

High Speed 2 Phase One : Route-wide Traffic Management Plan (For Consultation)

Document no.: HS2-HS2-CL-PLN-000-000004

Revision	Author	Date	Issued for/Revision details
Po1	Peter Tomlin		

SECURITY CLASSIFICATION: CONFIDENTIAL

Handling instructions: None

Contents

1	Executive Summary	5
2	Abbreviations and definitions	6
3	Introduction	9
	3.1 The Route-wide Traffic Management Plan	9
	3.2 Related documents	12
	3.3 Contactor deliverables	14
	3.4 Local Traffic Management Plans	14
	3.5 Strategic Liaison	17
	3.6 Local liaison meetings	18
	3.7 Other forums	20
	3.8 Following RTMP Sections	21
4	Traffic flow management	23
	4.1 Scope	23
	4.2 Approvals	24
	4.3 Responsibilities	25
	4.4 General requirements for vehicle and driver management	26
	4.5 Lorry routes	27
	4.6 Managing construction traffic flows	28
	4.7 Abnormal load management	32
	4.8 Access measures	35
	4.9 Vehicle access management	36
	4.10 Visitor access management	37
	4.11 Non-road construction haulage	37
	4.12 Workforce inductions and toolbox talks	37
	4.13 Construction tourism	37
5	Safety and environmental management	38
	5.1 Scope	38
	5.2 Responsibilities	38
	5.3 Vulnerable road users – scope and context	38
	5.4 General requirements for vehicle and driver management	40
	5.5 Promoting safety awareness to employees and communities	40
	5.6 Overview of quality plans, driver and vehicle safety	41
	5.7 Quality requirements	45
	5.8 Driver safety requirements	46
	5.9 Vehicle safety measures	48

5.10	Vehicle environmental management	50
5.11	Driver information packs	52
5.12	Segregation of workforce pedestrians and cycles at site accesses	52
5.13	Crash monitoring and incident reporting	52
5.14	Traffic Enforcement	53
6	Workforce Travel Management	54
6.1	Scope	54
6.2	Responsibilities	54
6.3	Workforce Travel Plans for Construction Projects	55
6.4	Travel Plan Scope	56
6.5	Additional requirements	58
7	Traffic Management	60
7.1	Scope	60
7.2	Approvals	60
7.3	Design requirements for temporary traffic management	70
7.4	Engagement	73
7.5	Temporary traffic management impact review	74
7.6	Road safety audits	74
7.7	Traffic signs	76
7.8	Advanced warning signing	76
7.9	Direction signing to worksites	78
7.10	Exit signing	80
7.11	Implementation	80
8	Highway Management	84
8.1	Scope	84
8.2	Approvals	85
8.3	Worksites on the highway	85
8.4	Traffic signals	90
8.5	HS2 Advice Notes	90
8.6	Temporary highway construction, maintenance and reinstatement	91
8.7	Bridge assessments and asset protection	92
8.8	Highway condition surveys and monitoring	92
8.9	Other highway protection	94
8.10	Road cleanliness	94
8.11	Highway accesses	95
8.12	Haul road Crossings over Highways	96
8.13	Other issues	97
8.14	Requirements for working over or under railways and waterways	98
	References	106

APPENDICES

- A. Indicative Structure and Content of Local TMPs
- B. Draft Terms of Reference for the Establishment of Local Traffic Liaison Group Meetings
- C. Highway Approvals for temporary works

DRAFT

1 Executive Summary

This High Speed Two Phase One Route-wide Traffic Management Plan (RTMP) is intended to capture in a single document the requirements of High Speed 2 Limited for managing transport, highways and traffic during the delivery of the works authorised by the High Speed Rail (London-West Midlands) Act.

The RTMP develops how HS2 will deliver the requirements relating to construction traffic within:

- The High Speed Rail (London-West Midlands) Act 2014
- Undertakings and Assurances register
- Environmental Statement
- The Code of Construction Practice (CoCP)
- Information papers

The aim of the RTMP is to ensure that the nominated undertaker and their Principal Contractors are following the requirements sets out in the above documents and provides greater detail of how High Speed Two Limited (HS2 Limited) and their Principal Contractors will undertake the delivery of the project. It codifies the discussions held with the highway authorities along the HS2 Phase One route via the Highway Sub Group to the Planning Forum and takes into account the experience of delivering similar large construction projects.

The RTMP will be the precursor to the establishment of a number of route-wide liaison bodies which will meet during construction.

The RTMP will form the basis of the contractor requirements for the principal contractors delivering Phase One of High Speed 2. In addition, the RTMP scopes route-wide activities such as direction signing to work sites and monitoring construction traffic volumes, routes and safety requirements.

Following consultation on this Route-wide TMP, the document will be converted into the Employer Requirements for the construction of Phase 1 of High Speed Two, to be followed following Royal Assent.

This document will be supplemented with a series of Local Traffic Management Plans (LTMPs) along the route. LTMPs will be drafted by High Speed 2 Limited, but completed by the principal contractors to include updated details of:

- Construction timing and sequences where they affect the road network, leading to submissions for temporary interference to the highway required to deliver the project;
- Construction traffic flow assumptions – volumes and routes, leading to, as necessary, applications for lorry routes approvals.

In addition, a number of contractor advice notes will be produced as necessary, to ensure that there is a consistent approach to issues along the alignment of the High Speed Phase 1 line.

2 Abbreviations and definitions

CandU – Construction and Use regulations.

CCTV – closed circuit television

CLOCS – Construction Logistics and Cycle Safety a standard for driver and vehicle safety for Managing Work Related Road Risk

CoCP – Code of Construction Practice

Construction access point – a point where construction traffic, of any type, including construction traffic, deliveries, workforce (including buses), enters a construction site (which may be a satellite compound). In the case of a main compound, it will include contractor's offices or welfare facilities associated with the construction activities within the area and may have several satellite compounds associated with it. The employer will establish and monitor the operation of construction accesses in accordance with this RTMP.

Construction traffic/construction traffic – all vehicles over 3.5t which are delivering (or removing) materials to and from worksites or engaged in the construction of the works. This excludes servicing security and welfare facilities and vehicles which visit the site as a part of a linked trip (such as postal deliveries and courier vehicles)

DAM – Duty Access Manager, who will be responsible for the management of construction access points at main compounds and may supervise a number of satellite compounds.

Delivery Point – the point where a delivery vehicle enters a construction site to travel to a storage, welfare facility, haul road or worksite.

DNA – drug and alcohol

ES – Environmental Statement

ESSMP – Logistics Environment, Sustainability and Safety Management Plan

FORS – Freight Operator Registration Scheme

GI – Ground Investigations

Haul road – a haul route is a vehicle route which will generally run alongside the trace of the HS2 railway which will be used by construction traffic to move from a construction access point to a remote welfare facility or worksite.

Haul route crossing – the crossing of a haul route across a highway.

Highway – carriageway, footway and verge which are adopted by the relevant highway authority. This may also include all public rights of way including footpaths and bridlepaths.

Highway Authority – the authority for any highway or traffic on the highway, comprising: (a) Highways England for Motorways and Trunk Roads (b) Transport for London for the TLRN and signals in London (c) London Boroughs (d) County Councils (e) Birmingham and Solihull unitary authorities.

HS2 – Phase One of High Speed 2 Railway

HS2 Act – the High Speed Rail (London – West Midlands) Act

HS2 Bill – the High Speed Rail (London – West Midlands) Bill

HS2 Limited – High Speed Two Limited

ISO39001 – International Standard for Road Safety

Key stakeholders – highway authorities, emergency services and public transport operators

LEMP – Local Environmental Management Plan

Lorry Routes – The routes to be used by large goods vehicles agreed in accordance with Paragraph 6 of Schedule 16 to the Bill.

LGV – large goods vehicle, being over 7.5t.

LTMP – Local Traffic Management Plan

LUX – standard for lighting illumination

NRSA – New Roads and Street Works Act

PSC – Professional Service Consultant/Contractor

ROMIS – Route Management, Improvement and Safety Plan

RTMP – Route-wide Traffic Management Plan

SRN – Strategic Road Network - roads which are: (a) Motorways and Trunk Roads managed by the Highways England (b) The Transport for London Road Network managed by Transport for London (c) the SRN in London which are managed by the London Boroughs, but where works notification is required to be issued to Transport for London) (d) the highest classification of local roads in Birmingham or Solihull unitary authorities.

TAN – Traffic Advice Note

TCSO – Traffic Control and Safety Officer

TENS – Traffic Enforcement Notice

TfL – Transport for London

TLRN – Transport for London Road Network

TLG – Traffic Liaison Group

TPC – Travel Plan Co-ordinator

Trace – the route of the HS2 railway line

U&As – Undertakings and Assurances

Worksite – an area wholly under the control and management of the principal contractor and may include a part (or whole width) of a highway

Workforce – employees of the principal contractor and of their supply chain and support staff (including HS2 staff and support staff) who regularly travel to the same site or a number of sites to deliver the project.

Workforce traffic – vehicles being used by workers from their place of residence during the working week which are not carrying materials or equipment to perform their work.

DRAFT

3 Introduction

3.1 The Route-wide Traffic Management Plan

3.1.1 Scope

This Route-wide Traffic Management (RTMP) sets out how HS2 will manage the flow of construction traffic, the safety of vehicles and drivers, workforce, temporary traffic management measures and highway asset protection during the delivery of Phase One of HS2.

It will incorporate relevant commitments from various documents prepared to support the passage of the High Speed Rail (London – West Midlands) Bill through Parliament. In particular:

- The Code of Construction Practice sets out a number of requirements for the management of traffic and transport during the construction of HS2 Phase One. Many of these requirements sit at a route-wide level and these requirements have been divided into topic specific areas which form the chapters of the RTMP.
- The register of Undertakings and Assurances to the House of Commons Select Committee, where these relate to traffic and are also applicable on a routewide basis.

Both the CoCP and the Undertakings and Assurances set out *what* is to be done by HS2 Limited to manage transport and traffic during construction, whilst the RTMP sets out *how* it will be done.

3.1.2 Vision

The recurring theme throughout this RTMP is that of a culture of safety, including:

- workforce on their travel to and from work;
- construction vehicles and their drivers using the road network;
- design, installation, operation and maintenance of temporary traffic management;
- protecting and appropriate monitoring of the highway from possible damage;
- protecting all road users, but with particular consideration of pedestrians, cyclists, equestrians and powered two wheeler users
- considering safe routes for diversions around worksites or road closures where there are high levels of movement by mobility impaired and on routes to and from schools; and,
- maintaining access for the emergency services

The vision for transport management is summarised by HS2 Limited as follows:

The management of our construction activities affecting highways and public rights of way will set consistently high standards of:

- *design;*
- *implementation; and*
- *compliance*

To ensure:

- *that there are no increase in recorded traffic crashes;*
- *our workforce is kept safe;*
- *vulnerable road users are protected; and,*
- *highway assets and maintained.*

3.1.3 Purpose

The RTMP:

- draws together into one document and develops the requirements for the management of traffic and highways which are set out within the documents prepared for, and during, the progress of the High Speed Rail (London – West Midlands) Bill in Parliament:
 - the High Speed Rail (London – West Midlands) Bill (The HS2 Bill)
 - Environmental Statement
 - Undertakings and Assurances register
 - The Code of Construction Practice (CoCP)
 - Information Papers
 - The draft Local Environmental Management Plans prepared to date (LEMPs)
- sets out how HS2 Limited will implement the provisions of the HS2 Bill with regard to highways and traffic during construction – and in many cases following consultation with highway authorities via the Highways Sub Group of the Planning Forum.
- sets out how HS2 Limited will develop consultation with key stakeholders when developing temporary traffic management schemes, principally through local Traffic Liaison Groups (TLGs)
- establishes the detailed requirements for the production of Local Traffic Management Plans
- establishes the route-wide strategy for the management of construction traffic, including direction signing for emergency services and deliveries as well as requirements for Principal Contractors to manage construction volumes and routes as well as environmental requirements
- establishes mechanisms for promoting and managing the safety of general traffic including vulnerable road users, workers and construction vehicles and their drivers
- establishes the requirements for the management of highways around worksites, particularly to protect highway assets
- develops the requirements for managing travel to work and workforce travel plans which will be prepared by the principal contractors.

The RTMP will provide the basis for the contractual requirements for the Principal Contractors who will deliver the permanent construction of HS2. It will also inform the scope of Professional Service Principal Contractors/Consultants who will implement, monitor and validate certain traffic flow and safety management activities on behalf of HS2 Limited.

3.1.4 Development

The RTMP has been developed through the following:

- The Framework Traffic Management Plan for Ground Investigation
- The Framework Traffic Management Plan for Enabling Works
- Meetings of the Highways Sub Group to the Planning Forum
- Meetings with Highways England

- Discussions with interest groups, such as the Freight Transport Association and the Road Haulage Association
- Consultation with the emergency services on the proposed standards for emergency services wayfinding.

3.1.5 **Timing**

The timetable for RTMP preparation is as follows:

Internal review

- Informal discussions with stakeholders – 4th quarter 2014
- 1st draft RTMP– 1st quarter 2015
- Discussions with key industry/stakeholders – early 2nd quarter 2015
- 2nd draft RTMP internal HS2 review – 2nd quarter 2015

External review

- Consultation RTMP with highway authorities via the Highways Sub-Group to the Planning Forum to the planning forum – 3rd quarter 2015
- Publish 1st version 4th quarter 2015

Contractor Works Information

- Prepare works information – 4th quarter 2015

A review of the RTMP may be undertaken in approximately mid-2017, following preparation of Local Traffic Management Plans, should these identify overlapping issues which need to be considered on a route-wide basis. Such a review may be carried out through the preparation of addenda or a further volume. Any reviews or changes to the RTMP will be consulted upon with Highways and Traffic Authorities and, as necessary, the Emergency Services.

It is assumed that, on Royal Assent of the High Speed Rail (London – West Midlands) Bill , the provisions of the Bill will come into effect, and that contractors delivering Ground Investigations and Enabling Works will be required to work in accordance with the provisions of the Bill and associated requirements, unless a transition period is agreed through the Highways Sub Group of the Planning Forum.

3.1.6 **Exclusions**

The scope of the RTMP and of Local Traffic Management Plans excludes:

- Works by utility companies using their own powers under NRSWA, although co-ordination with HS2 construction will be achieved via highway authorities' own NRSWA meetings and that for works authorised by the HS2 Bill and contracted by the Nominated Undertaker will require the relevant utility company to comply with the project Environmental Minimum Requirements;
- Permanent highway works - design, technical review, assurance and necessary approvals/ approvals of permanent works and structures including embankments, bridges and other structures, lighting, drainage etc - although some processes will be similar to temporary highway approvals.
- Environmental measures and controls within construction sites such as noise and dust.
- Station pedestrian modelling for changes to Euston Station during construction.

3.2 Related documents

3.2.1 The High Speed Rail (London – West Midlands) Bill

The proposed Act makes a number of provisions related to traffic management associated or highway safety with the delivery of the project:

- Schedule 2 part 1 – trail holes
- Schedule 4 part 1 – highway access (temporary and permanent)
- Schedule 4 part 2 – highway interference (permanent stopping up, permanent obstruction, temporary interference, streetworks)
- Schedule 4 part 3 – construction and maintenance of new or altered highways
- Schedule 16 part 1 – road mud control measures, approvals for routes for Large Goods Vehicles
- Schedule 23 – street works and permit schemes
- Schedule 24 – lorry ban orders
- Schedule 31 part 1 – protective provisions for highways and traffic

How the provisions will be put into practice for permanent works and temporary works has been the subject of discussions with the highway authorities along the route of the HS2 alignment through the Highways Sub-Group to the Planning Forum.

3.2.2 Environmental Statement

The Environmental Statement and supplementary environmental statements (collectively referred to as the ES) accompanied the deposit of the hybrid Bill and its additional provisions for Phase One of High Speed Two (HS2) for the proposed scheme. The ES set out the environmental effects which are likely to be significant, based on a reasonable “worst case” scenario.

Volume 5 of the HS2 Phase One environmental statement included a section on traffic and transport and was published in November 2013:

- the transport assessment that assesses the traffic and transport effects of the Phase One of HS2 on all relevant modes of transport, including cars, goods vehicles, public transport, equestrians, walking and cycling, waterways and air;
- potential transport mitigation measures that might be necessary to address the more significant adverse effects;
- maps showing the significant residual transport effects from Phase One of HS2

Where a significant adverse effect was identified within the ES, any specific mitigation measures were set out in the ES.

3.2.3 Information papers

A number of information papers have been prepared which provides further information on how the provisions of the Bill are expected to be implemented. Information papers which are relevant to the preparation of the RTMP are:

- D11: Maintaining access to residential and commercial properties during construction;
- E1: The Control of Environmental Effects
- E5: Roads and Public Rights of Way
- E13: Management of traffic during construction;
- E14: Highways and traffic during construction: legislative provisions;

This Route-wide TMP is consistent with these information papers and any assurances or undertakings provided within them.

3.2.4 Code of Construction Practice

Included within the documents submitted with the HS2 Bill) was a draft Code of Construction Practice (CoCP). Chapter 14 of the draft CoCP sets out project-wide requirement for managing traffic and transport related to the construction activities to deliver Phase One of HS2. The draft CoCP has recently been amended following consultation with the highways sub-group to the Planning Forum and this version of the RTMP is consistent with those amendments.

The chapter has been consulted on through the Highways Sub Group to the Planning Forum.

The transport chapter divides the requirements into the following:

- Route-wide requirements, which are incorporated into this Route-wide TMP.
- Local area requirements, which will be incorporated into Local Traffic Management Plans
- Site specific requirements, which will be addressed through the proposed Local Traffic Liaison Group meetings and within submissions for consultation or approval for temporary highway works.

This introduction chapter to the Route-wide Traffic Management Plan considers the following topics which are set out within the CoCP:

- the arrangements for liaison with the relevant highway authorities and emergency services (including air ambulances) and protecting corridors for emergency vehicles;
- emergency access protocols;

3.2.5 Undertakings and Assurances (U&As)

The passage of the HS2 Bill through Parliament resulted in a large number of petitions which have been considered by the Commons Select Committee. Many petitions refer to traffic impacts during construction and this has resulted in many undertakings and assurances, which have tended to be local in nature.

The register of undertakings and assurances (and other commitments), as far as they concern traffic matters during construction will be set out in:

- The Route-wide Traffic Management Plan, where the U&A requires specific operational route-wide requirements to be established;
- Local Traffic Management Plans or site specific submission related to local matters.

3.2.6 Local Environmental Management Plans

Local Environmental Management Plans (LEMPs) outline local or site specific control measures and local sensitive receptors that will need to be taken in to account during the construction phase.. The provisions within LEMPs with regard to traffic and transport matters during construction will be included within the LTMPs.

3.3 Contractor deliverables

Principal Contractors will be required to produce and implement the following plans:

- Local Traffic Management Plans (for consultation).
- Route Management, Improvement and Safety Plans (to accompany applications for lorry routes for large goods vehicles).
- Highway Condition, Maintenance and Cleansing Management Plan
- Logistics Environment, Sustainability and Safety Management Plan
- Highway Works Programme and Submissions
- Workforce Travel Plans and Monitoring Reports

The Principal Contractors will be responsible for identifying all approvals required to be obtained in advance of works, programming of approvals and for the preparation of all materials required for approvals in accordance with this RTMP.

All documentation and plans which are required to be submitted to Highway Authorities will be assured by HS2 Limited and any subsequent Nominated Undertaker, to ensure:

- Compliance with the Bill , CoCP and other project Environmental Minimum Requirements;
- Compliance with all necessary standards, this document, other relevant documentation and undertakings and assurances;
- A consistency of approach to the delivery of Phase One of High Speed 2;
- That all submissions are made by the Nominated Undertaker, as required by Schedule 4 and that submissions include other matters which are not disapplied by the HS2 Bill, as enacted, such as Traffic Regulation Orders.

3.4 Local Traffic Management Plans

Local Traffic Management Plans (LTMPs) will be drafted by HS2. The aim is that the Local TMPs identify all local area constraints and requirements set out in the ES, CoCP, LEMPs and U&As.

The LTMPs will then be completed by the Principal Contractors, depending on how the contracts are divided geographically.

3.4.1 Areas for LTMPs

The geographic areas of LTMPs has been subject to discussion at the Highways Sub Group to the Planning Forum. LTMPs will generally follow highway authority boundaries, but consideration has been given to planning construction activities in relation to local geography and contract boundaries.

Discussions have identified the need for a West Midlands Strategic TMP covering the Birmingham Box area, due to the complexities of the road network and the need to provide regional-based information so that the highway authorities can appropriately manage their road networks. Local TMPs would therefore be sub-plans to this Regional TMP such as a Curzon Street area local TMP.

The proposed areas for LTMPs, are set out in Table 3.1:

Local Traffic Management Plan	CFA area	Authority
Euston	Euston – Station and Approach	LB Camden
London Tunnels	Primrose Hill to Kilburn Kilburn (Brent) to Old Oak Common) Northolt Corridor	LB Camden City of Westminster Ken'tn and Chelsea Ham'th and Fulham Brent Ealing
Colne Valley	South Ruislip to Ickenham Colne Valley The Chalfonts and Amersham	Hillingdon Hertfordshire Buckinghamshire
Buckinghamshire	Central Chilterns Dunsmore, Wendover and Halton Stoke Mandeville and Aylesbury Waddesdon & Quainton Calvert, Steeple Claydon, Twyford & Chetwode.	Buckinghamshire
Three counties	Newton Purcell to Brackley Greatworth to Lower Boddington	Oxfordshire, Buckinghamshire Northamptonshire
Warwickshire South	Ladbroke and Southam Offchurch and Cublington Stoneleigh, Kenilworth and Burton Green	Warwickshire
Birmingham Box Strategic	<i>Motorways, trunk roads and immediately adjoining A road network</i>	-
Birmingham Interchange	Balsall Common & Hampton in Arden Birmingham Interchange & Chelmsley Wood	Solihull
Birmingham Junction	Coleshill Junction Castle Bromwich and Bromford Curdworth to Middleton, Washwood Heath	Solihull Warwickshire Birmingham
Birmingham Central	Curzon Street	Birmingham
Staffordshire	Drayton Bassett, Hints and Weeford Whittington to Handsacre	Staffordshire

Table 3.1 Indicative LTMP areas

3.4.2 Indicative Structure and Contents

Indicative contents of LTMPs are set out in Appendix A, but will be tailored to the geographical area which they cover and reflect the requirements set out in the CoCP.

The CoCP requirements are that Local TMPs include details of the following, where appropriate:

- permitted access routes and accesses for construction traffic;
- site boundaries and the main access/egress points for worksites and compounds;
- temporary and permanent closures and diversions of highways and other PRoW;
- a list of roads which may be used by construction traffic in the vicinity of the site including any restrictions to construction traffic on these routes, such as the avoidance of large goods vehicles operating adjacent to schools during drop off and pick-up periods and any commitments set out in the register of Undertakings and Assurances;
- phasing of works;
- the proposed traffic management strategy;
- other measures which will affect the highway, such as lorry holding areas;
- regular operation of traffic liaison groups with key stakeholders to ensure that programmes of HS2 works are shared and which will assist with the highways authorities to carry out their network management duties; and
- a register of applications for consents associated with temporary traffic management measures.

In relation to lorry management, LTMPs will include details of the following, where appropriate;

- timing of site operations and timing of traffic movements;
- local routes to be used by lorries generated by construction activity;
- lorry holding areas;
- lorry holding areas on- or off-highway, how they will be laid out and operated; and
- weighbridge(s) at a suitable location(s) on site to monitor compliance with vehicle weight restrictions.

The contents will include:

- a local register of construction traffic management undertakings and assurances, so that a single reference document can be referred to concerning the requirements for management of traffic at a local level.
- an initial programme of temporary traffic management, which will be continuously updated and shared with highway authorities and key stakeholders at TLG meetings.

Measures affecting strategic roads (Motorways, Trunk Roads and the TLRN in London) will be included within the relevant LTMPs.

3.4.3 **Development**

Indicative contents will be consulted on with the Highways Sub- Group to the Planning Forum.

LTMPs will be drafted by HS2 Limited for consultation, but completed by principal contractors.

Draft LTMPs will be consulted on with the relevant highway authorities and other key stakeholders in accordance with the CoCP.

3.5 **Strategic Liaison**

The draft CoCP requires that HS2 sets out, in relation to traffic, the arrangements for liaison with the relevant highway authorities and emergency services (including air ambulances) and protecting corridors for emergency vehicles. These arrangements are set out in below, and within following sections.

3.5.1 **Planning Forum**

The HS2 Phase One Planning Forum was established in May 2013 in advance of the submission of the HS2 Bill, and has been meeting regularly since then. The Forum acts as the primary vehicle for liaison between the HS2 project and the local authorities along the HS2 route on matters of cross boundary and route-wide interest.

The focus of discussions during passage of the HS2 Bill through Parliament has been the proposed planning regime set out in the Bill and associated documents, including the Environmental Minimum Requirements (EMRs).

3.5.2 **Highways Sub-Group to the Planning Forum**

The Highways Sub-Group to the Planning Forum was been established to:

- facilitate engagement between members of the sub-group on matters related to local highway authority roads and public rights of way;
- seek agreement on a common approach to route-wide principles, standards, practices and processes associated with highway approvals and approvals;
- present recommendations on highway-related planning approvals and approvals to the Planning Forum;
- to identify and discuss areas of common interest and concern to local highways authorities along the whole line of route; and
- to progress matters as raised and directed by the Select Committee.

It is not the purpose of the Highways Subgroup to discuss location specific issues and mitigation, which will be considered through local meetings.

The attendance of the Sub Group is primarily HS2 and highway authority representatives, comprising:

- Transport for London (strategic roads in London)
- London Boroughs
- County Councils

- Unitary Authorities (Solihull and Birmingham)
- Highways England

Meetings are open to District councils although they are not Highway Authorities and so attendance is at their own discretion and cost. It would be expected that, during construction, route-wide issues of interest to all highway authorities would continue to be discussed at the sub-group and where bespoke local concerns, consultations or consents required the involvement of the district council, they will be engaged with.

3.6 Local liaison meetings

3.6.1 Traffic Liaison Group meetings

During the construction phase regular local Traffic Liaison Group (TLG) meetings will be established with local highway authorities so that matters such as local traffic management schemes can be reviewed prior to submission or approval and other matters of interest can be discussed and co-ordinated. The geographic areas for TLGs and initial terms of reference including attendance and initial frequency of TLG meetings will be discussed with the Highways Sub Group to the Planning Forum.

Once established, TLGs may consider revised terms of reference, attendance and frequency of meetings.

Draft terms of reference are set out in Appendix B.

The key objectives of the TLG meetings will be to:

- enable consultation on the temporary traffic management programme and submissions;
- enable the highway authority to carry out its obligations to ensure there is a co-ordinated approach to traffic management in their area;
- ensure that local authorities, emergency services and bus operators are aware of programmed construction activities that could have an impact on the local and strategic road network;
- deal with relevant construction traffic issues;
- oversee workforce travel management, unless a subgroup is established.

Meetings in one highway authority area may include attendance from a representative of the adjoining highway authority areas.

To ensure effectiveness, it is recommended that attendance at meetings will be limited to:

- The local highway authority manager who has the remit to manage HS2 issues and approve submissions, where highway approval is required (and where necessary their counterparts from Transport for London and Highways England respectively);
- A person within the local highway authority responsible for streetworks and managing their obligations under the New Roads and Streetworks Act (1991) and Traffic Management Act (2004) (and their counterparts from Transport for London and Highways England respectively);

- A person within the local highway authority responsible for highway management/maintenance;
- A representative of the local traffic police, who would liaise with other emergency services;
- A representative of bus operators, such as a local authority manager for bus services;
- HS2 Area Traffic Manager and, as necessary, HS2 Head of Transport Management;
- As necessary, HS2 Principal Contractor(s) and/or consultants for agenda-specific items;
- HS2 community liaison, particularly to review where scheme notification will be required.

As necessary, the HS2 Head of Transport Management will need to assist the local highway authority manager in preparation of member briefings, responses to questions and attend Committee meetings etc (or delegated to the HS Area Traffic Manager).

In addition to the regular TLG meetings ad hoc scheme-specific consultation meetings will be required during development of proposals prior to review at TLG. This may include attendance from local highway authority specialists such as cycle and pedestrian planners, taxi licencing, parking managers, lighting engineers, drainage engineers, signals specialists and structural engineers.

3.6.2 Birmingham Box area

Sitting between the Highways sub group and meetings to discuss local area issues within TLG meetings, it is expected that a Birmingham Box group of highway authorities will need to be established, to enable the highway authorities to co-ordinate works affecting motorways and possible diversionary impacts onto other strategic routes in the area.

3.6.3 NRSWA meetings

It is normal practice that highway authorities hold regular New Roads and Street Works Act (NRSWA) meetings with utility companies who have rights under various acts to provide or work on apparatus in the highway. These are normally held at fixed intervals through the year and are attended by both the utility companies (who either have planned works or general requirements to maintain their assets) as well as the local authority teams with their maintenance and other highway works programmes such as developer programmes under Section 278 or Section 106 agreements.

It is proposed that the HS2 area traffic manager will attend highway authority's NRSWA meetings, where information and programmes of all utility works and highway works within the authority area are provided, to enable co-ordination of works and so that conflicts can be identified and appropriately managed by the highway authority.

3.6.4 Community meetings

As necessary, there may be a requirement for specific community consultation or engagement, such as for road closures or matters affecting specific communities or vulnerable road users which will need to be consulted on through appropriate forums or specific site meetings.

3.7 Other forums

Based on experience of other projects other topic-specific transport-related forums may be required. These may include:

- Travel Plan meetings (which may be sub groups of Traffic Liaison Meetings);
- Construction safety and regulatory meetings ; and,
- and Emergency Services Liaison meetings;

3.7.1 Emergency services liaison management

The CoCP requires that arrangements for emergency access protocols are to be developed.

The emergency service organisations along the HS2 Phase One route are set out as follows (table 3.2). The British Transport Police is the lead Policing authority for HS2:

Police force	Fire service	Ambulance service trust	Air Ambulance service
Metropolitan	London	London	London
Hertfordshire	Hertfordshire	East of England	Herts
Thames Valley	Oxfordshire	South Central	Thames Valley and Chiltern
	Buckinghamshire		
Northamptonshire	Northamptonshire	East Midlands	Warwickshire and Northamptonshire
Warwickshire	Warwickshire	West Midlands	
West Midlands	West Midlands		Midlands
Staffordshire	Staffordshire		

Table 3.2: Emergency services

Route-wide strategic liaison

Strategic level discussions have been held with the Police, Fire Services and Ambulance Trusts regarding the strategy of signing of worksites and RVP points for emergency services as well as access protocols. Discussions have also commenced with the Association of Air Ambulances.

These discussions may lead to the formation of a body to assist with the development of strategic emergency services protocols.

Local liaison

It would be expected that regular local emergency services liaison will be necessary throughout the construction period, so that emergency services can be consulted on:

- Significant road schemes which may impact on response and access;
- Schedule of access points, locations, Grid References and internal RVPs which would be available for emergency service use (and any signing or postcoding updates);

- Planned construction activities within sites which may present specific hazards to fire/rescue services (such as confined working, working at height, storage of materials and other fire hazards);
- Other impacts such as movement of abnormal loads, temporary road closures for construction works

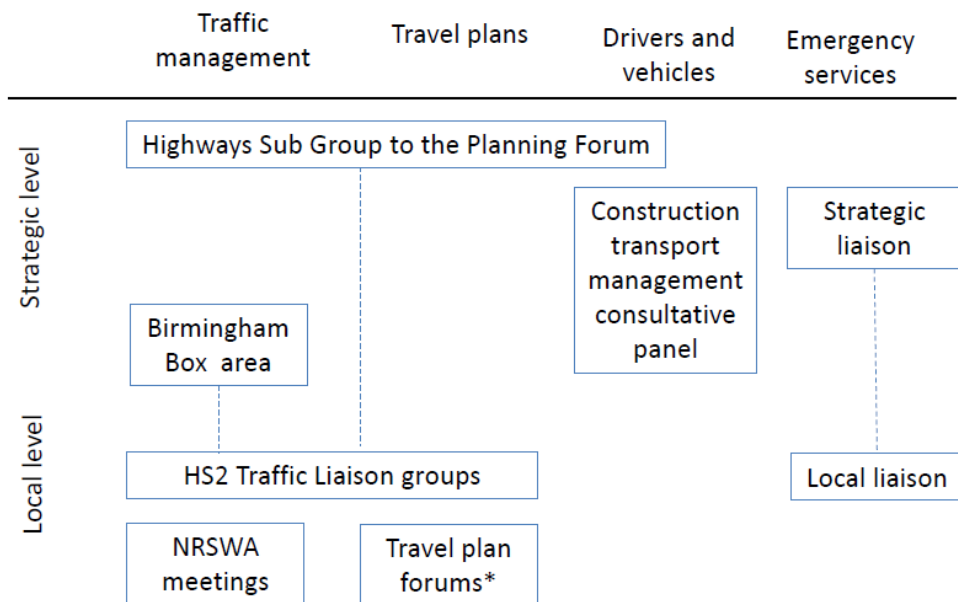
Protocols for access arrangements will be developed through these consultation forum and will typically consider:

- Arrangements for calling the emergency services within the worksites;
- Access arrangements at the site access points;
- Wayfinding within the worksites;
- Provision of RVP points within worksites;
- Provision of information packs at site access points

3.7.2

Consultative groups

The organisation of external liaison which may be required during HS2 delivery is set out in Figure 3.1:



*may be case for a route-wide panel, via the Highways Sub Group to the Planning Fourm

Figure 3.1: Indicative external liaison

3.8 Following RTMP Sections

The remaining sections of the RTMP deal with the following:

- Section 4 : traffic flow management and is concerned with the planning and management of vehicle movements
- Section 5 : vehicle and driver safety and minimising environmental impacts.
- Section 6 : journey to work.

- Section 7 : traffic engineering and includes temporary traffic management, impacts assessing and mitigating impacts on traffic, including how applications for approval will be made.
- Section 8 : highway management and asset protection, including matters such as sweeping and reinstatement.

DRAFT

4 Traffic flow management

4.1 Scope

The scope of this Chapter covers the following:

- Development of lorry routes for approval
- Implement vehicle booking, lorry routes monitoring, assurance and reporting
- Establish vehicle identification

Whilst the scope of this plan is concerned with management of HS2 works, traffic and people using the road network, construction vehicle management and safety issues also extends to the management of the following within construction sites, which may impact on the external road network:

- site access point(s) for vehicles and pedestrians;
- site plazas and access to parking, welfare and other facilities (the construction facilities);
- haul roads, which connects the construction facilities and associated remote welfare facilities and the construction zones along the route of Phase One of HS2.

4.1.1 Relevant Route-wide Requirements

Code of Construction Practice

The requirements for management of construction vehicle on a route-wide basis are:

- monitoring requirements;
- means of monitoring lorry use and any routes prohibited from use;
- dealing with large goods vehicles and abnormal loads;
- clear identification for construction heavy goods vehicles under the lead contractors' control;
- introduction of a GPS vehicle location and tracking system for tipper lorries within the lead contractors' control to be used for the movement of materials and waste in bulk and/or appropriate tracking solutions for the measurement of HS2 related traffic flows;
- monitoring for deviation from authorised routes;

Undertakings and Assurances

The method of managing construction traffic needs to fulfil the requirements of various Undertakings and Assurances with regard to levels of traffic permitted on certain lorry routes, or where certain roads are prohibited to large goods vehicles (over 7.5t) or heavy goods vehicles (generally over 3.5t). The proposals within this chapter have been developed to enable assurance that the U&A are being complied with and that monitoring of deviation from authorised routes is undertaken appropriately.

4.2 Approvals

The following approval requirements are relevant to this Chapter:

4.2.1 Lorry routes (schedule 16)

Requirement	<p>If the relevant planning authority is a qualifying authority, development must, with respect to the matters to which this paragraph applies, be carried out in accordance with arrangements approved by that authority.</p> <p>The matters to which this paragraph applies are the routes by which anything is to be transported on a highway by a large goods vehicle to—</p> <p>(a) a working or storage site, (b) a site where it will be re-used, or (c) a waste disposal site.</p> <p>(3) In this paragraph "relevant planning authority" means the unitary authority or, in a non-unitary area, the county council in whose area the development is carried out.</p> <p>(4) Sub-paragraph (1) does not require arrangements to be approved in relation to—</p> <p>(a) transportation on a special road or trunk road, or (b) transportation to a site where the number of large goods vehicle movements (whether to or from the site) does not on any day exceed 24.</p> <p>(7) In this paragraph— "large goods vehicle" has the same meaning as in Part 4 of the Road Traffic Act 1988; "special road" and "trunk road" have the same meanings as in the Highways Act 1980.</p>
When	<p>Approval will need to be given prior to construction, where it is expected that more than 24 Large Goods Vehicle movements are forecast to occur per day.</p> <p>It is possible that approvals may be sought in stages: (a) the A road network (b) local routes (c) other routes during construction, should the need arise.</p>
Who obtains approval	<p>Submission package prepared by the contractor and submitted by the Nominated Undertaker..</p>
Submission package	<ul style="list-style-type: none"> • Lorry routes approval proforma • Contractor's Route Management, Improvement and Safety plan • Plans of lorry routes to be used. • Submissions for permits as necessary for exemptions to lorry ban orders under Schedule 24 of the Bill
Other	<p>Undertakings and Assurances may need to be completed prior to commencement of the use of a route, which will be identified in Local Traffic Management Plans.</p> <p>It is assumed that no junction-specific modelling will be undertaken for temporary construction impacts</p>

4.2.2

Lorry ban order (disapplication) (schedule 24)

Requirement	If a lorry ban order ... does not contain the required provision, it is to be treated as if it did. (2) The required provision is provision to the effect that— (a) a person proposing to use heavy commercial vehicles in connection with authorised works in a way which would otherwise constitute a breach of the prohibition, restriction or requirement referred to in paragraph 1(1)(b) may apply for the issue of a permit in respect of that use, and (b) the use authorised by such a permit does not constitute a breach of the prohibition, restriction or requirement.
When	Applications for exemption permits will be required prior to use of a road which is covered by a lorry ban order.
Who obtains approval	Subject to the agreement for the arrangements, the principal contractor.
Submission package	The information required to be provided is prescribed within Schedule 24. Practicable measures will be subject to discussion with the Highways Sub Group to the Planning Forum. The highway authority is to make arrangements for "emergency permits" to be issued at any time and receive applications providing proscribed information electronically.
Other	None

4.3 Responsibilities

Principal Contractors will be required to assume responsibility for the management of all their activities and those of its suppliers. This includes:

- all logistics to and from construction sites associated with Hs2, including railheads and sites used for sustainable placement.
- the off-site movement of any excavated material or waste off-site
- the coordination of logistics activities with other Principal Contractors and stakeholders

Principal contractors will prepare and follow the following plans:

Local Traffic Management Plans

Principal Contractors will be required to develop within their Local Traffic Management Plans:

- the location of proposed temporary storage and works offices and other facilities, welfare facilities, vehicle routes for which approval will be required and site access points required;
- vehicle holding areas and, as necessary, consolidation plans;
- traffic flow forecasts - monthly, weekly, daily and hourly for total traffic and large goods vehicles (7.5t and over) and measures regarding the timing of deliveries in accordance with Undertakings and Assurances.

Route Management, Improvement and Safety Plans

ROMIS plans will be prepared by principal contractors to demonstrate that the grounds for refusal of proposed lorry route approval in Schedule 16 have been considered, namely:

- Preserving the local environment or local amenity
- To prevent or reduce prejudicial effects on road safety or on the free flow of traffic in the local area; or
- To preserve a site of archeological or historic interest or nature conservation value

The plans will include the measures considered necessary for site access along roads lower than an A classification and include the proposed measures which will be subject to highway consultation and, as necessary, approvals.

4.4 General requirements for vehicle and driver management

The requirements within this Chapter will apply as shown in Table 4.2:

Construction traffic	External roads	Site access points and haul routes	Worksites
All regular construction vehicles (5 or more visits in a 12 month rolling period) (excavated fleets, concrete fleets and others such as ring segment movements) over 7.5t	Required to follow approved lorry routes (for flows forecast to be more the 24 per day)	Rules within this chapter or as signed by HS2 Limited or by the principal contractor	Contractor rules
All regular construction vehicles (excavated material fleets, concrete fleets and others such as ring segment movements) under 7.5t	Required to avoid specific routes in accordance with Undertakings and Assurances.	Rules within this chapter or as signed by HS2 Limited or by the principal contractor	
Infrequent construction vehicles and deliveries (less than 5 visits in any rolling 12 month period)	Required to avoid specific routes in accordance with Undertakings and Assurances.	Required to comply with all driver and vehicle legal requirements.	
HS2 employees in HS2 vehicles or employed workers in works vehicles, being used for work	Required to avoid specific routes in accordance with Undertakings and Assurances.	Rules within this chapter or as signed by HS2 Limited or by the principal contractor	
HS2 employee or contractor employee using their personal vehicle for travel to and from their place of residence during the working week	No controls.	Rules within this chapter or as signed by HS2 Limited or by the principal contractor	

Site visitors of the principal contractor or HS2, including employees attending for project/site inductions	No controls	No access beyond welfare facilities unless escorted	
Abnormal loads	Required to comply with Abnormal load route and procedures (e.g. movement orders)	Required to comply with any specific requirements for access/egress	

Table 4.2 Application of driver and vehicle management requirements

The following sections set out a number of standards which will apply route-wide. They will be applied by the Principal Contractors who will be required to ensure that all haulage firms, freight operators and suppliers engaged on the works, including owner-drivers, are assessed and selected to ensure that they meet the minimum requirements of this document.

4.5 Lorry routes

4.5.1 General requirements

Principal contractors are to set out the proposed lorry routes for Large Goods Vehicles (over 7.5t) within their Local Traffic Management Plans.

In completing the Local Traffic Management Plans, the principal contractor will be required to review the assumed generation and assignment of construction traffic volumes and routes (less than 7.5t and more than 7.5t) which are set out within the ES to validate or amend:

- the assumptions with regard to construction traffic generation
- the impacts which are assumed
- to confirm the proposed routes for construction traffic (turning circles)
- any requirements for impact mitigation or safety management

Detailed access plans and necessary schemes for two-way construction traffic routes are to be set out with ROMIS plans for each proposed route for which lorry routes approvals will be required. It would not be expected that remedial works will be required to A class roads, except where new accesses are required to be provided for works traffic which will be subject to consent under Schedule 4, part 1).

Contractor LTMPs may also need to set out the contractors proposals for managing construction traffic in relation to incident management:

- On the road network (emergency road closures by others)
- Emergency closures of sites (e.g. due to site incidents)

4.5.2 Development of contractor flow forecasts

Principal Contractors will need to prepare a high level schedule of traffic flow assumptions during construction for vehicles under 7.5t and over 7.5t, to and from each worksites to be used, other locations such as planned excavated material deposit and expected routes (taking into account the assumptions within the ES as well as Undertakings and Assurances etc).

These plans will need to be undertaken for the daily, weekday AM and PM peak hour for background traffic and the weekday AM and PM peak hour for construction traffic movements in each area. The forecast should be on a month-by-month basis.

Estimates will need to be made for the flow on the road network, combined on each road as necessary taking into account restrictions on large goods vehicle movements from the Register of Undertakings and Assurances.

The contractors proposed lorry routes and overall flow assumptions are to be reported within the relevant LTMP.

4.5.3 Applications for lorry routes approvals

The process for Lorry Route approvals will be discussed at the Highways Sub Group to the Planning Forum. Applications will be made to the qualifying planning authority and, as stated in the draft Planning Memorandum, will be copied to the adjoining qualifying authorities.

Lorry route approvals may also include plans for emergency routes, should approved routes be known to be regularly susceptible to emergency closures, in consultation with the relevant Police authority.

4.5.4 ROute Management, Improvement and Safety plans (ROMIS plans)

Principal Contractors will need to prepare local ROute Management, Improvement and Safety plans (ROMIS) which will be submitted as a part of the lorry routes approvals submission.

The grounds whereby arrangements can be refused and required to be modified are:

- i. to preserve the local environment or local amenity,
- ii. to prevent or reduce prejudicial effects on road safety or on the free flow of traffic in the local area, or
- iii. to preserve a site of archaeological or historic interest or nature conservation value, and are reasonably capable of being so modified and are agreed with the nominated undertaker.

The purpose of the ROMIS plan will be to set out the routes to be approved and that these relevant issues have been considered and, as necessary, mitigated in the proximity of the construction access points.

4.6 Managing construction traffic flows

4.6.1 Construction activities

The management of vehicles will necessarily depend on the type and frequency of construction vehicles which will arrive and depart from the various construction sites along the route of Phase One of HS2.

Vehicle flows will range from multiple trips by a variety of vehicle sizes through to single trips by special loads. Typical construction activities are set out within Table 4.3 and, even for rural areas, it would be expected that the use of a fleet of Large Goods Vehicles (32 tonne tippers) excavated material movements will be only a small proportion of overall construction flows in many areas along the HS2 route.

Activity	Light vehicles	Heavy vehicles	Frequency
Fencing	High	Low	Low, once works complete
Security (throughout construction)	Medium	None	Daily
Welfare facilities provision and management (throughout construction)	Medium	Low, except for set up and removal of accommodation units	Infrequent
Workforce travel (throughout construction)	High at start at end of working day.	None	Workforce travel peaks
TBMs	High	Low	Low for delivery, otherwise high daily flows for ring segments
Demolitions, excavated material movements	Low	High	High
Structures along the trace including vent shafts/head houses	Low	High	High
Environmental management (planting etc)	High	Medium	Medium
Ballast, rail, catenary, permanent fencing	High	High	High
Power, signalling	High	Low	High
Stations and stabling depot structures	High	High	High
Building and headhouse fit out (electrical and mechanical)	High	Low	High
Operational fit out of stations and depots etc and commence testing	High	Medium	Medium

Table 4.3 Typical range of construction traffic flows

Given the diverse activities and frequency of site access by different vehicle types and sizes, the application of a single set of requirements for vehicle management is not feasible.

4.6.2 Vehicle flow management

The management of large goods vehicles and abnormal load movements will be a significant scope. This is likely to include:

- Excavated material vehicle fleet tracking (GPS or RFID) of vehicles under the Principal Contractor's control.
- Development and operation of a centralised vehicle booking system.
- Where necessary ANPR cameras at access points and fixed or mobile ANPR to evaluate usage of other routes which are not approved routes or which require monitoring (either as an Undertaking and Assurance or in relation to complaints received)
- Principal Contractor plan reviews (long-range, weekly and daily) and bookings
- Receiving vehicles at holding points/logistics centres/consolidation centres for urban areas and checks on-site within rural areas
- Provision of permitted route maps
- Collection of intelligence to inform Principal Contractors about factors which can affect vehicle schedules
- Liaison with enforcement agencies (Police, VOSA, HSE) via the proposed construction forum and key stakeholders via the Local Traffic Liaison Group meetings
- Liaison with permitting authorities where movement restrictions apply and for abnormal load movements

4.6.3 **Vehicle booking**

All works vehicles travelling to a site access point will be required to be booked in for each day that they are utilised on the HS2 project. Vehicle deliveries will be provided with slots according to the capacity of the worksite(s). Slots will be blanked out due to local flow restrictions in accordance with U&As.

Unique booking references for each arrival and departure (combined) will apply to all vehicles. For vehicles with access permits, only the first arrival will be subject to a full safety check but arrival time, driver name, trip origin, trip destination and driver details should be registered for each trip.

To ensure that vehicles arrive and depart access points in accordance with the vehicle booking, all vehicles will be recorded entering or leaving the site. The recording will be undertaken by: (a) the DAM or appointed banksperson (b) use of ANPR or (c) loop counters, set to record according to vehicle weight or type.

4.6.4 **Vehicle tracking module**

GPS

The Code of Construction Practice (CoCP) requires, as appropriate, the: *“introduction of a GPS vehicle location and tracking system for tipper lorries within the lead contractors' control to be used for the movement of materials and waste in bulk and/or appropriate tracking solutions for the measurement of HS2 related traffic flows;”*

With GPS, a device in the vehicle will send information back to the operator's system or to a web accessed system with the above data at pre-determined intervals, enabling the operator to see where the fleet is at any time. More recent developments link the GPS to telematics and video recording for incident management.

RFID

RFID is similar to GPS in that it would require fleet operators to fit a transmission device or tag to each of their vehicles which could then be read by a receiver. Receivers could be placed at any point on the route (including lorry holding areas, site access/egress points) where the flow assurance is applicable and identify vehicle tags as the vehicle is proximate to the reader. Tags can be configured with an asset identifier which could be the vehicle registration number (VRN).

RFID can be used to monitor non-approved routes for the vehicles which are fitted with tags, using remote beacons..

4.6.5 **ANPR**

ANPR will be expected to be utilised at site accesses and as necessary:

- at fixed sites on the network as required to monitor construction traffic flows in accordance with Undertakings and Assurances (to be cross referenced with the booking system);
- at mobile sites, to respond to complaints or issues associated with use of routes which are not approved lorry routes by construction traffic (to be cross referenced with the booking system).

4.6.6 **Road Vehicle Parks and Vehicle holding points**

For each worksite access which will receive deliveries, the Principal Contractor will need to evaluate the space available within the delivery areas for managing vehicle checking, loading/unloading and storage space and identify the works vehicle capacity for the purposes of establishing booking parameters management, so that booking systems can flag if capacity of a site is exceeded.

The principal contractor may be required to identify proposed holding areas. Holding areas may be on-street (and therefore subject to the provisions of Schedule 4 of the Bill or off-street within Road Vehicle Parks within scheme limits and which will be subject to approval under Schedule 16 of the Bill.

In locating and designing a holding area on-street, the contractor will need to consider the safety and welfare of traffic marshals as well as drivers in case they are required to wait at the holding area. Holding areas on-street will be subject to submissions under Schedule 4 of the Bill.

4.6.7 **Vehicle consolidation centres**

Where vehicle holding areas are located off-street, the principal contractor will be required to consider, where reasonably practicable and cost efficient, vehicle load consolidation. It would be expected that the opportunities for load consolidation would apply to fit-out activities.

4.6.8 **Site access permits**

Principal Contractors will consider if site access permits are to be implemented for specific or general use for access to construction sites.

An HS2 permit will be provided for HS2 works-related vehicles for access to construction site compounds and welfare facilities. These may be “infinity” permits for all sections of the route or nominated for north, central or south areas.

4.6.9 **Movements along the trace for cut and fill and management of road crossings**

Where necessary and practicable, a haul road is to be provided along the trace for vehicles to move from the construction vehicle access point to the worksite or working area. Each crossing of a highway will require the design of:

- Warning signing
- Traffic control measures (signals, give way)
- Measures to control mud on the highway, including hard standings areas;
- Gates to enable the haul road to be secured at night;
- Temporary lighting, as necessary.

Traffic marshalling management will need to be set out within the submission for highway consultation or approval.

4.6.10 **Closures of lorry routes/alternative temporary routes**

Should an approved lorry route be closed due to planned works (either as a result of works by HS2 or for highway works or utility works by others) temporary routes will need to be discussed and agreed in advance through the relevant local Traffic Liaison Group. If the works are not HS2 related, it would not be expected that HS2 would make improvements to the temporary route.

Should an approved route be closed without notice, drivers will follow diversions put in place by the relevant authority. As necessary, a duty HS2 traffic manager will be available to discuss the implications on vehicle movements should the closure period be of indeterminate duration and advise the relevant site duty manager as to appropriate action.

It may be the case that in such circumstances, existing VMS can be utilised or a limited number of VMS could be deployed to advise drivers approaching worksites of alternative routes to be used, operated under agreed protocols where it is known that a particular permitted lorry route is subject to frequent closures.

4.7 **Abnormal load management**

4.7.1 **Abnormal load management and procedures**

An abnormal load is a vehicle that has any of the following:

- a weight of more than 44,000 kilograms
- an axle load of more than 10,000 kilograms for a single non-driving axle and 11,500 kilograms for a single driving axle
- a width of more than 2.9 metres
- a length of more than 18.65 metres

There are no parameters for notification for height. It should be noted however that vehicles over 4.95m (16' 3") in height would have to pay particular attention to routing. There is no statutory limit governing the overall height of a load.

Table 4.4 indicates the notification periods when loads do not comply with the Construction and Use Regulations.

Weight limit of application	Roads and Bridges Authority Notice	Police Notice	Working Days Notice
Any maximum plated axle weight over 10,000kg or 11,500kg for drive axle	Yes		Two days, with indemnity to Roads and Bridges Authority
Any maximum plated motor vehicle weight over: 18,000kg 2 axle or 26,000kg 3 axle or 32,000kg 4 axle or 40,000kg 5 axle or 44,000kg 6 axle (44,000kg 5 axle)(combined transport operation only)	Yes		Two days, with indemnity to Roads and Bridges Authority
Any maximum plated weight over 80,000kg	Yes (five days)	Yes (two days)	Two or five days, with indemnity to Roads and Bridges Authority
Width of load or vehicle over 3m		Yes	Two days
Width of load or vehicle over 4.3m	Yes	Yes	Five days, with indemnity to Roads and Bridges Authority
Width of any lateral projection over 305mm either side of vehicle body		Yes	Two days
Length of vehicle or load over 18.75m (includes articulated vehicles)		Yes	Two days
Length of a combination of vehicles carrying the load over 25.9m		Yes	Two days
Length exceeding 30m rigid	Yes	Yes	Five days, with indemnity to Roads and Bridges Authority

Weight limit of application	Roads and Bridges Authority Notice	Police Notice	Working Days Notice
Length of any forward or rearward projection beyond foremost or rearmost point of a vehicle carrying the load exceeds 3m		Yes	

Table 4.4 Abnormal loads notification requirements.

In addition to the highway notification, Network Rail will also need to be notified if any rail bridges are to be crossed. In accordance with the statutory regulations, notifications are to be submitted to Network Rail within the following advance periods:

- Gross vehicle weights of up to 80t: two clear working days
- Gross vehicle weights between 80t and 150t: five clear working days

The notification of abnormal road loads is required by legislation (SI 1998 'The Road Vehicles (Authorisation of Special Types) (General) Order 2003') and by the Special Types General Order (STGO) Regulations 2003. Those vehicles that cannot comply with the requirements of the Construction and Use Regulations, by virtue of the tasks they carry out, and the dimensions that may exceed Construction and Use Regulations, e.g. low loaders and mobile cranes. Nevertheless, they must comply with the notification periods required by the regulations.

The Principal Contractor will ensure that they comply with abnormal load procedures for the relevant highway authority, Police authority and Department for Transport. As necessary, routes for abnormal load movements will occur in accordance with the movement orders. Abnormal loads that require escort may be delivered outside core working hours in accordance with the Abnormal load order.

Hauliers of abnormal loads will be responsible for applications and notifications for Abnormal load movements and use the ESDAL system to issue abnormal load notifications to the Police, highway authorities and other bridge and structure owners. The principal contractor will be responsible for:

- liaison with the haulier and ensuring that sufficient notice for the Abload movement is provided.
- identifying any temporary removal and reinstatement of street furniture to accommodate the Abload movement(s), via highway approval submissions or notifications.

As necessary, temporary traffic management measures may need to be put in place for varying periods to enable Abnormal load movements. Where these are required to be installed and left in situ, the measures will be subject to highway notification as set out in this RTMP, following consultation on abload routes via TLG meetings and other necessary stakeholder consultation.

HS2's standard safety requirements will not apply to Abload vehicles as they will be subject to appropriate construction and use regulations and may be accompanied

4.7.2 **Tracking over LUL assets in London**

Particular consideration will need to be given to the volume and weight of traffic tracking over London Underground structures and, as necessary, advice sought as to limitations which may need to be considered for routes, numbers of vehicles and weight of vehicles.

4.8 **Access measures**

4.8.1 **LGV and HGV vehicle identification**

All construction vehicles over 3.5t regularly attending a worksite (including minibuses and light vans constructed for load carrying) will be required to display a notice in the front vehicle window that the vehicle is working for a HS2 contractor.

Signs shall be placed in the front windscreen on the near side, but so not to interfere with the visibility of the driver. Signs shall be removed when the driver is not engaged in working on the HS2 project.

HS2 will prescribe the size and colour of signs to be used and may require the colour to be changed 6 monthly (with a required change-over period) to enhance recognition that the vehicle is continuing to be engaged on HS2 works activities.

Due to the risk that vehicles continue to display signs when not working on HS2 related activities, complaints about lorry movements will not be investigated unless a vehicle registration number is provided which can then be checked against the booking records.

4.8.2 **Site access outside core working hours and start up/close down periods.**

Vehicle access to site and from sites will occur during core working hours and start up and close down periods (so long as construction works are not being undertaken).

Access and egress to and from sites may be required outside these times:

- For security or maintenance or at the request of the emergency services
- Abnormal load movement
- At other times, where a highway authority as requested changes to delivery pattern, subject to a S61 approval is not required.

Principal Contractors will be required to ensure that they comply with large goods vehicles or heavy goods vehicles overnight waiting bans.

4.8.3 **Helpdesk**

Principal Contractors will be required to widely advertise a single number for all drivers to call to resolve issues during site working hours (and one hour before and after site working hours).

4.9 Vehicle access management

4.9.1 Duty Access Managers

At each access to a main construction sites or works compounds along the route (not being a haul route crossing), a Duty Access Manager (DAM) will be required to be employed by the Principal Contractor with responsibility for managing the flow of vehicles into and out of the worksite and have responsibility for associated satellite compounds, laydown areas or others works facilities accessed to or from the highway..

The DAM will be responsible for:

- Ensuring that construction vehicles arrive in accordance with the daily booking schedule or Abnormal load arrival schedule.
- Ensuring that vehicles and drivers comply with the project safety standards
- Ensure that drivers have any necessary delivery paperwork and display construction vehicle signage if used.
- Using means of recording data for reporting purposes (i.e. using dataloggers)
- Rejecting vehicles, if booking or safety requirements are not met (and completing "near miss records" as necessary).
- If necessary issuing notices or TENS for non-compliance with driver or vehicle safety standards
- Managing site access bankspersons.
- Ensuring compliance with wheelwashing and road sweeping standards.
- Ensuring that workforce walking into/out of site only use pedestrian access points and do not mix with construction traffic.
- Check that vehicle registration plates are clean
- Ensuring that RFIDs are fitted and working (as necessary)

The DAMs will be managed by Principal Contractor's site safety manager or security manager.

DAMs will be required to:

- Undergo necessary training for their role and responsibilities, which will be provided by the Principal Contractor;
- Wear distinctive hard hats and, as necessary distinctive reflective waistcoats and/or jackets;
- Wear portable video recording equipment

4.9.2 Contractor bankspersons

Access and site Bankspersons shall be trained and equipped to carry out their duties effectively and safely. This will include use of "STOP WORKS" boards.

4.9.3 Site security

The layout of main site accesses will consider the requirements for providing:

- site security, including the provision of gates;
- the possible need to search vehicles entering or exiting a site access point;

- the possible need to reject vehicles.
- Bus turn around and bus stops and shelters, where bussing is to be provided to transport hubs or pick up/set down points.

4.10 Visitor access management

Visitors (one day visits, press, media, local community representatives etc who will not proceed through the contractor's site induction process) must be met at a pedestrian access point and escorted to site offices/welfare facility.

Visitors attending a construction site in a vehicle must park in a designated visitor parking place. Where practicable this will be located adjoining the site welfare/offices.

Visitors attending a construction site on foot must be directed by the segregated walkway to the site offices/welfare.

4.11 Non-road construction haulage

The Principal Contractor will establish the options for, and usage of rail and water for haulage of materials and waste within their LTMPs taking into account (a) the required lorry routes to serve rail heads and water wharfs (b) the environmental benefits/disbenefits (c) the capacity of the rail and water haulage industry including rail paths (d) the additional cost of water or rail use (e) the associated safety risks of potential double handling.

4.12 Workforce inductions and toolbox talks

A principal contractor's general induction for workforce should include reference to:

- Site access arrangements
- Travel to work
- Safe driving on-site and off-site

Programmes of topic specific tool box talks and site-wide campaigns should be programmed to include:

- Managing work-related road risk
- Safety during travel to/from work (person safety, driver, rider and pedestrian safety).

4.13 Construction tourism

The construction activities could lead to the development of a tourism industry around the works. HS2 will not provide facilities for, or manage, travel along the route by tourists (such as coach parking etc).

5 Safety and environmental management

5.1 Scope

This Chapter establishes the standards for vehicle and driver safety and environmental management.

5.1.1 Relevant Route-wide Requirements

Code of Construction Practice

The requirements for management of construction vehicle on a route-wide basis are:

- contractor quality plans for management of construction vehicles through the supply chain;
- contractor implementation of driver training programmes relevant for their specific environment (e.g. to protect pedestrians and non-motorised traffic);
- vehicle safety measures including signage, mirrors, prevention of under-running and use of technology to remove blind spots according to vehicle size;
- procedures to address any highway incidents or vehicle breakdowns relating to construction traffic, especially at peak times;

5.2 Responsibilities

Principal Contractors will be required to assume responsibility for the management of all their activities and those of its suppliers. This includes driver and vehicle safety and environmental management.

Principal contractors will prepare and implement the following plan:

Logistics Sustainability, Environment and Safety Management Plans

Logistics Environment, Sustainability and Safety Management Plans (ESSMPs) will be required to be prepared by Principal contractors to develop the requirements of this Chapter with regard to:

- A quality operation with audit and annual re-inspection
- Driver safety measures
- Vehicle safety to protect vulnerable road users
- Measures to minimise vehicle environmental impacts

5.3 Vulnerable road users – scope and context

In this RTMP, vulnerable road users refers to :

- Pedestrians
- Powered two-wheelers
- Pedal cyclists
- Equestrians

Injuries to vulnerable road users involving Heavy Goods Vehicles (over 3.5t) for the three years 2011, 2012 and 2013 are presented in Table 4.1, for the highway authorities through which the route of Phase One of High Speed Two passes (except Hertfordshire):

Column	a	b	c	d	e	F
	All casualties which are KSIs*	All reported casualties involving an HGV	KSI casualties, involving an HGV	% of injuries involving HGVs which are KSIs (c/b)	% KSIs to vulnerable users which involved an HGV (c/a)	% of KSIs involving HGVs which were within London
Pedestrians	Not recorded	394	71	18.0%	-	46.5%
Motorcycles	1589	336	55	16.4%	3.5%	23.6%
Cycles	1076	332	34	10.2%	3.2%	50.0%
Equestrians	6	0	0	n/a	n/a	n/a

*KSI – Killed and seriously injured.

Figures are for: Camden, Westminster, Kensington and Chelsea, Hammersmith and Fulham, Brent, Ealing, Hillingdon, Buckinghamshire, Oxfordshire, Northamptonshire, Warwickshire, Solihull, Birmingham, Staffordshire

Table 4.1: Vulnerable road user casualties (2011, 2012 and 2013)

The figures do hide that of all fatal injuries involving cycle, that a greater proportion can involve HGVs but that these large percentages refer to small numbers. Of cycle fatal casualties, the following percentages involved an HGV within the authorities along the HS2 route:

2011 - 45%

2012 - 0%

2013 - 33%

But in terms of overall safety, there is a safety deficit with respect to the number of casualties and distance travelled for vulnerable road users, as shown in Figure 4.2 :

Chart 4: Proportion of reported casualties by road user type and severity, Great Britain: 2012

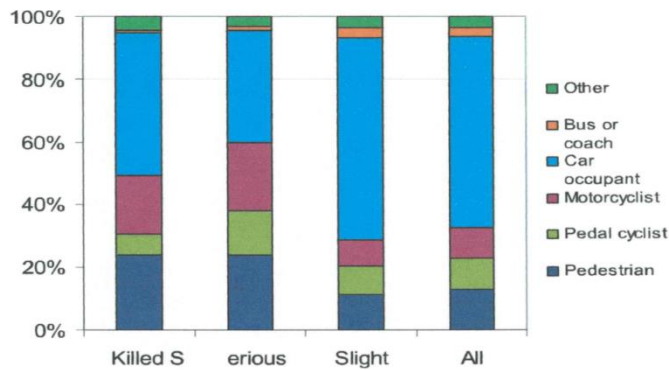


Chart 5: Proportion of reported casualties by road user type and severity, adjusted for distance travelled per year, Great Britain: 2012

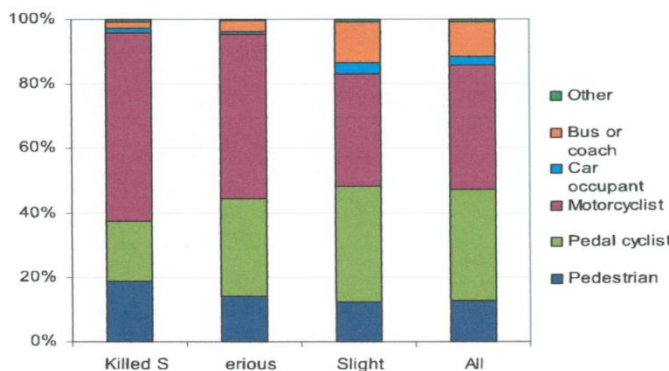


Figure 4.2: Comparison of reported casualties by user type (chart 4) and by distance travelled (chart 5) for 2012 (source: Reported Road Casualties Great Britain 2012)

Figure 4.2 shows that, in particular, motor cyclists are significantly over-represented in terms of numbers killed and seriously injured, compared to the estimated distance travelled.

5.4 General requirements for vehicle and driver management

The following sections set out a number of areas which have been considered during the development of the HS2 route-wide standards:

- the controls on vehicle and driver safety will extend to vehicle movements to and from as well as between work locations.
- principal Contractor will be required to ensure that all haulage firms, freight operators and suppliers engaged on the works, including owner-drivers, are assessed and selected to ensure that they meet the minimum requirements of this RTMP.
- a freight operator or haulier includes the Principal Contractors, their sub-Contractors and suppliers engaged in use of vehicles being used regularly for construction activities on the road network.

5.5 Promoting safety awareness to employees and communities

Principal contractors will be required to develop and deliver suitable safety engagement programmes:

5.5.1 Employees

Principal contactors will be required to identify and promote activities across their workforce and supply chain with regard to:

- Get home safely every day
- Driver wellness
- Security awareness for pedestrians to and from work
- Safety awareness
- Other relevant presentations or information related to this Route-wide Traffic Management Plan or Local Traffic Management Plans

5.5.2 Communities

Principal contactors will be required to identify and promote activities within local communities, such as schools, workplaces and community groups or forums with regard to:

- Road safety, appropriate for the audience (e.g. cycle safety checks)
- Changing places (between HGV drivers and vulnerable road users according to the local environment – cyclists, horse riders, pedestrians, motorcyclists, schools and other community groups)
- Appropriate safety management, such as promoting “walking buses”

This engagement will be undertaken within the context of wider community engagement strategies.

5.6 Overview of quality plans, driver and vehicle safety

5.6.1 ISO 39001

ISO 39001:2012 specifies requirements for a road traffic safety (RTS) management system to enable an organization that generated traffic flow on the road network to reduce death and serious injuries related to road traffic crashes, within management areas which it can either control or influence. The requirements in ISO 39001:2012 include development and implementation of an appropriate RTS policy, development of RTS objectives and action plans, which take into account legal and other requirements to which the organization subscribes, and information about elements and criteria related to RTS that the organization identifies as those which it can control and those which it can influence.

Section 6 of the standard sets out a number of performance factors to be considered. Those which are relevant for the delivery of Phase One of HS2 are:

- a) Risk exposure factors
 - Traffic volume and traffic mileage by vehicle and road user type
- b) Safety outcome factors
 - The number of deaths and serious injuries

c) Intermediate safety outcome factors

- The safe planning, design, operation and use of the road network
 - Road design and safe speed especially considering separation (on-coming traffic and vulnerable road users), side areas and intersection design
 - Use of appropriate roads depending on vehicle type, user, type of cargo and equipment
 - Use of personal safety equipment especially considering seat belts, child restraints, bicycle helmets, motorcycle helmets, and the means to see and be seen
 - Using safe driving speed also considering vehicle type, traffic and weather conditions
 - Fitness of drivers especially considering fatigue, distraction, alcohol and drugs
 - Safe journey planning including consideration of the need to travel, the amount and mode of travel and choice of route, vehicle and driver
- The safe entry and exit of vehicles and road users to the road network
 - Safe vehicles especially considering the occupant protection, protection of other road users (vulnerable as well as other vehicle occupants), road traffic crash avoidance and mitigation, road worthiness, vehicle load capacity and securing of loads in and on the vehicle.
 - Appropriate authorization to drive/ride the class of vehicles being driven/ridden
 - Removal of unfit vehicles and drivers/riders from the road network

5.6.2 **Fleet Operator Recognition Scheme**

The Fleet Operator Recognition Scheme (FORS) is a voluntary scheme for fleet operators. Its purpose is to raise the level of quality within fleet operation, and to demonstrate which operators are achieving the standard. There are three award levels – Bronze, Silver and Gold.

The themes of the FORS accreditation are related to:

- Legal compliance
- Safety
- Efficiency
- Environmental management

Specific quality areas are:

- Fleet Management
 - Documentation of policies and procedures
 - Defined responsibilities and accountabilities
 - Defined responsible person
 - Demonstrate holding of all regulatory licencing
 - Procedures to communicate with workforce
 - Policies and procedures reviews every 12 months
 - A change process
 - A complaints procedure
 - Adequate resources
 - Procedure to updating policies and plans
- Vehicles
 - Vehicle inspection and maintenance plan in place
 - Daily walk around checks of vehicles

- Fuel and tyre usage monitoring
- Demonstrate holding required insurance
- Demonstrate management of vehicle excise duty payments
- Safe loading management
- Vulnerable road user safety
- Mitigation of risks for working at height/falls from vehicles
- Risk assess vehicle manoeuvring
- Drivers
 - Licencing and qualification checking
 - Driving standards
 - Staff training – both progressive and continued professional development
 - Implement rules concerning use of distractive technology
 - Workplace health, safety and welfare policies
 - Management of driver fitness and health
 - Monitoring of driver hours and working time
 - Driver monitoring
- Operations
 - Routeing and scheduling
 - Compliance with regulations for specialist goods carriage
 - Reporting and review of incidents and collisions
 - Insurance claims review of working practices
 - Record controls

Accreditation to one of the award levels is by application, audit and award of the appropriate level of accreditation, with annual renewal required. There is generally a 90 day period between initial registration and progression to the Bronze standard.

Silver standard requires (Bronze standard plus):

- Driver licencing verification
- Vehicle warning equipment
- Vehicle blind spot minimisation
- Driver training, including cycle hazard awareness
- Review of traffic related fines and charges
- Performance measurement

Gold standard requires (Silver standard plus):

- Active promotion of the FORS standard to their supply chain
- Publication of evidence of attainment
- Performance measurement
- Review of staff training to determine its achievement in performance improvement
- Appoint a champion for fuel and emissions efficiency

5.6.3 Work Related Road Risk (the CLOCS standard)

Arising from work undertaken by the Transport Research Laboratory for Transport for London which examined factors related to cycle fatalities in London, a standard for Work Related Road Risk has been prepared and promoted by Transport for London.

The CLOCs standard requires that fleet operators implement:

- Collision reporting
- Driver training and development
- Driver licence checks
- Vehicle warning signing
- under-run protection
- blind spot minimisation and
- audible warning

Other workstreams being developed by TfL include vehicle design improvements.

HSE Driving at Work

The Health and Safety at Work etc Act 1974 requires employers to take appropriate steps to ensure the health and safety of their employees and others who may be affected by their activities when at work. This includes the time when they are driving or riding at work, whether this is in a company or hired vehicle, or in the employee's own vehicle.

The HSE notes that there will always be risks associated with driving and, although these cannot be completely controlled, an employer has a responsibility to take all reasonable steps to manage these risks and do everything reasonably practicable to protect people from harm in the same way as they would in the workplace.

HSE Fitness to Drive

All regular drivers to be provided with annual fitness assessments to ensure that drivers are able to notify DVLA if they have:

- developed a 'notifiable' medical condition or disability
- a condition or disability which has got worse since obtaining a driving licence (or qualified to drive an additional a class of vehicle)

Notifiable conditions are anything that could affect an employee's ability to drive safely and can include:

- epilepsy
- strokes
- other neurological and mental health conditions
- physical disabilities
- visual impairments

Driver qualifications

Drivers must have a valid driving licence for the vehicle they are driving – on the highway and haul roads. The principal contractor will be responsible for validating driving licences for regular drivers accessing worksites.

Driver Certificate of Professional Competence (CPC)

Drivers are required to hold a Driver Certificate of Professional Competence (CPC) to drive a large goods vehicle. CPC holders have a Driver Qualification Card, which is required to be held by the driver whenever driving for work.

To obtain a CPC, a driver will either need to have “acquired rights” (licence issued for the class of vehicle issued before 10 September 2009) or to have undertaken a four-part test.

All drivers are required to undertake 35 hours of periodic training every 5 years to retain a Driver CPC. Goods vehicle drivers with “acquired rights” licences were due to have completed the 35 hours training before 9 September 2014. Centres providing CPC training are required to be approved by the DVSA and to deliver the CPC syllabus set out by the DVSA.

National Vocational Qualification (NVQ)

An NVQ is a qualification which assesses competency in a work situation. Drivers are able to be accredited to a level 2 or level 3 NVQ in Driving Goods Vehicles. Given the mandatory CPC requirement, the NVQ level 2 or 3 is a qualification which would be aimed by employers to provide qualifications following apprenticeship training, for those aiming to be a driver team leader or manager in a multi-vehicle fleet operator.

Construction and Use regulations

Compliance with C&U regulations is a legal requirement and therefore not dealt within this RTMP.

5.7 Quality requirements

The project’s requirements are that the Principal Contractor is to set out how it will address the quality requirements of the project within the ESSMP.

Either:

How the Principal Contractor will achieve and adhere to FORS Bronze level (and achieve Silver level) within a period to be agreed with HS2 Limited,

Or:

How the Principal Contractor will achieve and adhere to ISO 39001 within a period to be agreed with HS2 Limited,

Or:

How the contractor intends to address the themes contained in the current FORS or ISO39001 standards for quality operation – such as the emerging DVSA standard.

And:

- how the standard will be set and implemented through the supply chain for vehicles regularly accessing site

And:

- how the standard will be independently validated and audited, if not via FORS

Company licences

Principal Contractors with owned vehicle fleets (and their hauliers) shall have Standard Operators licences and ensure full compliance with the O licence regulations within the quality requirements of the ESSMP. Small van operators for deliveries (under 7.5t) may use Restricted O licences.

Principal Contractors will be responsible for ensuring that any workforce bussing operation is operated in accordance with any require PSV Operator Licences.

5.8 Driver safety requirements

Safety requirements

The following minimum standards will apply to the delivery of Phase One of HS2 as follows:

- Collision reporting;
- Progressive driver training and development, appropriate for the type of construction activities and environment or geography relevant to the contract area;
- Driver licence checks;

Training will be provided, either

By Principal Contractors, delivering suitable course content, appropriate for the type of construction activities and environment or geography relevant to the contract area

Or:

Make use of courses provided by external parties (such as the British Safety Council , ROSPA or Safer Urban Driving or Vulnerable Road User Course which are valid for CPC driver training)

And:

HS2 will endorse the proposed course content, if they do not provide the same content as the CLOCs standard.

The Principal Contract will need to set out within the ESSMP how the standard and training will be delivered through the supply chain.

HSE Driving at Work

Principal Contractor ESSMPs will be required to set out compliance with the recommendations contained within INDG382 (Driving at Work – Managing Work Related Road Safety) and how compliance will be managed through the supply chain.

HSE Fitness to Drive

Subject to the requirements which are set out within the project's H&S policies and procedures (such as use of medicines which advise against use of machinery) Principal contractors are to set out within their ESSMPs how regular drivers are provided with:

- random alcohol and drugs tests
- 6-monthly eye sight tests
- an annual opportunity to receive health and appropriate lifestyle advice, as necessary.

And how this will be managed through the supply chain.

Driver qualifications

Drivers on the High Speed Two project will be competent to drive their class of vehicle in the conditions expected. Principal Contractors will need to set out within their ESSMP how they ensure drivers of vehicles are competent for the conditions the vehicle or plant is used.

HS2 employees who will be driving for work will undergo regular vehicle licence checks and, as appropriate, checks on vehicle insurance.

Driver Certificate of Professional Competence (CPC)

HS2 Limited will consult with key stakeholders as to desirability of annual CPCs for regular fleet drivers and minimum training hours during a year (or pro rata for working time on HS2).

5.8.1 **Additional requirements**

Driver rules

Drivers rules will apply to all on-site construction traffic. Drivers must:

- not use any radio or telephone equipment on public highways, access points, car parks or haul routes unless factory or dealer-fitted or unless the vehicle is parked and the engine switched off
- use seat belts on any highway open to public use or haul road, if fitted (except where exemptions apply)
- obey all traffic signs, signals or directions of a traffic marshal or traffic supervisor, on-site or off-site
- not exceed speed limits
- not use ear phones for electronic equipment (except for prescribed hearing aids)
- not manoeuvre at an access point, on a haul road or highway without the presence of a banksperson.
- only park in designated area and must not obstruct a highway, access point or haul road
- drive with due care and attention
- stop after any incident
- report near misses
- only overtake when safe to do so.

- reverse park into any marked parking space (90 degree or echelon parking)
- not park in any designated spaces unless the relevant type of vehicle or displaying a relevant, valid permit (e.g. ambulance bay, visitor bay, welfare facilities loading bay);
- have zero levels of drug or alcohol (except where detectable in relation to prescribed medicines).

Where necessary, DAMS may reject vehicles seeking site access or egress due to reasonable concerns regarding (a) excessive exhaust pollution, (b) excessive noise (c) damage which could present a hazard (e.g. sharp or protruding edges) (d) leaking oil etc.

Where relevant, these rules will also apply when driving for work or commuting to and from a worksite or related facility car park on the public highway.

Contractors will be required to publish and distribute to all drivers the HS2 rules for vehicles and drivers and include the requirements for PPE such as safety boots, hard hat, high viz vest or jacket. Drivers of frizzable¹ material shall also have gloves and eye protection.

Total driver hours

Contractors will be required to ensure that total driving hours per day include travel to and from work.

No incentives

Where practicable to do so, construction activity will not be undertaken which sets penalties for haulage of materials according to the duration of tasks or which rewards the number of trips or weight moved per day.

Near Miss reporting

The Principal Contractor will be required to actively support and encourage near-miss reporting.

Principal Contractors will be required to inform HS2 Limited of any incidents that may impact on the local community or the reputation of HS2 Limited and provide an incident report to HS2 Limited.

5.9 Vehicle safety measures

5.9.1 Requirements

Construction and Use regulations

Compliance with C&U regulations will be managed through:

- The contractor's quality plan within their ESSMPs
- Planned access to weighbridges
- Consultation via the Construction Forum
- Targeted vehicle checks at holding points (and other locations) by DVSA and Police

¹ Lightweight, dusty, flyaway.

Safety measure requirements

Access to site by any UK-registered vehicle will only be permitted with the following minimum vulnerable road user safety kit fitted (to be provided by the 5th visit in any 12 month rolling period):

All construction vehicles:

- Back and side warning pictorial stickers

Vehicles over 3.5t must have, as an addition:

- Side under-run protection on both sides (except where site conditions negate this requirement and has been agreed on a site-by-site basis with HS2 Limited)
- Side scan detection
- Blind spot minimum standard:
 - Class IV, V and VI mirror appropriate to vehicle size
 - Camera system and/or left turn sensor system fitted to the vehicle front nearside
 - an audible left turn alert

Vehicles over 7.5t must have, as an addition:

- a four-way (or 360) camera system fitted, with recordings to be 2 weeks data and retained for 4 weeks

In all cases, the safety features must be in working order.

The Principal Contractor shall adopt additional innovation or technology to remove blind spots and prevent under-running. This could include retro fitting HGVs with doors which provides for improved visibility.

As technology changes, Principal contractors and their supply chain will be reasonably required to adopt improved standards during their vehicle fleet renewal programme, where technology standards and reliability permit..

Daily, weekly and other vehicle checks

Vehicle checks will form a part of the contractor's quality plan within their ESSMPs.

Large Goods Vehicle Design

As a part of the contractor's ESSMP, the contractor will need to identify how they will provide and operate vehicles on the highway which will minimise ground clearance. It is expected that such vehicles will:

- be N3 compliant, except where demonstrated to be impracticable.
- have a maximum design ground clearance of 200mm and height from ground to front window of no more than 1600mm except where demonstrated to be impracticable.

Throughout the supply chain, contractors will be required to demonstrate that vehicles to be used on the highway which are to be purchased or leased for use on the project will need

to be the latest designs available which address driver visibility, particularly lateral visibility and which minimises the height of the driver seat above road level.

How this will be implemented to avoid less vulnerable road user-friendly vehicles being moved down the supply chain will need to be demonstrated as a part of the contractor's SSMP.

5.9.2 Additional requirements

Vehicles entering or exiting a holding area or site access must:

- not have tinted windows, other than factory fitted tinting.
- have clean, standard number plates
- have a working beacon fitted or available for use, if being used for works on haul roads. Beacons are to be checked at the start of each working day.
- only carry passengers for the number of seats fitted.
- not use hazard warning lights at any time, except when the vehicle is broken down
- not carry alcohol
- carry a first aid kit and fire extinguisher (except visitor vehicles or single/infrequent visit deliveries)
- not carry pets or children;
- have winter tyres fitted, where it is an employer policy for works vehicles.

Except where delivery notes are provided, any vehicle bearing non-UK registration mark (number plates) will not be permitted access to any site, 3 months after first accessing any worksite (or off-site facility) if the vehicle continues to bear the same non-UK registration mark.

Where necessary, DAMS may reject vehicles seeking site access or egress due to reasonable concerns regarding (a) excessive exhaust pollution, (b) excessive noise (c) damage which could present a hazard (e.g. sharp or protruding edges) (d) leaking oil etc

Where relevant, these rules will also apply when driving for work or commuting to and from a worksite or related facility car park on the public highway.

5.10 Vehicle environmental management

5.10.1 Emissions

Chapter 7 of the CoCP sets out the project's general provisions for air quality management, within the construction sites and measures which will apply on the highway.

The contractor's SSMP quality plan for transport management will need to set out the principal contractor's proposals for minimising emissions and for reductions in carbon use through the supply chain for heavy and light vehicles when using the public highway.

In order to mitigate impacts on Local Air Quality, in areas where there is action in place to meet EU limit values through the introduction of Low Emission Zones (such as the London Low Emission Zone), HS2 Ltd will require Heavy Duty Vehicles (with a weight greater than 3.5 tonnes) entering these designated Zones during construction, for the purposes of transporting excavated material, to be powered by EURO VI (or lower emission) engines.

With reference to the HS2 Air Quality Strategy document HS2-HS2-EV-STR-000-000007, Principal Contractors will be required to identify a vehicle management and renewal programme for their supply chain to adopt EURO VI in urban areas or locations specifically identified within Undertakings and Assurances (to be set out within Local Traffic Management Plans) and early adoption of more restrictive Euro standards in advance of their required use, as technology permits.

5.10.2 **Noise controls**

Contractors should set out within their SSMP proposals for managing vehicle noise on the highway (white noise alarms, soft closing doors, low noise tyres for use in urban and suburban areas)

Principal Contractors will be required to use less intrusive noise alarms for vehicles working within the site that meet the particular safety requirements of the site, such as broadband reversing warnings, or proximity sensors to reduce the requirement for traditional reversing alarms.

5.10.3 **Measures to minimise queuing on the highway**

Principal Contractors will be required to use booking systems to ensure, as far as reasonably practicable, that the number of vehicles entering sites are no greater than the site capacity.

Principal Contractors will be required consider one-way movement of construction vehicles through sites.

5.10.4 **Minimising construction vehicle parking**

Principal Contractors will be required to ensure that measures are implemented to reduce construction traffic impacts associated with parking in the vicinity of sites, including by construction vehicles or by employees using private cars for their journey to and from work.

5.10.5 **Sheeting and wheelwashing**

Dust and air quality management measures will be required to be implemented by Principal Contractors to limit pollution arising from the transportation and storage of materials, including covering materials, deliveries or loads entering and leaving the site for the purposes of preventing materials and dust spillage.

Principal Contractors will be required to provide and maintain wheelwashing facilities, located on hard standing, where necessary.

5.10.6 **Vehicle breakdowns on the highway**

Principal Contractors will be required to put in place procedures to manage vehicle breakdowns related to construction traffic, particularly in peak times, within their ESSP plans..

Vehicle recovery within temporary traffic management will be subject to site specific measures.

5.10.7 **Weigh bridges**

Principal Contractors will be required to identify locations of weighbridges or where weighbridges are to be provided at holding areas or construction site accesses/egresses.

5.11 **Driver information packs**

For irregular drivers visiting worksites, consideration will be given to the provision of a driver information workpack .

The contents of such may include:

- Causes of crashes
- Sharing the road
- Daily and weekly vehicle checks
- Environmental management (sheeting, wheelwashing)
- Vehicle loading
- Vehicle standards

It may be the case that the driver information packs are prepared to a common standard, with contract and route and site specific information added by the Principal Contractors, such as permitted lorry routes, holding areas and other contract-specific information.

5.12 **Segregation of workforce pedestrians and cycles at site accesses**

At any site access point, pedestrians will be provided with a route into and exiting the site which is segregated from works traffic. The site access point will be provided with cycle parking, in accordance with the demands for cycling to work. If a site has more than one pedestrian access point, cycle parking need be provided only at one designated location.

5.13 **Crash monitoring and incident reporting**

5.13.1 **Incident reporting**

Principal contractors are required to require that fleet operators capture, investigate and analyse road traffic collisions which result in personal injury, damage to vehicles or damage to property directly to the employer and through the CLOCs manager, or similar, reporting system.

5.13.2 **Near miss reporting**

As well as CLOCS anonymous reporting of crashes (whether resulting injury or damage), all near misses will be reported using the HS2 Limited HSE reporting requirements.

5.13.3 **Area-wide monitoring**

In order that the project's vision for managing safety on the network will be realised, a programme of monitoring of recorded crashes will be put in place.

STATS19 records will be gathered for (a) lorry routes (b) suitable geographic areas around construction sites which are subject to network changes (such as road closures) and (c) for the

remainder of the highway authority area. Records will be assessed for each of the three years prior to, and following, commencement of main construction within the authority area. The data will be examined for the relevant hours of construction works:

- Total crashes
- Total personal injuries
- KSIs involving HGVs
- KSIs involving pedestrians, cyclists, powered two-wheelers and equestrians
- KSIs involving pedestrians, cyclists powered two-wheelers, equestrians and HGV

HS2 will review and report to the relevant TLG:

- any geographic trends related to worksite areas, compared to the remainder of the highway authority area.
- any safety action to be undertaken by HS2 and its principal contractors, where trends are can be identified as related to construction activities
- safety actions to be implemented by the relevant highway authority.

5.14 Traffic Enforcement

Traffic offences on public highways will be dealt with as follows:

- Police enforcement (and other enforcement agencies such as DVSA and HSE) will be dealt with as necessary by the enforcement agency. Issues will be reported to the Construction safety and regulatory meetings.
- Public reports to the project will be investigated, as far as reasonably practicable (for both alleged offences and for driving where/when prohibited according to local rules according to vehicle size) but will depend on provision of a vehicle registration number, location and date/time being provided.
- Offences observed by HS2 traffic managers or staff will be followed up and may result in (a) serious offences being reported to the Police (b) the issue of a TEN or suspension of access to a worksite.
- Not following signage specific to the project or instruction related to lorry routes by report to the principal contractor and, as appropriate the issue of a TENS.

Traffic Enforcement Notices (TENS) will be issued to workforce drivers and pedestrians who are not compliant with the project rules for using public highways, accesses or haul roads

6 Workforce Travel Management

6.1 Scope

6.1.1 Route-wide Requirements

Code of Construction Practice

Construction workforce travel plans will be prepared by the lead contractors, through engagement with the relevant highways authority, with the aim of encouraging the use of sustainable modes of transport to reduce the impact of workforce travel on local residents and businesses.

The COCP outlines that contractors travel plans will include:

- identification of a travel plan co-ordinator and a description of their responsibilities;
- key issues to consider for each compound/construction site or group of sites;
- site activities and surrounding transport network including relevant context plans;
- anticipated workforce trip generation and how it may change during the construction process;
- travel mitigation measures that will be introduced to reduce the impact of construction workforce on the transport network and services;
- measures to control on-site parking provision and promoting travel by public transport where available;
- target to reduce individual car journeys by the construction workforce;
- methods for surveying workforce travel patterns;
- the process for monitoring and reviewing the construction workforce travel; and
- the process for monitoring and reviewing the construction workforce travel.

Environmental Statement

The ES included, in Annex A, a generic Workforce Travel Plan. The ES provides a significant package of requirements to be followed and these are brought together within this RTMP chapter, along with best practice. The scope of HS2 Limited's work will include:

- Setting and updating requirements for travel plans in accordance with this chapter
- Ensuring that Principal Contractors prepare, implement and manage travel to work initiatives
- Developing guidance and new initiatives as necessary
- Monitoring, assurance and reporting
- Liaison with internal and external stakeholders as necessary

6.2 Responsibilities

The Principal Contractors will be required to assume responsibility for managing workforce for their journey to and from their place of work.

Objectives to support these aims will include:

- Measures which seek to influence the volume of construction worker traffic so to minimise adverse impacts on the environment, impact on the surrounding road network and disturbance to neighbouring properties;
- the introduction of measures to reduce single occupancy car journeys by staff working on construction sites through the encouragement of car-sharing, public transport, cycling and walking to work where reasonably practicable.
- The objectives will be supported by measures to make walking, cycling and public transport use attractive and safe options within the vicinity of the worksites, according to the level of demand and the location of the worksites.

Lead contractors will provide a single travel plan to cover their contract area, individual chapters may consider a number of compound worksites and specific sites, as appropriate according to the anticipated volume of workforce, rather than duplicating documents.

6.2.1 Local Liaison

Local Travel Plan meetings may be required to be established to assist in their delivery, potentially as a sub-group of Traffic Liaison Groups.

6.3 Workforce Travel Plans for Construction Projects

Workforce Travel Plans for the delivery of construction projects such as HS2 are significantly different to traditional travel plans. HS2 Principal Contractor Workforce Travel Plans will need to ensure that people can get to and from work in urban, suburban and rural areas so that HS2 Phase One can be delivered on time. Construction workers generally arrive at work earlier and leave later than employees in other employment sectors.

Monitoring of workforce travel will necessarily be undertaken using easily completed, short questionnaires, which need to be issued, completed and returned during canteen breaks. Canteens will also be used by drivers making irregular (and possibly one-off) deliveries and will need to be excluded from the questionnaire analysis.

The travel plans will also be significantly different to a traditional travel plan in that:

- the workforce on site will be constantly changing and, although a maximum workforce forecast can be made for each site, many times this number of people will be employed during the construction period – ranging from perhaps a day or two through to a few months and with only a proportion working on the project until completion.
- working hours (and hence times of arrival and departure) will follow the approvals for working hours provided by the relevant local authority and reflect practises within the construction industry as a whole and will be bound into the construction contracts;
- the workforce on-site will not work for HS2 Limited, but is managed by the various principal contractors and therefore a number of possible initiatives which would be normally delivered by an employer such as financial or other incentive schemes cannot be utilised;
- the travel plan will need to ensure that HS2 is an attractive project to work on and is accessible, given the various projects competing for the same workforce – and in

particular skilled workforce – who have the advantage of little or no constraints on means of access by private vehicle to other construction projects;

HS2 Workforce Travel Plan will therefore need to be:

- *more dynamic* – necessitating frequent travel-to-work surveys and evaluation and delivery of fairly short-term solutions based on projections;
- *more focused* – reducing the *overall* travel demand will not be tackled, but improving access and travel choice will be promoted;
- *less target-driven* – due to an ever changing workforce, with different working patterns and without a fixed residency.

6.4 Travel Plan Scope

6.4.1 Appointment of a travel plan coordinator

Each principal contractor will appoint a Travel Plan Co-ordinator (TPC) to lead the development and implementation of the travel plan. The TPC will act as a single point of contact for internal and external stakeholders.

6.4.2 Local Travel Plan meetings

It may be appropriate to establish Local Travel Plan meetings to bringing together all parties with an interest in managing workforce travel arrangements. These may include the Principal Contractor, the Nominated Undertaker, travel planning officers from the relevant planning and highway authority and transport authority representatives, as well as other relevant stakeholders so that best information on travel arrangements, capacities and facilities can be accessed by the Principal Contractor when developing and implementing appropriate travel plans. .

6.4.3 Site evaluation

The workforce travel plan should include an indication of the anticipated workforce levels and related site operation issues relevant to the contract area, local area or site specific worksites and other facilities which require regular work trips.

Any specific local issues raised by consultation processes will also need to be noted and addressed if they are relevant to the construction workforce travel plan which can reasonably be managed through the workforce travel plan.

6.4.4 Travel plan requirements

The Workforce Travel Plan will include a description of the construction and other site(s) within the plan. The travel plans will set out the anticipated volume workforce travel that will be generated by the sites or other facilities which will generate daily flows of workers to and from offices and welfare facilities at the start and end of the working day.

This will include location plan(s) showing the local context of the site and a more detailed plan showing the road network directly serving the site(s). The description should include:

- public transport infrastructure and services - nearest stops/stations, service frequencies and routes served;

- non-motorised user routes - existing footways, road crossings, other rights of way (bridleways, footpaths, canal towpaths), cycle lanes and cycle tracks.

The travel plan will relate to the key milestones in the construction process and phasing of works from site clearance and preparation through to completion.

As appropriate, the Workforce Travel Plan should identify measures around the site or area which are required to improve safety for walking and cycling, commensurate with the expected demands. This includes walking to and from stations and bus stops which are anticipated to be used by the workforce.

As necessary, temporary traffic management measures may be identified within the Workforce Travel Plan and be implemented subject to the submission process set out within this RTMP.

6.4.5 **Workforce travel management measures**

In many locations, it is assumed that a number of the compound workforce construction sites will include dedicated accommodation which will assist with reducing the impact of workforce travel on the transport network.

Details on the number of external trips and their timing should be included within the travel plan, including an estimate of weekday travel savings which on-site or off-site accommodation will generate.

The workforce that travel directly to the site can benefit from some of the standard approaches that apply to travel planning in any workplaces. These options include:

- anticipated and actual information on travel habits to understand origin locations of workforce to enable targeted interventions on car sharing, public transport or special staff buses – either to or from transport nodes or other collection points;
- evaluate the availability (hours of operation and frequency) of public transport services which will provide the necessary anticipated capacity to serve workforce flows. Where necessary, identify additional services to serve workforce movements, which would enable the construction site(s) to operate core weekday and Saturday working hours, include start up and close down periods. Where additional services are required to be provided, these should be set out within the Workforce Travel Plan – either as services provided by the contractor or as service level agreements with the relevant operator;
- pre-construction review of anticipated crowding of bus and rail services and rail stations with anticipated workforce numbers and mode share, to ensure that sufficient capacity will be available for all users and, as necessary, measures to mitigate impacts are identified and implemented;
- provision of on-site services, such as catering, to reduce the requirement to travel off site during the working day;
- encouragement of car-sharing by awareness raising measures and help with finding partners with similar journeys (this may include signing up to car-share schemes operated by the local authority and its partners to enable access to a wider local pool of people travelling within an area);

- potential provision of mini-bus services to assist with travel to sites and from transport nodes, and between sites to reduce traffic entering the site or travelling between construction sites. Pick up points will need to be agreed with the relevant highway authorities;
- provision of good quality and accurate information on local public transport services, where relevant – including potential for real time bus and rail service information at workforce exits and/or via internal websites;
- encouragement of the use of public transport through raising awareness of local services, offering discounted season tickets or loans for season ticket purchase;
- encouragement of cycling through awareness of local safe routes and discounted tax-free cycle purchase scheme or interest-free loans for cycle purchase and provision of secure cycle parking on site (and any site specific safety measures);
- measures to limit or manage car parking on site to ensure safe access and to discourage parking off-site in areas where this might adversely impact local residents or businesses;
- Parking will not be permitted on footways or verges and discussions with highway authorities to install waiting or other restrictions (and traffic orders) and enforcement (including physical measures) will be undertaken as necessary;
- provision of safe and well-lit walking routes from nearby bus stops or rail stations to welfare facilities within the site (including liaison with highway authorities regarding maintaining street lighting, cutting back overhanging foliage, street cleansing etc); and,
- an on-going commitment to promote safe and sustainable transport to the workforce through events and publicity such as campaigns and travel information posters.

6.4.6 **Monitoring**

The TPC will engage with the relevant local authority travel planning officers on appropriate monitoring arrangement of regular workforce and if targets are appropriate. This might include:

- a review/benchmarking of similarly located compounds/worksites, undertaking the same types of work activities, to identify lessons learned which can inform the travel plan arrangement for new compound sites;
- mapping (by GIS or other means) locations of workforce weekday overnight residency and mode of travel to review options for travel consolidation (minibussing, car sharing)
- where practicable, to include within surveys barriers to walking, cycling or using public transport.

Monitoring should be undertaken on an annual basis, until the number of construction workers on any particular site reaches peak numbers.

6.5 **Additional requirements**

6.5.1 **Local community impacts**

Where necessary, workers walking to and from worksites will be reminded regarding the need to respect local communities when travelling to and from work – particularly to and from stations and bus stops.

6.5.2 **Charges for travel to work**

Contractors will not be permitted to charge site worker (either direct labour or contracted, including by any pay deductions) for travel to work in works buses or minibuses, either to or from public transport nodes or other pick up/set down points.

It would be normal practice that drivers will check that bus users have workplace or site accreditation, but will also be required to permit use by those attending site inductions. Unless a specific insurance requirement, workforce bussing should be available to all workers that the bus is travelling to and from a pick up point and worksite access or welfare facility, including HS2 accredited staff or HS2 accredited visitors.

Workers may be charged for parking private vehicles at work welfare facilities with charges set to encourage shared use. Any profits from parking charges are required to be used for charitable purposes. HS2 may set a minimum parking charges for single occupancy private vehicles parking on-site where the vehicle is not being used for work purposes.

6.5.3 **Workforce site inductions**

It would be expected that, particularly in suburban and rural areas, workers arriving for site inductions will travel in their private vehicles and the principal contractors should either provide (and control) visitor parking to allow for induction travel or advise those attending inductions regarding transport arrangements to induction locations.

As a part of the workforce induction, workers are to be provided with information about travel arrangements to and from their place of work (e.g. to the welfare facility associated with their worksite(s)).

6.5.4 **Minimum parking requirements**

Minimum parking requirements will be provided at welfare facilities for:

- Site medical team (if any)
- Canteen staff, who will be arriving earlier than start up activities
- Site security staff, particularly those carrying dogs.
- Project visitors
- External operational vehicles (including street sweepers and Nominated Undertaker vehicles)
- Parking for workers whose vehicles are then continuing into the worksite areas.

7 Traffic Management

7.1 Scope

The scope of construction works will include significant levels of temporary traffic management to be installed. This will range from working for a few hours on a footway with no impact on passing pedestrians or traffic through to the provision of complex, multi-phase traffic management using a mixture of new carriageways, signing, temporary layouts and diversions of pedestrians and cyclists over a number of years. These may include new temporary signal installations or adjustments to existing signal installations.

Temporary traffic management will be required:

- For the delivery of the permanent scheme (railway and road diversions);
- To enable the delivery of the works, temporary works will need to be installed, maintained and removed.

The scope of this chapter concerning traffic management includes:

- Setting requirements for the design, installation, review and removal of temporary traffic management measures;
- The procedures to be followed, taking into account the provisions of the HS2 Phase One Bill;

It is expected that this chapter will be subject to updates (adding new information), through issuing Traffic Advice Notes as the works proceed, to ensure that issues which arise – and how they can be overcome - can be rapidly circulated.

7.1.1 Relevant route-wide requirements

Code of Construction Practice

The CoCP sets out that site specific plans which will need to be provided by the contractor at a local level which contain the following:

- measures to provide for road safety for all modes for the public and construction staff during traffic management works and temporary traffic control measures;
- process of submission and, as necessary approval, of site specific traffic management measures;
- procedures to be followed for the temporary or permanent closure or diversion of roads, PRow or accesses;
- lorry route signing strategy;

7.2 Approvals

This section sets out the provisions for approvals which will be required. This includes where consultation and scheme notification is required under the provisions of the HS 2 Bill .

7.2.1 Approvals prior to Royal Assent of the High Speed Rail (London – West Midlands) Bill

Prior to Royal Assent, HS2 will be engaged on the following activities:

- Ground Investigations
- Enabling works
- Utility diversion works

In the case of works being undertaken by contractors for HS2 Limited, the approvals will be undertaken via existing legislation and appropriate engagement will be undertaken via the Highways Sub Group to the planning Forum as well as with the individual highway authorities concerning their specific notification requirements.

Utility diversion works S2, or by the relevant utility company under Section 50 of the New Roads and Street Works Act. It is intended that, following Royal Assent, utility companies will continue to use their powers under NRSWA to carry out works, but are expected to work within the scope of the HS2 Environmental Minimum Requirements.

7.2.2 Approvals under the provisions of the High Speed Rail (London – West Midlands) Bill

The following are approvals which will applied for by the Nominated Undertaker under the provisions of the Bill :

Trial holes (schedule 2 part 1)

Requirement	<ol style="list-style-type: none"> 1) The nominated undertaker may for the purposes of this Act— <ol style="list-style-type: none"> a) survey or investigate land which is within the Act limits or which may be affected by the works authorised by this Act; b) take steps to protect or remove any flora or fauna on land which may be affected by the carrying out of the works authorised by this Act. 2) The power in sub-paragraph (1)(a) includes power to— <ol style="list-style-type: none"> a) make trial holes in such positions as the nominated undertaker thinks fit on the land to investigate the nature of the surface layer and subsoil; b) carry out ecological or archaeological investigations on the land; c) take samples of anything in or on the land. 3) Sub-paragraph (2)(a) does not authorise the making of trial holes in a carriageway or footway without the approval of the highway authority; but such approval must not be unreasonably withheld.
When	Approval will need to be given prior to the works, but no timescale for the granting of approval is provided for.
Who obtains approval	Submission package for temporary traffic management and for the highway work prepared by the Principal Contractor and verified and submitted by the Nominated Undertaker
Submission package	Highway temporary interference proforma, including temporary traffic management arrangements.
Other	None

Temporary accesses (schedule 4 part 1)

Requirement	<p>(1) The nominated undertaker may, for Phase One purposes—</p> <p>(a) form and lay out means of access, and</p> <p>(b) improve existing means of access, at any place within the Act limits.</p> <p>(2) In the case of works at a place shown on the deposited plans which require the opening of an access on to, or the alteration of, a highway used by vehicular traffic, the power under sub-paragraph (1) is exercisable on giving at least 28 days' notice to the highway authority.</p> <p>(3) Works which are the subject of a notice under sub-paragraph (2) may not be carried out at the place shown on the deposited plans if, within 28 days of the giving of the notice, the highway authority objects to the works being carried out there by giving the nominated undertaker notice to that effect.</p> <p>(4) The only ground on which the highway authority may object under subparagraph (3) is that works under sub-paragraph (1) should be carried out instead at another place within the Act limits to prevent or reduce—</p> <p>(a) injury to local amenity, or</p> <p>(b) prejudicial effects on road safety or on the free flow of traffic in the local area, and are reasonably capable of being carried out there.</p> <p>(7) Works under sub-paragraph (1) may only be carried out at a place not shown on the deposited plans if the highway authority approves to the siting of the works; and such approval is not to be unreasonably withheld.</p>
When	<p>Approval will need to be given prior to construction.</p> <p>It is expected that approvals will be sought for each access (or group of access), once satisfactory details are provided by the Principal Contractor.</p>
Who obtains approval	<p>Submission package prepared by Principal Contractor and verified and submitted by Nominated Undertaker.</p>
Submission package	<ul style="list-style-type: none"> • Highway temporary interference approval proforma, identifying that the works are for temporary access and if the location is as set out in the deposit plans. • Detailed design, including layout, materials, signing, removal or relocation of street furniture. • Temporary traffic management layout during construction. • Swept path analysis, if required. • Relevant information related to holding areas, hard standing for sweeping etc.
Other	<p>It is assumed that no junction specific modelling will be undertaken for temporary construction impacts.</p>

Temporary interference (schedule 4 part 2 section 6)

Requirement	<p>(1) For the purposes of the works authorised by this Act, the nominated undertaker may—</p> <p>(a) temporarily stop up or alter or divert any highway or part of a highway;</p> <p>(b) for any reasonable time divert traffic from, and prevent persons passing along, any highway or part of a highway;</p> <p>(c) break up or interfere with any highway or part of a highway (including any sewer, drain or tunnel in it);</p> <p>(d) temporarily remove any street furniture in or beside a highway.</p> <p>Before exercising the powers under sub-paragraph (1) in relation to a highway, and to an extent, specified in table 3 in Part 4 of this Schedule, the nominated undertaker must consult the relevant authority.</p> <p>(4) The purpose of consultation under sub-paragraph (3) is to ensure public safety and, so far as reasonably practicable, to reduce public inconvenience.</p> <p>(5) Before exercising the powers under sub-paragraph (1) in relation to a highway, or to an extent, not specified in table 3, the nominated undertaker must obtain the approval in writing of the relevant authority.</p> <p>(6) Approval under sub-paragraph (5) must not be unreasonably withheld, but may be given subject to such conditions as the relevant authority may reasonably require in the interest of public safety or convenience.</p>
When	Consultation, and as necessary approval, will need to be given prior to construction.
Who obtains approval	Submission package prepared by Principal Contractor and verified and submitted by the Nominated Undertaker.
Submission package	<p>Detailed traffic management layouts, including any advanced warning signing</p> <p>Details of changes to street furniture</p> <p>Request for any required traffic orders.</p>
Other	<p>Traffic assessments where necessary (e.g. to calculate preferred temporary signal green times)</p> <p>RSAs</p> <p>Bagging over machines for payment for parking places</p> <p>Method statements</p> <p>Temporary interference will include the setting up of hoardings on the highway, scaffolding on the highway, temporary suspension of parking places etc.</p> <p>A minor works procedure may be agreed for use for (a) works approval is not required (b) other locations where no impact is expected to be caused.</p> <p>Non-response after 28 days of a request to issue a certificate, it is deemed to be approved (42 days in the case of Transport for London)</p>

Certification of temporary works (schedule 4 part 1 section 3)

Requirement	10 (1) Where under this Act the nominated undertaker— (a) constructs a new highway, or (b) alters a highway, otherwise than by carrying out street works within the meaning of Part 3 of the New Roads and Street Works Act 1991, the construction or alteration must be completed to the reasonable satisfaction of the highway authority. (2) Where work mentioned in sub-paragraph (1) has been completed to the reasonable satisfaction of a highway authority, it must certify that fact in writing to the nominated undertaker.
When	Following completion of temporary works which affects a highway, then a certificate will be requested to ensure that it is completed to the reasonable satisfaction of the highway authority.
Who obtains approval	Certificate prepared by the Area Traffic Manager.
Submission package	A certificate to be issued for signature of an authorised person. As necessary, a stage 3 RSA designers response and a defects report in relation to the works, closed out where reasonably required.
Other	Non-response after 28 days of a request to issue a certificate, it is deemed to be approved.

7.2.3 Streetworks disapplication (Schedule 23)

Many provisions of the New Roads and Street Works Act are specifically disappplied by the High Speed Rail (London – West Midlands) Bill :

- directions as to timing of street works
- power to give directions as to the placing of apparatus
- power to impose restriction on the execution of street works following completion of substantial road works.
- requirements in relation to protected streets.
- requirement of the settlement of a plan and section to be executed in a street designated as having special engineering difficulties
- requirements for re-surfacing streets
- charges or contributions for streetworks
- restrictions on works following substantial street works, where a notice would be issued
- relevant sections of schedule 3A –
 - notices to require notification of works
 - directions as to date of commencement
 - order of street works to be completed
 - restriction of further works

In addition, Part 3 of the Traffic Management Act 2004 (permit schemes), or in any permit scheme or permit regulations under that Part is also disappplied.

Through the local Traffic Liaison Group meetings, the HS2 area traffic manager will provide highway works programmes and consult on major and standard streetworks, prior to submission (and where required, consent). Highway works programmes will be shared at relevant NRSWA meetings.

7.2.4 **Protective provisions (Schedule 31)**

The provisions within Schedule 31 which may applied to temporary interference are:

- the nominated undertaker must — (a) have regard to the potential disruption of traffic which may be caused, and (b) seek to minimise such disruption so far as is reasonably practicable.
- enable inspection of the works by the highway authority and required to follow the directions of the highway authority with regard to danger to any highway or property of the highway authority;
- enable the highway authority reclaim the cost of works to put right defects
- enable the highway authority to claim costs for (a) signposting traffic diversions and related measures (b) repair of highway due to diversion of traffic from a road of a higher standard
- remove soil or deposit or store plant so to obstruct a highway
- erect scaffolding without the approval of the highway authority
- provide and maintain temporary ramps as necessary
- reinstate the highway to the appropriate standard (unless it is to be later stopped up)
- make good damage to the highway (or pay compensation to the highway authority)

These matters will be discussed at TLG meetings, or as required, site meetings with relevant parties (such as the HS2 area traffic manager, highway authority nominated highway inspectors and the relevant contractor which, as a minimum, will include the principal contractor site agent)

7.2.5 **New Roads and Street Works Act**

Certain sections of NRSWA are not specifically disapplied by the HS2 Bill. In particular:

- Section 54 – Advance notice of works
- Section 55 – Notice of starting date for works
- Section 64 – Notices in relation to traffic sensitive streets
- Section 75 – Inspection fees

With regard to advance notices (sections 54 and 55), there is some duplication and difference between the 28 day approval period contained within the provisions of the HS2 Bill and the notification for major works which are contained within the NRSWA 1991 Code of Practice for the Co-ordination of Street Works and For Road Purposes and Related Matters (4th edition revised October 2012).

To overcome this, advanced notification will be carried out which will satisfy the notice periods for different categories of works within the guidance to the NRSWA Code of Practice (major, standard and minor) as well as emergency notifications. This process is described in more detail in the following sections.

With regard to both processing of HS2 notices and inspections fees, will be allowed for within the Service Level Agreement between HS2 Limited and the highway authorities along the route, so that the costs of these services are being met.

7.2.6 Related approvals and approvals

Appendix C sets out the range of highway approvals and other approvals and how they will be gained through the Bill powers or where normal procedures will apply.

7.2.7 Process

Standard submissions

The standard submission process is set out in Figure 7.1. It comprises the following elements:

- I. A programme of standard or major traffic management which will be regularly updated and submitted to the relevant TLG and NRSWA meetings. The first draft of the programme will initially be prepared as a part of the contractors LTMP.
- II. As necessary, early discussions on specific schemes will be held regarding the design with relevant specialist stakeholders within the relevant highway authority or externally (such as bus or taxi operators). This may flag the requirements for RSAs and for TROs.
- III. The contractor will prepare the draft submission for HS2 review and approval. The draft submission will include the indicative work dates. HS2 will agree if the draft submission can be put on the agenda for the next TLG.
- IV. The scheme will be consulted on at the TLG and, as necessary (a) agreed, (b) agreed subject to revisions (c) not agreed and will need to be reviewed again at the following TLG.
- V. The final version of the scheme will be submitted by HS2 Limited to the lead person in the highway authority, and copied to key stakeholders (as a minimum to the streetworks manager and Police, and to adjoining authorities where appropriate). Submissions will be by e-mail.
- VI. After 28 days (42 days for TfL), the submission will be deemed to be approved, where approval is required.
- VII. Prior to commencement of works, a commencement notice will be issued, 5 days before start of works (3 days minimum)

The schedule of works will generally be a spreadsheet with a single line summary of information for each notice to be submitted. This spreadsheet will also be made available in a more detailed format to enable highway authorities to enter the planned works into the streetworks register, as set out in Table 2.1 of the Code of Practice for the Co-ordination of Street Works and Works for Road Purposes and Related Matters (HAUC August 2009).

It is expected that, where approval is not required, a 28 day period will be allowed for following submission, except for urgent works when a 10 day period may be agreed at the TLG.

The intention is that the submission (VI) is a formality and that any new issues be raised which have not been considered at the TLG or prior consultation, then these will need to be resolved by way of a minor change agreement within the 28 days (or 42 days) period. A highway authority will not be able to ask that the 28 day period is suspended and any revisions will need to be agreed within the 28 day period.

Experience suggests that almost all submissions will be “deemed approval”, where approval will be required.

Where a new traffic management phase will be implemented, a new commencement notice will be issued, a minimum 3 days prior to the start of the new phase. This notice may be accompanied by new or revised temporary traffic management drawings.

A standard set of proformas will be utilised for HS2 temporary traffic management notifications, which will apply route-wide. The layout and information provided on the proformas will be consulted on via the Highways Sub Group to the Planning Forum.

Major submissions

A major submission may be undertaken where agreement needs to be reached in principle on one or more phases of temporary traffic management prior to the commencement of detailed design. The standard submission process is set out in Figure 6.5.

It may be the case that following a major submission, one or more standard submissions will then follow, with certainty that the principles have been agreed.

Minor works notices

Minor works notices are used where the scope of work is unlikely to have an impact on road users and that the traffic management layout is generally a standard layout within chapter 8 of the Traffic Signs Manual. In most cases, MWNs will be used for working in off-peak hours, with the actual hours of “off peak” being agreed through LTMPs.

Minor works notices will be issued at least three days prior to commencement of works and it is assumed that minor works notices are deemed to be approved unless the local highway authority requests additional information or advises that there are planned conflicting works by a statutory undertaker.

Additional notices

Written notification will be made to the relevant highway authority for the following:

- Notice of reinstatement
- Notice of emergency works
- Notice for the extension of works
- Certification of satisfactory completion of temporary works

7.2.8 **Standard Submissions contents**

Standard applications may include:

- Phasing diagrams
- Direction signing and other regulatory and information signing drawings
- Advanced notification signing drawings and community liaison plan (compliant with Section 5.1 of the CoCP)
- Plans of temporary traffic management
- Road Safety audit reports (and any exceptions reports)
- Modelling assessment reports (as necessary)

- Impact reports (against ES criteria, to show if mitigation required)
- Draft traffic management orders
- Detail drawings related to movement of street furniture and standard construction detail
- Revised lighting drawings
- Revised drainage drawings
- Pedestrian, cycle and equestrian route drawings and direction signing
- Standard details for footway crossovers or ramps
- Information on required TROs
- Information on required suspensions or revocation of parking places required
- Necessary technical documentation, such as standard BD2/12 for erection of temporary structures adjoining or over motorways.

7.2.9 Proposed Standard Conditions

Proposed Standard conditions for carrying out highway works which are to be followed by HS2's Principal Contractors and their supply chain are:

- Approval is only granted for defined works and for a defined period of time. It is presumed that any temporary highway works will be the subject of restoration to original condition, unless it is agreed that the works shall remain in situ.
- Approval is subject to provision of acceptable plans, specification, method statements etc. submitted prior to the works commencing, in accordance with the agreed procedures set out in the RTMP. All highway works which are being undertaken for the delivery of Phase One of HS2 are to be notified by the agreed procedure, to ensure that they are coordinated. Indirect utility works will be notified through the normal NRSWA procedures.
- Each highway authority will nominate points of contact. It may be preferable that this is a single point for all highway-related matters and one which deals with NRSWA notices.
- Approval by highway authorities does not remove the need for HS2 Limited or their Principal Contractor to seek approvals from other parties as necessary.
- HS2 Limited will ensure that all works are carried out by contractors experienced and qualified to work on the public highway including NRSWA accreditation as appropriate. Highway contractors engaged by HS2 Limited or Principal Contractors are to have public liability insurance of at least £10M.
- HS2 Limited will ensure all Health and Safety requirements are met including application of Construction (Design and Management) (CDM) Regulations 2007 where appropriate (or as revised).
- HS2 Limited, through its Principal Contractors, will remain responsible for defects of workmanship and materials for temporary works, but the highway authority will be responsible for normal wear and tear and routine highway maintenance and winter maintenance under its responsibilities as a highway authority.
- Following restoration of an altered highway, then full maintenance responsibility will pass to the highway authority, following a final defects and snagging review and agreed timetable for close-out of any defects of workmanship and materials of the works. All highway works are to be completed to the reasonable satisfaction of the highway authority.
- Should it be agreed that a temporary work be retained as a permanent work, the highway authority will take full responsibility for the works from the date that it is agreed that the works will remain in situ.

- Any proposals for erecting traffic signing on lamp columns will be approved by the highway authority on the basis that they remain responsible for monitoring and maintaining the state of their own assets.
- HS2 Limited will ensure that best practice industry standards are applied to all aspect of the works.
- HS2 will provide evidence that any conditions imposed on a approval have been discharged and / or complied with, where reasonable to do so.

7.2.10 **Responsibilities**

Principal contractors

Principal Contractors will be required to specify a nominated person with responsibility for: leading on the co-ordination, submission preparation, compliance, programming and management of highway approval issues, who shall be the main point of contact for all highway approval matters whilst taking due regard of the requirements of the Route-wide TMP and LTMPs.

Where Highway Approvals are required, Principal Contractors will be required to:

- take responsibility for preparing approval submissions, in consultation with the Nominated Undertaker;
- identify for each work undertaken, the point of contact in relation to maintenance of the works;
- not start works until the approval has been obtained and notified by the Nominated Undertaker;
- ensure that the views of the Nominated Undertaker and relevant Highway Authority and other stakeholders have been considered and incorporated as necessary when preparing the approval application;
- for standard or major submissions, provide the Nominated Undertaker with drafts of approval drawings and documentation for review at least 14 calendar days prior to their submission to relevant Traffic Liaison Group meeting;
- for minor works notices (MWNs), provide the Nominated Undertaker with drafts of approval drawings and documentation for review at least 6 calendar days prior to their submission to relevant highway authority, to determine if the application should be considered a MWN;
- invite the Nominated Undertaker and Employer to any pre-meetings with the highway authority prior to the preparation of the draft submission;
- maintain a schedule of standard and major highway approvals to be obtained and a schedule of minor works notices;
- ensure that each Approval application is of a sufficiently high standard to facilitate approval;
- pay fees and charges required for any approvals, where this is not disapplied by the provisions of the HS2 Bill or Service Level Agreement; and,
- ensure that site managers are aware of any restrictions or agreed conditions in relation to carrying out the works.

Nominated Undertaker

Where highway approvals are required, the Nominated Undertaker will:

- ensure that adequate consultation has been undertaken in accordance with this plan;
- provide, and keep updated a highway authority master schedule of highway approvals to be obtained, including dates of submission and notification, dates of approval (either actual or after the lapse of 28 days (42 for TfL roads), planned and actual dates of works;
- attend relevant stakeholder forums including NRSWA meetings, to share HS2's highway works programme;
- approve submissions by the contractor and submit them to the relevant highway authority and copy to adjoining authorities, where relevant;
- ensure that the implementation of works are in accordance with the approved drawings.

Highway Authorities

Where highway approvals are required, highway authorities will be expected to:

- engage with principal contractors, their consultant and HS2 Limited in early consultation with regard to preparation of standard and major submissions and highlight any constraints including requirements for any necessary traffic assessments, road safety audits, consultation with other key stakeholders and traffic orders which are reasonably necessary;
- appoint a single point of contact for submissions/notifications, with suitable responsibility to approve submissions/notifications, where approval is required
- promptly provide comments or agree conditions related to submission
- enter proposed and actual works onto the streetworks register as necessary
- provide timely responses to road safety auditor CVs for approval, RSA briefs, reports and exception reports.
- Promote Traffic Regulation Orders, as necessary.
- Arrange for parking place removal (and provision of new parking places), as necessary.

7.3 Design requirements for temporary traffic management

7.3.1 Standard for Temporary traffic management

Temporary traffic management is to be designed to the current Traffic Signs Regulations and Directions Order and Chapter 8 of the Traffic Signs Manual. Local situations will require layouts which will be based on Chapter 8 standards. Except for small standard layouts for minor works notices, temporary traffic management drawings will be required to be provided by the Principal Contract for HS2 approval and submission.

7.3.2 Additional temporary traffic management safety requirements for non-motorised users

Drawings which require the diversion or deviation of pedestrians and/or cyclists must indicate routes and signage to be provided to indicate re-routed or divert pedestrian/cycle paths. Where necessary, temporary crossing points must be provided, including physical measures

to provide refuges/keep left signs. Temporary ramps may be deployed for temporary situations, subject to drainage requirements and cycle safety.

Clear sight lines will be maintained around hoardings and fencing with no hidden corners in order to avoid, where reasonably practicable, opportunities for anti-social behaviour and crime and to ensure safety of vehicles. Footways of adequate width to facilitate pedestrian flows will be provided with signs provided to facilitate safe access around the site boundary.

Where sharp bends in pedestrian diversions are unavoidable, "trixi" mirrors are to be installed as well as "cyclists dismount" signs. On shared use paths which are diverted, separate lanes for pedestrians and cyclists may need to be signed and marked. Vandal-resistant lighting will need to be provided, where street lighting provides insufficient illumination to a constant LUX level. The Principal Contractor will need to respond and remove any graffiti from hoardings or other fencing within 4 working hours. Consideration may need to be given to CCTV coverage, with CCTV recording and associated signing that CCTV is deployed, the purpose for which it is deployed and the operator's contact details. As necessary, the design of segregated routes for pedestrians and cyclists away from traffic routes should take into account the need to design out crime and Police crime advisors consulted.

7.3.3 **Design for temporary accesses**

Principal Contractors will be required to prepare layout drawings for site access points, including arrangements for, and execution of, traffic management arrangements for approval.

Consideration will need to be given to requesting traffic orders for reduced speed limit on roads in the vicinity of site accesses for all traffic.

7.3.4 **Temporary carriageway construction requirements**

Temporary running lanes and carriageways will be constructed to appropriate design standards to be agreed with the relevant highway authority.

7.3.5 **Temporary highway boundaries**

Where necessary, agreements will need to be entered into with relevant highway authorities for the temporary adoption of a highway, where a temporary carriageway or running lane, footway or cycleway has been constructed on land in ownership of the project. In such cases, legal fees for the adoption (and subsequent stopping up) will need to be met by HS2 Limited.

7.3.6 **Worksite layout(s)**

Principal Contractors will be required to ensure that all temporary works shall be designed by a competent person and implemented in accordance industry best practice. The Principal Contractor shall be responsible for the design of temporary works including: site layouts, fencing, shuttering and propriety systems, site cabins, temporary roadways, signing, lighting and guarding.

The design of temporary traffic management is required to follow the requirements of Traffic Safety Measures and Signs for Road Works and Temporary Situations Parts 1 and 2. Any design which is not compliant with the standards MUST be brought to the attention of the relevant highway authority as a part of an application for approval, and details of how non-

compliance is being managed and any residual risk eliminated or as low as reasonably practicable.

Temporary traffic management drawings will need to set out the layout of the temporary worksite and associated signing and safety zones. As necessary, worksites may be required to include temporary welfare facilities close to, or at the worksite area in accordance with the contract requirements.

The layout of worksites on the highway must not interfere with the visibility splay of junctions. Instructions must be provided on drawings for the maximum height of barriers or hoardings, or if essential, where mesh fencing must be used within a visibility splay. Workers on site must be briefed that visibility splays must be maintained, particularly where works would normally use sheeting to prevent spread of dust or in relation to hot works etc. Where mesh fencing has been used within a visibility splay, the designer must review the visibility of junctions – and in particular traffic signals – as soon as practicable after installation.

7.3.7 **Traffic management phasing**

For major scheme submissions, the traffic management phasing may need to be prepared, consulted on and submitted for consultation or approval, prior to the preparation of detailed design drawings.

7.3.8 **Maintaining access for emergency services**

Local TMPs and a site-specific level traffic management approval or consultation plans and notifications will consider the requirements of the emergency services:

- The location and routes from fire stations and from ambulance stations and to A&E hospitals, which may influence the design of temporary traffic management.
- The potential impact of required attendance times due to road closures within rural areas.
- The potential need to identify and agree air ambulance landing sites in rural areas;

7.3.9 **Maintaining access to premises**

Access will be considered at a site-specific level within traffic management approval or consultation plans and notifications.

Access for pedestrians

Access to premises in use will be provided for pedestrians at all times, unless agreed with the relevant building occupier. This will include emergency egress routes.

Access for mobility impaired

Design of temporary traffic management will include consideration of access for wheelchairs to adjoining premises and, according to the use of the building or site specific users, the need for parking for valid orange or (in Central London) blue badge needs.

Access for vehicular traffic

.Where reasonably practicable, access to parking facilities and loading facilities will be maintained. Where appropriate, alternative facilities for deliveries will be identified.

Access for fire appliances

Site specific fire appliance access requirements will be considered on a site-by-site basis in consultation with the occupiers and emergency services, particularly for tall buildings.

7.3.10 **Maintaining site safety**

At all sites in the highway or road closures, gates etc to be provided with 2 red/white barriers, one at approx. 1m height and one at 1.6m height.

As appropriate, requirements for speed limit reviews and any necessary orders and enforcement (including camera enforcement) will be discussed on a scheme-by-scheme basis through consultation within TLG meetings.

Tape is never to be used on a highway as a substitute for barriers.

7.3.11 **Method statements and risk assessments**

Where considered appropriate, method statements and risk assessments for the setting out, operation, maintenance and removal of temporary traffic management will be submitted prior to commencement of work on the highway.

7.3.12 **Traffic Management and Streetworks qualifications**

Deployment of temporary traffic management will be supervised by a qualified Traffic Safety and Control Officer.

Works in the highway will be supervised by a qualified Supervisor registered on the Streetworks Qualifications Register. A registered operative will be required to be in attendance during works.

7.4 **Engagement**

The development of plans which affect public transport routes and stops, taxi stands or which prevents vehicular access to premises adjoining the highway will necessarily require appropriate engagement with the relevant stakeholders during the preparation of temporary traffic management layouts.

The development of plans which require temporary traffic regulation orders will be notified to the relevant highway authority as soon as practicable to enable temporary orders (or as necessary permanent orders) to be promoted.

Full road closures (including closures which only affect certain road users such as vehicular traffic) will be appropriately advertised – by advanced warning signing at the closure location, signing on approach roads prior to the signed diversion routes. Notices will be placed in local newspapers where appropriate.

Submissions will necessarily include a notification plan for temporary road closures or works which will affect the immediate local community.

Prior to works starting, Principal Contractors may be required to undertake the delivery of Advance Notification of Works leaflets appropriate to the location, nature and duration of work and which outline the impacts which may arise and any appropriate mitigations.

7.5 Temporary traffic management impact review

7.5.1 Impact assessment against ES

As necessary, impacts of temporary traffic management will need to be reviewed against the assumptions contained within the ES.

Where proposed temporary traffic management measures were not assessed within the ES, the ES criteria will be reviewed to confirm if a proposed measure would meet the required standards to ensure that no new impacts are generated.

If the proposals are outside the parameters set out in the ES, then the proposals may require appropriate mitigation – either to directly address the effect or parallel mitigation to minimise disruption to a greater range of road users or limited to a target group.

7.5.2 Traffic modelling

Whilst it is assumed that the traffic modelling work undertaken to develop the ES will generally not be revisited, there are likely to be requirements to undertake additional modelling work to ensure that the detailed traffic management designs of the Principal Contractors can be implemented. This modelling could comprise:

- local modelling (e.g. TRANSYT) to provide detailed signal timings and congestion assessments; and
- potential strategic traffic modelling (e.g. SATURN) to overview how flows reassign with changed network assumptions

Whilst it may be that this work is undertaken by the Principal Contractor's traffic management consultants, the PSCs who have undertaken the modelling could be better placed to undertake this work and may be instructed by HS2 Limited if appropriate due to the following:

- the ownership of the models would need to be determined and transferred, including all documentation
- how the models are used need to be consistently applied, particularly where one Principal Contractor will not necessarily take into account the works of another Principal Contractor
- understanding of the model strengths and weaknesses, which will be a key requirement
- understanding of how the ES process has been developed.

7.6 Road safety audits

For significant temporary traffic management, it may be necessary for road safety audits to be undertaken in accordance with standard HD19/15. These are expected to be required where:

- the temporary traffic management alters a highway to the extent that a driver will not be familiar with the route/direction to take;
- the temporary traffic management is not a standard layout conforming to Chapter 8 of the Traffic Signs Manual

The overseeing organisation will approve the audit brief and the CVs of the auditors to undertake the work.

It is expected that temporary traffic management will be subject to a combined stage 1 and 2 RSA and a later stage 3 RSA. These audits will include, as necessary, NMU audits.

7.6.1 Road safety audit procedure

Audit responses will be prepared by HS2 Limited in consultation with the designer and will generally:

- Accept an audit recommendation
- Identify if an alternative measure negates the audit recommendation
- Identify that the audit recommendation is outside the scope of the works
- Identify if the audit recommendation is an existing issue and therefore the responsibility of the highway authority to rectify
- Reject the recommendation on the grounds that it is disproportionate to the level of risk identified or unreasonable cost to rectify the identified risk

At the stage 3 RSA, should there be a conflict between the audit recommendation and the result of any site visit by the highway authority, the audit recommendation will prevail, unless (or until) the highway authority has written to HS2 Limited instructing the outcome of the site visit.

No stage 4 RSAs will be conducted as a part of the installation and operation of temporary traffic management measures.

The proposed road safety audit procedure is set out in Figure 7.2:

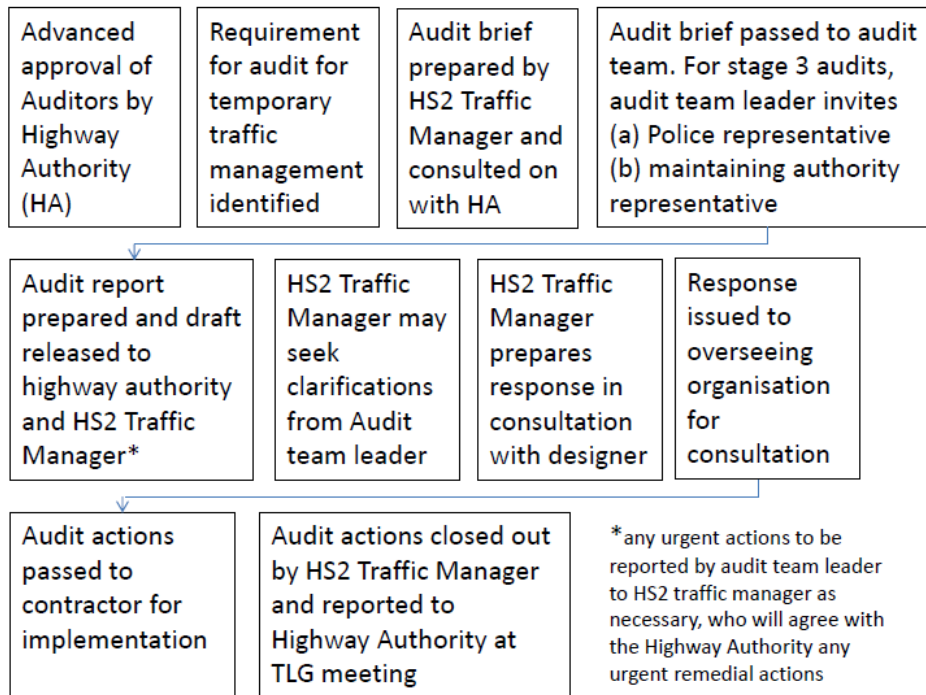


Figure 7.2: Proposed Road Audit Procedure

7.7 Traffic signs

Traffic signs will be designed to the requirements of the most recent Traffic Signs Regulations and Directions Order. Non-prescribed signs will require authorisation and, where reasonably practicable, HS2 Limited will seek general approval for non-prescribed signs for use during the delivery of all phases of the delivery of High Speed Rail for which the project will be responsible.

7.8 Advanced warning signing

7.8.1 General Traffic advanced warning signage

Typically, signing will be required to warn road users of expected additional congestion due to reduced capacity and road closures (as well as closures of Rights of Way such as footpaths and bridleways in rural areas). As a minimum, advanced warning or capacity reductions which will last more than three weekdays will be required on the following:

- Motorways (Highways England),
- trunk roads (Highways England),
- the Transport for London road network (TfL)
- the strategic road network in London (Boroughs)
- the principal road network in Manchester (Manchester City) or Solihull (Solihull Borough)

Typically, advanced warning signing on roads of less than 40 mph will be to 75 x-height, with minor text to 45 x-height. For roads of more than 40mph, signing will be to 120 x-height, with

minor text to 70 x-height. Advanced warning signs should include “High Speed Two” on a top line, as shown in Figure 7.3:

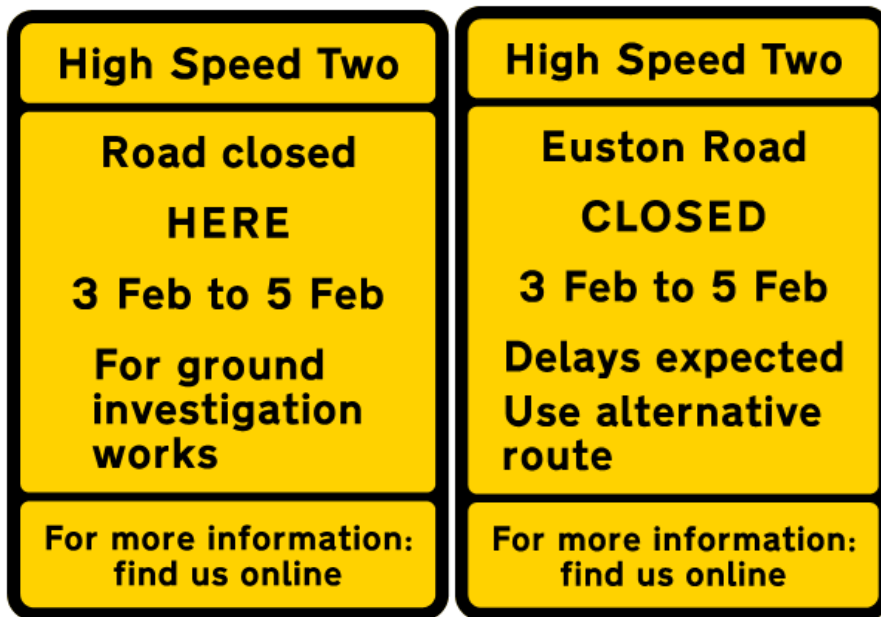


Figure 7.3: Signing for road closures and other constraints

Signing to this general design will be required to provide advanced warning of banned turns and other temporary traffic restrictions, where routes are diverted.

7.8.2 Managing on-street parking loss at temporary and permanent highway works, including blue badge spaces

For temporary works in the highway, advanced warning signing for suspension of parking places and other kerbside space required for the works will be required in accordance with the requirements of each highway authority. Where advanced warning signing is required to be provided by the Principal Contractor, signing should be provided to 40 x-height, with minor wording to 30 x-height. Typical sign layout is shown in Figure 7.4, with the colour of the signing to be agreed with the relevant highway authority. These signs are intended to supplement the highway authority’s own suspension signing:

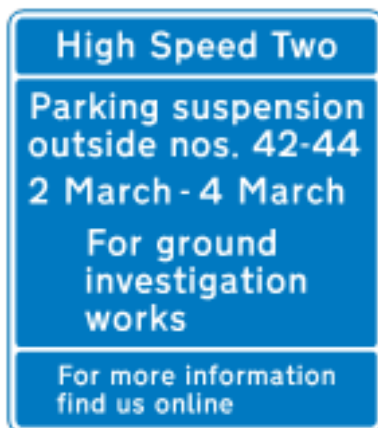


Figure 7.4: Signing for parking place and other kerbside suspensions

7.9 Direction signing to worksites

Direction signing to worksites will be required for:

- Emergency services to follow to arrive at construction sites (where the incident is location specific) or arrive at RVP points (where the location of the incident is along a construction route in a rural area);
- Supplementary signing for deliveries to sites, where necessary.

The provision of direction signing to worksite access points (which may include office and accommodation/welfare compounds, holding areas, logistics centres/consolidation centres) and RVP points along the trace will need to be approved by the relevant highways authorities.

The signing and worksite numbering/lettering system has been developed in consultation with the emergency services. This will then be developed into:

- a direction signing design standard for consultation with the highway authorities through the Highways Sub group to the Planning Forum
- information packs for emergency services
- driver information packs for routes and deliveries
- information to be used in for workforce inductions and toolbox talks as to how to call the emergency service

Signs will be:

- White text on red background (as used for CTRL, Terminal 5, Olympic Park and Crossrail)
- x-height of 75 for roads with a speed limit of 40mph or below and x-height of 120 for roads with a speed limit of 50 and 60 mph. Roads with speed limits of 70mph will have an x-height agreed with the relevant highway authority.
- Have a standard legend either as a top panel or upper text on a chevron sign

Signing to worksites will commence from locations where considered necessary by the emergency services. Supplementary signing locations will be agreed on a case-by-case basis.

The convention to be used on direction signs will be subject to consultation with the emergency services:

- Delivery Area (North, Central or South) – N, C or S
- Delivery Section (1 to n , working south to north)
- Delivery Sector (1 to n , working south to north)
- Gate letter (1 to n , working south to north)

This convention skips over Delivery Lots as a third level as in several cases there is only one Delivery Lot within the Delivery Sector.

Figure 7.5 sets out indicative designs:



Approach to a slip road at a grade separated junction



Double sided sign at site access

Approach to a roundabout

Figure 7.5 Indicative signing (showing alternative straplines)

The signing system will need to be consistent and recognise that some locations will open or close or move during the period of construction. New gates that are not planned for will be provided with a letter suffix. Haul road crossings may be provided with a single gate reference and distinguished as either north and south, or east and west.

The location of accesses and reference numbers will need to be regularly updated with the emergency services. These updates will need to include information on the types of activities at each location and the subsequent risks and type of emergencies which may arise.

The design, installation, updating, maintenance and removal of direction signing to worksites will be managed on a route-wide basis.

Should a lorry route be closed, LGV construction traffic will:

- Follow the diversion signing, if the closure is a planned closure
- Following emergency services directions, if the closure is an emergency closure.

It may be the case that, in consultation with relevant highway authority and emergency services, contingency routes may need to be identified for LGV construction traffic where routes are considered to be at high risk of frequent/long term emergency closures. These may need to be signed upstream using existing VMS or temporary portable VMS, operated according to pre-agreed protocols.

7.9.1 **Signing of non-permitted routes and providing local access**

In some cases, signing will need to be used to identify restrictions on construction traffic – either prohibitions at all times or at certain times of the day and which may be for all

construction traffic or construction traffic over 7.5t. It is likely that such signing will be provided where U&As have specifically identified such restrictions.

The requirement for such signing in other locations, will be considered by HS2 Limited on a case-by-case basis.

7.9.2 **Emergency services and access protocols**

Emergency access protocols will be developed by the Principal Contractors, in liaison with the emergency services and High Speed 2 Limited.

7.10 **Exit signing**

Signing which relays general or site specific safety information will be displayed at the exit from worksites. In particular, this may include signing related to pedestrian and cycle safety.

7.11 **Implementation**

7.11.1 **Traffic orders**

The Principal Contractor's method of working will, as necessary determine the requirement for temporary Traffic Regulation Orders.

Where regulated kerbside is affected by the works, specific parking places or other bays will be relocated according to the following priorities - blue badge bays, doctor bays or diplomatic bays, taxi ranks, bus stops or stands, resident parking and short-stay paid-for or free parking and loading bays. Appropriate reallocation of parking places, or no waiting restrictions, will be discussed at local Traffic Liaison meetings.

As the HS2 Bill enables the nominated undertaker to temporarily stop up a highway and remove street furniture, charges for parking place suspensions or compensation for loss of parking revenue will not be payable, unless specifically agreed as an Undertaking and Assurance.

7.11.2 **Road closure or temporary traffic management protocols**

The implementation of each road closure will be undertaken in accordance with a standard procedure with regard to design, community notification and checklist of activities to be confirmed prior to a closure being put into effect. The checklist may include:

- All approved diversion signing is in place;
- Ensuring that buses are on diversion, where a closure is on a bus route (and as necessary, scheduled coaches);
- That sufficient workforce are in place to implement the closure in the correct sequence;
- That workforce is in place to assist drivers on the approach to a closure for the first weekday peak period (but not deployed to direct traffic)

For deployment of new temporary traffic management on motorways, Highways England traffic officers will be notified when traffic management is ready for deployment (hard shoulder closure, lane closure or carriageway closure).

7.11.3 **Mapping of temporary traffic management**

It is anticipated that the project will provide a web-based system for members of the public to find out what construction activities are occurring within their immediate area.

7.11.4 **Temporary direction signing for road network changes.**

LTMPs (or separate reports) will establish, as necessary, destination signing requirements to be utilised on temporary road signs.

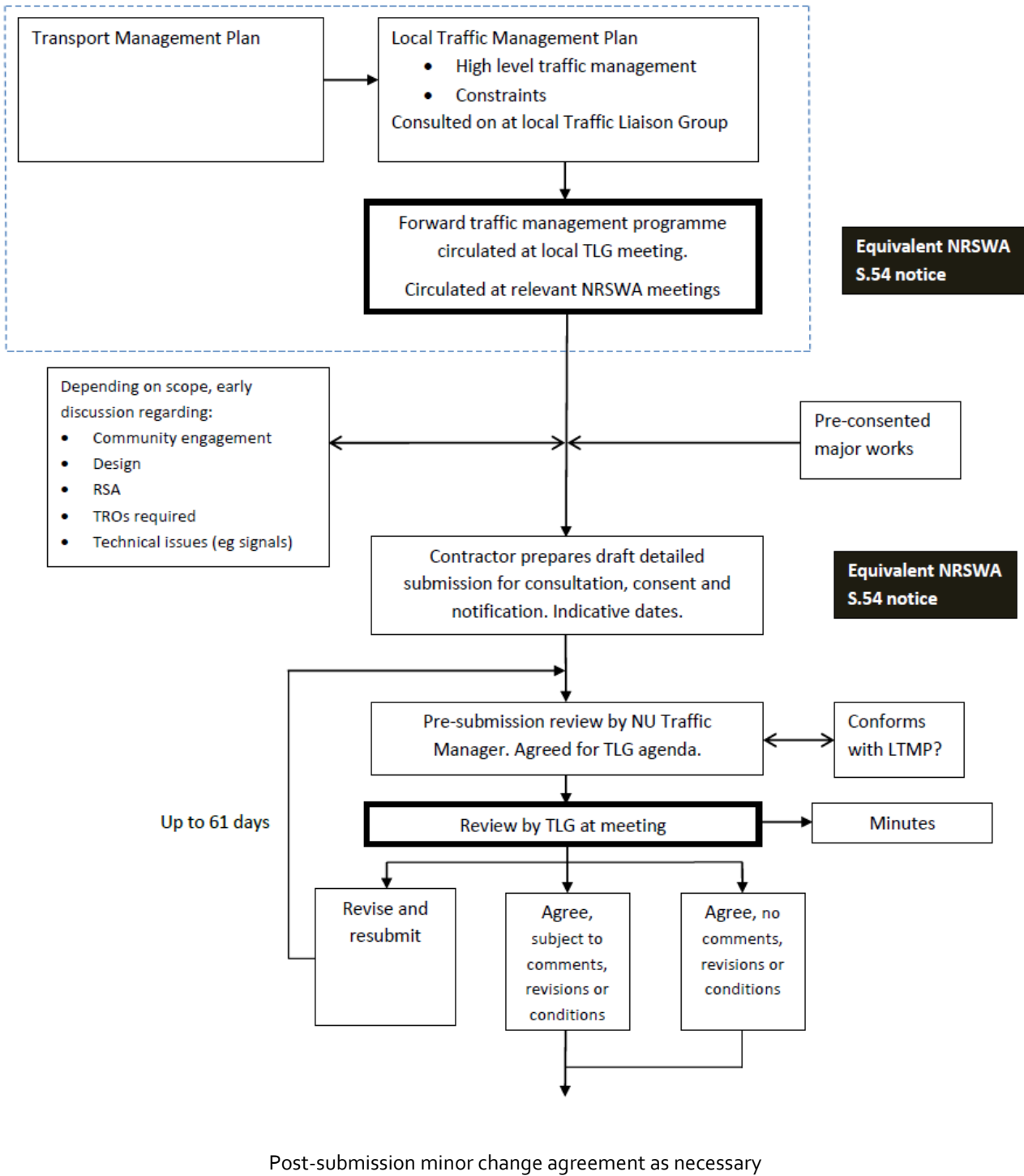
At an application level, this may include destinations (or principal businesses or destinations) along roads stub ends of roads which are temporarily stopped up.

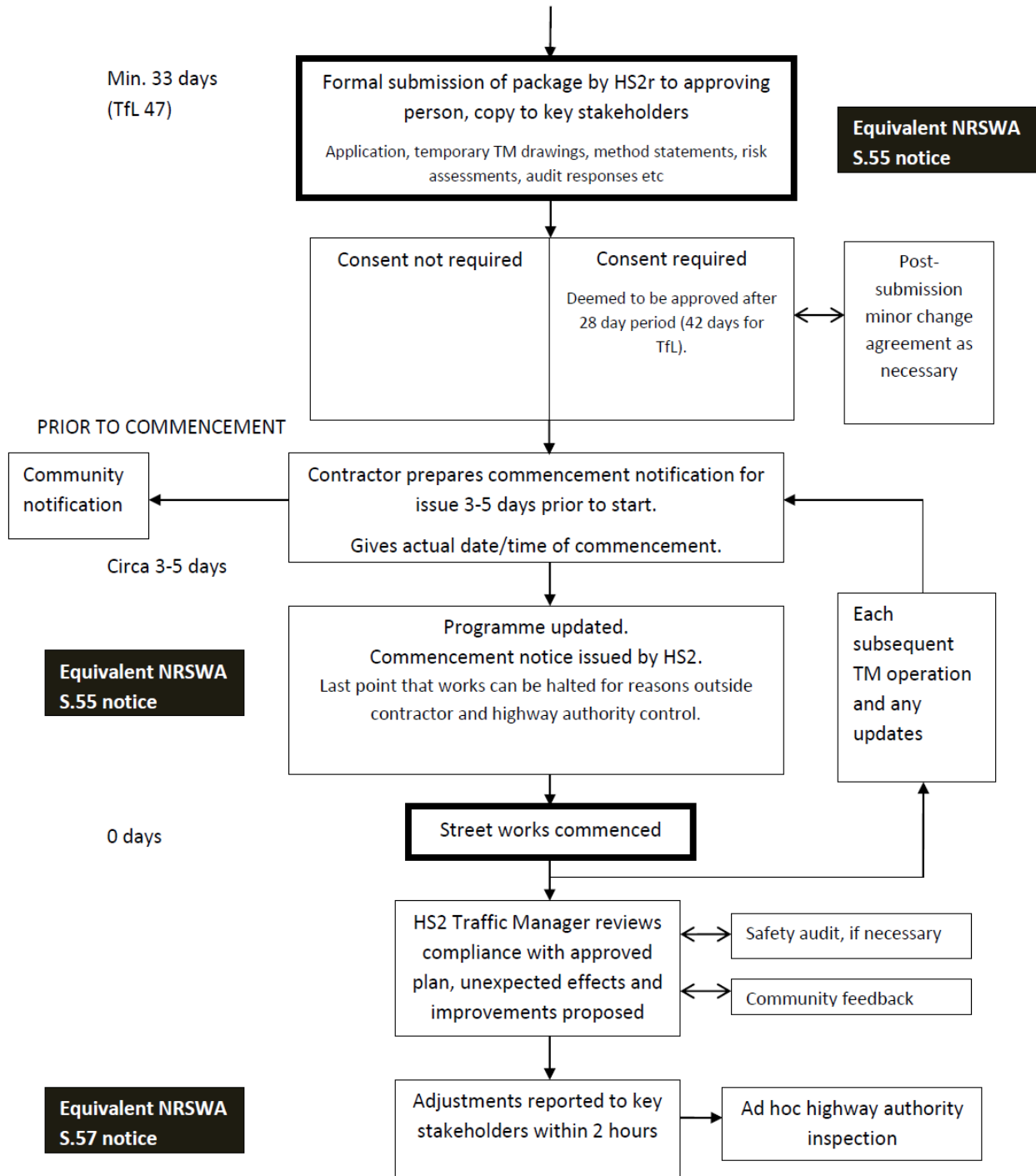
7.11.5 **Certification of works.**

A certificate will be issue by the nominated undertaker for the relevant highway authority to sign that temporary works have been completed satisfactorily. The certificate may be accompanied by:

- A stage 3 Road Safety Audit, closed out
- A list of defects of materials and workmanship of the works, closed out.

Figure 6.1 **TEMPORARY HIGHWAY WORKS APPROVAL FOR STANDARD WORKS**





8 Highway Management

8.1 Scope

The scope covers setting and maintaining appropriate standards for working on, or using, highway network and in particular to minimise surface deterioration during the construction phase. The scope of this chapter includes:

- worksite establishment on the highway;
- measures to protect highway assets;
- management and operations for temporary or altered traffic signals
- incident protocols;
- the management of haul routes and haul route crossings;
- other highway management (flytipping, condition surveys, movement of tracked vehicles, winter maintenance, water abstraction, working near railways or canals)

If appropriate, contractors will prepare Highway condition, maintenance and cleansing management plans to set out how the contractor will undertake necessary steps to ensure that impacts on the carriageway surface are minimised during the construction phase.

8.1.1 Relevant route-wide requirements

Chapter 8 Traffic Signs Manual

Whilst Chapter 8 of the Traffic Signs Manual (which puts into practice the Traffic Signs Regulations and Directions Order) sets out the standards for the layout of temporary traffic management and supporting guidance provided information on how the temporary traffic management should be deployed, this section sets out how the HS2 project will manage the road space according to “best practice” and takes into account experience of managing highways around busy worksites for major construction projects.

Code of Construction Practice

The CoCP requires that all reasonably practicable measures will be put in place to avoid, limit and mitigate the deposition of mud and other debris on the highway.

General requirements set out within the CoCP include:

- measures to ensure that the maintenance and condition of public roads, cycleways and PRow do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities;
- procedures to be followed to obtain consent to work on or over railways, highways and canals;
- measures for highway reinstatement;
- controls on reversing alarms.

The project requirements to avoid/limit and mitigate the deposition of mud and other debris on the highway are :

- hardstanding at the access and egress points will be cleaned at appropriate intervals;
- vehicle wash down points to clean vehicle wheels at each exit point onto the highway;
- the correct loading of vehicles and sheeting of loads where necessary to avoid spillage during their journeys;
- appropriate wheel cleaning measures will be employed to prevent the transfer and accumulation of mud and other granular deposits on the public highway;
- the use of mechanical road sweepers combined with water sprays for the suppression of dust to clean hardstandings, roads and footpaths in the vicinity of the site;
- measures to avoid water runoff onto the adjacent highway (footways or carriageways), including avoiding ponding adjacent to hoardings on the carriageway;
- ensure no material is deposited onto the public highway which will affect drainage interceptors, etc; and
- the flushing of gullies in the vicinity of the site.

For works which are being undertaken on the highway which are not protected by secure temporary-type fencing or hoarding, then at the completion of each day's works, the site is to be left in a tidy condition. All surplus materials arising from the works will be cleared from the highway, leaving it in a clean and tidy condition in accordance with the reasonable requirements of the highway authority.

8.2 Approvals

8.2.1 Mud control measures (schedule 16)

Requirement	The relevant planning authority may only refuse to approve arrangements for the purposes of this paragraph..on a ground specified in relation to the matter in the following table: (7) Road mud control measures. That the arrangements ought to be modified— (a) to preserve the local environment or local amenity, or (b) to prevent or reduce prejudicial effects on road safety or on the free flow of traffic in the local area, and are reasonably capable of being so modified.
When	Requests for approval will need to include conditions for mud control which are to be implemented within the site.
Who obtains approval	Nominated undertaker.
Submission package	Detailed site layout in include mud control measure and generic and site specific text within the application.
Other	None

8.3 Worksites on the highway

Worksites refer to:

- Temporary traffic management on the highway using barriers, according the Chapter 8 standards and the works being carried out within the safety zone.
- Occupation of the highway of larger, longer-term works areas, which may be segregated by heras fencing or hoardings, with gated accesses for works vehicles to enter and exit the site where traffic is still able to pass the worksite. Footways on one side may be closed;
- Occupation of the whole width of the carriageway, with hoarded sites, possibly with footways being closed or one footway retained, also providing for walk-through for cyclists.

It may be the case that arrangements are made with adjoining occupiers for occasional pre-planned access to premises via the worksite or the provision of a fire path for emergency vehicles.

For long-term highway occupation, Principal Contractors will be required to join the Considerate Constructors Scheme (CCS), company registration scheme. Principal Contractors shall ensure that CCS audits take place on sites where work is being undertaken on behalf of the Employer.

The responsibility for the implementation, maintenance, amendments, operation and removal of traffic management will be undertaken by a competent and qualified TSCO. The TSCO will report to the responsible engineer or manager, named on the proforma for works notification or approval.

8.3.1 **Barriers on the highway**

When preparing drawings for layout of worksites on the highway, contractors will need to give consideration to the following requirements:

- Barriers are to be used to enclose working areas on the highway, footway and verges in accordance with the guarding requirement of Safety at Streetworks and Roadworks – A Code of Practice (the red book)
- Where Heras-type fencing or hoarding are used on the highway, the design will need to accommodate visibility slays, particularly at junction, according to the junction type in accordance with the relevant standards set out in the relevant design standard.
- The design and use of hoardings will consider the safety of cyclists, to avoid “canyon” effects and lack of space for cyclists to take avoiding action. In all cases, hoardings on the highway are to be accompanied by red/white baulk timbers at the foot of the hoarding to provide a safety zone. The hoarding is to be lit with white lighting at appropriate intervals and the baulk timber with red lighting at appropriate intervals.
- Hoardings are to be installed to avoid ponding on the traffic side. HS2 may issue an advice note for hoarding standards.

Tape is not to be utilised for traffic management on the highway.

8.3.2 HS2 Code of Practice for Streetworks

The Principal Contractors will be required to follow the following Code of Practice for street works:

- Provide suitable advance warning to neighbours and road users;
- Be tidy and safe with a clutter-free site so it is safe for pedestrians, cyclists and other road users.
- Always explain what's happening through detailed, clear and consistent signage.
- Explain if works are delayed (e.g. unexpected buried services).
- Take up as little road / pavement space as reasonably practicable with a compact working area and eliminating the unnecessary use of cones, safety barriers and storage of materials.
- Help keep traffic moving by working outside peak hours, re-opening the road to traffic at peak times and, where this is not reasonably practicable, working 24/7 or extended hours to complete works as quickly as reasonably practicable (subject to any necessary noise approvals).
- Diversion routes should be clearly signed
- Ensure that barriers, cones and signs, including diversion signs are inspected on a daily basis, maintained in good order and regularly cleaned.
- Project hoardings and fencing along the boundary of a highway, footway, cycleway or other PROW will need to be checked daily for graffiti and flyposting and should be removed or covered during the working day (and for offensive material within two hours).

Grffiti or flyposting on the highway or other property will be reported to the highway authority or owner as soon as practicable.

8.3.3 Site information signing requirements

Signing of worksites on the highway shall include:

- Employer and Principal Contractor information boards, including emergency contact information
- Relevant health and safety information for employees
- Relevant safety information for pedestrians and other road users as appropriate
- Relevant safety information concerning hazard materials used or stored on site.
- Displaying notices confirming that businesses whose access or view may be affected by construction works, remain open with directions for how to access them.

Hs2 may set out design requirements within HS2 Contractor Advice Notes to ensure a consistent approach.

8.3.4 Street lighting in temporary traffic management

During construction:

- lighting columns may require removal
- hoardings may be erected which will lead to reduced street lighting levels

In these cases, the temporary traffic management drawings will need to ensure that sufficient, even, lighting is provided for vehicle and personal safety. LUX levels will be agreed with the relevant highway authority on a scheme by scheme basis.

8.3.5 Advertising rights

Where advertising hoardings are to be removed or obscured, notification will be made to the owner.

8.3.6 Competence of installation

All site personnel shall be competent to carry out their particular duties and tasks, or be adequately supervised if being trained. All personnel involved in the installation, maintenance or removal of signing, lighting and guarding or this carrying out excavations in the public highway (including footpaths and grass verge) shall be suitably competent and qualified.

8.3.7 Maintenance and inspection of layouts

Principal Contractors will be required to ensure that the Site shall be subject to routine inspections. Records of formal inspections including deficiencies identified and the corrective action taken shall be made available to HS2 Limited on request.

The HS2 area traffic manager (or authorised agent) may inspect a worksite in the highway and (a) direct that temporary traffic management is installed in accordance with the approved plans and/or (b) operated in accordance with the approved method statement and may require the works to immediately cease until corrective action is undertaken.

Any works on the highway which have not been approved or notified to the highway authority will be immediately suspended and any traffic management removed as soon as reasonably practicable and the incident reported to the HS2 area traffic manager, who in turn will report it to the relevant highway authority. The HS2 area traffic manager will investigate all such instances and agree with the Principal Contractor's Project Director of the contractor corrective actions. The principal contractor will be expected to take disciplinary action in accordance with its own procedures.

8.3.8 Safety requirements for worksites on the highway

Principal Contractor's workplaces will be required to be clean, tidy and without risk to safety or health of employees and all road users as far as reasonably practicable. Principal Contractors will be required to maintain work place plant and other equipment are maintained in accordance with a written plan and replaced as necessary. Principal Contractors will be required to ensure that they protect members of the public from hazards arising from their activity. These controls shall extend to logistical operations, vehicle movements and compounds. This includes logistical movements to and from sites of work.

Workers on the highway will be required to wear PPE supplied by their employer to the relevant and current EN standard. Minimum requirements will be:

- Jacket and trousers to BS EN 471 class 3, with 2 parallel horizontal torso reflective hoops, with the top hoops linked via over-the shoulder vertical braces
- Hard hat
- Safety boots
- Safety goggles or glasses
- Ear defenders
- Gloves

Prior to commencing work on-site (as a part of the safety briefing etc), the Principal Contractor will be required to inform operatives working on the highway the address of the worksite in the event of the need to call the emergency services and remind operatives as to the dangers of working adjoining live traffic.

Vehicles being used for works in the highway shall display the words "Highway Maintenance" or "Motorway Maintenance" as required and have a working rotating beacon, to BS standards.

Working on motorways and other high speed roads are particularly hazardous. Operatives on motorways must have in their possession a valid motorway permit and agreed with the relevant operator the time and conditions for working on the motorway or hard shoulder.

Buried structures and services represent a significant hazard for ground investigation works. The Principal Contractor will be required to exercise all due diligence to identify the risk at each location, to detect and locate buried structures and services before commencement and to apply excavation methods appropriate to the risk. Principal Contractors will be responsible for the detection, avoidance and protection of buried utilities and will be held responsible for damages caused.

In the event of damage or suspected damage to a buried service, utility or structure, works shall cease, the area of work made safe and the appropriate statutory undertaker has been contacted to affect a repair or confirm that the buried service is not damaged.

Traffic-related risk assessment requirements for undertaking works on the highway (risks associated with the works should be covered by the same procedure as for working within a construction site)

8.3.9 Safety requirements for workers using vehicle, plant and machinery on the highway

No works will be permitted to be undertaken on the footway or highway without segregation from all other road users and pedestrians.

Principal Contractors will be required to implement controls to manage the risks associated with workplace transport, mobile plant and mechanical equipment. Operators shall be competent and suitably qualified with either a Construction Plant Certification Scheme (CPCS) or National Plant Operators Registration Scheme (NPORS) qualification in the appropriate plant category or equivalent as agreed with HS2 Limited safety managers.

No vehicle will be permitted to park within traffic management, unless included for within the temporary traffic management design. No vehicle will be permitted to stop or be parked within the safety taper.

Consideration will be given to the need for the use of reversing alarms within worksites – on the highway and off-highway which are in proximity to residential areas. Such controls on the use of alarms may apply at certain hours only such as outside core working hours, subject to the requirements of site safety.

8.4 Traffic signals

8.4.1 Operation of temporary portable traffic signals

Where temporary traffic signals are required to be operated for temporary highway works or for haul road crossings, the process for consultation and notification (and as necessary, approval) is to be followed, as set out in this RTMP.

8.4.2 Signal works agreements

The works are likely to require a range of various changes to existing signal installations, such as poles in barrels, movement of signal heads and stop lines and associated works to deliver the permanent works. In other cases, new temporary signal junctions may be required.

Discussions will be held with highway authorities through the Highways Sub Group to the Planning Forum in advance of construction works concerning standard Signals Works Agreements. These agreements will set out how signal works will be designed, procured, installed and commissioned for changes to existing installations or the installation of temporary works.

Within London, these discussions will be held with Transport for London.

8.5 HS2 Advice Notes

Advice notes may be prepared to develop common standards for the following activities, as necessary:

- Signing of worksites (adjoining or on the highway), including:
 - Safety information for workforce
 - Warning information for public
 - Emergency contact/security information
 - Contractor information
 - Project information
- Hoarding construction, fascia and standard colour (on or adjoining the highway);
- Recording defacing of hoardings;
- Worksite establishment on the highway and vehicle removal;
- Parking controls design and implementation;
- Designing for lane discipline/management on the approaches to works;
- Incident response in temporary traffic management (vehicle recovery in road works and qualification requirements under NHSS 17/17B);
- Access standards for emergency services within worksites
- Variable Message Signing protocols for road works information or construction traffic diversions;
- Speed detection through worksites;
- Signals works;
- Activities schedule/key milestones for road closures/temporary stopping up;
- Managing protest
- Recording flytipping
- Procedures to be followed to obtain consent to work on or over railways, highways and canals

Advice notes, or specific sections within advice notes, will be classified as “must”, “should” or “may”. Those which are classified as “must” will become contract requirements.

Where appropriate, the Advice Notes will be consulted on via the Highways Sub Group to the Planning Forum.

8.6 Temporary highway construction, maintenance and reinstatement

8.6.1 Agreement on materials and design to be used for temporary works – carriageway construction and surface, footway, street furniture, lighting

Highway reinstatement will be in accordance with the DfT’s Specifications for the reinstatement of openings in the highways (2011) or otherwise agreed with the relevant highway authority.

8.6.2 Inspection regime during construction

Principal Contractors will need to ensure that HS2 Limited is advised of all visits and action by regulators (such as the Local Authority, HSE, Environment Agency) or utility companies, in connection with the works, including:

- Site visits and comments made during such visits;
- Site inspections and comments made during such inspections;
- Written communication; approval updates, notices or other formal action.

8.6.3 Maintenance and adoption of temporary works

Temporary works will be maintained by the Principal Contractor until such time that:

- They form a part of a permanent highway work in which case they will be subject to permanent highway works procedures in terms of certification of practical completion;
- The highway is reinstated to the design prior to the temporary works being installed, in which case the highway authority standard for reinstatement in terms of workmanship and materials for the works will apply;

In all cases, temporary works will be subject to the highway authority’s routine inspection and maintenance regime, including crash damage, sweeping and small item repairs.

Whilst all temporary highway works are assumed to be maintained by the Principal Contractor until the works are reinstated, prior to assumed reinstatement the highway authority may consider that the temporary works are beneficial and should be retained. In these cases, the works will be adopted as permanent works, on the basis that the Principal Contractor will no longer warrant the works to be left in situ.

8.7 Bridge assessments and asset protection

8.7.1 Bridge assessments and strengthening works

HS2 will review the assumed lorry routes set out in the Environmental Statement and compare these to the location of restrictions where any weight limit currently applies, or where structures could require a weight limit to be applied in the near future. Where appropriate, consideration will be given to the requirement for:

- Undertaking a physical upgrade to the structure;
- Other options such as a bailey bridge or off-line solution;
- Amendments to the proposed lorry routes.

8.7.2 Other asset protection

HS2 will review the assumed lorry routes set out in the Environmental Statement and compare these to the location of restrictions where any height or width restriction applies. Where appropriate, consideration will be given to the requirement for

- Height restriction – provision of bash beams where risk of collisions, additional signing and warning camera as necessary. This will include bridges which may be on haul routes.
- Width restrictions – provision of upstream collision bollards and additional signing

8.8 Highway condition surveys and monitoring

8.8.1 Local accesses

Prior to the use of any access from a carriageway, a condition survey is to be carried out of the kerbs and the verge prior to commencement of works, including detailed photographs and a record of any existing damage to kerbs, verge and any other street furniture, including gratings, inspection pit covers etc. The Principal Contractor will be required to retain the records for 6 months following any reinstatement works.

8.8.2 Route condition surveys

Where it is proposed that a route condition survey is carried out, the nominated undertaker will agree with the relevant highway authority the scope of the route survey along the permitted lorry routes and the scope of a parallel route to act as a reference. Surveys will also apply to routes where traffic is required to be diverted to a route of a lesser standard than the road from which it is being diverted. These routes may be agreed as a part of a Local Traffic Management Plan.

Rapid pavement assessment before and after construction will be required to assess the pavement condition and effect of construction traffic loading on the carriageway pavement following the completion of main construction activities.

The first stage of the pavement assessment programme will involve a standardised set of investigation surveys focused on assessment methods that minimise disruption to road users. These indicative surveys will provide a certain degree of information regarding the structural condition, surface condition and pavement thickness, to identify the potential need for remedial action before and after construction traffic.

The following pavement assessment surveys are proposed:

- Visual Condition machine survey such as HARRIS surveys which will provide digitised visual imaging and longitudinal and transverse defects, with the data recorded to include GPS location. The survey can provide high quality downward facing video images which are digitised then assessed manually to provide a detailed visual survey from which quantitative assessments of cracking and other surface defects can be derived. The survey is also used to provide transverse profile (rutting), longitudinal profile, surface texture and crossfall.
- Deflectograph surveys, where a survey system measures the vertical deflection velocity of the pavement under a loaded wheel (a proxy for road strength) using Doppler laser technology. The results will identify areas where the equivalent Deflectograph deflection would be relatively high and thus warrant further investigation. Results can be compared before and after construction traffic to assess effect of traffic on pavement structure.

The objective of this assessment stage is to assemble the information from the rapid condition surveys and to identify lengths where maintenance would be considered to be required prior to, and after, main construction of the works and the likely scope of that maintenance. The indicative maintenance can be divided into four broad classes, namely:

- No treatment;
- Resurface (replacement of surfacing only);
- Strengthen (overlay / deep inlay);
- Reconstruct (full depth reconstruction).

An initial assessment is important as it will identify the pavement condition prior to commencement of works and following completion of main works, to identify any remedial work which will be required.

Using one of the methods (SCANNER or HARRIS) would ensure that there is independence in identifying the requirements for remedial repairs.

These repairs could then be undertaken by the principal contractor or via funding to the relevant highway authority.

Excluded from remedial works would be:

- crash damage, unless known to be caused by contractor vehicles.
- consumables such as street lighting not working, unless contractors have undertaken works to the lighting.
- gulley sucking, unless due to site run-off.

It may be the case that some preventative works could be required prior to commencement of construction where there could be rapid deterioration.

8.9 Other highway protection

8.9.1 Protection of verges and kerbs

Principal Contractor will be required to undertake protection of verges in the vicinity of worksite accesses and, as necessary, undertake the reinstatement of verges and kerbs following completion of the works.

8.9.2 Protection of carriageway surface (tracking)

No vehicle with metal tracks may be tracked or driven along or over a carriageway, kerb, footway or verge without the use of protection boards.

8.9.3 Winter maintenance

Contractors will need to consider the routes that local highway authority gritters and snowploughs follow and the likelihood of routes between strategic roads and construction worksites not being prioritised and develop snow and ice response plans accordingly.

8.10 Road cleanliness

Section 7.32 notes that there are class approvals in place for mud control measures within Schedule 16 of the Hs2 Phase one Bill .

All reasonably practicable measures will be put in place to avoid/limit and mitigate the deposition of mud and other debris on the highway. These measures will have regard to the nature and use of the site(s) in question, and will include:

- hardstanding at the access and egress points will be cleaned at appropriate intervals;
- vehicle wash down points to clean vehicle wheels at each exit point onto the highway;
- the correct loading of vehicles and sheeting of loads where necessary to avoid spillage during their journeys;
- appropriate wheel cleaning measures will be employed to prevent the transfer and accumulation of mud and other granular deposits on the public highway;
- the use of mechanical road sweepers combined with water sprays for the suppression of dust to clean hardstandings, roads and footpaths in the vicinity of the site; and
- the flushing of gullies in the vicinity of the site.

After completion of any works affecting a highway, all surplus materials arising from the works will be cleared from the highway, leaving it in a clean and tidy condition in accordance with the reasonable requirements of the highway authority.

8.10.1 Prevention of water run off onto highways

Construction sites and compounds will be managed to prevent-water run-off onto the highway. However, should any run-off be observed, this will be investigated and action taken as necessary to intercept the flow and remove any standing water from the highway-

Should water run-off be observed in winter, appropriate action will be taken as required to minimise the risk of ice forming.

Where water runoff is observed which is silty or otherwise contaminated, then the highway will be cleansed as soon as reasonably practicable. Spill kits will be deployed at site access points for emergency use, when appropriate.

8.10.2 **Street sweeping – mechanical and hand**

The Principal Contractor will be required to undertake appropriate measures to keep roads and accesses clean through regular street sweeping. Particular attention will be paid to the alignment used by two wheel vehicles, where appropriate.

8.10.3 **Haul routes**

Haul routes will be provided through the works for use by construction vehicles to access the works.

The construction and maintenance of haul routes, will include the following measures, as appropriate:

- the surfacing and maintenance of haul routes to control dust emissions as far as reasonably practicable, taking into account the contractors intended level of traffic movements;
- inspection of haul routes regularly and their prompt repair if required;
- reuse of haul route surfacing materials where the locations of haul routes change during the course of construction;
- provision of areas of hard-standing at site access and egress points to be used by any waiting vehicles;
- methods to clean and suppress dust on haul routes (including watering) and in designated vehicle waiting areas. The frequency of cleaning will be suitable for the purposes of suppressing dust emissions from the site boundaries; and
- enforcement of speed limits on haul roads for safety reasons and for the purposes of suppressing dust emissions.

As necessary, damping down will extend to haul route crossings and around worksite accesses.

8.11 **Highway accesses**

8.11.1 **Site access plans**

Principal Contractors will be required to prepare a site access layout plan for submission to High Speed 2 Limited, including for existing site accesses, setting out the design to be installed and the necessary safety features and measures to avoid mud on the highway. It is expected that the scope of the plan will be from the point of highway access to the point of access to a worksite, haul road or welfare facilities.

8.11.2 **Site safety requirements for employees at access points**

Workforce entering worksites on foot will be required to be separated from construction traffic at all works access points from the highway and provided with a safe walking route to welfare facilities or site information facilities, prior to access onto site. For large construction locations, workforce will be required to use site access passes to pass through turnstiles.

Induction and other workforce briefings will be used to ensure that workforce are aware of the particular risks of moving plant at site accesses, as well as around sites.

8.11.3 **Site access safety requirements for other road users**

At site access points, all gates adjoining pedestrian routes will be provided with portable barriers which can be positioned by bankspersons to temporarily close the footway. Signing on the barriers will ask that pedestrian stop for their safety. Where footways have moderate or heavy footfall will be provided with barriers along the kerb edge as well as portable barriers which can be positioned by bankspersons to temporarily close the footway. Two bankspersons will therefore be required. In addition, for locations with moderate or heavy traffic flows, two "STOP-WORKS" boards will be provided to assist in the control of traffic to enable large vehicles to manoeuvre as necessary. However, these measures will not relieve the drivers of giving way to pedestrians or traffic as necessary.

8.11.4 **Hard standing locations and wheel washing**

Principal Contractors must not export risk for example by spreading mud onto the public highway, causing muddy, slip areas where vehicles are accessing and egressing the site. The Principal Contractor shall ensure that access and egress points are kept safe whilst in use.

The site access layout plan will be submitted to HS2 for approval prior to any new highway access being submitted for approval by the relevant highway authority.

8.11.5 **Bankspersons and use of "STOP WORKS" boards**

Bankspersons should be competently trained, in relation to signalling to drivers, other traffic, keeping appropriate lookout, loading and unloading adjoining live traffic and use of "STOP WORKS" boards. On busy roads, where a vehicle needs to stop to unload adjoining a worksite, two bankspersons will be required to operate "give and take" traffic management using "STOP WORKS" boards, for the minimum practicable period in accordance with the red book.

Construction materials must not be swung over a live footway unless absolutely unavoidable. If this is necessary, access for pedestrians along the footway should be closed and either pedestrians diverted at suitable crossing points and/or pedestrians controlled via manual barriers across the footway, operated by bankspersons.

8.12 **Haul road Crossings over Highways**

Haul roads will be provided along the trace of the railway under construction to move materials from access points to worksites.

The intention is that, as far as reasonably practicable, haul roads will be "clean roads". Although managed by Principal Contractors, HS2 Limited will ensure that these roads provide the necessary "first line" in ensuring that mud is not tracked onto local roads and that haul roads are managed safely. It is likely that haul roads will comprise temporary surfacing such as compacted type 1 or other materials which can be removed and reused and which will limit dust from construction vehicles through regular damping down in summer months as well as construction traffic speed limits.

It may be the case that haul road crossings will be used by construction vehicles over 44t and if this is the case, specific maintenance and, potentially, highway reconstruction will need to be put in place in consultation with the relevant highway authority and will be subject to submission to the relevant highway authority.

A standard design for haul road crossings will be developed to include:

- provision of areas of hard-standing at site access and egress points to be used by any waiting vehicles and lockable secure gates to secure the construction site;
- appropriate means of control will be implemented according to the volume of traffic on the highway, such as "STOP Works boards", temporary/portable traffic signals operating during working hours or "Give Way" or "STOP" markings.

Where a crossing is operated by manual signals, the operator will require appropriate training to ensure that the use of signals does not lead to rear-end shunts.

Haul road crossings will be "ahead only" junctions, with no turning onto or off the trace being permitted, with signing as appropriate.

Sweeping tools will be stored at each crossing point.

8.13 Other issues

8.13.1 Abstraction of potable water from standpipes

Contractors will need to apply for abstraction licences for standpipes.

8.13.2 Managing the movement of farm livestock

Where necessary, traffic management measures will need to consider the requirements for movement of farm livestock.

8.13.3 Managing protest

As necessary, an advice note will be prepared concerning managing protest on the highway or on land adjoining the highway which does not form a part of the worksite.

8.13.4 Trading on the highway around workforce access points

Experience suggests that construction workers may be targeted by unlicensed sellers of PPE and other safety equipment or tools, selling from the back of vehicles near to workforce entry/exit points. Where this is identified it will be reported to the relevant Police contacts or local authority trading standards. As employers are required to provide their workforce with all necessary PPE free of charge, workers will be periodically reminded not to buy equipment which may not be safe to use.

8.13.5 Managing fly tipping and abandoned vehicles

Highways authorities will continue to be responsible for the following:

- removal of abandoned vehicles, where the street is to be a worksite for works;
- removal of flytipping on highways where the street is to be a worksite for works;

- removal of fly tipping on “stub ends” of roads or in other locations which are highways and which specifically impact on the delivery of the project.

The Environment Agency will be notified of any fly tipping which contains (or may contain) hazardous waste.

Principal Contractors will remove and dispose of fly tipped materials blocking site accesses where it is on HS2 land. Principal contractors will notify the relevant highway authority to remove fly tipped material on the highway or highway land. A protocol for recording fly tipped material may be developed for instances where flytipping occurs on the highway at site access points. If site accesses are obstructed due to fly tipped material, the principal contractor may either remove and dispose of it or move it aside, once recorded.

8.14 Requirements for working over or under railways and waterways

Site specific procedures will be put in place in consultation with Network Rail and the relevant water authority or owner and approval requirements agreed as necessary.

DRAFT

APPENDIX A

Indicative Structure and Content of Local TMPs

Notes

Structure/contents

1. The transport context

- 1.1 High Speed 2 in (authority name)
- 1.2 The overall scope of construction and main feature and high level timetable
- 1.3 Documentation which precedes the production of the LTMP and how it fits with the LEMP
- 1.4 On-going liaison processes- TLG and other liaison (e.g. NRSWA)
- 1.5 Other construction activities
- 1.6 The security context

2. The TMP context

- 2.1 Purpose of the TMP
- 2.2 Scope of the TMP
- 2.3 The geography of the local TMP
- 2.4 Structure of the local TMP

3. Transport networks and services

- 3.1 Road networks and significant construction changes
- 3.2 Amendments to traffic, bus, cycle, walking and riding routes (including footpaths)
- 3.3 Signed diversion destinations
- 3.4 Rail networks infrastructure and significant construction changes
- 3.5 Amendments to passenger and freight services
- 3.6 Waterway and towpaths and significant changes

4 Temporary highway works

- 4.1 Worksites and access points for construction activities
- 4.2 Temporary highway works to deliver the project
- 4.3 Expected scope/sequence of significant highway works to deliver permanent works
- 4.4 Temporary traffic management programme (including footpath diversions)
- 4.5 Temporary traffic modelling
- 4.6 Road safety audit schedule
- 4.7 Local direction signing requirements for emergency services and deliveries
- 4.8 Signals design requirements and procurement
- 4.9 Temporary enhancements for travel to work

5 Road Network Management

- 5.1 Protection of highway assets
- 5.2 Temporary access points
- 5.3 Haul roads and crossings

- 5.4 Monitoring highway condition
- 5.5 Safety management
- 5.6 Crash data recording and review

6 Managing construction movements

- 6.1 ES forecast flows by vehicle types and activities
- 6.2 Contractor forecast flows by vehicle types and activities (Note 1)
- 6.3 Local worksite capacities, holding areas and other local measures
- 6.4 U&As restrictions vehicle flows
- 6.5 Sites and flow assumptions in ES
- 6.6 Sites and flow forecasts and comparison with ES
- 6.7 Lorry Routes approvals and monitoring
- 6.8 Other management measures
- 6.9 Resilience planning
- 6.9 Rail facilities and paths
- 6.10 Water facilities and freight

7. Workforce transport

- 7.1 Local travel plan(s) which will be prepared and associated monitoring
- 7.2 Traffic and parking management measures to support local travel plans
- 7.3 Travel plan monitoring
- 7.4 Any specific measures to support travel to work (e.g. interchange facilities)

Notes

1. *In certain cases, this data will need to be supplied by more than one contractor*

APPENDIX B

Draft Terms of Reference for the Establishment of Local Traffic Liaison Group Meetings

1. The key objectives of the TLG meetings will be to:
 - be a forum between HS2 Limited and Key highway, traffic and transport management stakeholders to consult on the temporary traffic management programme and submissions;
 - pre-agree formal submissions for highway approval (or submission for consultation);
 - review and comment on other relevant plans and documents;
 - assist the highway authority carry out its obligations to ensure there is a co-ordinated approach to traffic management in their area;
 - ensure that local authorities, emergency services and bus operators are aware of the programme of construction activities that could have an impact on the local and strategic road network, routes and access;
 - manage construction traffic and highway issues; and,
 - manage local workforce movement issues, unless delegated to a sub-group, which may involve alternative membership.
2. The geographic areas for which Local Traffic Liaison Group (TLG) meetings are to be established are to be agreed by the Highways Sub Group to the Planning Forum. In the event of no unanimous agreement of the geographic areas, the chair of the Highways Sub Group shall determine the areas.
3. The Traffic Liaison Group meetings are to comprise representative(s) of:
 - The relevant highway authority or authorities within the TLG area (or successor bodies).
 - The Highways England (outside London) or Transport for London (within London) or successor bodies.
 - Adjoining highway authorities shall be invited to attend.
 - Relevant transport stakeholder representation for bus operations (in London, Transport for London)
 - The relevant Police force (traffic division) for the TLG area.
 - HS2 Limited
4. The TLG meeting may be chaired by the relevant highway authority (or an agreed lead highway authority) or by HS2 Limited. HS2 Limited shall provide a proposed agenda in advance of each TLG meeting and provide and circulate draft and final minutes of each meeting.
5. Specific attendees will be agreed at the first TLG meeting and may be varied at subsequent meetings.
6. The schedule of meetings will be agreed at the first TLG meeting and may be varied at subsequent meetings.
7. The TLG shall follow the procedures and utilise the standard pro-formas agreed at the Highways Sub-Group to the Planning Forum for the notification, submission, consultation and approval of temporary traffic management schemes.
8. The TLG will agree the common e-mail addresses to be used for notification, submission, consultation and approval of temporary traffic management schemes.

9. The TLG shall consider all transport and traffic management issues relevant to the delivery of High Speed Two in the construction phase, as set out within the Route-wide Traffic Management Plan, the Local Traffic Management Plan and the Local Workforce Travel Plan and resulting submissions. Initially this will include:
 - approval submissions as identified within the Route-wide TMP, including lorry routes approvals;
 - highway works necessary for the movement of construction vehicles, including the design and layout of access points to the construction sites from the highway;
 - temporary traffic management measures;
 - implementation of road, footway, footpath and rights of way closures and associated warning and diversion signing for traffic, pedestrians and cyclists;
 - implementation of direction signing to worksites, including emergency access;
 - travel demand management measures related to construction workforce travel
 - monitoring of construction traffic volumes and routing
 - vehicle and driver safety standards
 - the protection of highway assets, including highway condition surveys
10. HS2 Limited shall prepare and continuously update a programme of transport and traffic management schemes and consultation or approvals necessary for construction to proceed to achieve completion of the main construction works, the overlay of railway systems and commissioning of High Speed Two Phase One on time and to budget.
11. The TLG shall receive and comment on the Local Traffic Management Plan and Workforce Travel Plan and as necessary any necessary interface with the Code of Construction Practice, Route-wide Traffic Management Plan, relevant Local Environmental Management Plan(s), the High Speed Two Act and the Register of Undertakings and Assurances. The Route-wide Traffic Management Plan and the Local Traffic Management Plan will be the agreed reference document with regard to the design and implementation of transport and traffic management schemes for construction activities in relation to the delivery of High Speed Two Phase One. The Route-wide Traffic Management Plan, Local Traffic Management Plan, Workforce Travel Plan and Local Environmental Management Plan may be revised periodically during construction activities or addenda issued as appropriate.
12. The TLG shall consider the detailed planning, implementation (and as necessary timing) of mitigation schemes required during construction arising from the Register of Undertakings and Assurances.
13. Should there be any requirement for HS2 Limited to propose temporary highway works or undertake temporary traffic operations (including routes) which exceed those set out within the Environmental Statement, these shall be reported in the first instance to the Local Traffic Liaison Group, with a report of the impacts and mitigations proposed.
14. The TLG is to ensure appropriate liaison with New Roads and Street Works Act (NRSWA) meetings.
15. The TLG is to initiate any other liaison or consultation as necessary, having regard to the traffic management programme of transport and traffic management schemes and overall construction programme.
16. The TLG shall report proceedings to the Highways Sub Group of the Planning Forum, in relations to matters to be determined by the Highways Sub Group to the Planning Forum.

APPENDIX C

Highway Approvals for temporary works

Required approval etc.	Relevant Legislation	Managed under HS2 legislation
London night time lorry control order exemption	Greater London (Restriction of Goods Vehicles) Traffic Order 1985	Specific exemption applies under Schedule 24
Works Screening and Hoarding adjacent to a highway	Highways Act 1980 S172	Approval to be applied for under "temporary interference" Schedule 4
Satisfactory fixing of Hoardings	Highways Act 1980 S173	Approval to be applied for under "temporary interference" Schedule 4
Deposit of builders skip in highway	Highways Act S139	Notification or Approval to be applied for under "temporary interference" Schedule 4
fixing or placing any overhead beam, rail, pipe, cable, wire or other similar apparatus over, along or across a highway	Highways Act S178	Notification or Approval to be applied for under "temporary interference" Schedule 4
Temporarily deposit building materials, rubbish or make temporary excavations in streets maintainable at public expense	Highways Act 1980 S171	Notification or Approval to be applied for under "temporary interference" Schedule 4
Erect or retain on or over a highway any scaffolding or other structure which obstructs the highway	Highways Act 1980 S169 & Greater London Council (General Powers) Act 1986 S15(1)	Notification or Approval to be applied for under "temporary interference" Schedule 4
Works for retaining temporary Walls adjacent to highways	Highways Act 1980 S167 & Greater London Council (General Powers) Act 1986 S8(2) - (5)	Notification or Approval to be applied for under "temporary interference" Schedule 4
Constructing temporary access on to public highway	Highways Act S184	Approval to be applied for under Schedule 4 for temporary accesses. Notification or Approval to be applied for under "temporary interference" Schedule 4 to carry out the works.
Temporary "stopping up" - i.e. closure of a highway, carriageway or traffic lane, footway, cycleway, footpath, bridleway or other right of way.	Highways Act 1980 S118/S119	Notification or Approval to be applied for under "temporary interference" Schedule 4

Authorisation to temporarily divert any highway, footway, cycleway, footpath, bridleway or other right of way.	s116 of Highways Act 1980	Notification or Approval to be applied for under "temporary interference" Schedule 4
For the execution of works in a highway	s278 of Highways Act 1980	Notification or Approval to be applied for under "temporary interference" Schedule 4
Obstructing a highway	s137 of Highways Act 1980	Notification or Approval to be applied for under "temporary interference" Schedule 4
Notice on timing of roadworks	New Roads and Street Works Act 1991 S56 & Schedule 3/3A	Specifically disapplied
Compliance with order restricting street works unless with written approval of street authority	New Roads and Street Works Act 1991 S58 & Schedule 3/3A	Only applicable for works in streets not listed in Schedule 4 and not applicable after 28 days (42 days for TfL roads) if not approved or refused
Placing of apparatus in a protected street/relocating undertakers apparatus in a newly designated street (second part less likely)	New Roads and Street Works Act 1991 S61 & 62	Specifically disapplied
Satisfactory reinstatement of street is required (This is not a approval, it is a requirement).	New Roads and Street Works Act 1991 S71	Completion of works to be to the reasonable satisfaction.
Street Works in given streets	New Roads and Street Works Act 1991, S51	Specifically disapplied
Advance notice of street works	New Roads and Street Works Act 1991, S54	Not specifically disapplied, but arrangements for consultation and notification is compliant.
Notice of start date of breaking up of street or tunnelling or boring under it.	New Roads and Street Works Act 1991, S55	Not specifically disapplied, but arrangements for consultation and notification is compliant.
Roadworks	Traffic Management Act (2004) Part 3	Disapplied
Seeking an order to temporarily put in place restrictions as to the use of a highway - Temporary traffic regulation orders, to cover, for example, turning restrictions, one-way streets, speed limits, restrictions on CLASSES OF vehicular traffic and pedestrian traffic (other than access to premises) and suspension of parking bays	s14 Road Traffic Regulation Act 1984 ("RTRA 1984") The Road Traffic (Temporary Restrictions) Procedure Regulations 1992 Reg 3.	Remains in place in relation to requirements to regulate moving traffic or parking/waiting/loading on the highway.
Abnormal temporary and permanent load routes	The Motor Vehicle (Construction and Use Regulations) 1998, as amended; The Motor Vehicles (Authorisation of Special Type) General Order 1973, as amended.	Continues to apply

Permit providing exemption from restriction on movement of heavy goods vehicles within specified area	The Greater London (Restriction of Goods Vehicles) Traffic Order 1985 (made under section 6 Road Traffic Regulation Act 1984)	Specific exemption applies under Schedule 24
Authorisation for non-prescribed traffic signs	Traffic Sign Regulations and General Directions 2002 Reg 8	Continues to apply
Permission for portable light signals	Traffic Sign Regulations and General Directions 2002 Direction 53	Notification or Approval to be applied for under "temporary interference" Schedule 4

DRAFT

References

Title	Reference

DRAFT