeting the statutory requirements of the Traffic Signs Regulations and General Directions 2016, along with the guidance given in the Traffic Signs Manual we will ensure that the number of signs is kept to a minimum.

1.2 Safe design in accordance with scheme vision & principles

We have drawn up our traffic sign strategy to address requirements recorded in DCO documents and the project scope including:

- DCO drawings
- Highways England Design and Access Statement
- OEMP Parts 3 and 4 including signing requirements in the REAC table of environmental commitments
- Scope Part 2 Design & Technical Requirements, particularly

Section 11 (Traffic Signs & Signals)

- Volume 2 Part 4 Maintenance Period Requirements

Informatory, directional and tourist signs

Road classification

We will develop a signage system that provides the appropriate number, size and locations of advance direction signs, direction signs and route confirmation signs in accordance with the relevant classification of the road in accordance with the Classification of Roads Plans.

For the A303 signage will be provided in accordance with its status as an All-Purpose Trunk Road. For side roads signage will be provided in accordance with their classification, minimising numbers and sizes of signs as far as reasonably practical.

Once the required location of signs to conform to current standards has been established, we will review their potential impact on views from the WHS, including views between monuments, to minimise and where possible avoid adverse impacts wherever practically possible. Where necessary we will liaise with Highways England to explore if Departures would be permitted.

Destinations

Destination signing strategy will be based on a review of the existing signing strategy on the A303 and wider area, including consultation with stakeholders to agree the extent of the strategy and to ensure continuity of destination signing.

Diversion route signing

We will liaise with Highways England and Wiltshire Council to ensure the continuity of established diversion routes and their compatibility with the diversion routes required for tunnel closures.

Temporary portable VMS signs will be used during construction to provide key information, including journey times and progress of the works.



Tunnel signs and signals

Signs and signals in the tunnel

Signs and signals will be provided in the tunnel to indicate speed limits, lane control, variable text messages, advance direction signage and emergency egress routes.

Signs and signals for tunnel operation

We will develop a comprehensive signage system to warn and direct traffic during tunnel maintenance operations, incidents and tunnel closures. Use of variable message signs and signals will be co-ordinated with static and variable signage, such as rotating prism signs as used at Hindhead, to cover all operational scenarios.



Control of signing will be co-ordinated with any barriers installed for protection of the workforce. We will use TDSCG meetings to engage with emergency services regarding access and RVP signing during emergencies.

Variable message signs will be used to meet the requirements of TSM Chapter 8 to deal with closures, contraflow situations, instigate diversion routes and minimise the need for manual installation of temporary signs. VMS will also provide lane control at the portals and within the tunnel. On the approaches to the tunnel, the VMS (in the form of verge mounted cantilever MS4s at the positions outlined in the DCO Schedule 1) will also be linked to the Regional Operation Centre to display tactical and strategic messages.

We will take particular care to ensure that signs within tunnel approach cuttings in the WHS area are the minimum required for safety, visible only from the A303 and do not intrude on views from the WHS. We will carefully consider requirements for signing during planned maintenance to achieve a balance between reducing the clutter of permanent signs and the safety of road workers and road users.

The design of variable tunnel control signage at Longbarrow Junction and Countess Junction, which will also be traffic light controlled will be carefully co-ordinated with directional, regulatory and warning signage to minimise the number of signs required while maintaining an understandable and safe system.

Signs to enforce traffic regulation measures

Speed Limits

We will provide terminal speed limit signs along with repeaters in accordance with the Traffic Regulation Measures Plans (Speed Limits) plans.

We will ensure that variable message signs will be provided to indicate variable speed limits inside and outside the tunnel to cover the extent of the variable speed control areas shown on the Traffic



Regulation Measures (Speed Limits) plans.

Signs indicating the start and end of the variable speed limit will also be provided. These have recently been given national authorisation by the DfT for their use on all-purpose trunk roads as part of the A14 improvements scheme.

Clearways and Prohibitions

We will provide start and end of clearway signs at appropriate locations at the junctions with repeaters on the A303.

Prohibition signs will be provided on the A303 and at Countess and Longbarrow junctions in accordance with the traffic regulation measures as described in the DCO Schedule 10, Part 2. The signing at the start of these prohibitions will be carried out using the regulatory signs within the Traffic Signs Regulations and General Directions. Any advance warning signs of the prohibitions, however, are likely to be a non-prescribed sign and require DfT authorisation for their use.



Traffic Regulation Orders

We will work with Highways England and Wiltshire Council to ensure the necessary information is available to produce and

promote the TRO's for the project.

Other regulatory signs

Other regulatory signs will be considered, including no-entry signs at slip roads. These will require illumination if they are within 50m of a streetlight.

Warning signs

Use of warning signs will be minimised to reduce clutter. Advance warning of lay-bys will be provided on the A303. During design consideration will be given to any future proofing of a potential upgrade to an Expressway. Signs at junctions will be considered for advance warning of roundabouts and traffic signals as necessary.

Technical Details

Overall technical requirements

All signs will be reviewed against overall technical requirements including consideration of:

- Minimising signage and clutter – is the sign necessary, can signs be combined?
- Lighting requirements – is lighting necessary, if so, develop low impact solutions.
- Use of passively safe supports to minimise requirements for road restraint.
- Position in relation to earthworks to ensure no adverse impact on the OUV of the WHS.
- Use of low reflectivity posts or painted a suitable colour to minimise the impact on the environment.
- Painting the rear of signs a suitable colour to minimise their visual impact, which will require non-prescribed signs authorisation.

Technical details for consultation, review and construction

Sign details will be worked up at detailed design stage, showing

- Locations on plans



- Sign face details, or TSRGD reference, with sizes
- Lighting requirements, if any
- Post requirements
- Foundation requirements.

Incorporation, alteration and replacement of existing signs

Re-use of signs – general

Our signing strategy will be to retain or re-use as many signs as possible. This will improve sustainability, reduce disruption to users and improve safety of workers during the works.

The timing of the works means that most existing signs will be required to remain in place until the new road is open. Signs removed as part of necessary site clearance to progress the works will, where possible, be retained for use in temporary road layouts. This will particularly apply at Longbarrow Junction.

We will liaise with Wiltshire Council to investigate potential for re-use in order to provide as efficient as possible re-cycling of traffic sign materials, particularly those items that do not become surplus until the new road is open. For example, the de-trunking of the existing A303 through Winterbourne Stoke will involve a combination of incorporation, alteration and replacement of existing signs.

Countess Junction

Countess Junction represents the main opportunity to retain, alter or re-use existing signs. Our strategy will be to minimise the number of new signs required. Existing signs will be reviewed for suitability in terms of sign face details, location and condition to see if they can be retained or incorporated in the works. If the sign faces cannot be re-used consideration will be given to mounting new signs on existing posts if they are in a suitable condition.

Road markings, marker posts and studs

Road Markings

Road markings will be provided in accordance with current standards. The existing road markings at Countess Roundabout will be reviewed for compatibility with the new junction layout.

Marker Posts

Marker posts will be provided on the new A303 in accordance with the project scope.

Road Studs

Road studs will be provided in accordance with current standards on carriageways and at NMU crossings. Provision of a comprehensive pattern of studs will be a key safety factor on the unlit road outside the tunnel and in transiting to and from the tunnel. We will consider bi-directional studs on the offside in the tunnel to allow for contraflow operations. We will consider how LED road studs can be used to create different road markings, such as for variable speed limits and for use on the centre line in the tunnel to create the illusion of a solid white line to discourage overtaking during normal operation and to allow the avoidance of cones being used during contraflow operations. Approval will be required for the use of these studs with non-standard markings.

1.2.1 Lighting of traffic signs

Traffic Signs between the western portal (Approx. chainage Ch. 7+200m) and the western extent of the WHS shall not be lit.

The only signs which will require lighting are a number of regulatory signs at Countess junction, these include, but may not be limited to, terminal speed limit, clearway and no entry signs.

1.2.2 Decluttering the Site



In order to minimise the number of signs, where possible signs will be co-located on the same post, for instance change in speed limit and end of clearway.

As noted above, many existing signs cannot be removed until the new road is open and are likely to become unnecessary once the existing A303 is de-trunked.

The Countess Junction slip roads will be single lane connector roads in the new layout so the lane designation signs on the existing 3 lane approaches to the roundabout are likely to be removed during construction, with replacement temporary signs if necessary.

The declassification of the existing A303 through Winterbourne Stoke to "C" Class (road number tbc) will allow decluttering of the old A303 by removal of the existing Trunk Road signage and replacement by fewer and smaller local signs. The section of the old A303 between the B3083 (N) and B3083 (S) will be reclassified as the B3083 and new signage provided to reflect that change.



PROW signing

Approach to PROW signing

We recognise that signing for PROW and PMAs needs a different approach to statutory traffic signs. We will utilise our specialist NMU and wayfinding expertise to develop a signing system that is in keeping with the WHS location with low impact materials.

We will apply particular attention to signing where non- motorised users may come into conflict with traffic at the new Pegasus crossings at Longbarrow Junction and at Countess Junction where existing pedestrian underpasses are being converted to at-grade

crossings.

1.3 Non-prescribed and non-conforming traffic signs

There will be non-prescribed signs required to provide advance warning to the prohibited road users i.e., pedestrians, cyclists, horse riders and horse drawn vehicles, for which we have recently obtained authorisation for the use of similar signs on the A14 scheme.

There may also be a requirement for non-prescribed signs on the approaches to the tunnel portals, as there is a conflict between the requirements of the Road Tunnel Safety Regulations (2007) and what is permitted under the Traffic Signs Regulations and General Directions 2016.

The application process is one which we have undertaken for a number of schemes. It requires the preparation of drawings, documents and the completion of the Non-prescribed signs application form, which is then sent to HE Safer Roads Team. They review the documentation and may ask for amendments before forwarding to DfT for their formal acceptance and signature on behalf of the Secretary of State. Adequate time will be allowed in the programme for authorisation of any non-prescribed signs.

1.4 Consultation and approval process

We will liaise with Highways England and Wiltshire Council to confirm destinations and consider any inconsistencies.

We will also consult with English Heritage Trust, The National Trust and Wiltshire Council on the signing to the Stonehenge Visitor Centre and any other tourist attractions. Wherever practicable we will aim to include the tourist destinations within the overall sign face on new direction signs.