

HS2

High Speed 2 Phase One and 2a Route-Wide Traffic Management Plan

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1 Executive Summary

- 1.1.1 This High Speed Two Phase one and 2a Route-wide Traffic Management Plan (RTMP) captures in a single document the requirements for managing transport, highways and traffic during the delivery of the works authorised by the High Speed Rail (London-West Midlands) Act 2017 and by the High Speed Rail (West Midlands-Crewe) Act 2021.
- 1.1.2 The RTMP develops how the Nominated Undertaker will deliver the requirements relating to construction traffic and transport matters contained within:
- a. The High Speed Rail (London-West Midlands) Act 2017 and the High Speed Rail (West Midlands-Crewe) Act 2021;
 - b. The register of Undertakings and Assurances, which includes commitments within the Information Papers submitted to Parliament; and,
 - c. Compliance with the Environmental Minimum Requirements (EMRs) including the Code of Construction Practice and the General Principles Document
- 1.1.3 The aim of the RTMP is to ensure that the Nominated Undertaker and their Contractors are following the requirements sets out in the above documents and provides greater detail of how the Nominated Undertaker and their Contractors will undertake the delivery of the project.
- 1.1.4 It codifies the discussions held with the highway authorities along the line of route via the Highway Sub Group to the Planning Forum established for each phase of the project. The RTMP takes into account the best practice used during the delivery of similar large construction projects.
- 1.1.5 The RTMP sets out how the project will establish local Traffic Liaison Group meetings along the line of route, in accordance with the Code of Construction Practice.
- 1.1.6 In addition, the RTMP scopes route-wide activities such as direction signing to construction sites and monitoring construction traffic volumes, routes and safety requirements so that common arrangements apply across the project.
- 1.1.7 The RTMP also includes the project's requirements for:
- a. Managing traffic flows;

- b. Standards for vehicle and driver safety, including how principal contractors should develop plans regarding fleet upgrades;
- c. Travel planning and travel surveys; and
- d. Managing and protecting highway assets.

1.1.8 This document will be supplemented with a series of Local Traffic Management Plans (LTMPs) along the route prepared by the relevant Principal Contractors. LTMPs will set out the Principal contractors "intent" for how the project will be delivered within an area, until replaced by an updated version or by the addition of supplementary information or appendices.

1.1.9 Principal contractors will develop appropriate LTMPs using suggested templates within this RTMP according to the scale and scope of the works to include appropriate details of:

- a. High level construction timing and sequences where they affect the road network, which will be subject to site specific submissions for temporary interference to the highway required to deliver the project;
- b. High level construction traffic assumptions
 - i. setting out the proposed routes for use by vehicles over 7.5t, leading to, as necessary, applications for lorry routes approvals.
 - ii. a summary of forecast traffic flow information consistent with the Environmental Statement; and
- c. Incorporating information from other HS2-related works in the vicinity, where appropriate.

1.1.10 The RTMP document forms a part of the Employer Requirements for the construction of Phases 1 and 2a.

2 Abbreviations and definitions

Abload – Abnormal Load (vehicle weight, width or length) normally indivisible

ANPR – Automatic Number Plate Recognition

CandU – Construction and Use regulations.

CDM Regulations – The Construction (Design and Management) Regulations 2015, or as amended

CCTV – closed circuit television

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

CoCP – Code of Construction Practice

Contractors – all contractors, being the Principal Contractor and their supply chain working on the construction at a construction site or carrying out works on a highway

Construction or Site access point – a point where construction traffic, of any type, including deliveries, workforce (including buses), enters a construction site (which may be a satellite compound). In the case of a main compound. It may include contractor's offices or welfare facilities associated with the construction activities within the area and may have several satellite compounds associated with it.

Construction site – a compound or other site where the works authorised by the HS2 Phase one Act or Phase 2a Act are being carried out. Access to and from construction sites will be via a construction access point. Construction sites will generally be bounded by fencing or hoardings along the highway boundary. A construction site may include a part of a highway.

Construction traffic – all vehicles over 3.5t which are delivering (or removing) materials to and from construction sites or engaged in the construction of the works. This excludes servicing security and welfare facilities (which may include changing facilities, catering) and vehicles which visit the site as a part of a linked trip (such as delivering to non-HS2 site after they have left a HS2 construction site, postal deliveries and courier vehicles)

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

DVSA – Driver and Vehicle Standards Agency

EMRs - Environmental Minimum Requirements, which sets out the controls on how the project will be delivered set out in para 3.1.1 of the General Principles Document, the Planning, Heritage and Environment Memorandums, the CoCP, and the U&As.

ES – Environmental Statement

ESSMP – Logistics Environment, Sustainability and Safety Management Plan

FORS – Freight Operator Registration Scheme

GI – Ground Investigations

GPS – Global Positioning Satellite

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 construction site.

Haul route crossing – the crossing of a haul route across a highway linking separate sections of a construction site.

HCMCM – Highway Condition, Maintenance and Cleansing Management Plan

HGVs – vehicles over 3.5t.

Highway – a route open to the public to pass and re-pass along without let or hindrance that is adopted by the relevant highway authority and maintained at public expense. Highways are either roads (which include any carriageway, footway, verge and other land within the highway boundary as applicable) or public rights of way (i.e. footpaths, bridleways, restricted byways or byways open to all traffic).

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 (f) M6 Toll concessionaire.

HORACE – HS2's Safety and Incident management system which supersedes the issue of TENS (traffic enforcement notices) for non-compliance with the project's requirements.

HS2 –all sections of the High Speed 2 railway

HS2 Phase one Act – the High Speed Rail (London – West Midlands) Act 2017

HS2 Phase 2a Act – the High Speed Rail (West Midlands-Crewe)_Act 2021

HSE – Health and Safety Executive

ISO39001 – International Standard for Road Safety

JAUPT – Joint Approvals Unit for Periodic Training

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

Larger construction vehicles – vehicles such as 32t tippers and up to 44t

LEMP – Local Environmental Management Plan

Lorry Holding Area – a location which may be on-street or off-street where HGV may be held prior to travelling to a work site or construction site. These areas may be required to regulate the flow of traffic and may be used for assurance that vehicles are compliant with HS2 vehicle and driver safety standards. Areas may be supervised by traffic marshals and may be provided with welfare facilities. These areas may be used by light construction vehicles.

Lorry Routes – The routes to be used by large goods vehicles assessed in the Environmental Statement and/or agreed in accordance with Paragraph 6 of Schedule 17 to the Act.

LGV – large goods vehicle, being over 7.5t.

LTMP – Local Traffic Management Plan

LUX – standard for lighting illumination

Mass haul – movement of spoil as a part of cut and/or fill activities

MSA – Motorway Service Area

NRSWA – New Roads and Street Works Act 1991

Nominated Undertaker – the undertaker appointed by the Secretary of State. In the case of Phase one and Phase 2a, this is High Speed Two (HS2) Limited

Permanent stopping up - the stopping up of a road, footway, right of way etc in accordance with Tables 1 and 2 of Schedule 4 of the HS2 Phase One Act or Schedule 5 of the HS2 Phase 2a Act.

PSC – Professional Service Consultant/Contractor

Principal Contractor – lead contractors undertaking: ground investigation, Enabling/Advanced work, main civil works, station civil works and on-network or rail system works delivering the scheduled works.

PROW – Public Right of Way

RFID – Radio Frequency Identification

ROMIS – Route Management, Improvement and Safety Plan

RTMP – Route-wide Traffic Management Plan

RVP – Rendezvous Point

Site – a construction site

SRN – Strategic Road Network - roads which are Motorways and Trunk Roads, managed by Highways England.

Strategic routes – other major routes, including the Transport for London Route network in London.

Street Manager/HS2 Street Manager – the system used for raising notices for street works to the relevant highway authority street works register. HS2 Street Manager enables the submission of temporary interference submissions on a voluntary basis, so that they appear on the relevant highway authority street works register and disapplies permit schemes introduced by Traffic Management Act 2004 for streetworks within Act limits.

TAN – Traffic Advice Note

TBM – Tunnel Boring Machine

Temporary stopping up : the partial or full closure of a road, footway, right of way etc undertaken using the powers within Schedule 4 of the HS2 Phase one Act/Phase 2a Act which will be removed on completion of the works

TENS – Traffic Enforcement Notices. – the physical log of a likely non-compliance with vehicle, traffic or related requirements which are now reported via HORACE

TSCO – Traffic Safety and Control Officer

TfL – Transport for London

TLRN – Transport for London Road Network

TLG – local Traffic Liaison Group

TMA – Traffic Management Act 2004

TPC – Travel Plan Co-ordinator

Trace – the route of the HS2 railway line

U&As – Undertakings and Assurances

VMS – Variable Message Signing

Worksite – an area of a highway where works are being undertaken. Generally freestanding and protected by barriers, fencing etc.

Workforce – employees of the Principal Contractor and of their supply chain and support staff (including The Nominated Undertaker staff and support staff) who regularly travel to the same construction 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.

3 Introduction

3.1 The Route-wide Traffic Management Plan

3.1.1 Scope

3.1.1.1. The Code of Construction Practice (CoCP) for HS2 Phase one and Phase 2a, which forms a part of the project Environmental Minimum Requirements (EMRs), sets out in section 14.2 that route-wide measures will be develop and applied as follows:

3.1.1.2. *Generic measures, which will apply route-wide, will be discussed in advance with the local highway authorities and any other appropriate authorities. Prior to the commencement of the works, the nominated undertaker will ensure that a route-wide traffic management plan (RTMP) will be produced in consultation with the highway and traffic authorities and the emergency services and other relevant key stakeholders. The RTMP will include, as appropriate:*

- a. *measures to ensure that the timely maintenance and condition of public roads, cycleways and PRoW do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities;*
- b. *measures which may include engagement with vulnerable road users (pedestrians, motorcyclists, cyclists, equestrians), to provide for road safety for all modes for the public and construction staff during traffic management works and temporary traffic control measures;*
- c. *contractor quality plans for management of construction vehicles through the supply chain;*
- d. *contractor implementation of driver training programmes relevant for their specific environment (e.g. to protect pedestrians and non-motorised traffic);*
- e. *vehicle safety measures including signage, mirrors, prevention of under-running and use of technology to remove blind spots according to vehicle size;*
- f. *a process of submission and, as necessary, approval of site-specific traffic management measures;*
- g. *procedures to be followed for the temporary or permanent closure or diversion of roads, PRoW or accesses;*

- h. procedures to be followed to obtain consent to work on or over railways, highways and canals;*
- i. measures for highway reinstatement;*
- j. the arrangements for liaison with the relevant highway authorities and emergency services (including air ambulances) and protecting corridors for emergency vehicles;*
- k. procedures to address any highway incidents or vehicle breakdowns relating to construction traffic, especially at peak times;*
- l. emergency access protocols;*
- m. monitoring requirements;*
- n. lorry route-signing strategy;*
- o. means of monitoring lorry use and any routes prohibited from use;*
- p. dealing with large goods vehicles and abnormal loads;*
- q. clear identification for construction heavy goods vehicles under the lead contractors' control;*
- r. 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;*
- s. monitoring for deviation from authorised routes; and*
- t. controls on reversing alarms.*

3.1.2 **Vision**

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

- a. workforce on their travel to and from work;
- b. construction vehicles and their drivers using the road network;

- c. design, installation, operation and maintenance of temporary traffic management;
- d. protecting and appropriate monitoring of the highway from possible damage;
- e. protecting all road users, but with particular consideration of pedestrians, cyclists, equestrians and powered two wheeler users
- f. considering safe routes for diversions around worksites or temporary road closures where there are high levels of movement by mobility impaired and on routes to and from schools; and,
- g. maintaining access for the emergency services

3.1.2.2. The vision for transport management is summarised as follows:

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

- a. design;*
- b. implementation; and*
- c. compliance*

To ensure:

- a. our workforce is kept safe;*
- b. vulnerable road users are protected;*
- c. highway assets are maintained;*
- d. to appropriately engage with our key stakeholders and local communities affected by construction;*
- e. that impacts of construction are minimised as set out with the EMR General Principles document; and,*
- f. work with key stakeholders to analyse and reduce personal injury accidents around construction sites and along approved lorry routes*

3.1.3 Purpose of the RTMP

3.1.3.1. Chapter 14 of the Code of Construction Practice (CoCP) sets out project-wide requirement for managing traffic and transport related to the construction activities to deliver HS2.

3.1.3.2. The RTMP:

- a. 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) Act and the High Speed Rail (West Midlands-Crewe) Act 2021 in Parliament:
 - i. the High Speed Rail (London – West Midlands) Act 2017 and the High Speed Rail (West Midlands-Crewe) Act 2021
 - ii. The Environmental Statement
 - iii. Undertakings and Assurances register
 - iv. The Codes of Construction Practice (CoCP)
 - v. The EMR General Principles documents
 - vi. Information Papers
- b. sets out how the Nominated Undertaker will implement the provisions of the HS2 Act with regard to powers related to highways and traffic during construction – and in many cases following consultation with highway authorities via the relevant Highways Sub Group of the Planning Forum for Phases One and 2a.
- c. sets out how the Nominated Undertaker will develop consultation with key stakeholders when developing temporary traffic management schemes, principally through the establishment of local Traffic Liaison Groups (TLGs).
- d. establishes the detailed requirements for the production of Local Traffic Management Plans
- e. establishes the route-wide strategy for the management of construction traffic, including direction signing for emergency services and deliveries
- f. Principal Contractors to manage construction volumes and routes as well as environmental requirements to ensure EMR compliance

- g. establishes mechanisms for promoting and managing the safety of general traffic including vulnerable road users, workers and construction vehicles and their drivers
- h. establishes the requirements for the management of highways around construction sites, particularly to protect highway assets; and
- i. develops the requirements for managing travel to work and workforce travel plans which will be prepared by the Principal Contractors.

3.1.3.3. The RTMP provides the basis for the contractual requirements for the Principal Contractors who will deliver the permanent construction of HS2. It also informs the scope of others who will implement, monitor and validate certain traffic flow and safety management activities on behalf of The Nominated Undertaker such as utility companies who are bound by the project's Environmental Minimum Requirements (EMRs) when working on HS2. Where relevant, requirements set out within the RTMP replace those set out in the Specification for Highway Works.

3.1.3.4. Indicative Principal Contractor roles and responsibilities are set out in Appendix A.

3.1.4 **RTMP Implementation**

3.1.4.1. On Royal Assent of the Phase One Act and the Phase 2a Act all contractors were bound by the project EMRs and required to comply with the provisions of the Phase One and 2a RTMP.

3.1.4.2. For Phase One and 2a the implementation of a number of requirements within the RTMP will be deferred until the commencement of their respective Main Civil Works (unless required by an Undertaking and Assurance), such as:

- a. the adoption of detailed separate travel plans;
- b. the adoption of an electronic vehicle monitoring system; and,
- c. rural road driver training.

3.1.4.3. Vehicle and driver safety checks, as well as vehicle details for flow management and emissions monitoring, will be undertaken manually by contractors until the vehicle monitoring system is in place.

3.1.5 **RTMP Review**

3.1.5.1. The Phase One and 2a RTMP may be reviewed and, as necessary revised, due to:

- a. any legislative changes (including the Phase 2a Act and the submission to Parliament of the Phase 2b Bill);
- b. revisions to standards which should be reflected in the RTMP;
- c. other emerging best practice;
- d. following publication of the Local Traffic Management Plans, should these identify overlapping issues which need to be considered on a route-wide basis;
- e. other route-wide matters which may be raised via the Highways Sub Group to the Planning Forum for Phase One and Phase 2a; and
- f. any review of the operation of the RTMP such as clarifications or where there are conflicts with the Works Information, as necessary;
- g. identification of clarifications or changes proposed by the relevant Highways Sub Group to the Planning Forum or, as appropriate, clarifications requested by contractors.

3.1.5.2. 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 through the Highways Sub Group to the Planning Forum for Phase One and Phase 2a , and, as necessary, the Emergency Services and, where relevant to the changes, other key stakeholders. In such cases, consultation will only be on the changes proposed, rather than re-consultation on the whole RTMP.

3.1.6 Exclusions

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

- a. Procedures for notification of utility companies using their own powers under NRSWA. Co-ordination with HS2 construction will be achieved via attendance at Local TLG meetings. Highways authorities may reasonably request attendance by HS2 or its contractors at relevant NRSWA meetings to share programmes of forward works plans.
- b. Permanent highway works - design, technical review, assurance and necessary consents or approvals of permanent works and structures including embankments, bridges and other structures, lighting, drainage etc. Highways Authorities should refer to the relevant HS2 'Consents and Approvals Strategy - Permanent Highway Works'.

- c. Environmental measures and controls within construction sites such as noise and dust which will be subject to measures set out in the relevant Code of Construction Practice; and
- d. Station pedestrian modelling for changes to existing stations during construction.

3.2 Related documents

3.2.1 The High Speed Rail (London – West Midlands) Act 2017 and High Speed Rail (West Midlands – Crewe) Act 2021

- 3.2.1.1. The Phase One Act and phase 2a Act makes a number of provisions related to traffic, highways and transport management associated with the delivery of the project:

Table 3.1: Legislative provisions

	Phase one Act	Phase 2a Act
	http://www.legislation.gov.uk/ukpga/2017/7/contents/enacted	https://www.legislation.gov.uk/ukpga/2021/2/contents
Trial holes*	Schedule 2 part 1	-
Highway access (temporary and permanent)	Schedule 4 part 1	Schedule 4 part 1
Highway interference (permanent stopping up, permanent obstruction, temporary interference, street works)	Schedule 4 part 2	Schedule 4 part 2
Construction and maintenance of new or altered highways	Schedule 4 part 3	Schedule 4 part 3
Highways : Tables relevant to Part 2 of Schedule 4	Schedule 4 part 4.	Schedule 5
Road mud control measures, approvals for routes for Large Goods Vehicles	Schedule 17 part 1	Schedule 17 part 1
Street works (and permit schemes)	Schedule 24	Schedule 24
Traffic regulation (orders and vehicle removals)	Schedule 25	Schedule 30
Lorries (Lorry ban orders)	Schedule 26	Schedule 25
Protective provisions for highways and traffic	Schedule 33 part 1	Schedule 32 part 1

*schedule 4 is used for any temporary interference submissions

3.2.1.2. How these provisions of the Phase One Act and Phase 2a Act will be put into effect for the construction of HS2 is set out within this RTMP for consultation and operational matters may be subject to further discussion with the highway authorities along the HS2 route through their respective Highways Sub Groups.

3.2.2 Information Papers

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

Table 3.2: Information Papers

	Phase one Act	Phase 2a Act
Maintaining access to residential and commercial properties during construction	D11	D10
The Control of Environmental Effects	E1	E1
Roads and Public Rights of Way	E5	E5
Management of traffic during construction;	E13	E3
Highways and traffic during construction: legislative provisions;	E14	E4
Future Highway Maintenance Responsibilities	E29	E7
Vehicle flow management and safety requirements during construction	E30	E8
Air Quality	E31	E14
Main Provision of the Planning Regime	B1	B2
Local Authority Funding and New Burdens	C13	C12

3.2.2.2. Commitments within the information papers are included in the Register of Undertakings and Assurances, as appropriate. Certain requirements in the Information Paper concerning Vehicle Flow Management and Safety Requirements During Construction will fully applies from commencement of main civil works (e.g. use of electronic booking management system).

3.2.2.3. This Route-wide TMP is consistent with these information papers and any assurances or undertakings derived from them.

3.2.3 Project Environmental Minimum Requirements (EMRs)

3.2.3.1. The HS2 EMRs comprise The General Principles document and four annexes, including the Code of Construction Practice.

3.2.3.2. The General Principles document sets out that:

- a. It is the intention of the Secretary of State to carry out the project so that its impact is as assessed in the ES.
- b. The Secretary of State will require the nominated undertaker to adhere to the arrangements provided for in the Environmental Minimum Requirements (EMRs) in designing and constructing the High Speed Two Works; and
- c. The controls contained in the EMRs, along with powers contained in the relevant Phase One Act or Phase 2a Act and the Undertakings given by the Secretary of State, will ensure that impacts which have been assessed in the ES will not be exceeded unless it:
 - i. results from a change in circumstances which was not likely at the time of the ES; or,
 - ii. would not be likely to be environmentally significant; or,
 - iii. results from a change or extension to the project, where that change or extension does not itself require environmental impact assessment (EIA); or,
 - iv. would be considered as part of a separate consent process (and therefore further EIA if required)

3.2.4 **Environmental Statement**

3.2.4.1. The project has set out within the Environmental Statements (ES) the criteria for determining the impacts on transport during the construction of HS2 Phase One and Phase 2a. The ES established where there are expected to be significant adverse effects based on reasonable assumptions related to matters such as construction traffic generation and temporary changes to road networks.

3.2.4.2. The criteria for determining impacts and the assessed impacts can be found in the following documents:

Table 3.3: Transport Assessments

	Scope and methodology report	Transport assessment reports
Phase One	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/260116/HS2_London_to_West_Midlands_EIA_Scope_Methodology_Report_revised_0.pdf	https://www.gov.uk/government/publications/hs2-phase-one-environmental-statement-volume-5-traffic-and-transport
Phase 2a	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/627187/E23_EIA_SMR_CT-001-001_WEB.pdf	https://www.gov.uk/government/publications/hs2-phase-2a-environmental-statement-volume-5-traffic-and-transport

3.2.4.3. The processes set out in this RTMP seek to ensure that no new significant adverse effects arise in relation to traffic and highway matters, as set out in the General Principles document and as assessed in the Environmental Statement.

3.2.5 Undertakings and Assurances (U&As)

3.2.5.1. The passage of the HS2 Phase one Act and Phase 2a Act through Parliament resulted in numerous petitions. 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.

3.2.5.2. As appropriate, area-wide Undertakings and assurances may be managed, as far as they concern traffic matters during construction within:

- a. The Route-wide Traffic Management Plan, where the U&A requires specific operational route-wide requirements to be established, particularly those derived from Information Papers; and
- b. Local Traffic Management Plans or site specific submission related to local matters, which will be generally managed by relevant Principal contractors.

3.2.6 Local Environmental Management Plans

3.2.6.1. Local Environmental Management Plans (LEMPs) outlines matters such as local or site-specific control measures and local sensitive receptors that will need to be taken into account during the construction phase.

3.2.6.2. LEMPs will include a chapter on traffic and transport and will be appropriately developed within the LTMPs.

3.2.6.3. LEMPs will be developed and engaged on in accordance with the requirements set out in the CoCP.

3.3 Contractor transport deliverables

3.3.1 Principal Contractors will be required to produce and implement the following plans and submissions, in accordance with this RTMP:

Table 3.4: Indicative contractor deliverables

Plan	For	Contractors
Local Traffic Management Plans (LTMPs)	Consultation with highway authorities and others as described in the CoCP, prior to commencement of works and following updates (or addenda)	All. For Main Civils, Stations and Rail Systems contractors a lead contractor will take responsibility for ensuring that there is a single LTMP covering the relevant geographic area.
Route Management, Improvement and Safety Plans (RoMIS)	For pre-application discussion with the relevant highway authority for Schedule 17 lorry route applications	EWCs: prepare a ROMIS statement (which can be included within the LTMP or written statement) if any physical works to highways are required. MWCCs and following principal contractors prepare full ROMIS Plans
Highway Condition, Maintenance and Cleansing Management Plan (HCMCM)	HS2 review	EWCs if the scale and scope of works require. MWCCs and following principals contractors
Logistics Environment, Sustainability and Safety Management Plan (ESSMP)	HS2 review	All Principal Contractors
Highway Works Programme and Submissions	Consultation at TLG meetings. 1 st copy in Local TMPs, as relevant.	All Principal Contractors working on, or altering highways
Interim and First Workforce Travel Plans and Monitoring Reports	Engagement	EWCs - included within LTMP MWCCs and following principal contractors
Other certificates and notices related to highway works and streetworks	Notice to the highway authority	All
Other Logistics plans	HS2 review	EWCs if the scale and scope of works require.

Plan	For	Contractors
		MWCCs and following principal contractors

3.3.2 The indicative requirement for preparation of the document deliverables (for Phase One Main Works Civil Contracts onwards) are:

- a. LTMPs - draft complete at least 32 weeks prior to notice to proceed (or any lesser periods agreed with The Nominated Undertaker)
- b. ROMIS – draft prepared at least 32 weeks prior to earliest 1st access date
- c. HCMCMs - draft prepared 20 weeks prior to notice to proceed; and
- d. ESSMPs - draft complete at least 32 weeks prior to notice to proceed (unless instructed by The Nominated Undertaker)

3.3.3 Travel plan statements will be produced within Enabling/Advanced works local TMPs. For main civils and station works contractors, travel plans are required to be prepared a follows:

- a. Interim Travel Plan (for MWCC and Station contractors) - draft complete at least 20 weeks prior to commencement of works; and
- b. First Travel Plan - prepared 8 weeks following acceptance by HS2 of the first travel survey report. This may be up to 52 weeks following commencement of work and following a 4 week period to complete the travel survey report. The periods between submission and acceptance of the travel survey report is not defined.

3.3.4 Periods set out in 3.3.2 and 3.3.3 above may be varied with the agreement of the Nominated Undertaker and following discussion with the relevant highway authorities, or as appropriate via the Highways Sub Group to the Planning Forum.

3.3.5 Principal contractors who are engaged on works prior to commencement of Main Civils Works are required to prepare Local Traffic Management Plans and other appropriate plans, as the scope of work requires and in accordance with an agreed programme.

3.3.6 The Principal Contractors will be responsible for identifying all consents or approvals required to be obtained in advance of works, programming of consents or approvals

and for the preparation of all materials required for consents or approvals in accordance with this RTMP.

3.3.7 All documentation and plans described in this RTMP which are required to be submitted to Highway authorities will be reviewed as appropriate by The Nominated Undertaker, to facilitate:

- a. Contractor compliance with the Act, CoCP and other project Environmental Minimum Requirements;
- b. Contractor compliance with all necessary standards, this document, other relevant documentation and undertakings and assurances;
- c. A consistency of approach to the delivery of High Speed 2, where appropriate; and
- d. Appropriate acceptance of submissions made under Schedule 4 of the HS2 Phase One Act or Phase 2a Act (as set out in Chapter 7).

3.3.8 Where consultation is required on schedule 4 temporary interference submissions, this will be undertaken, as appropriate for the scale and scope of the work, through Local Traffic Liaison Group meetings (see section 3.6)

3.4 Contractor logistics deliverables

3.4.1 Logistics plans will be developed by Principal Contractors covering such matters as use of water and rail and site management, where appropriate.

3.4.2 Construction road vehicle volumes are created by mass haul, bulk material movements and other logistics processes. Principal Contractors will be required to follow the appropriate logistics planning processes and develop:

- a. an Excavated Material Plan;
- b. a Construction Logistics Strategy (CLS); and,
- c. appropriate site Construction Logistics Plans (CLPs).

3.4.3 The indicative contents for these documents are set out in Appendix B.

3.5 Local Traffic Management Plans

3.5.1 Purpose

- 3.5.1.1. Local Traffic Management Plans (LTMPs) will set out the Principal contractor’s intention as to how the project will be delivered within the relevant geographical area and how the project delivery will be managed in relation to matters such as those listed in 3.4.4 below, as appropriate and commensurate with the scale and scope of the works.
- 3.5.1.2. An LTMP is required to be in place - i.e. already subject to consultation – prior to start of works authorised by the relevant Act.
- 3.5.1.3. LTMPs should confirm, through an appropriate statement of compliance, that no new significant adverse effects are forecast to arise beyond those recorded in the Environmental Statement.
- 3.5.1.4. The LTMP may be amended, (or by addenda or supplements) should the Principal contractor significantly change the assumptions contained in the LTMP and in such cases, consulted on through the relevant Local Traffic Liaison Group meeting.

3.5.2 Versions of LTMPs

- 3.5.2.1. Various versions of LTMPs may require to be prepared by Principal Contractors. Generically these may be:

Table 3.5: Generic versions of LTMPs

Generic sequence of LTMPs	Scope	By	Traffic flows	Lorry routes
HS2 draft	Generic, based on the Environmental Statement for use by contractors	HS2	Environmental Statement (as baseline)	Environmental Statement (as baseline)
Enabling/ Advanced works (which may include early GI, utilities and other works)	Developed for an area or for each package. Where packages are in close proximity, then the package LTMPs may be incorporated as appendices to one area document.	Enabling /Advanced works contractor	Enabling/Advanced works contractor forecasts, as reasonably required according to the scope.	Enabling/Advanced works required routes, if any.

Generic sequence of LTMPs	Scope	By	Traffic flows	Lorry routes
Main Civil works	Main civil works and any other remaining Enabling/Advanced works scope	Main Civil works contractor	Main civil works contractor forecasts (and any other remaining Enabling/Advanced works requirements)	Main civil works contractor required routes
Station civil works (where applicable)	Station civil works and any other remaining Main civil works scope	Station Civil works contractor	Station civil works contractor forecasts (and any other remaining Main works requirements)	Station civil works contractor required routes
On-network works (where applicable)	On-network works and any other remaining Main civils works/Station civils scope	On-network works contractor	On-network contractor forecasts (and any other remaining Main works or Station works requirements)	On-network works contractor required routes

3.5.2.2. Local TMPs should reasonably identify all relevant local area constraints and requirements set out in the ES, CoCP, LEMPs and U&As.

3.5.3 Areas for LTMPs

3.5.3.1. Proposals for the geographical areas that LTMPs cover will be consulted on through the relevant Highways Sub Group to the Planning Forum. This will include discussion on how the Phase One LTMP for Staffordshire will be merged with the later development of the LTMP for Phase 2a.

3.5.4 Indicative Structure and Contents

General requirements

3.5.4.1. The CoCP sets out that Local TMPs include details of the following, where appropriate:

- a. permitted access routes and accesses for construction traffic;
- b. site boundaries and the main access/egress points for worksites and compounds;
- c. temporary and permanent closures and diversions of highways and other PRoW;

- d. 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;
- e. phasing of works;
- f. the proposed traffic management strategy;
- g. other measures which will affect the highway, such as lorry holding areas;
- h. 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
- i. a register of applications for consents associated with temporary traffic management measures.

3.5.4.2. In relation to lorry management, LTMPs will include details of the following, where appropriate:

- a. timing of site operations and timing of traffic movements;
- b. local routes to be used by lorries generated by construction activity;
- c. lorry holding areas;
- d. lorry holding areas; and
- e. 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.

3.5.4.3. The indicative contents of LTMPs in the CoCP have been developed and are set out in Appendix C of the RTMP. These contents will be tailored to the geographical area and scope which LTMPs cover. The scope of LTMPs for site specific ground investigation or Enabling/Advanced works prior to main civils works will be limited to only directly relevant matters, but may require a covering LTMP to consider the

cumulative scope of works within an authority area. Indicative requirements are included in Appendix C.

- 3.5.4.4. Local TMPs may identify the areas of the highway authorities, contract boundaries, CFA report boundaries etc.
- 3.5.4.5. The contents of LTMPs (from MWCC LTMPs onwards) will include a register of any related 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.

Temporary traffic management and changes to road networks

- 3.5.4.6. The contents of LTMPs will include, as appropriate:
 - a. major changes to the road network such as road closures or major works lasting more than 4 weeks, and the expected dates when they are planned to occur
 - b. a register of any related 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; and
 - c. an initial programme of temporary traffic management, which will be continuously updated and shared with highway authorities and key stakeholders at TLG meetings. Paper programmes for temporary interference submissions should be replaced by use of the Forward Plan function in Street Manager
- 3.5.4.7. Measures affecting the SRN and Strategic Routes will be included within the relevant LTMPs.

Lorry routes and flow assumptions

- 3.5.4.8. Local TMPs should indicate any proposed lorry route which are intended to be taken forward for approval under the relevant planning regime within the Phase One Act or Phase 2a Act.
- 3.5.4.9. Contractors should provide any available and firm flow forecasts to and from relevant compounds for the peak construction period for the AM and PM peaks and all day flows as set out in the Environmental Statement. LTMPs may replicate flow

assumptions set out in the Environmental Statement but in such cases Principal Contractors will need to provide updated flow assumptions, consistent with those shown in the Environmental Statement when available.

- 3.5.4.10. In this regard, Principal Contractors need to comply with the requirements set out in Planning Forum Note 6 to ensure that close collaboration and co-operation between HS2 and its contractors and local authorities will be required to develop effective LTMPs which set out any measures related to the management and control of Large Goods Vehicles.

Access to compounds via narrow roads through small local communities

- 3.5.4.11. Where local TMPs are being prepared or updated, consideration needs to be given to the use of narrow local rural roads (C class and below) through village communities. LTMPs must set out controls on use of roads, timing of movements and other relevant matters following appropriate community engagement. As necessary, these need to be updated when Local TMPs are revised and consulted on via Local TLG meetings.

Requirements for maintaining accessibility

- 3.5.4.12. In developing Local TMPs, and site-specific traffic management submissions in accordance with Chapter 7 of this RTMP (as the scale and scope of works requires), the Principal Contractor will need to ensure that accessibility and connectivity is maintained in accordance with Information Paper E5 (Roads and Public Rights of Way):
- a. Where reasonably practicable, maintain existing pedestrian, cycle and public transport links between communities and their local facilities, amenities and countryside.
 - b. Where a temporary or permanent realignment or diversion of a public right of way is unavoidable, the shortest practicable route will normally be adopted. In a few cases, users will be redirected using a reasonably convenient alternative route to a nearby public right of way or road, if suitable for non-motorised users prior to closure, with appropriate signing. Temporary arrangements required during construction will remain in place until the public right of way is either re-established or a permanent diversion or realignment is constructed. Public rights of way will also be re-established where 'cut and cover' tunnelling techniques are used.

- c. Where several nearby public rights of way are affected during construction, any temporary closures will be phased, where reasonably practicable, to help maintain public access.
- d. Where bus routes are affected by temporary road closures during construction, a diversionary route and (where necessary) temporary bus stops will be identified. In a few cases, there may be permanent changes to bus routes the nominated undertaker will work with local authorities and transport operators to develop suitable alternative arrangements.
- e. In the case of other bus services provided by local authorities under statutory and policy based obligations, such as home to school transport and adult social care services, these may also be subject to temporary diversion and to some delay. The nominated undertaker will discuss any potential implications arising during construction with the relevant local authorities during preparation of local traffic management plans and again in advance of works taking place in those locations; and
- f. During the construction phase, meeting the needs for cyclists and other vulnerable road users will be a key consideration when plans are prepared for road closures or other works in the highway that could disrupt existing routes.

Construction impacts

- 3.5.4.13. No new information will be provided in LTMPs on construction traffic impacts on the local road network due to construction traffic flows or traffic management assumption unless the principal contractor assumptions are significantly different to those in the ES and may result in a new significant adverse effect. In these cases principal contractors are required to ensure that their revised arrangements (and in collaboration with adjoining principal contractors, as appropriate) create no new significant adverse effects will be in accordance with the criteria and methodology set out within the ES. This will include traffic-related air quality and noise.
- 3.5.4.14. For more information regarding traffic modelling requirements, see 7.8.2.
- 3.5.4.15. In addition to lorry route approvals and flow numbers contained within LTMPs, controls on the environmental effects of vehicles movements on the highway will also need to comply with the General Principles document and, or where appropriate, relevant Undertakings and Assurances

3.5.5 **Updating LTMPs**

3.5.5.1. Any significant changes to the assumption with regard to the changes to the road network during construction, or revised forecasting of construction traffic will need to be included within updates to LTMPs. These may be appropriately addressed in supplements or addenda, if appropriate.

3.5.6 **Consultation**

3.5.6.1. Local TMPs are consulted on with the relevant Local Traffic Liaison Group meeting attendees.

3.5.6.2. If the highway authority considers that wider consultation or engagement on draft Local TMPs is required, then they are free to undertake this and provide the views of others as a part of their response, within an appropriate consultation timeframe.

3.6 **Strategic Liaison**

3.6.1 The CoCP requires that The Nominated Undertaker 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 the following sections.

3.6.2 **Planning Forum**

3.6.2.1. The HS2 Phase One Planning Forum was established in May 2013 in advance of the submission of the HS2 Act, and has been meeting regularly since then.

3.6.2.2. The HS2 Phase 2a Planning Forum has been established.

3.6.2.3. These Forums 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.

3.6.2.4. The focus of discussions during passage of the HS2 Phase one Act and the HS2 Phase 2a Act through Parliament has been the proposed planning regime set out in the relevant Act and associated documents, including the Environmental Minimum Requirements (EMRs).

3.6.3 Highways Sub-Group to the Planning Forum

- 3.6.3.1. A Highways Sub-Group to the Planning Forum has been established for both Phase One and Phase 2a. These have been established to:
- a. facilitate engagement between members of the sub-group on matters related to highway authority roads and public rights of way;
 - b. seek agreement on a common approach to route-wide principles, standards, practices and processes associated with highway consents and approvals;
 - c. present recommendations on highway-related planning approvals to the Planning Forum;
 - d. to identify and discuss areas of common interest and concern to local highways authorities along the whole line of route; and
 - e. to progress matters as raised and directed by the Select Committee.
- 3.6.3.2. It is not the purpose of the Highways Subgroup to discuss location specific issues and mitigation, which will be considered through local meetings.
- 3.6.3.3. The attendance of the Sub Group is primarily HS2 and highway authority representatives, comprising:
- a. Strategic transport authorities, as appropriate such as Transport for London (for strategic routes in London)
 - b. London Boroughs
 - c. County Councils
 - d. Unitary Authorities; and
 - e. Highways England
- 3.6.3.4. 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 through bilateral meetings.

- 3.6.3.5. For Phase 2a, Parishes attend an annual special meeting of the Highways Sub Group.

3.7 Local liaison meetings

Establishment

- 3.7.1.1. In accordance with the HS2 Phase One CoCP and Phase 2a CoCP, regular local Traffic Liaison Group (TLG) meetings are required to be established with local highway authorities along the line of route. These meetings enable matters such as local traffic management proposals and their programming can be reviewed prior to submission for consultation, consent or approval and the implementation of schemes reviewed and other monitoring reported, along with other matters of interest discussed and co-ordinated.
- 3.7.1.2. The geographic areas for Phase One TLGs and initial terms of reference including attendance and initial frequency of TLG meetings were discussed with the Highways Sub Group to the Planning Forum.
- 3.7.1.3. TLG meetings have been established for Phase 2a, following review of the Phase One TLG terms of reference.
- 3.7.1.4. Once established, TLGs may consider revised areas, revised terms of reference, attendance and frequency of meetings, with the agreement of the participants.

Terms of reference

- 3.7.1.5. Terms of reference for local TLG meetings for Phase One are set out in Appendix D. These have formed the basis of terms of reference for Phase 2a.
- 3.7.1.6. The key objectives of the TLG meetings are to:
- a. enable consultation on the temporary traffic management programme and submissions;
 - b. enable the highway authority to carry out its obligations to ensure there is a co-ordinated approach to traffic management in their area;

- c. ensure that local authorities, emergency services and bus operators are aware of programmed construction activities that could have an impact on the local and SRN or other strategic routes;
- d. deal with relevant construction traffic issues; and
- e. oversee workforce travel management, unless a subgroup is established.

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

3.7.1.8. To ensure effectiveness attendance at meetings will be limited to:

- a. The highway authority manager who has the remit to manage HS2 issues and approve submissions, where highway consent or approval is required (and where necessary their counterparts from Transport for London, Highways England and Transport for West Midlands respectively);
- b. A person within the 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);
- c. A person within the highway authority responsible for highway management/maintenance;
- d. A representative of the local traffic police, who would liaise with other emergency services, unless they are separately represented;
- e. A representative of bus operators, such as a local authority manager for bus services;
- f. HS2 Area Traffic Manager and, as necessary, HS2's Head of Transport Management;
- g. As necessary, Principal Contractor(s) and/or consultants for agenda-specific items;
- h. HS2 community liaison, particularly to review where scheme notification will be required; and

- i. Other such relevant persons agreed by the members of the TLG may attend for one or more meetings as consultees

3.7.1.9. As necessary, HS2 will assist highway authority managers in preparation of member briefings, responses to questions and attend Committee meetings etc.

3.7.1.10. In addition to the regular TLG meetings ad hoc scheme-specific consultation meetings or pre-submission discussions will be required during development of proposals prior to review at TLG or, as necessary, submission. This may include attendance from highway authority specialists such as cycle and pedestrian planners, taxi licencing, parking managers, lighting engineers, drainage engineers, signals specialists and structural engineers. Actions arising should be reported back to the relevant Local TLG meeting as appropriate.

3.7.2 **Area-wide co-ordination**

3.7.2.1. Separate meetings may be established to cover the West Midlands area or where other significant projects overlap with HS2 activities, to enable the highway authorities to co-ordinate works and other activities. HS2 will attend these meetings where reasonably requested to do so.

3.7.2.2. Further network co-ordination meetings may be established between Highways England and HS2 to assist with the programming of activities on the motorway and trunk road networks. These discussions may be through HS2 joining already established meetings.

3.7.3 **NRSWA meetings**

3.7.3.1. 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.

3.7.3.2. HS2 or contractors will attend highway authority's NRSWA meetings as reasonably requested by the highway authority and provide available advanced programmes, to enable co-ordination of works and so that conflicts can be identified and appropriately managed by the highway authority.

3.7.4 **Community meetings and information**

3.7.4.1. General community relations will be subject to the provisions of the CoCP which identifies that regular meetings will be held at Community locations between the Principal Contractor, The Nominated Undertaker, local authority and representatives of the local community or other stakeholders to discuss construction issues and the forthcoming programme of works. Where practicable, new forward information on works which are expected to significantly affect traffic and highways, such as road closures, will be provided on HS2 websites. Submissions for temporary interference will also be made available via Street Manager to public portals such as One.Network.

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

3.8 **Other forums**

3.8.1 Based on experience of other projects other topic-specific transport-related forums may be required. Examples are:

- a. TLG sub Groups
- b. Other route-wide and/or sub regional groups
- c. Travel Plan meetings (which may be sub groups of Traffic Liaison Meetings);
- d. Construction safety and regulatory meetings with transport groups and other representatives; and
- e. Emergency Services Liaison meetings.

3.8.2 **Construction Safety and Regulatory Meetings**

3.8.2.1. HS2 is regularly engaging with a variety of groups, including the CLOCS working group, FORS, industry representative such as Freight Transport Association and Road Haulage Association, Driver and Vehicle Agencies, Universities and other parties concerning vehicle and driver safety and regulatory issues and which enables HS2 to be kept up-to-date with emerging issues and opportunities.

3.8.2.2. If appropriate, meetings will be held by the Nominated Undertaker with the regulatory bodies, to explore issues associated with vehicle and driver safety, legal compliance and other related issues. These meetings may involve representatives of the Traffic Police, HSE, DVSA, Traffic Commissioners as well as principal contractor representatives. The meetings may co-opt others as necessary or invite other key stakeholders to one or more meetings to discuss specific issues, such as representatives of vulnerable road user groups, at a national level. An objective would be to monitor issues and, as necessary, recommend best practice as far as is relevant to the project.

3.8.3 Emergency services liaison management

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

3.8.3.2. The emergency service organisations along the HS2 Phase One and 2a route are set out as follows (table 3.2). The British Transport Police is the lead Policing authority for HS2:

Table 3.6: Emergency Services

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		
	Berkshire		
Northamptonshire	Northamptonshire	East Midlands	Warwickshire and Northamptonshire
Warwickshire	Warwickshire	Midlands	Midlands
West Midlands	West Midlands		
Staffordshire	Staffordshire		
Cheshire	Cheshire	North West	North West

3.8.3.3. Strategic level discussions have been held with the Phase One Police, Fire Services and Ambulance Trusts regarding the strategy of signing of construction sites and RVP points for emergency services as well as access protocols. Discussions have also

been held with the Association of Air Ambulances. Discussions will be held with the Cheshire authorities for Phase 2a.

Local liaison

- 3.8.3.4. The Emergency Services hold Resilience Forums with relevant stakeholders to plan and manage for significant issues within their relevant areas. Along the line of route an HS2 sub group is being established which will sit under each of the relevant Resilience Forums. These sub groups are likely to meet approximately quarterly.
- 3.8.3.5. Under these regional sub groups, local liaison meetings are being established between Principal contractors and the emergency services.
- 3.8.3.6. It would be expected that regular local emergency services liaison will be undertaken throughout the construction period, so that emergency services can be consulted on:
- a. Significant road schemes which may impact on response and access;
 - b. Schedule of access points, locations, Grid References and internal Rendezvous Points (RVPs) which would be available for emergency service use (and any signing or postcoding updates);
 - c. 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); and
 - d. Other impacts such as movement of abnormal loads, temporary road closures for construction works
- 3.8.3.7. HS2 will review how to provide suitable information via the Resilience Direct website.
- 3.8.3.8. Protocols for access arrangements will be developed such as:
- a. Arrangements for calling the emergency services within the construction sites;
 - b. Access arrangements at the site access points;
 - c. Wayfinding within the construction sites;
 - d. Provision of RVP points within construction sites; an

- e. Provision of information packs at site access points

3.9 New Burdens

- 3.9.1 Information Paper Local Authority Funding and New Burdens arising from HS2 (C13 for Phase One and C12 for Phase 2a) includes Table 1 which sets out the scope of HS2-related activities for which highway authorities will be funded through service level agreements or funding agreements.
- 3.9.2 Contractors pay fees as appropriate for other services, such as planning applications or Traffic Regulation Orders.

3.10 General Complaint handling

- 3.10.1 The HS2 Public Response team is responsible for handling all enquiries and complaints about HS2 as well as requests for information under legislation. These fall into three broad categories:
 - a. Public enquiries made via telephone, email and post to a dedicated Helpdesk.
 - b. Requests for information made under the Freedom of Information Act and Environmental Information Regulations legislation; and
 - c. Any complaint about service provided by HS2 Ltd, its staff or contractors which cannot be resolved locally within the service.
- 3.10.2 The public can contact HS2 for free by two Freephone numbers. Calls are managed by HS2's Helpdesk team. All communication should be via the Helpdesk, so that issues and incidents are logged and appropriately managed.

3.11 Traffic Advice Notes

- 3.11.1 Traffic Advice Notes (TANs) will be prepared by The Nominated Undertaker for issue to Principal Contractors to:
 - a. provide or recommend processes and procedures to be adopted by the Principal Contractor which are not fully developed within the Route-wide Traffic Management Plan; and
 - b. Provide advice and recommendations on how updates to the RTMP should be implemented, new legislative requirements should be adopted or changing

requirements such as measures which improve vehicle safety above the legal minimum requirements as standards are changed.

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

4 Traffic flow management

4.1 Scope

4.1.1 The scope of this Chapter covers the following:

- a. Development of lorry routes for approval
- b. Implement vehicle management, flow monitoring using Vehicle Booking Systems, assurance and reporting; and
- c. Establish vehicle identification

4.1.2 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:

- a. site access point(s) for vehicles and pedestrians;
- b. site plazas and access to parking, welfare and other facilities (the construction facilities);
- c. haul roads, which connects the construction facilities and associated remote welfare facilities and the construction zones along the route of Phase One and Phase 2a of HS2.

4.1.3 **Relevant Route-wide Requirements**

Code of Construction Practice

4.1.3.1. The requirements for management of construction vehicle on a route-wide basis to be included within the RTMP, as appropriate, are:

- a. monitoring requirements;
- b. means of monitoring lorry use and any routes prohibited from use;
- c. dealing with large goods vehicles and abnormal loads;

- d. clear identification for construction heavy goods vehicles under the Principal Contractors' control;
- e. introduction of a GPS vehicle location and tracking system for tipper lorries within the Principal 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; and
- f. monitoring for deviation from authorised routes;

Undertakings and Assurances

- 4.1.3.2. 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 these U&As are being complied with and that monitoring of deviation from authorised routes is undertaken appropriately.

4.2 General requirements for vehicle and driver management

- 4.2.1 The requirements within this Chapter will apply as shown in Table 4.1:

Table 4.1: Application of driver and vehicle management requirements

Construction traffic	External roads	Site access points and haul routes
Construction vehicles over 7.5t	<p>Required to follow approved lorry routes (for flows forecast to be more the 24 per day to or from a site).</p> <p>Required to avoid specific routes in accordance with Undertakings and Assurances.</p> <p>Required to follow driver and safety requirements (as set out in the RTMP) Principal contractors required to have fleet management quality plan</p>	Rules within this chapter or as signed by The Nominated Undertaker or by the Principal Contractor
Construction vehicles over 3.5t and under 7.5t	<p>Required to avoid specific routes in accordance with Undertakings and Assurances.</p> <p>Required to follow driver and safety requirements (as set out in the RTMP)</p> <p>Principal contractors required to have fleet management quality plan</p>	Rules within this chapter or as signed by The Nominated Undertaker or by the Principal Contractor
Construction vehicles under 3.5t	Required to avoid specific routes in accordance with Undertakings and Assurances	Rules within this chapter or as signed by The Nominated Undertaker or by the Principal Contractor
The Nominated Undertaker employees in works vehicles, being used for work purposes	Required to avoid specific routes in accordance with Undertakings and Assurances.	Rules within this chapter or as signed by The Nominated Undertaker 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, other than EMR compliance	Rules within this chapter or as signed by The Nominated Undertaker or by the Principal Contractor

Construction traffic	External roads	Site access points and haul routes
Site visitors of the Principal Contractor or The Nominated Undertaker, including employees attending for project/site inductions	No controls, other than EMR compliance	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

4.2.1.1. The requirements of the General Principles document that no new significant adverse effects arise during construction beyond those reported in the Environmental Statement will apply.

4.2.1.2. Where contractors consider it appropriate to manage a specific U&A or resolve local issues, signing of “No HS2 works traffic” can be provided but should be worded appropriately to include “over 3.5t or “over 7.5t” and “except for local access” as appropriate. If the signing is not related to a U&A the signing will not be enforceable by the Nominated Undertaker.

4.3 Approvals

4.3.1 The following approval requirements are relevant to this Chapter:

4.3.2 Lorry routes

Table 4.2: Legislative provisions – lorry routes

	Phase One – Schedule 17	Phase 2a – Schedule 17
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,</p> <p>(b) a site where it will be re-used, or</p>	<p>(1) Where—</p> <p>(a) the relevant planning authority is a qualifying authority, and</p> <p>(b) development consists of the use of an authorised site,</p> <p>arrangements relating to the routes by which anything is to be transported to the site on a highway by a large goods vehicle must be approved by the relevant planning authority.</p>

	Phase One – Schedule 17	Phase 2a – Schedule 17
	<p>(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</p> <p>(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>(5) The relevant planning authority may only refuse to approve arrangements for the purposes of this paragraph on the ground that—</p> <p>(a) the arrangements relate to development which, for the purposes of regulating the matter in question, ought to and can reasonably be considered in conjunction with development which has deemed planning permission under section 19(1) and which is to be carried out in the authority’s area, or</p> <p>(b) the arrangements ought to be modified—</p> <p>(i) to preserve the local environment or local amenity,</p> <p>(ii) to prevent or reduce prejudicial effects on road safety or on the free flow of traffic in the local area, or</p> <p>(iii) to preserve a site of archaeological or historic interest or nature conservation value, and are reasonably capable of being so modified.</p> <p>(6) The relevant planning authority may only impose conditions on approval for the purposes of this paragraph—</p> <p>(a) with the agreement of the nominated undertaker, and</p> <p>(b) on the ground referred to in sub-paragraph (5)(b).</p>	<p>(2) In this paragraph, “authorised site” means -</p> <p>(a) a working or storage site,</p> <p>(b) a site where anything transported to the site will be re-used, or</p> <p>(c) a waste disposal site.</p> <p>(3) Where a route to an authorised site includes a special road or trunk road, sub-paragraph (1) requires arrangements to be approved only in relation to transportation on so much of the route as lies between (but does not include) the site and—</p> <p>(a) the special road or trunk road, or</p> <p>(b) where the route includes more than one special road or trunk road, the last such road before reaching the site.</p> <p>(4) 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>(5) The relevant planning authority may only refuse to approve arrangements for the purposes of this paragraph on the ground that—</p> <p>(a) the arrangements relate to development which, for the purposes of regulating the matter in question, ought to and can reasonably be considered in conjunction with development which has deemed planning permission under section 17(1) and which is to be carried out in the authority’s area, or</p> <p>(b) the arrangements ought to be modified—</p> <p>(i) to preserve the local environment or local amenity,</p> <p>(ii) to prevent or reduce prejudicial effects on road safety or on the free flow of traffic in the local area, or</p> <p>(iii) to preserve a site of archaeological or historic interest or nature conservation value,</p>

	Phase One – Schedule 17	Phase 2a – Schedule 17
	<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>	<p>and are reasonably capable of being so modified.</p> <p>(6) The relevant planning authority may only impose conditions on approval for the purposes of this paragraph—</p> <p>(a) with the agreement of the nominated undertaker, and</p> <p>(b) on the ground referred to in sub-paragraph (5)(b).</p> <p>(7) Sub-paragraph (1) does not require arrangements in relation to transportation to an authorised site where the number of large goods vehicle movements (whether to or from the site) does not on any day exceed 24.</p> <p>(9) 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 meaning as in the Highways Act 1980.</p>
When	<p>Approval will need to be given prior to use of a site, 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, for example. (a) for specific routes to be used by Enabling/Advanced works contractors (b) for all routes set out in the ES for Main Civil works (b) for any other routes required to be used by main civils works, station works and rail systems works</p>	
Who obtains approval	<p>Principal Contractors are responsible for obtaining necessary consents.</p>	
Submission package	<p>For approval</p> <ul style="list-style-type: none"> • A list of roads (or a plan) for approval (the main route(s)) • A requirement for suppliers/businesses located between the special/trunk road network and the HS2 site to use the most appropriate route from the supplier/business site to the main route(s). The most appropriate routes will be discussed at the relevant Traffic Liaison Group. <p>For Information</p> <ul style="list-style-type: none"> • A covering letter (including a definition of the works to which the proposed routes relate) • A plan showing the routes (if not submitted for approval). • A written statement which will:- <ul style="list-style-type: none"> i) Describes the sites ii) Describes the works at each site; and 	

	Phase One – Schedule 17	Phase 2a – Schedule 17
	<p>iii) Provides a summary of the lorry route information from the Local Traffic Management Plan which will include predicted LGV numbers and timings.</p> <ul style="list-style-type: none"> For MWCC submissions, a Route Management, Improvement and Safety Plan (ROMIS) which will be submitted for information alongside lorry routes approvals submission prior to the commencement of main civils works. The contents of the ROMIS will be as per section 4.3 of the Route Wide Traffic Management Plan. The ROMIS will include: <ul style="list-style-type: none"> a) a summary of any physical changes necessary to facilitate the use of the route by LGVs; and b) a summary of measures required to ensure the safety and free flow of traffic in the proximity of the worksite access points 	
Disputes	Appeal process as outlined in Schedule 17	
Other	<p>Undertakings and Assurances may need to be completed prior to commencement of the use of a route, such as temporary junction schemes or safety measures which are required to be implemented (or reasonable endeavours to do so) 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 traffic impacts unless stipulated by an assurance</p>	

* for the purpose of the RTMP, this should read construction site

4.3.3 Lorry ban order (disapplication)

Table 4.3: Legislative provisions – lorry ban orders

	Phase One – schedule 26	Phase 2a – schedule 25
Requirement	<p>1 (1) In this Schedule “lorry ban order” means—</p> <p>(a) the Greater London (Restriction of Goods Vehicles) Traffic Order 1985, or</p> <p>(b) any other order made at any time under section 1 or 6 of the Road Traffic Regulation Act 1984 which to any extent imposes —</p> <p>(i) a prohibition or restriction on the use of heavy commercial vehicles, or any class of</p>	<p>In this Schedule, “lorry ban order” means an order made at any time under section 1, 9 or 14 of the Road Traffic Regulation Act 1984 which to any extent imposes—</p> <p>(a) a prohibition or restriction on the use of heavy commercial vehicles, or any class of such vehicles, in an area,</p>

	Phase One – schedule 26	Phase 2a – schedule 25
	<p>such vehicles, in an area, zone or place, or on a road, specified in the order, or</p> <p>(ii) a requirement that heavy commercial vehicles, or any class of such vehicles, use a specified through route.</p> <p>If a lorry ban order ... does not contain the required provision, it is to be treated as if it did.</p> <p>(2) The required provision is provision to the effect that—</p> <p>(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</p> <p>(b) the use authorised by such a permit does not constitute a breach of the prohibition, restriction or requirement.</p>	<p>zone or place, or on a road, specified in the order, or</p> <p>(b) a requirement that heavy commercial vehicles, or any class of such vehicles, use a specified through route.</p> <p>Required provision in lorry ban orders</p> <p>(1) If a lorry ban order does not contain the required provision, it is to be treated as if it did.</p> <p>(2) The required provision is provision to the effect that—</p> <p>(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) may apply for the issue of a permit in respect of that use, and</p> <p>(b) the use authorised by such a permit does not constitute a breach of the prohibition, restriction or requirement.</p>
When	Applications for exemption permits (or virtual permits) will be required prior to use of a road which is covered by a lorry ban order.	
Who obtains approval	Contractor with HS2 approval, where appropriate.	
Submission package	<p>The information required to be provided is prescribed within the relevant Schedule. Practicable measures have been subject to discussion with the Highways Sub Group to the Planning Forum and will necessarily be considered or at a local level via the relevant Traffic Liaison Group meeting.</p> <p>The highway authority is to make arrangements for “emergency permits” to be issued at any time and receive applications providing prescribed information electronically, as agreed via the relevant Traffic Liaison Group meeting.</p>	

	Phase One – schedule 26	Phase 2a – schedule 25
Appeal	Provision is made in this part of the schedule for referral to the Secretary of State for Transport and that the Secretary of State may allow or dismiss the appeal or vary the decision of the authority whose decision is appealed against.	

4.4 Responsibilities and plan preparation

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

- a. all logistics to and from construction sites associated with HS2 construction, including railheads and sites used for sustainable placement.
- b. the off-site movement of any excavated material or waste off-site
- c. the coordination of logistics activities with other Principal Contractors and stakeholders
- d. Application of the CDM regulations, where appropriate; and
- e. Completion or preparation of plans set out in this RTMP

4.4.2 In accordance with the relevant Planning Memorandum, to facilitate effective consultation and ensure that requests for approval are determined expeditiously, contractors should engage in proportionate forward discussions about prospective requests for approval with the qualifying authority and statutory consultees.

4.4.3 Principal Contractors will prepare and follow the following plans:

Local Traffic Management Plans

4.4.4 Prepared in accordance with Section 3.4 above. Schedule 17 submissions will need to follow the preparation of an appropriate LTMP, enabling consultation on the proposed route(s) for Large Goods Vehicles through the relevant Local Traffic Liaison Group meeting.

Route Management, Improvement and Safety Plans

- 4.4.5 Principal Contractors are to validate the proposed lorry routes for Large Goods Vehicles (over 7.5t) which they have included within the Local Traffic Management Plans with regard accessibility to construction sites.
- 4.4.6 The Nominated Undertaker has prepared a template for Route Management, Improvement and Safety plans (ROMIS) for development by Main Civil Works Principal Contractors (and as appropriate Station Works contractors) which will be submitted for information alongside requests for approvals for the routes to be used.
- 4.4.7 Enabling/Advanced work contractors may make earlier submissions for lorry route approvals, as necessary, with an appropriate ROMIS statement if physical works are required to enable access/egress to the construction site which should be included in the relevant LTMP or written statement, if more appropriate.
- 4.4.8 The grounds whereby arrangements (i.e. the proposed route) can be refused and required to be modified are:
- a. to preserve the local environment or local amenity,
 - b. to prevent or reduce prejudicial effects on road safety or on the free flow of traffic in the local area, or
 - c. to preserve a site of archaeological or historic interest or nature conservation value, and are reasonably capable of being so modified
- 4.4.9 The purpose of the ROMIS plan will be:
- a. to set out the routes to be approved;
 - b. to consider what physical changes are necessary to enable use by Larger Construction Vehicles;
 - c. to confirm that the measures related to safety and the free flow of traffic have been considered and, as necessary, mitigated in the proximity of the construction access points; and
 - d. to confirm any other appropriate measures in relation to Undertakings and Assurances.

- 4.4.10 ROMIS plans should set out the scope of works required by a contractor for accessibility, rather than setting out the scope of works related to other matters which should be set out, and consulted on, within the relevant LTMPs. The plans will include the measures considered necessary for the movement of Larger Construction Vehicles and include the proposed measures which will be subject to highway consultation and, as necessary, consent or approvals. It is unlikely that measures to enable access will be required along A classified roads, as they would be presumed suitable for 2-way traffic including use by Larger Construction Vehicles.
- 4.4.11 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 of the Phase One Act/Phase 2a Act.
- 4.4.12 ROMIS plans may identify temporary, long term, works to enable Abnormal Load Movements, where routes can be identified in advance in consultation with the Traffic Liaison Group meetings and other stakeholders.
- 4.4.13 LTMPs should indicate locations of community facilities along proposed lorry routes, which may attract use by larger numbers of vulnerable road users, such as schools and hospitals.
- 4.4.14 The need for a ROMIS for any additional routes required for planning approval and which are proposed by Principal Contractors will be assessed on a case by case basis and it would not be expected that ROMIS would be provided as information for minor changes to lorry routes and/or additional compounds on routes that have already been approved as part of another lorry route approval.
- 4.4.15 Implementation of improvement works within ROMIS plans will be subject to consultation with the relevant highway authority and will be reported at local TLG meetings, as necessary.
- 4.4.16 Principal Contractors may consider the need for additional works, as a part of lorry route approvals or during construction, to improve journey time reliability.
- 4.4.17 ROMIS plans should be submitted for discussion to the relevant local planning authority for discussion at least 6 weeks prior to the submission of any relevant S17 lorry route application, where practicable to do so.

4.5 Flow forecasting and monitoring

4.5.1 General requirements

- 4.5.1.1. The Environmental Statement set out forecast flows which were considered to be “reasonable worse case assumptions”. Generally two figures are given in the ES for the AM/PM/all day periods: (a) the average flow in the peak month (b) the average flow where the flow exceeds 50% of that in peak month..
- 4.5.1.2. As a result of the work undertaken to seek to reduce effects of construction during the passage of the HS2 Phase One Act and the Phase 2a Act through Parliament, these forecasts were shared with petitioners and Select Committee and mitigation measures agreed which are recorded in the register of Undertakings and Assurances.
- 4.5.1.3. Apart from specific commitments within the Undertakings and Assurances, the project is required to seek to reduce impacts generally in accordance with the General Principles document, but not the specific impacts identified in the ES. The ES sets out general mitigation measures which are incorporated within this RTMP, requirements for Local TMPs or site specific management measures.
- 4.5.1.4. Flow forecasting and measuring flows into and out of compounds will be undertaken by principal contractors and reported to the nominated undertaker to satisfy that the project will not create new significant adverse effect arising from construction, beyond those reported in the ES, in accordance with the General Principles document. Average flows will be shared with the Local TLG meetings along the line of route, so that the information presented is consistent with the ES.

4.5.2 Initial assessment

- 4.5.2.1. As appropriate, MWCC and, as relevant, stations and route-wide systems principal contractors will need to develop forecasts of expected average peak flow assumptions, so that their forecasting aligns with the assumptions within the Environmental Statement. The nominated undertaker will provide appropriate guidance to ensure that the flows evaluated by principal contractors and those set out in the ES are consistent. Construction vehicle movements will need to be assessed for vehicles over 3.5t (Heavy Goods Vehicles) for consistency with the ES, whereas lorry route approvals are required for Large Goods Vehicles, over 7.5t.

4.5.3 **Presentation of summary flow assumptions in LTMPs**

4.5.3.1. As appropriate, MWCC, stations and route-wide systems principal contractors will be required to develop forecasts of expected AM and PM peak flow assumptions within Local TMPs, aligned to the Environmental Statement. Otherwise the ES flows will be used within LTMPs.

4.5.3.2. Where changes are made to the construction assumptions, such as new proposed lorry routes or where the flows exceed those reported in the ES and could introduce a new significant adverse effect then principal contractors will undertake appropriate steps to mitigate and avoid the creation of new significant adverse effects in accordance with the General Principles document.

4.5.4 **Flow monitoring and compliance**

4.5.4.1. During construction, main civils work and following principal contractors will undertake further forecasting through the vehicle monitoring system and provided to the Nominated Undertaker as long-range, medium range and short-term forecasts. These forecasts will be shared with the Local Traffic Liaison meetings as forecast averages aligned to the ES, for information. .

4.5.4.2. The forecasts will need to reflect Undertakings and Assurances on vehicle flows as well as the capacities of construction sites and, as necessary, proposed vehicle holding areas.

4.5.4.3. The forecasts will be reviewed with actual data from the Vehicle Monitoring System and reported to the Local Traffic Liaison meetings as actual averages aligned to the ES, for information.

4.5.4.4. It could be the case that flows which were assessed in the ES are exceeded. HS2 will monitor the forecasts and actual flows to and from construction site accesses to assure that the project's commitments in the General Principles document are being met.

4.5.4.5. The Nominated Undertaker will review the overlap between flow forecasts across the boundaries of Local Traffic Management Plans to assure that no new significant adverse effects are forecast to arise including on the HE road network.

4.5.4.6. In accordance with the relevant Information Paper, the nominated undertaker will employ a monitoring and compliance team prior to commencement of works by the

Main Works Civil Contractors. The team will review matters, on a risk-based approach (i.e. targeting resources where considered to be most necessary), such as:

- a. compliance with lorry routes (where approval has been necessary)
- b. compliance with specific U&As
- c. correct collection of vehicle flow data by the contractor
- d. compliance with the project's driver and vehicle safety standards
- e. traffic management is deployed in accordance with plans submitted for consultation or consent (or as reasonably adjusted)
- f. compliance with road cleansing requirements

4.6 Further matters related to lorry routes

4.6.1 Failure to comply

- 4.6.1.1. Failure to follow an approved route (for LGVs), will result in an incident recorded in the Nominated Undertaker's Safety and Incident management system (HORACE) and will require action from the Principal Contractor (previously known as a TENS). Issues related to non-compliance may be reasonably be discussed at the relevant TLG meeting.

4.6.2 London Lorry Control Order

- 4.6.2.1. Contractors requiring to use routes in London will be required to register with the London Lorry Control Scheme - www.londoncouncils.gov.uk/lorrycontrol. Approved lorry routes will be provided to London Councils.

4.7 Managing construction traffic flows

4.7.1 Construction activities

- 4.7.1.1. Typical construction activities are set out within Table 4.4 and, even for rural areas, it would be expected that the use of a fleet of Larger 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.

Table 4.4: Typical range of construction traffic flows

Activity	Light vehicles (car-derived vehicles or vans)	Heavy goods vehicles (over 3.5t)	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

4.7.1.2. 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.

4.7.2 **Vehicle flow management**

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

- a. Excavated material vehicle fleet tracking (GPS or RFID) of vehicles under the Principal Contractor's control, as described in the CoCP.
- b. Seeking to ensure that contractors are aware not to rely on sat nav systems for wayfinding
- c. Risk-based monitoring of compliance through employment of a dedicated HS2 compliance team
- d. Operation of a centralised vehicle monitoring system.
- e. Where necessary temporary use of ANPR cameras at access points to validate flow records 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)
- f. Principal Contractor plan reviews (long-range, weekly and daily) and bookings
- g. Receiving vehicles at holding points/logistics centres/consolidation centres and checks on-site, where appropriate.
- h. Provision of permitted route maps
- i. Collection of intelligence to inform Principal Contractors about factors which can affect vehicle schedules
- j. Liaison with enforcement agencies (Police, DVSA, HSE) via the proposed construction forum and key stakeholders via the Local Traffic Liaison Group meetings
- k. Liaison with relevant authorities where movement restrictions apply and for abnormal load movements; and
- l. Regular review meetings between The Nominated Undertaker and the Principal Contractor to discuss any vehicle flow issues.

4.7.2.2. In addition, there may be benefit from close working arrangements with Highways England's Regional Control Centres and the Traffic Officer Service as well as TfL's London Streets Traffic Control Centre to ensure the smooth movement of HS2 construction traffic whilst minimising delays to other traffic where practicable to do so.

4.7.3 **Vehicle booking**

- 4.7.3.1. All construction vehicles travelling to a construction site access point will be required to be booked in for each arrival and departure on the HS2 project through systems or uploads to the vehicle monitoring system.. Vehicle deliveries will be provided with slots according to the capacity of the construction site(s). Slots should be in accordance with site opening times and factor the impact of arrivals and departures on any flow restrictions demanded from the U&As.
- 4.7.3.2. Advance booking information will be supplied to the vehicle monitoring system at specific times and will include long range plans (five weeks in advance), weekly plans (one week in advance) and daily plans (day before planned movement).
- 4.7.3.3. Unique booking references for each arrival and departure (combined) shall apply to all movements.
- 4.7.3.4. The following vehicles are exempt from advance booking and vehicle safety checks but their actual arrival and departure shall be recorded:
- a. Vehicles accessing sites on behalf of utility companies and not directly related to HS2 construction.
 - b. Vehicles accessing sites for welfare purposes; e.g. for food and drink supplies; water bottles; toilet consumables; cleaning materials etc.
 - c. Vehicles accessing site to attend breakdown of vehicle, including tyre replacement, and repair of plant
 - d. Couriers – where the courier vehicle is delivering small items not requiring mechanical handling equipment to unload and where items can be carried by a single person without assistance.
 - e. Postal services.
 - f. Vans used by site staff to travel to work but also to convey tools and equipment for personal use of same staff and which do not require the use of site mechanical handling equipment for loading and unloading. Note: Depending on site arrangements, such vans may park in car parks that do not require the site gates (for construction traffic) for access and will not therefore be subject to booking; and

g. Access to railway land by Network Rail or contractors

4.7.3.5. Abnormal loads are required to be booked in but are also exempt from safety checks.

4.7.4 **Vehicle recording**

4.7.4.1. To ensure that vehicles arrive and depart access points in accordance with the vehicle management plan, all vehicles will be recorded entering or leaving any HS2 construction site from or to a highway.

4.7.4.2. Only the first arrival of a vehicle with the same driver each day will be subject full recording of the vehicle and driver status. Principal Contractors may choose to operate a vehicle access permit process for returning vehicles.

4.7.4.3. Principal contractors will, through either linked vehicle management systems or for smaller sites, uploaded spreadsheet, enter into the vehicle management system actual vehicle arrival times at construction sites and provide management information such as registration, vehicle type, operator, load type, utilisation, origin, driver details.

4.7.4.4. Vehicle safety standards will also be checked on 1st arrival at any HS2 construction site and the status of safety equipment, as set out in Section 5.5 and driver qualifications, as required in Section 5.6 entered. These may be checked at lorry holding areas or the operator's base. In the case of checks at the operator base this will be subject to the approval of the nominated undertaker and that the operator is registered (and maintains) a quality standard as set out in the Principal Contractor ESSMP and may subject to auditing by the nominated undertaker's Compliance team at the site access. Should these compliance team reviews identify that vehicles are non-compliant or that equipment is not working, all future checks will need to be carried out by the Principal contractor on arrival of relevant vehicles at the construction site.

4.7.4.5. The system will enable the production of reports covering adherence to plans, actual movement details and safety compliance.

4.7.4.6. The configuration of the vehicle monitoring system will capture the following, although for manual recording a reduced inventory may be agreed with the Principal contractor, dependent on factors such as projected volume of vehicle movements and lifetime of the site:

- a. Vehicle arrival time.
- b. Vehicle departure time.
- c. Vehicle type.
- d. Load type.
- e. VRN.
- f. Vehicle Origin.
- g. Vehicle Destination.
- h. Vehicle Utilisation.
- i. Haulier/fleet operator.
- j. Driver's name.
- k. Compliance to vehicle safety equipment requirements, appropriate to the vehicle type; and
- l. Whether the vehicle was permitted on site or turned away.

4.7.4.7. Detail of actual movement data shall be supplied regularly to the vehicle monitoring system and the timing of data uploads will be discussed with contractors as appropriate.

4.7.5 **Vehicle tracking module**

GPS

- 4.7.5.1. The Code of Construction Practice (CoCP) requires that the RTMP include amongst generic measures, as appropriate, the: *"introduction of a GPS vehicle location and tracking system for tipper lorries within the Principal 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;"*
- 4.7.5.2. 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

4.7.5.3. 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).

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

4.7.6 **ANPR**

4.7.6.1. ANPR will be expected to be utilised for monitoring purposes as necessary and comply with the requirements of the Information Commissioner. ANPR may be provided as necessary:

- a. at construction site accesses;
- b. 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 vehicle management system); and
- c. 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 management system).

4.7.7 **Road Vehicle Parks and Vehicle holding points**

4.7.7.1. For each construction site 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 management systems can flag if capacity of a site is exceeded.

4.7.7.2. The Principal Contractor may identify proposed holding areas. Holding areas may be on-street (and therefore subject to the provisions of Schedule 4 of the Act for consultation and, as necessary consultation and consent or approval of the highway authority) or off-street within Road Vehicle Parks within scheme limits and which will be subject to approval under Schedule 17 of the Act and any relevant planning permissions for the site and any buildings.

4.7.7.3. In locating and designing a holding area on-street, the principal 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.

4.7.7.4. Should Motorway Service Areas (MSAs) be proposed to be used as lorry holding points, this will be discussed with Highways England and the operator and managed to avoid reduction in customer occupancy.

4.7.7.5. **Vehicle consolidation centres**

4.7.7.6. 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 station and depot fit-out activities.

4.7.7.7. **Site access permits**

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

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

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

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

- e. Temporary lighting, as necessary if recommended by a road safety audit; and
- f. Management plan.

4.7.8.2. Traffic marshal management of haul route crossings will need to be set out within the submission for highway consultation, consent or approval.

4.7.8.3. Crossing of other PROWs will also require appropriate generic or site specific plans to be prepared and implemented.

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

4.7.9.1. A number issues may arise as a result of a closure of an approved route for construction traffic. The general requirements are set out as follows:

Planned closure by HS2 contractors

- a. If an approved lorry route is in place, then the contractor will need to seek an additional approval for the additional length of route to/from the relevant sites or compounds.
- b. If the diversion route is onto a road of a lower status, the contractor needs to agree the scope of prior and post highway condition surveys

Planned closure by others

- c. The highway authority may wish to raise the need for an alternative diversion route to be provided by those implementing the closure if the proposed diversion route is not suitable for HS2 large construction traffic, with any remedial measures provided by the applicant for the closure.

Emergency closure (contractor or others)

- d. Drivers follow the signed diversion route or directions of the Police as appropriate.

4.7.9.2. LTMPs may also need to set out the principal contractors' proposals for managing construction traffic in relation to incident management:

- a. On the road network (emergency road closures by others)

b. Emergency closures of sites (e.g. due to site incidents)

4.7.9.3. Principal Contractors may need to include within their LTMPs plans for emergency routes, should approved routes be known to be regularly susceptible to emergency closures, in consultation with the relevant Police authority, if the normal diversion route is not suitable for use by large goods vehicles. These routes would not require approval, but may need to be signed.

4.7.9.4. Should an approved lorry route be closed due to planned works by HS2 temporary routes will need to be discussed and agreed in advance through the relevant local Traffic Liaison Group and, as necessary, submitted for approval to the local planning authority (where the affected sites generate more than 24 movements per day by vehicles over 7.5t) . If the works are not HS2 related, it would not be expected that HS2 would make improvements to the temporary route.

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

4.7.9.6. It may be the case that in such circumstances, existing VMS might be utilised or a limited number of VMS could be deployed to advise HS2 construction traffic approaching construction sites 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. As necessary protocols for use of VMS will be agreed with the relevant highway authorities.

4.8 Abnormal load management

4.8.1 Abnormal load management and procedures

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

- a. a weight of more than 44,000 kilograms
- b. an axle load of more than 10,000 kilograms for a single non-driving axle and 11,500 kilograms for a single driving axle
- c. a width of more than 2.9 metres; or

d. a length of more than 18.65 metres

4.8.1.2. 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.

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

Table 4.5: Abnormal loads notification requirements

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

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

4.8.2 The relevant Principal Contractor is responsible for ensuring that appropriate engagement takes place with the highway authority and other interested parties in the planning of the Abnormal Load Movement. Contractors should have regard to Abnormal Load Movement information provided on the relevant highway authority websites and comply, as far as reasonably practicable, with the individual highway authority requirements. The highway authority, or bridge owner remains responsible for structure assessments.

4.8.3 The haulier is responsible for the planning of Abnormal load movements, submission via EDSAL and for indemnifying the highway authority and bridge owners for damage to roads or structures during the movement of the Abnormal Load. Timing of movements and routes to be used are subject to approvals as a part of the EDSAL procedures and any guidance provided during engagement.

4.9 Access measures

4.9.1 Access measures will be designed with appropriate consideration of the requirements of the CDM regulations.

4.9.2 Vehicle identification

4.9.2.1. In accordance with the relevant information paper (E30 and E8 for Phase One and 2a respectively) relevant vehicles over 3.5t which are making deliveries of construction equipment or materials, or moving quantities of spoil on public roads. to or from a construction site compound will be required to display a notice in the

front vehicle window that the vehicle is working for an HS2 Principal Contractor. For Phase 2a the requirement applies to vehicles regularly attending site and Phase 2a contractors are to use all reasonable means to ensure that vehicles over 3.5t display HS2 identification as soon as practicable. The requirement for display does not apply to exempt vehicles as set out in 4.7.3 above. The requirement extends to Utility and Enabling/Advanced Works contractors, but guidance may be provided as appropriate.

4.9.2.2. Should the safety of vehicles and drivers/passengers be at risk due to the display of a sign (i.e. protestor or criminal activity), signs will not be displayed but the matter referred to the Undertaking and Assurance Compliance Committee where the requirement is covered by an Undertaking and Assurance.

4.9.2.3. Signs shall be placed so that they are visible in (but not attached to) the front windscreen (or on the front of the vehicle) 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.

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

4.9.2.5. Complaints about lorry movements will not be investigated unless a vehicle registration number is provided which can then be checked against the booking records.

4.9.2.6. Contractors may wish to include "How's my driving" notices at the rear of vehicles.

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

4.9.3.1. The timing of access to or from construction sites by construction traffic or worker car traffic are not controlled (subject to compliance with project EMRs and any relevant Undertakings and Assurances), so long as construction works are not being undertaken outside permitted working hours as set out in the Code of Construction Practice or otherwise with required consents.

4.9.3.2. Beyond planned works outside of core working hours, examples of access and egress requirements for works activities outside core working hours and start up and close down periods are:

- a. For security or maintenance or at the request of the emergency services
- b. For emergency and planned access by utilities companies and Network Rail
- c. Abnormal load movement; and
- d. At other times, where a highway authority has requested changes to delivery pattern, subject to a S61 approval is not required.

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

4.9.4 **Construction Driver Helpdesk**

4.9.4.1. 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) within driver information packs.

4.10 **Vehicle access management**

4.10.1 **Supervisors**

- a. To ensure that the project standards for vehicle booking, safety and management are met, Principal Contractors are to appoint Supervisors and Traffic Marshals. Supervisors will have responsibility for associated satellite compounds, laydown areas, Lorry Holding Areas or others works facilities accessed to or from the highway. Supervisors will be responsible for ensuring that Traffic Marshals are: Ensuring that construction vehicles arrive in accordance with the daily booking schedule or Abnormal load arrival schedule.
- b. Ensuring that vehicles and drivers comply with the project safety standards
- c. Ensure that drivers have any necessary delivery paperwork and display construction vehicle signage if used.
- d. Using means of recording data for reporting purposes (i.e. using dataloggers)
- e. Rejecting vehicles, if management or safety requirements are not met (and completing "near miss records" as necessary).

- f. Logging observed incidents (such as non-compliance with the driver licencing and vehicle safety standards within this RTMP) on the appropriate incident management system (HORACE)
- g. Ensuring compliance with wheel washing and road sweeping standards.
- h. Ensuring that workforce walking into/out of site only use pedestrian access points and do not mix with construction traffic.
- i. Check that vehicle registration plates are clean; and
- j. Ensuring that RFIDs are fitted and working (as necessary)

4.10.1.1. Where practical and safe to do so, certain vehicle checks may be carried out elsewhere in accordance with 4.7.4.4.

4.10.1.2. Supervisors will be managed by Principal Contractor's safety manager, logistics or security manager.

4.10.1.3. Supervisors will be required to:

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

4.10.1.4. Portable video recording equipment may be worn by an appropriate member of the Principal contractor team supervising access at main construction sites.

4.10.2 **Principal Contractor traffic marshals**

4.10.2.1. Traffic marshals work under the supervision of a Supervisor and refers issues to the Supervisor for resolution as appropriate. Traffic marshals working at construction site accesses (and as necessary, at Lorry Holding Areas) shall be trained and equipped to carry out their duties effectively and safely. This will include use of "STOP WORKS" boards or barriers in accordance with the relevant Schedule 4 submission.

4.10.2.2. HS2 has established a bespoke traffic marshal training course, covering matters such as the project's vehicle and driver safety standards and the use of STOP-

WORKs boards under Act powers. Contractors will be required to utilise this training course for traffic marshals, so that they understand the project requirements in a consistent manner and to an appropriate standard, unless alternative training is agreed by the Nominated Undertaker and provides the same standard of training in use of STOP-GO boards and barriers.

4.10.2.3. Traffic marshals may be able to be multi-skilled (such as security or site banksperson/on-site traffic marshal), where cost effective and appropriate. This may include traffic management operatives, if appropriately trained (see 8.3.4.4)

4.10.3 **Site security**

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

- a. site security, including the provision of gates;
- b. the possible need to search vehicles entering or exiting a site access point;
- c. the possible need to reject vehicles; and
- d. Bus turn around and bus stops and shelters, where bussing is to be provided to transport hubs or pick up/set down points.

4.11 **Visitor access management**

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

4.11.2 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.

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

4.12 **Rail and water construction haulage**

4.12.1 Principal Contractors will be required to consider and document options for use of rail and water within LTMPs and endeavour to implement use of water and rail where reasonably practicable, 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/savings of water or rail use and (e) the associated safety risks of potential double handling.

- 4.12.2 As appropriate, The Nominated Undertaker will encourage early discussions between the Principal Contractors and the Canal and River Trust, as well as rail and water haulage operators.

4.13 Workforce inductions and toolbox talks

- 4.13.1 A Principal Contractor's general induction for workforce should include reference to:

- a. Site access arrangements
- b. Travel to work and relevant travel plan provisions; and
- c. Safe driving on-site and off-site

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

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

5 Safety and environmental management

5.1 Scope

5.1.1 This Chapter sets out the project's minimum standards for fleet quality plans, required standards for vehicle and driver safety and related environmental management. Principal Contractors are required to set out their ESSMP plans for how they and their supply chain will exceed these minimum requirements. The chapter examines how principal contractors should consider improvements through the adoption of vehicle designs and new technology over the life of their delivery of the project, where there is a business case to do so.

5.1.2 Relevant Route-wide Requirements

Code of Construction Practice

5.1.2.1. The CoCP notes that the RTMP will include, as appropriate:

- a. measures which may include engagement with vulnerable road users (pedestrians, motorcyclists, cyclists, equestrians), to provide for road safety for all modes for the public and construction staff during traffic management works and temporary traffic control measures;
- b. contractor quality plans for management of construction vehicles through the supply chain;
- c. contractor implementation of driver training programmes relevant for their specific environment (e.g. to protect pedestrians and non-motorised traffic); and
- d. vehicle safety measures including signage, mirrors, prevention of under-running and use of technology to remove blind spots according to vehicle size;

5.2 Responsibilities

5.2.1 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.

5.2.2 Principal Contractors will prepare and implement the following plan:

Logistics Environment, Sustainability and Safety Management Plans

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

5.3 Promoting safety awareness to employees and communities

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

5.3.2 Employees

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

- a. Get home safely every day
- b. The promotion of healthy and sustainable travel to and from work, appropriate to the site location.
- c. Driver wellness
- d. Security awareness for pedestrians to and from work
- e. Safety awareness; and
- f. Other relevant presentations or information related to this Route-wide Traffic Management Plan or Local Traffic Management Plan

- 5.3.2.2. For those employees or workers who are not required to attend any construction vehicle training whilst working on the HS2 project, Principal Contractors should review the material available Rail Industry Road Risk Resource Centre webpages <https://www.rssb.co.uk/pages/rail-industry-road-risk-resource-centre.aspx> and consider utilising relevant material from the DfT's Driving for Better Business campaign: <https://www.drivingforbetterbusiness.com/driving-for-better-business-campaign-relaunched>
- 5.3.2.3. If appropriate, Principal Contractors should consider the extent that the scope of driver safety initiatives indicated in the RTMP, such as in 5.4.6 below, should be reviewed and extended to workers who regularly drive to and from work but are not driving for work.

5.3.3 **Communities**

- 5.3.3.1. Principal contractors will be required to identify and promote activities within local communities, such as schools, workplaces and community groups or forums with regard to:
- a. Road safety, appropriate for the audience (e.g. cycle safety checks, annual "changing places" events)
 - b. Exchanging places (between HGV drivers and vulnerable road users according to the local environment – cyclists, horse riders, pedestrians, motorcyclists, schools and other community groups)
 - c. Appropriate safety management, such as promoting "walking buses"
- 5.3.3.2. This engagement will be undertaken within the context of wider community engagement strategies and in consultation with external parties, such as highway authority road safety education teams.

5.4 **Overview of quality plans, driver and vehicle safety**

5.4.1 **ISO 39001**

- 5.4.1.1 ISO 39001:2012 specifies requirements for a road traffic safety 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.

5.4.2 Fleet Operator Recognition Scheme

5.4.2.1. FORS is a voluntary progressive national fleet management accreditation scheme. FORS was set up in 2008 with the aim of raising safety, environment and efficiency standards in fleet operations. FORS won the 2014 Fleet Category of the Prince Michael of Kent International Road Safety Award.

5.4.2.2. The themes of the FORS accreditation are related to:

- a. Legal compliance
- b. Safety
- c. Efficiency; and
- d. Environmental management

5.4.3 Earned Recognition

5.4.3.1. The DVSA Earned Recognition scheme is a voluntary scheme for all operators who can demonstrate a strong track record of compliance and adherence to standards. Operators must be able to show that they have robust systems and processes that promote effective and proactive transport management. Once successfully accepted into the scheme, these operators will enjoy the benefit of a reduced burden of enforcement by DVSA

5.4.3.2. Operators who successfully achieve DVSA Earned Recognition status will possess a proven culture of compliance. By allowing DVSA to remotely monitor their compliance systems, checks can be carried out which will provide the assurance and confidence that the operator is effectively managing the transport operation and functioning in a compliant manner. In exchange, these operators may benefit from a reduced number of inconvenient and costly roadside checks and visits from enforcement officers thereby reducing the administrative burden of regulation on those who achieve high levels of compliance.

5.4.3.3. This scheme ensures that compliant operators with DVSA Earned Recognition status obtain best business value from the enforcement regime and creates a model that will drive up compliance and enable others to aspire to. It also enables DVSA to divert its resource to target the seriously and serially non-compliant where the risks to road safety are highest.

5.4.3.4. All operators wishing to use Earned Recognition on HS2 will be required to comply with section 10 (HS2 module) of the Earned Recognition scheme.

5.4.4 **Van Excellence**

5.4.4.1. For vehicles of less than 3.5t, Van Excellence is an industry-led initiative which has been developed by the Freight Transport Association alongside van operators.

5.4.4.2. The scheme has been developed primarily to:

- a. raise standards within the industry
- b. improve the perception of vans and light commercial vehicles; and
- c. enhance the reputation of organisations operating van fleets

5.4.4.3. By joining contractors can demonstrate commitment to safer, more efficient and sustainable van operations.

5.4.5 **Work Related Road Risk (the CLOCS standard)**

5.4.5.1. The CLOCS programme, created in 2013 was the result of increasing concern about cyclists and other vulnerable road users' safety and the lack of consistency within vulnerable road user training standard requirements.

5.4.5.2. The CLOCS programme was developed in collaboration with the construction logistics industry to address the issues raised from the report. The CLOCS Standard is adhered to and

5.4.5.3. The CLOCS Standard for construction logistics: Managing work related road risk, was developed with the owners of eleven different identified WRRR standards, reviewed and consolidated into one standard that could be applied in a consistent national basis, this is implemented by local authorities through planning or client contractual conditions. The requirements are aimed at reducing the risk of a collision between an HGV over 3.5 tonnes and a vulnerable road user (VRU), the requirements may also be applied to vehicles under 3.5 tonnes.

5.4.5.4. The CLOCS standard requires that fleet operators implement:

- a. Operations – Quality fleet operation; collision reporting; traffic routing

- b. Vehicles – warning signage; side under-run protection; blind spot minimisation; vehicle manoeuvring warnings
- c. Drivers – training and development; driver licensing; and
- d. Standard for construction clients – construction logistics plan; site suitability for vehicles fitted with safety features; site access and egress; vehicle loading and unloading; traffic routing; control of traffic particularly at peak hours; supply chain compliance.

5.4.5.5. Other workstreams being developed by CLOCS working groups include vehicle design improvements. The Nominated Undertaker has been represented on the CLOCS working groups and sub-groups since the beginning of the programme.

5.4.6 **Other safety initiatives**

HSE Driving at Work

5.4.6.1. 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.

5.4.6.2. 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

5.4.6.3. It is recommended that all regular drivers be provided with annual fitness assessments to ensure that drivers are able to notify DVLA if they have:

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

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

- a. epilepsy
- b. strokes
- c. other neurological and mental health conditions
- d. physical disabilities; or
- e. visual impairments

Driver qualifications

Licencing

- 5.4.6.5. 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 construction sites in line with the frequency, as described in the FORS standard.

Driver Certificate of Professional Competence (CPC)

- 5.4.6.6. 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.
- 5.4.6.7. 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.
- 5.4.6.8. 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)

- 5.4.6.9. 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

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

5.5 Quality requirements

5.5.1 Mandatory requirements

- 5.5.1.1. It is mandatory that Principal Contractor heavy goods vehicle fleets (over 3.5T) are operated according to a suitable quality standard.

- 5.5.1.2. Principal Contractor joint venture partners who are UK registered shall either:

- a. achieve and adhere to FORS Bronze level and in addition adhere to the other mandatory requirements as set out in 5.6, 5.7 and 5.8 of the RTMP. Bronze should be achieved prior to start of works, unless an alternative timeframe is agreed with the Nominated Undertaker for the quality elements. The safety requirements set out in the RTMP will always apply to all relevant vehicles from the 5th visit to any HS2 construction site. Principal contractors should progress to Silver level within 6 months of commencement of construction works for the HS2 Phase One and Phase 2a project, unless otherwise agreed by The Nominated Undertaker. Certain FORS Silver requirements may be subject to derogation.

Or:

- b. adopt the ISO39001 standard (which shall apply to any joint venture partners who are not UK registered) and comply with the additional mandatory vehicle and driver safety requirements in this RTMP

Or:

- c. adopt the DVSA Earned Recognition standard and comply with the additional mandatory vehicle and driver safety requirements in this RTMP

Or:

- d. achieve and adhere to an alternative quality standard which must address the themes of the FORS standard and must be subject to independent auditing. Alternatives will be approved by the nominated undertaker.

- 5.5.1.3. The Nominated Undertaker may issue guidance on the adoption and progression of quality standards through a TAN as necessary

Company licences

- 5.5.1.4. 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 set out within the ESSMP. Light goods and small van operators for deliveries (under 7.5t) may use Restricted O licences.

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

5.5.2 Further improvements

Extending quality management through the supply chain

- 5.5.2.1. Principal Contractors set out in ESSMPs their proposals for extending an audited quality management through their supply chain for HGV vehicles regularly accessing construction sites.

- 5.5.2.2. The Phase One Main Civil Works Principal Contractors have been collaborating on off-site road and vehicle safety. Contractors have proposed that the Phase One Main Works Civil Contractors and their supply chain will collectively adopt FORS, with Bronze standard to be reached prior to start on site and Silver standard within 6 months, subject to appropriate derogations on a risk-based basis (such as for occasional trips) as noted within the RTMP. Principal Contractors will confirm their adoption of this approach for their supply chain through their ESSMPs. The requirement for fitting safety equipment remains from the 5th trip to an HS2 construction site.

- 5.5.2.3. Principal contractors set out in their ESSMPs if the Van Excellence standard or an alternative standard will apply to light vehicles (under 3.5t), if not applying appropriate elements of a standard for heavier vehicles and the extent to be applied through their supply chain.

Transport Manager Fleet Training

- 5.5.2.4. The scope and quality of available transport manager training with regard to vehicle and driver behavioural change will be reviewed by HS2 in consultation with relevant stakeholders.
- 5.5.2.5. If HS2 establishes a bespoke manager behavioural change course, principal contractors will be required to provide the training to their own existing and new fleet managers managing HS2 construction fleets within 6 months of an instruction to adopt the training course.

5.6 Driver safety requirements

5.6.1 The CLOCS standard will apply in accordance with the following section and additional driver safety training requirements will apply. The Nominated Undertaker may issue guidance on compliance with CLOCS through issuing TANs as necessary.

5.6.2 Mandatory Requirements

- 5.6.2.1. The following minimum standards will apply to the delivery of HS2 as follows:
 - a. Collision reporting;
 - b. Progressive driver training and development, appropriate for the type of construction activities and environment or geography relevant to the contract area; and
 - c. Driver licence checks (which may be at varying intervals according to the number of penalty points);

Collision and Near Miss reporting

- 5.6.2.2. Principal Contractors are required to require that fleet operators through their supply chain 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 FORS collision manager, or similar, reporting system.
- 5.6.2.3. As well as anonymous reporting of crashes (whether resulting injury or damage), all near misses will be reported using the Nominated Undertaker HORACE reporting requirements.

- 5.6.2.4. Principal Contractors will be required to inform The Nominated Undertaker of any incidents that may impact on the local community or the reputation of The Nominated Undertaker and provide an incident report to The Nominated Undertaker.

Driver training for vehicles over 3.5t

- 5.6.2.5. Drivers of all vehicles over 3.5t regularly attending any construction site will be required to have approved CPC-valid training as follows:
- a. Work related road risk driver training/Vulnerable road user awareness training/Safe Urban Driving training
 - b. Rural driver training; and
 - c. Fuel efficiency training
- 5.6.2.6. HS2 has reviewed the availability of suitable training for rural driving and developed the HS2 Professional Driver Training course which satisfies the requirement for both vulnerable road user awareness and driving in rural areas and which has been JAAPT approved. The HS2 Professional Driver Training course should be delivered by Main civils works, Stations works and on-network contractors as a free-standing course or as a module component of Work related road risk driver training or Vulnerable road user awareness training or Safe urban driver training . Until the HS2 Professional Driver Training course is available, work related road risk/vulnerable road user training can be provided:
- a. By Principal Contractors, delivering suitable course content, appropriate for the type of construction activities and environment or geography relevant to the contract area and agreed with The Nominated Undertaker;
- Or:
- b. Make use of CPC valid courses provided by external parties (such as the Safer Urban Driving, or Vulnerable Road User Courses)
- 5.6.2.7. The Nominated Undertaker may endorse vulnerable road user training courses within a TAN.

5.6.2.8. Contractors may also require drivers to undertake further SUDS training in addition to the HS2 Professional Driver course, to meet the requirement of FORS Silver standard, but is not a requirement of the HS2 project to do so.

5.6.2.9. The HS2 requirement has been mapped to the FORS bronze and silver standard as follows:

Table 4.6: Comparison of HS2 requirements with CLOCS standards (as set out in FORS)

	FORS		HS2 requirement (may be varied)
Bronze	Work related road risk e-learning	Completed within the past 12 months	Completed within 6 months (if not already valid or HS2 professional drivers not available) HS2 professional driver training (freestanding or as a component of other available courses)
	Security and counter terrorism e-learning	Completed within the past 24 months	
Silver	Work related road risk SUDS training	Completed within the past 5 years	E-learning course to be undertaken in next CPC training period
	Fuel efficiency LoCity e-learning	Completed within the past 24 months	

5.6.2.10. Periods before drivers have to provide evidence of training will be included within the contract documentation and may be varied.

5.6.2.11. The Principal Contract will need to set out within the ESSMP how driver training will be delivered through the supply chain, including frequency of different training within the context of driver CPC renewal and any derogation from the requirement for HS2 approval.

Driver licence checks and qualifications

5.6.2.12. 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.

5.6.2.13. Requirements for driver licence checks to be carried out by Principal Contractors are set out in the quality requirements above.

- 5.6.2.14. The Nominated Undertaker employees who will be driving for work will undergo regular vehicle licence checks and, as appropriate, checks on vehicle insurance.

HSE Driving at Work

- 5.6.2.15. 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.

Total driver hours

- 5.6.2.16. Principal Contractors will be required to ensure that total driving hours per day include travel to and from work through their supply chain.

No incentives

- 5.6.2.17. Construction activity should 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. Any exceptions to this must be agreed by The Nominated Undertaker.

5.6.3 Further improvements

Driver training for vehicles under 3.5t

- 5.6.3.1. The scope and quality of available driver training for vans will be reviewed by HS2 in consultation with relevant stakeholders.
- 5.6.3.2. If HS2 establishes a bespoke van driver training course, principal contractors will be required to provide the training to their own existing and new fleet van drivers engaged on HS2 construction within 6 months of an instruction to adopt the training course and confirm the extent that it will be cascaded through their supply chain.

Driver Certificate of Professional Competence (CPC)

- 5.6.3.3. The Nominated Undertaker with 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).

HSE Fitness to Drive

- 5.6.3.4. 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:
- a. random alcohol and drugs tests
 - b. 6-monthly eye sight tests
 - c. an annual opportunity to receive health and appropriate lifestyle advice, as necessary; and
 - d. And how this will be managed through the supply chain.

Driver rules

- 5.6.3.5. Drivers rules will apply to all on-site construction traffic travelling on site roads or haul roads. Drivers should:
- a. not use any radio or telephone equipment on public highways, site access points, car parks or haul routes unless factory or dealer-fitted or unless the vehicle is parked and the engine switched off
 - b. use seat belts on any highway open to public use or haul road, if fitted (except where exemptions apply)
 - c. obey all traffic signs, signals or directions of a traffic marshal or traffic supervisor, on-site or off-wide
 - d. not exceed speed limits
 - e. not use ear phones for electronic equipment (except for prescribed hearing aids)
 - f. not manoeuvre at a site access point, on a haul road or highway without the presence of a traffic marshal.
 - g. only park in designated area and must not obstruct a highway, site access point or haul road

- h. drive with due care and attention
- i. stop after any incident
- j. report near misses
- k. only overtake when safe to do so.
- l. reverse park into any marked parking space (90 degree or echelon parking)
- m. 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); and
- n. have zero levels of drug or alcohol (except where detectable in relation to prescribed medicines) in accordance with the policies of HS2 or, as appropriate those of the principal contractor or employer.

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

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

5.6.4 **Further data review by the Nominated Undertaker**

5.6.4.1. 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 by The Nominated Undertaker.

5.6.4.2. 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:

- a. Total crashes

- b. Total personal injuries
- c. KSIs involving HGVs
- d. KSIs involving pedestrians, cyclists, powered two-wheelers and equestrians; and
- e. KSIs involving pedestrians, cyclists powered two-wheelers, equestrians and HGV

5.6.4.3. The Nominated Undertaker will review and report to the relevant TLG:

- a. any geographic trends related to construction site areas, compared to the remainder of the highway authority area.
- b. any safety action to be undertaken by The Nominated Undertaker and its Principal Contractors, where trends are can be identified as related to construction activities; and
- c. safety actions to be implemented by the relevant highway authority.

5.7 Vehicle safety requirements

5.7.1 The CLOCS standard will apply to construction vehicles in accordance with the following section and additional vehicle safety requirements will apply. The Nominated Undertaker may issue guidance on compliance with CLOCS through issuing TANs as necessary. The vehicle safety requirements do not apply to tractors (e.g. towing water bowsers or rigs) and mobile plant (e.g. diggers) when used on the highway.

Construction and Use regulations

5.7.2 Compliance with C&U regulations will be managed through:

- a. The contractor's quality plan within their ESSMPs
- b. Planned access to weighbridges, if appropriate
- c. Consultation via the Construction Forum

- d. Targeted vehicle checks at holding points (and other locations) by DVSA and Police

5.7.3 **Mandatory Requirements**

Safety measure requirements

- 5.7.3.1. Access to site by any UK-registered construction 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):
- 5.7.3.2. All construction vehicles shall have back and near side warning pictorial stickers, of a design to be approved or which is to be promoted by The Nominated Undertaker
- 5.7.3.3. Vehicles over 3.5t shall have, as an addition:
 - a. 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 The Nominated Undertaker)
 - b. an audible left turn alert; and
 - c. blind spot elimination or minimisation as far as practicable around the front, side and rear of the vehicle through indirect vision aids and driver audible alerts.
- 5.7.3.4. Blind spot driver aids shall comprise Class IV, V and VI mirror appropriate to vehicle size and one of the following:
 - a. side scan detection
 - b. viewable camera system
 - c. left turn sensor system fitted to the vehicle front nearside; or
 - d. Collision avoidance system fitted to the vehicle front nearside
- 5.7.3.5. Stick-on fresnel lenses are not considered an appropriate solution to minimising blind spot areas.

5.7.3.6. Vehicles regularly accessing HS2 construction sites for mass haul spoil movements will be required to adopt an additional method of digitally recording the activity outside of and around the vehicle, which can be stored for a period of at least 4 weeks, to provide digital witness and evidence in the event of collisions and near-misses and for training purposes for the reasons of aiming to reduce the risk of future incidents.

5.7.3.7. Principal Contractors shall set out in their ESSMPs the extent that vehicles over 7.5t also regularly accessing construction sites will be fitted with cameras with digital recording equipment.

5.7.3.8. The HS2 project requirements above have been mapped to CLOCS standard (as at January 2019) as follows (vehicles over 3.5t), set out in Table 5.1:

Table 5.1 Mapping HS2 requirements to CLOCS standards (as set out in FORS)

Requirement – all above the legal road-going minimum	RTMP (from the 5th trip)	CLOCS (FORS Bronze) (1)	CLOCS (FORS Silver)
Camera monitoring system/display	Yes - one of the following: Side scan detection, viewable camera system, left turn sensor system, collision avoidance system	No	Yes
A sensor system		No	Yes
Both Class V and VI mirrors	Yes	Yes	Yes
Audible left turn alerts	Yes	No	Yes
Rear vehicle stickers	Yes	Yes	Yes
Under run protection	Yes, unless demonstrated to be impracticable on a site by site basis.(2)	Yes	Yes

(1) Required by the London Safer Lorry Scheme which came into force in November 2015

(2) Or unable to be fitted

Daily, weekly and other vehicle checks

5.7.3.9. Daily vehicle checks will be required for all construction vehicles and evidenced. In all cases, the safety measure requirements must be in working order at the start of

each working day. A change may be issued directing that electronic safety devices, such as side scan detection systems, are required to be working at all times, unless otherwise directed by the employer.

- 5.7.3.10. 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 construction site (or off-site facility) if the vehicle continues to bear the same non-UK registration mark.

5.7.4 Further improvements

- 5.7.4.1. During the delivery of the project it would be expected that certain principal contractors and their supply chain will be renewing their vehicle fleets. ESSMPs should set out how the Principal Contractor and its supply chain will adopt improved safety design and cleaner vehicles as a part of their normal fleet renewal programmes.

Large Goods Vehicle Design

- 5.7.4.2. As a part of the principal contractor's ESSMP, the contractor will need to identify how they and their supply chain will provide and increase the number of vehicles on the highway working on HS2 which will minimise ground clearance. It is expected that such vehicles will be N3 compliant, except where site conditions are demonstrated to be impracticable.

Safer vehicle technology and design

- 5.7.4.3. The Nominated Undertaker will require the Principal Contractors to demonstrate, within their Logistics Environment, Sustainability and Safety Management Plans (ESSMPs), how they and their supply chain will:
- a. extend digital witness to aggregate and concrete movements or across all vehicles over 12t;
 - b. adopt additional innovation or technology to remove blind spots and prevent underrunning (beyond the mandatory safety requirements set out in the RTMP). This could include retrofitting LGVs with doors which provides for improved visibility or installation of viewable camera systems to comply with the FORS Silver standard;

- c. demonstrate how vehicles used on the highway which are to be purchased or leased for use on the project will increasingly be the latest designs available which address driver visibility, particularly lateral visibility, and which minimise the height of the driver seat above road level (except where otherwise stated in the RTMP) – i.e. to be rated 5 star under the manufacture visibility rating; and
- d. how this will be implemented, avoiding less vulnerable road user-friendly vehicles being moved down the supply chain.

5.7.4.4. The Nominated Undertaker will require the Principal Contractors to consider changes in related technology, and reasonably require adoption of new technology by the Principal Contractor and their supply chain during their vehicle fleet renewal programme, where technology standards and reliability permit. The Nominated Undertaker will issue guidance to Principal Contractors regarding the suitability and adoption of new types of safety aids or vehicle design standards where there is a business case for their adoption. Such guidance may be subject to external stakeholder consultation to ensure best practice.

Access to site

- 5.7.4.5. Vehicles entering a construction site access should comply with the Principal contractor site rules which should include:
- a. not have tinted windows, other than factory fitted tinting.
 - b. have clean, standard number plates
 - c. have a working beacon fitted or available for use, if being used for works or along haul roads. Beacons are to be checked at the start of each working day.
 - d. only carry passengers for the number of seats fitted.
 - e. not use hazard warning lights at any time, except when the vehicle is broken down
 - f. not carry alcohol
 - g. carry a first aid kit (except visitor vehicles or single/infrequent visit deliveries)
 - h. not carry pets or children; and

- i. have winter tyres fitted, where it is an employer policy for works vehicles.

5.7.4.6. Beacons and other flashing warning aids are to be switched off when driving on adopted highways.

5.7.4.7. Where necessary, traffic marshals 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.

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

5.8 Vehicle environment management

5.8.1 Mandatory requirements

Air quality and cleaner vehicles and plant

5.8.1.1. 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.

5.8.1.2. With regard to highway vehicle emissions, Principal Contractors will be required to comply with Phase One Information Paper E31/Phase 2a Information Paper E14 which deals with Air Quality. Within the Information Papers HS2 has set emission requirements and targets for the engines of contractor cars, vans and heavy road vehicles. These have been developed for the whole route and are categorised as follows; London Low Emission Zone, Clean Air Zones, and Rest of Route. Targets have also been set for the use of Ultra Low Emission Vehicles. Appendix A within the information paper sets out these requirements and targets.

5.8.1.3. Certain exemptions to the construction vehicle emission standards are permitted for specialist vehicles, unforeseen circumstances and triviality. These are detailed within the Information Papers.

5.8.1.4. The Principal contractor's ESSMP 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 to meet the requirements of Information Papers or over the life of their contract.

- 5.8.1.5. The Nominated Undertaker may issue Traffic Advice Notes to Principal Contractors regarding the suitability and adoption of new vehicle engine types, fuels and related standards, where there is a business case for their adoption. Such advice notes may be subject of external stakeholder consultation, to ensure best practice.

Measures to minimise queuing on the highway

- 5.8.1.6. Principal Contractors will be required to use vehicle flow management systems to ensure, as far as reasonably practicable, that the number of vehicles entering sites are no greater than the site capacity.
- 5.8.1.7. Principal Contractors will be required consider one-way movement of construction vehicles through sites.

Minimising construction vehicle parking

- 5.8.1.8. 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.
- 5.8.1.9. Where there is a specific Undertaking or Assurance related to parking on adopted roads, contractors should sign these appropriately so that contractors are aware of the restriction. Signing may say "No waiting by HS2 construction vehicles" with "over 3.5t" "for the next 100 yds" or relevant additional information included as appropriate to the undertaking or assurance. The colours of the type face and backgrounds should be discussed with the relevant local highway authority.

Sheeting and wheel washing

- 5.8.1.10. 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.
- 5.8.1.11. Principal Contractors will be required to provide and maintain wheel washing facilities, located on hard standing, where necessary.

5.8.2 Further improvements

Noise controls for road going vehicles

- 5.8.2.1. Principal Contractors should set out within their ESSMP proposals for managing vehicle noise on the highway (white noise alarms, soft closing doors, low noise tyres for use in urban and suburban areas) and should refer to “Quiet Deliveries Good Practice Guidance – Key Principles and Processes for Construction Logistics”, DfT, April 2014, within their ESSMPs, where relevant.

Noise controls for site vehicles

- 5.8.2.2. Principal Contractors and their supply chains should 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.

5.9 Driver information packs

- 5.9.1 For irregular drivers visiting construction sites, Principal Contractors are to consider the provision of a driver information pack for drivers within the supply chain.

- 5.9.2 The contents of such may include:

- a. Routes to be used where there is a Schedule 17 route approval in place (or intended)
- b. Causes of crashes
- c. Sharing the road
- d. Daily and weekly vehicle checks
- e. Environmental management (sheeting, wheel washing)
- f. Vehicle loading
- g. Vehicle safety standards; and
- h. Incident reporting

5.9.3 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 (where they apply to vehicles over 7.5t) or other routes to be avoided (where a U&A applies) , holding areas and other contract-specific information.

5.10 Segregating vehicles at site access

5.10.1 At any site access point, pedestrians will be provided with a route into and exiting the site which is segregated from works traffic in accordance with CDM regulations. The site access point will be provided with secured and sheltered 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.

5.11 Traffic enforcement

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

- a. 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.
- b. 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.
- c. Offences observed by The Nominated Undertaker compliance team will be followed up and may result in (a) serious offences being reported to the Police (b) reported on the incident management system (HORACE, which has superseded TENs, or suspension of access to a construction site; and
- d. Not following signage specific to the project or instruction related to lorry routes (where they apply and for vehicles over 7.5t) by report to the Principal Contractor and, as appropriate noted in the incident management system. Issues related to non-compliance may be reasonably be discussed at the relevant TLG meeting.

- 5.11.2 Actions of workforce drivers and pedestrians who are not compliant with the project rules for using public highways, accesses or haul roads will be reported through the incident management system (HORACE).

5.12 Vehicle and Driver rejection/suspension

- 5.12.1 Vehicles will be rejected for reasons of non-compliance with the vehicle safety standards in this RTMP i.e. from the 5th visit to any HS2 construction site in a rolling 12 month period. However, these requirements are above the legal requirement and contractors (such as traffic marshals at the access to sites) will not be undertaking inspections of vehicle road worthiness.
- 5.12.2 Compliance monitoring and vehicle or driver rejection procedures will be developed and implemented through the issue of a TAN. Rejections will, as a minimum, be related to standards of driver training and vehicle safety.
- 5.12.3 Return conditions always include the provision by the driver's employer of a rectification note to prove the suspendable fault has been repaired. The training requirements vary by the number of times a driver has been suspended.
- 5.12.4 A driver's suspension status will be managed through the H&S Passport system but the conditions to lift are managed within the Vehicle Monitoring System. An appeals process to challenge a suspension shall be available to the driver's employer.

5.13 Other measures

Vehicle breakdowns on the highway

- 5.13.1 Principal Contractors will be required to put in place procedures to manage construction vehicle breakdowns related to construction traffic, particularly in peak times, within their ESSMP plans.
- 5.13.2 Vehicle recovery within temporary traffic management will be subject to site specific measures.

Weigh bridges

- 5.13.3 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.

6 Workforce Travel Management

6.1 Scope

6.1.1 Route-wide Requirements

Code of Construction Practice

- 6.1.1.1. Construction workforce travel plans will be prepared by the principal 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. Travel plans will be prepared for one site, a group of sites or across a Principal Contractor area and where the works will be undertaken over an extended period.
- 6.1.1.2. The COCP outlines that contractors travel plans will include:
- a. identification of a travel plan co-ordinator and a description of their responsibilities;
 - b. key issues to consider for each construction site or group of sites;
 - c. site activities and surrounding transport network including relevant context plans;
 - d. anticipated workforce trip generation and how it may change during the construction process;
 - e. travel mitigation measures that will be introduced to reduce the impact of construction workforce on the transport network and services;
 - f. measures to control on-site parking provision and promoting travel by public transport where available;
 - g. target to reduce individual car journeys by the construction workforce;
 - h. methods for surveying workforce travel patterns; and
 - i. the process for monitoring and reviewing the construction workforce travel.

6.1.1.3. For Enabling/Advanced works (including GI and utilities works), travel plans will be included within Local Traffic Management Plans, as appropriate depending on the scale, scope and duration of the works.

6.1.1.4. Travel plans will only apply to construction sites.

Environmental Statement

6.1.1.5. The ES included, a generic Workforce Travel Plan (ES Volume 5 Appendix (TR-001-000) Transport Assessment - Annex A). 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 The Nominated Undertaker's work will include:

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

6.2 Responsibilities

6.2.1 The Principal Contractors will be required to assume responsibility for managing the overall levels of workforce travel for their journey to and from their place of work so as to avoid any new significant adverse effect beyond those set out in the Environmental Statement.

6.2.2 Objectives to support these aims will include:

- a. 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;

- b. 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.
- c. The objectives will be supported by measures to make walking, cycling and public transport use attractive and safe options within the vicinity of the construction sites, according to the level of demand and the location of the construction sites.

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

6.2.4 **Engagement and Local Liaison**

6.2.4.1. Travel Plans will be engaged on through the relevant Local Traffic Liaison Group meetings, or any sub-group established to consider the plans, surveys and any updated plans, as considered appropriate by the Local Traffic Liaison Group meeting members. This may include discussions concerning the delivery of transport and related measures.

6.2.4.2. Review of Local Travel Plans will be incorporated into the following travel plan update as appropriate. .

6.3 **Workforce Travel Plans for Construction Projects**

6.3.1 Workforce Travel Plans for the delivery of construction projects such as HS2 are significantly different to traditional travel plans. 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.

6.3.2 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.

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

- a. 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 may be employed during the construction period.
- b. 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;
- c. the workforce on-site will not work for The Nominated Undertaker, 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; and
- d. 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;

6.3.4 HS2 Workforce Travel Plan will therefore need to be:

- a. *more dynamic* – necessitating frequent travel-to-work surveys and evaluation and delivery of fairly short-term solutions based on projections;
- b. *more focused* – reducing the overall travel demand will not be tackled, but improving access and travel choice will be promoted;
- c. *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 All workers on site, including office and welfare facilities will be covered by the implementation of travel plans. Visitors (attending site meetings) will also be informed if parking is provided or not for visitor vehicles

6.4.2 Travel Plan editions

6.4.2.1. Main Civils Works and Station Works Principal Contractors will be required to prepare an interim travel plan for single or suitable groups of construction sites,

identifying initial measures to be put in place at the commencement of construction, including any measures required by Undertakings and Assurances. Full travel plans will then be prepared, following the 1st travel to work surveys. Full travel plans are to be prepared between 6 and 12 months following commencement of main civils works and utilise travel survey data to forecast mode share and impacts on transport networks at peak employment on-site (or sites).

6.4.2.2. Enabling/Advanced works contractors and later railway/network contractors set out travel plan proposals within their relevant LTMP.

6.4.2.3. The Nominated Undertaker may provide guidance on the timing and scope of travel surveys. Surveys should, for example, include type of fuel used for private worker car trips.

6.4.3 **Appointment of a travel plan coordinator**

6.4.3.1. Main Civils Works and Station Works Principal Contractors will need to 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. For Enabling/Advanced works, this responsibility can be combined with another role.

6.4.4 **Local Travel Plan meetings**

6.4.4.1. It may be appropriate to establish Local Travel Plan meetings to bringing together all parties with an interest in managing workforce travel arrangements.

6.4.4.2. It will be for relevant local TLG meetings to consider the establishment of travel plan meetings, attendance, scope and frequency of meetings along with any appropriate consultation arrangements for Workforce Travel Plans.

6.4.4.3. 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.

6.4.5 **Site evaluation**

- 6.4.5.1. 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 construction sites and other facilities which require regular work trips.
- 6.4.5.2. 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.

6.4.6 **Travel plan requirements**

- 6.4.6.1. 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.
- 6.4.6.2. 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, as appropriate:
 - a. public transport infrastructure and services - nearest stops/stations, service frequencies and routes served; and
 - b. non-motorised user routes - existing footways, road crossings, other rights of way (bridleways, footpaths, river and canal towpaths), cycle lanes and cycle tracks
- 6.4.6.3. The travel plan will relate to the key milestones in the construction process and phasing of works such as site clearance and preparation through to completion.
- 6.4.6.4. 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, or use of canal or river towpaths.
- 6.4.6.5. 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.

6.4.7 Workforce travel management measures

- 6.4.7.1. In many locations, it is assumed that a number of the construction sites will include dedicated accommodation which will assist with reducing the impact of workforce travel on the transport network.
- 6.4.7.2. 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 above the assumed numbers of trips in the Environmental Statement, if relevant.
- 6.4.7.3. 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:
- a. 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;
 - b. 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 contractors or as service level agreements with the relevant operator;
 - c. 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;
 - d. provision of on-site services, such as catering, to reduce the requirement to travel off site during the working day;
 - e. where appropriate, 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);

- f. 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;
- g. 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;
- h. encouragement of the use of public transport through raising awareness of local services, offering discounted season tickets or loans for season ticket purchase;
- i. 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 commensurate with demand (and any site specific safety measures);
- j. 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;
- k. as appropriate, cycle training and bicycle safety checks 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,
- l. an on-going commitment to promote safe and sustainable transport to the workforce through events and publicity such as campaigns and travel information posters.

6.4.8 **Car parking provision**

- 6.4.8.1. In inner city locations sufficient public transport will be available over a wide enough catchment, so that car parking will be limited to operational users only. This will apply to London Borough of Camden at all times and Curzon Street from commencement of Main Civil Works.
- 6.4.8.2. Operational parking will be provided, normally at welfare facilities, for:

- a. Site medical team (if any)
- b. Canteen staff, who will be arriving earlier than start up activities
- c. Blue badge holders
- d. Site security staff, particularly those carrying dogs.
- e. Essential project visitors, carrying out a statutory function
- f. External operational vehicles (including street sweepers and compliance team vehicles)
- g. Parking for workers at welfare facilities whose operational vehicles are then continuing into the construction site areas.

6.4.8.3. In suburban or other urban areas, it would be expected that parking controls will apply around the construction site areas and have good public transport links, but not necessarily able to cater for all transport needs. In such areas, principal contractors shall set out in their travel plans the maximum parking provision to be applied.

6.4.8.4. In rural areas, where necessary, controls may be required to ensure that no vehicles are parked on verges around the construction site – for example by requiring access by cycle, car, minibus or works vehicle (e.g. no walk-in allowed to deter off-site parking).

6.4.8.5. Car parks should be provided with EV charging points, powered from the mains supply and the demand for charging points kept under review and provided as necessary.

6.4.8.6. Parking will not be permitted on footways or verges and discussions with highway authorities will be held concerning the options to install waiting or other restrictions (and traffic orders) and enforcement (including physical measures) will be undertaken as necessary.

6.4.8.7. Options for on-site parking charges, making sites “no walk in” or introducing no waiting around construction sites will be discussed, where appropriate, with the local highway authority through Local TLG meetings or travel plan forums.

6.4.9 **Monitoring**

- 6.4.9.1. The TPC will engage with the relevant local authority travel planning officers on appropriate workforce monitoring and if targets are appropriate. This might include:
- a. a review/benchmarking of similarly located compounds/construction sites, undertaking the same types of work activities, to identify lessons learned which can inform the travel plan arrangement for new compound sites;
 - b. 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); or
 - c. where practicable, to include within surveys barriers to walking, cycling or using public transport.
- 6.4.9.2. 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**

- 6.5.1.1. Where necessary, workers walking to and from construction sites 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**

- 6.5.2.1. Principal Contractors or their supply chain 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.
- 6.5.2.2. 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 construction site access or welfare facility, including The Nominated Undertaker accredited staff or accredited visitors.

6.5.2.3. 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. The Nominated Undertaker may set a minimum parking charge for single occupancy private vehicles parking on-site where the vehicle is not being used for work purposes.

6.5.3 **Workforce site inductions**

6.5.3.1. 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.

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

7 Highway Works, Street Works and Traffic Management

7.1 Scope

7.1.1 The scope of construction works will include significant levels of temporary and permanent highway works and associated 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 highway 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 or signal timings.

7.1.2 Temporary traffic management will be required:

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

7.1.3 The scope of this chapter concerning traffic management includes:

- a. Describing the various legislative components in the HS2 Phase One Act and the Phase 2a Act;
- b. The procedures to be followed, taking into account the provisions of the HS2 Phase One Act and the Phase 2a Act for the design and consultation (and consent) for temporary highway works and temporary traffic management;

7.1.4 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

7.1.5 Relevant route-wide requirements

Code of Construction Practice

7.1.5.1. The CoCP sets out that route-wide measures to be considered within the RTMP include:

- a. measures which may include engagement with vulnerable road users (pedestrians, motorcyclists, cyclists, equestrians) to provide for road safety for all modes for the public and construction staff during traffic management works and temporary traffic control measures;
- b. process of submission and, as necessary consent or approval, of site specific traffic management measures;
- c. procedures to be followed for the temporary or permanent closure or diversion of roads, PRow or accesses; and
- d. lorry route signing strategy;

7.1.5.2. Where working under their permitted development rights, utility companies will continue to use their powers and follow the notification procedures under NRSWA to carry out works. For works authorised by the HS2 Phase One Act or for which they are relying on permitted development rights restored to them under Schedule 33 to the Phase One Act or Schedule 32 of the Phase 2a Act, they will be required to work within the scope of the HS2 Environmental Minimum Requirements.

7.2 Highway Works

7.2.1 Temporary highway works are described in the HS2 Phase One Act and the Phase 2a Act as temporary interference and are analogous to the term “works for highway purposes”

7.2.2 **Consultation, consent or approval for Highway Works under the provisions of the High Speed Rail (London – West Midlands) Act and the High Speed Rail (West Midlands – Crewe) Act**

7.2.2.1. The following sections set out the requirements for consents, consultation or approvals for temporary works which will applied for under the provisions of the Phase One Act/Phase 2a Act:

Trial holes

Table 7.1: legislative provisions – trail holes

	Phase One Act (Schedule 2)	Phase 2a Act (Schedule 2)
Requirement	<p>2) The nominated undertaker may for the purposes of this Act—</p> <ul 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. <p>3) The power in sub-paragraph (1)(a) includes power to—</p> <ul 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. <p>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.</p>	<p>1 (1) The nominated undertaker may for the purposes of this Act—</p> <ul 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 works authorised by this Act. <p>(2) The nominated undertaker may, in connection with the exercise of the powers under sub-paragraph (1), enter—</p> <ul style="list-style-type: none"> (a) land within the Act limits, or (b) land which may be affected by the works authorised by this Act. <p>(3) The land referred to in sub-paragraph (2)(a) or (b) need not be the same as the land in relation to which the powers under sub-paragraph (1) are being or are to be exercised.</p>
When	Approval will need to be given prior to the works, but no timescale for the granting of approval is provided for.	No requirement in relation to highways
Who obtains approval	Principal Contractor with The Nominated Undertaker acceptance.	No requirement in relation to highways
Submission package	Highway temporary interference proforma, including temporary traffic management arrangements.	No requirement in relation to highways
Disputes	Provision is made that: Any dispute as to the giving of consent under sub-paragraph (3) must be referred to arbitration if the parties so agree; but must otherwise be determined by the Secretary of State.	No requirement in relation to highways

7.2.2.2. The Phase 2a Act removes the requirement for consent with regard to making trail holes, presumably on the basis that the requirements under Schedule 2 in the Phase One Act were incompatible with the temporary inference powers in Schedule 4 of the Phase One Act.

7.2.2.3. Accesses

Table 7.2: Legislative provisions - accesses

	Phase One Act (schedule 4 part 1)	Phase 2a Act (schedule 4 part 1)
Summary 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>	<p>(1) The nominated undertaker may, for Phase 2a 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 consents to the siting of the works; and such consent is not to be unreasonably withheld.</p>
When	<p>Approval will need to be given prior to commencement of 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>Principal Contractor with The Nominated Undertaker acceptance.</p>	

	Phase One Act (schedule 4 part 1)	Phase 2a Act (schedule 4 part 1)
Submission package	<ul style="list-style-type: none"> Plans and specifications in accordance with paras 5 and 6 of the Act 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. Request any relevant Traffic Regulation Orders <p>Relevant information related to holding areas, hard standing for sweeping etc.</p>	
Disputes	Provision is made that: Any dispute with a highway authority under this paragraph must be referred to arbitration if the parties so agree, but must otherwise be determined by the Secretary of State.	
Other	It is assumed that no junction specific modelling will be undertaken for temporary construction impacts.	

7.2.2.4. Temporary interference

Table 7.3: Legislative provisions – temporary interference

	Phase One Act (schedule 4 para 6)	Phase 2a Act (schedule 4 para 8)
Summary 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>.</p> <p>(3) Before exercising the powers under subparagraph (1)e</p> <p>e(3) is to ensure public safety and, so far as reasonably practicable, to reduce public inconvenience.</p>	<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>(3) Before exercising the powers under subparagraph (1) in relation to a</p>

	Phase One Act (schedule 4 para 6)	Phase 2a Act (schedule 4 para 8)
	<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 consent in writing of the relevant authority.</p> <p>(6) Consent 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> <p>(7) If a relevant authority which receives an application for consent under sub-paragraph (5) fails to notify the applicant of its decision on the application before the end of 28 days beginning with the date on which the application was made, it is to be treated as having granted the application.</p>	<p>highway, and to an extent, specified in table 4 in Schedule 5, 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 4 in Schedule 5, the nominated undertaker must obtain the consent in writing of the relevant authority.</p> <p>(6) Consent 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> <p>(7) If a relevant authority which receives an application for consent under subparagraph (5) fails to notify the applicant of its decision on the application before the end of 28 days beginning with the date on which the application was made, it is to be treated as having granted the application.</p>
When	Consultation, and as necessary consent, will need to be given prior to construction.	
Who obtains approval	Principal Contractor with Nominated Undertaker acceptance.	
Submission package	<p>Detailed traffic management layouts, including any advanced warning signing</p> <p>Details of changes to the highway or footway layout and associated changes to street furniture</p> <p>Request for any required traffic orders.</p>	
Disputes	Any dispute with a relevant authority about consent under sub-paragraph (5) must be referred to arbitration if the parties so agree, but must otherwise be determined by the Secretary of State.	
Other	<p>As appropriate or the scale and scope of the works:</p> <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>Request any Traffic Regulation Order(s)</p>	

	Phase One Act (schedule 4 para 6)	Phase 2a Act (schedule 4 para 8)
	<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>	

7.2.2.5. Constructs a new highway or alters a highway – certification

Table 7.4: Legislative provisions – satisfactory completion

	Phase One Act (schedule 4 para 10)	Phase 2a Act (Schedule 4 para 12)
Summary requirement	<p>10 (1) Where under this Act the nominated undertaker—</p> <p>(a) constructs a new highway, or</p> <p>(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.</p> <p>(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.</p>	<p>12 (1) Where under this Act the nominated undertaker—</p> <p>(a) constructs a new highway, or</p> <p>(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.</p> <p>(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.</p>
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 Contractor with The Nominated Undertaker acceptance, where appropriate.	
Disputes	Any dispute with a highway authority under this paragraph must be referred to arbitration if the parties so agree, but must otherwise be determined by the Secretary of State.	
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.	

7.2.2.6. Construction or realigns a highway (plans and specifications)

Table 7.5: Legislative provisions – plans and specifications

	Phase One Act (schedule 4 para 11)	Phase 2a Act (schedule 4 para 13)
Summary requirement	11 (1) Sub-paragraph (2) applies where under this Act the nominated undertaker— (a) constructs a new highway which is constituted by or comprises a carriageway, or (b) realigns a highway which is constituted by or comprises a carriageway. (2) The construction or realignment must be carried out in accordance with plans, sections and specifications approved by the highway authority at the request of the nominated undertaker; and such approval is not to be unreasonably withheld.	13 (1) Sub-paragraph (2) applies where under this Act the nominated undertaker— (a) constructs a new highway which is constituted by or comprises a carriageway, or (b) realigns a highway which is constituted by or comprises a carriageway. (2) The construction or realignment must be carried out in accordance with plans, sections and specifications approved by the highway authority at the request of the nominated undertaker; and such approval is not to be unreasonably withheld.
When	Completion of works according to the submitted plans	
Who obtains approval	Submission of certificate by contractor after The Nominated Undertaker acceptance	
Disputes	Any dispute with a highway authority under this paragraph must be referred to arbitration if the parties so agree, but must otherwise be determined by the Secretary of State.	
Submission package	A certificate to be issued for signature of an authorised person. As necessary, a stage 2 RSA designers response closed out where reasonably required. Requests any Traffic Regulation Order(s)	
Other	Non-response after 28 days of a request to issue a certificate, it is deemed to be approved.	

7.2.2.7. Maintenance of new highways or alteration of highways (schedule 4 part 3)

Table 7.6: Legislative provisions – maintenance of new or altered highways

	Phase One Act (schedule 4 para 14)	Phase 2a Act (schedule 4 para 16)
Summary requirement	14 (1) Sub-paragraph (2) applies 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. (2) The new or altered highway must be maintained by and at the expense of the nominated undertaker for a period of 12 months from	16 (1) Sub-paragraph (2) applies where under this Act the nominated undertaker — (a) provides 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. (2) The new or altered highway must be maintained by and at the expense of the nominated undertaker for a period of 12 months from — (a) the date of practical completion, or (b) if

	Phase One Act (schedule 4 para 14)	Phase 2a Act (schedule 4 para 16)
	— (a) the date of practical completion, or (b) if later, the date on which it is first open for public use; and after the end of that period must be maintained by and at the expense of the highway authority. (3) Sub-paragraph (2) is subject to — (a) any agreement between the nominated undertaker and the highway authority as to alternative arrangements relating to the maintenance of the highway, and (b) sub-paragraph (4), in respect of a period for which the nominated undertaker is under a duty to maintain the highway. (4) Unless otherwise agreed between the highway authority and the nominated undertaker, the highway authority must ensure, so far as reasonably practicable, that safe passage along the new or altered highway is not endangered by snow or ice.	later, the date on which it is first open for public use; and after the end of that period must be maintained by and at the expense of the highway authority. (3) Sub-paragraph (2) is subject to — (a) any agreement between the nominated undertaker and the highway authority as to alternative arrangements relating to the maintenance of the highway, and (b) sub-paragraph (4), in respect of a period for which the nominated undertaker is under a duty to maintain the highway. (4) Unless otherwise agreed between the highway authority and the nominated undertaker, the highway authority must ensure, so far as reasonably practicable, that safe passage along the new or altered highway is not endangered by snow or ice.
When	Practical completion or open to public use. After 1 year, maintenance falls to the highway authority	
Who obtains approval	Submission by contractor after The Nominated Undertaker acceptance	
Disputes	-	
Submission package	A certificate to be issued for signature of an authorised person.	
Other	-	

7.2.2.8. Appendix E sets out the range of highway consents or approvals and how they will be gained through the Act powers or where normal procedures will apply.

7.2.3 Protective provisions

All highway authorities

7.2.3.1. Schedule 33 of the HS2 Phase One Act (Schedule 32 of the HS2 Phase 2a Act) also sets out that where highway works are required to be carried out, protective provisions apply, but where they apply, then the New Roads and Street Works Act is fully disapplied. In several cases, the protective provisions requires the consent of the highway to be sought (i.e. it effectively disapplies Table 3 of Schedule 4 in the Phase One Act and table 4 of Schedule 5 in the Phase 2a Act). The range of matters which the Schedule comprises are:

- a. Wherever in this Part provision is made with respect to the approval or consent of the highway authority, that approval or consent must be in writing

and subject to such reasonable terms and conditions as the highway authority may require, but must not be unreasonably withheld.

- b. In exercising the powers conferred by this Act in relation to any highway the nominated undertaker must—
- c. have regard to the potential disruption of traffic which may be caused, and
- d. seek to minimise such disruption so far as is reasonably practicable
- e. Approval required if any works to any tunnel, subway or other structures under or within 8m of the surface of a carriageway (and these are not street works);
- f. Approval required if any works to any new bridge or extension or alteration of an existing bridge of a carriageway;
- g. Provide new bridges to the appropriate loading recommended for highways by the Secretary of State
- h. Access to a highway authority for inspection of works;
- i. Approval required for alteration or disturbance of the property of the highway authority (which means apparatus affixed to or under the highway), but a highway authority can alter, divert, replace or reconstruct at the nominated undertaker expense.
- j. Not remove more soil or materials except required for the authorised works;
- k. Reclaim expense related to signposting traffic diversions, other measures related to diversions and repair of any highway due to diversion of traffic from a road of a higher standard;
- l. Without consent –
 - i. deposit material or store equipment on the highway “to which the public continues to have access”;
 - ii. Deposit soil or materials outside a hoarding;
 - iii. Erect on or over a highway any scaffolding or structure

- m. The nominated undertaker can provide and maintain temporary bridges or ramps;
- n. Make good a highway and maintain, for such time as reasonably required, the permanent reinstatement; and
- o. Permanent reinstatement to be as required by regulations made under Section 71 of the New Roads and Street Works Act 1991.

7.2.3.2. These matters will be discussed at TLG meetings, or as required, site meetings with relevant parties (such as The Nominated Undertaker, highway authority nominated highway inspectors and the relevant contractor which, as a minimum, will include the Principal Contractor site agent). General proposals related to reinstatement of highway works are set out in Section 8.5.

7.2.3.3. Where consent is required, then they will be undertaken through applications and notifications as set out in Section 7.4 below.

Highways England

7.2.3.4. The HS2 Phase One Act and 2a Act incorporate the following clause:

The powers conferred on the nominated undertaker under this Act with respect to works may not be exercised in relation to a highway for which a strategic highways company is the highway authority unless the company consents.

7.2.3.5. The Phase 2a Act adds a sentence related to consent being able to be conditioned.

7.2.3.6. Further requirements for working on the Highways England network may be addressed separately to this RTMP.

Transport for London

7.2.3.7. Transport for London has a Protective Provisions Agreement (PPA) which requires additional consultation related to works close to transport assets (generally speaking rail assets) or which effectively provides for consents for works which affect bus stops, bus stands, taxi ranks or cycle hire docking stations as well as bus service disruption.

7.2.3.8. In addition, the PPA includes the provision of a Requirements document. This generally relates to the design of stations but include certain elements of matters

related to highways (the Transport for London Road Network - TLRN) and consulted on separately.

- 7.2.3.9. Further requirements for working on the TLRN may be addressed separately to this RTMP

7.3 Street Works

7.3.1 Streetworks disapplication (Schedule 24)

- 7.3.1.1. Section 48 of the New Roads and Street Work Act defines streetworks as:

Works of any of the following kinds (other than works for road purposes) executed in a street in pursuance of a statutory right or a street works licence —

(a) placing apparatus, or

(b) inspecting, maintaining, adjusting, repairing, altering or renewing apparatus, changing the position of apparatus or removing it,

or works required for or incidental to any such works (including, in particular, breaking up or opening the street, or any sewer, drain or tunnel under it, or tunnelling or boring under the street).

- 7.3.1.2. And that an “undertaker” in relation to street works means:

the person by whom the relevant statutory right is exercisable or the licensee under the relevant street works licence, as the case may be.

- 7.3.1.3. The Street Works (Registers, Notices, Directions and Designations) (England) Regulations 2007 sets out the information which is to be provided by the statutory undertaker which means:

a person entitled by virtue of a statutory right to carry out street works.

- 7.3.1.4. Where the works within the highway include Streetworks, as defined within the New Roads and Streetworks Act, many provisions of the New Roads and Street Works Act are specifically disapplied by the Schedule 24 of the HS2 Phase One Act and Phase 2a Act where the works are within Act limits:

- a. directions as to timing of street works

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

7.3.1.5. Schedule 24 of the Phase One Act/Phase 2a Act also sets out that Part 3 of the Traffic Management Act 2004 (permit schemes), or in any permit scheme or permit regulations under that Part is also disapplied where the street works are within Act Limits.

7.3.1.6. Streetworks outside Act limits are afforded no disapplications of the Traffic Management Act or the New Roads and Street Works Act.

7.3.2 **Streetworks notifications**

7.3.2.1. Certain sections contained within Part 3 of NRSWA are not specifically disapplied by the HS2 Act. In particular:

- a. Section 54 – Advance notice of works
- b. Section 55 – Notice of starting date for works

- c. Section 64 – Notices in relation to traffic sensitive streets; and
- d. Section 75 – Inspection fees

7.3.2.2. Utility companies carrying out works on their utility assets (i.e. apparatus), or others carrying out works to provide utilities or alter existing utilities for works to deliver the project, will continue to provide notices under NRSWA for their works, as required by existing legislative requirements, subject to the disapplications in the HS2 Phase One Act or 2a Act. Utility works outside Act limits require both notices under NRSWA and permits under Part 3 of the Traffic Management Act 2004, but may be undertaken using temporary interference powers as appropriate.

7.3.2.3. Through the local Traffic Liaison Group meetings, the relevant contractor will provide street 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 at the request of the highway authority.

7.3.2.4. Utility companies and contractors may submit notifications for street works within Act limits using the HS2 version of Street Manager (HS2 Street Manager), to afford the disapplications to Traffic Management Act. The Nominated Undertaker will control access to HS2 Street Manager. Where submissions are made for streetworks using HS2 Street Manager, it should be assumed that the works are authorised by the relevant streetworks clauses in the relevant HS2 Act and the disapplications to NRSWA and TMA legislation apply to those works

7.4 Highway works funded by the project

7.4.1 Apart from permanent highway works which are set out in Schedule 1 of the relevant HS2 Act, the following temporary highway works are funded by the project (including, as appropriate, restoration to the condition of the highway prior to commencement of works):

- Works necessary to deliver the permanent works;
- Works required to comply with an Undertaking and Assurance;
- Works necessary to mitigate foreseen new significant adverse effects in accordance with the General Principles document, if those affects cannot be otherwise mitigated by programme change or traffic flow change;

- Works required by the contractor to enabling accessibility to the worksites, which may include direction signing, asset protection, journey time reliability, long-term works associated with abnormal load movements and construction of accesses.
- Works (or funding of works) related to anticipated or actual damage to the surface of highways or restoration of verges, although works to a carriageway are likely to be undertaken under Schedule 33 (Phase One Act) or Schedule 32 (Phase 2a Act).

7.4.2 Contractors may consider implementing additional traffic signing to manage the unintended consequences of construction traffic, but generally will be advisory signing only and not enforceable unless accompanied by a Traffic Regulation Order promoted by the contractor and made by the relevant Local Highways Authority.

7.4.3 Where a temporary work is proposed by the highway authority to remain as a permanent work, the highway authority funds the additional costs of design and construction to enable the works to function, or last, as a long-term permanent scheme.

7.4.4 Where works are not funded by the project, the highway authority may wish to consider using their Road Safety Fund allocations to fund other works, such as mitigations requested by local communities. These will necessarily need to meet the guidance provided on the use of the Road Safety Fund for the relevant phase of the project.

7.5 Procedures for Temporary Highway Works and Temporary Traffic Management

7.5.1 The Phase One Act/Phase 2a Act provisions only require consultation (and where necessary) consent for the nominated undertake to temporarily stop up, break up or alter a highway – including removal of street furniture and does not set out the arrangements by which consultation will be undertaken or written consent provided.

7.5.2 The generic process for consultation, consents and approvals for highway works (temporary interference) and associated traffic management is set out in this section.

7.5.3 As with the case for works undertaken under the New Roads and Street Works Act, the relevant schedule of the Phase One Act and Phase 2a Act also sets out that Part 3

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

Forward Programme and Temporary Interference Submissions using HS2 Street Manager

- 7.5.4 An initial programme of temporary traffic management measures are included by contractors within their Local Traffic Management Plans. This programme will be regularly updated by relevant contractors and circulated to the relevant TLG.
- 7.5.5 Contractors shall use the forward plan function in HS2 Street Manager to enable all contractors and HS2 to review temporary traffic management programmes and to assist the highway authority carry out its co-ordination function under the Traffic Management Act. The forward programme in HS2 Street Manager can be utilised as the consents register for temporary interference consents.
- 7.5.6 DfT has developed an HS2 version of Street Manager, which superceded the EToN specification in mid-2020. Although not required to place notices on the highway authority street works register for temporary interference, HS2 recognised the benefits of doing so with regard to works co-ordination, as long as it does not create additional requirements on contractors compared to paper submissions.

The HS2 version of Street Manager has been developed so that it takes account of the provision of the HS2 Phase One Act and Phase 2a Act. Guidance has been provided to contractors on the use of HS2 Street Manager (HS2-HS2-CL-ADV-000-000021 Guidance on Submissions Using Street Manager) including managing change, as well as guidance to Highways Authorities (HS2-HS2-CL-ADV-000-000022) on how to manage HS2 contractor submissions, within their own Street Manager portal.

Submissions process

- 7.5.7 The standard submission process for temporary interference (as defined in the legislation and including temporary traffic management) comprises the following elements depending on the scale or scope of the works and interference:

Table 7.7: Standard submission process

Temporary interference submission process	
1	The contractor include the scheme on Traffic Management Programme as early as practicable (Note 1)
2	As appropriate for the scale and scope of the works, early discussions on specific schemes will be held regarding the design of any temporary works as well as the traffic management arrangements 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 and seek their promotion. (Note 2)
3	The contractor will prepare the draft submission. The draft submission will include the indicative work dates. Placed on TLG agenda for discussion as appropriate. Draft circulated prior to TLG if practicable to do so.
4	TLG consultation and any actions arising, including any further discussions prior to submission.
5	The final version of the scheme will be accepted by HS2 and submitted to the highway authority by the Contractor with firmer or actual dates (and copied to key stakeholders and to adjoining authorities where appropriate. Copied submissions will be by e-mail). (Note 3)
6	<p>For streets listed in Table 3 of Schedule 4, a minimum three day period for consultation should normally be provided. If the scheme has been through detailed pre-submission discussion but a reasonable period may be agreed on a case by case basis, depending on the scale and scope of the work but no more than 10 days.</p> <p>For streets not listed in Table 3 of Schedule 4 of the Act, the contractor may identify a date for early determination but after 28 days (42 days for TfL), the submission will be deemed to be approved, where approval is required (Note 4) Issues raised within the determination period agreed as appropriate.</p> <p>Note that emergency works may require applications to be made retrospectively, but that in such cases, the highway authority will be notified as soon as practicable.</p>
7	Consent achieved
8	Contractor updates Street Manager with the commencement date
9	Works commence

Notes:

1. *The traffic management forward programme will generally be a spreadsheet with a single line summary of information for each notice to be submitted printed from Street Manager..*
2. *This will include discussions about requirements for Community Engagement, design, TROs and RSAs, as appropriate*

3. *The intention is that, where there have been pre-application discussions, including at the relevant Local TLG meeting, the submission 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 written exchange for audit purposes 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.*
4. *It is expected that, where consent is not required, a maximum 10 day review period may be agreed at the TLG on a case-by-case basis.*
5. *As necessary, revisions to the end date will be discussed in advance of a change being made on Street Manager (or submission of a TM3 form). This may include supplementary traffic management drawings as appropriate.*

7.5.8 Emergencies will be notified to the highway authority in advance wherever possible. This may include matters related to security intelligence where a planned road closure may need to be brought forward to avoid protester action.

7.5.9 An indicative summary of the process is set out in Table 7.8:

High Speed 2 Phase One and 2a Route-Wide Traffic Management Plan

Document Number: HS2-HS2-CL-PLN-000-000002

Revision: P01

Table 7.8: Indicative Process for temporary interference

Submission	Programme	Engagement	TLG meeting	Submission	Consent?	Start or extension	Complete
Minor, in Act limits "no interference"	Forward plan circulated to TLG	-	-	3 days	No	As submission	Certificate of practical completion or otherwise as necessary.
Standard, in Act limits	Ditto	As necessary, discussion with key parties	Review at TLG, as appropriate to the scale and scope of the works	Consultation period minimum three days. agreed on a case-by-case basis, up to 10 days	No	As submission or updated	
Standard, outside Act limits (1)	Ditto	Ditto		28 days (plus 3-5 days between end of consent period and start on site)	Yes	As submission or updated	

Proformas

- 7.5.10 A standard set of proformas will be utilised for HS2 submissions will apply route-wide, other than for temporary interference which will be made through HS2 Street Manager, Proformas will be consulted on via the Highways Sub Group to the Planning Forum.
- 7.5.11 Where a highway authority is not using Street Manager for temporary interference submissions, form TM1 will be used for the submission for consultation or consent and TM3 for notifying a change of dates or other minor amendments.

Additional notices

- 7.5.12 Written notification will be made to the relevant highway authority for the following and may be made via Street Manager:
- a. Notice of opening or reinstatement - although voluntarily for highway works but contractors will be encouraged to do so using Street Manager.
 - b. Location of new access within Act limits
 - c. Design and specification for new accesses
 - d. Design and specification for new and altered carriageways
 - e. Certification of practical completion of temporary works
 - f. Date of certification of practical completion

7.5.13 Submissions contents

- 7.5.13.1. Depending on the scale and scope of the temporary highway works and temporary traffic management, standard submissions may include as necessary:
- a. Traffic Management phasing diagrams
 - b. Traffic Management layout drawings
 - c. Direction signing and other regulatory and information signing drawings

- d. Advanced notification signing drawings and community liaison plan (compliant with Section 5.1 of the CoCP)
- e. Road Safety audit reports for the works (and any exceptions reports)
- f. Modelling assessment reports (as necessary)
- g. Summary impact assessments (against ES criteria, to show if new significant adverse effects are predicted and mitigation required)
- h. Draft traffic management orders
- i. Detail drawings related to movement of street furniture and standard construction detail
- j. Revised lighting drawings
- k. Revised drainage drawings
- l. Pedestrian, cycle and equestrian route drawings and direction signing
- m. Standard details for footway crossovers or ramps
- n. Information on required TROs
- o. Information on required suspensions or revocation of parking places required; and
- p. where necessary, a BD2 approval for a temporary structure over a highway will be discussed in advance with the relevant highway authority.

7.5.13.2. In all cases, a submission must include the contractor's contact details in case of emergency.

7.5.14 **Clauses**

- 7.5.14.1. Clauses for carrying out highway works which are to be followed by HS2's Principal Contractors and their supply chain are:
- a. Where consent or approval is required, it is 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.

- b. Where consultation is undertaken (and as necessary consent or approval is required) it is subject to provision of plans and specification (in accordance with provisions related to accesses or new or altered highways). Method statements, risk assessments or safety risk assessments etc. may be submitted prior to the works commencing, for information All highway works which are being undertaken for the delivery of Phase One and 2a 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.
- c. 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 notices within the relevant Street Works team.
- d. Where consultation is undertaken (and as necessary consent or approval is required), it does not remove the need for The Nominated Undertaker or their Principal Contractor to seek approvals from other parties as necessary.
- e. Principal Contractors will ensure that all works are carried out by sub-contractors experienced and qualified to work on the public highway including NRSWA accreditation as appropriate. Principal Contractors are to have public liability insurance of at least £10M (or a sum to be agreed by the Highways Sub Group to the Planning Forum).
- f. Contractors are to ensure all Health and Safety requirements are met including application of Construction (Design and Management) (CDM) Regulations where appropriate (or as revised).
- g. The Nominated Undertaker, through its Principal Contractors, will remain responsible for defects of workmanship and materials for temporary highway works (unless a certificate of practical completion has been issued and following 1 year maintenance period or other shorter period agreed with the highway authority) in accordance with the relevant Information Paper .
- h. Following restoration of an altered highway a further certificate of practical completion may be issued, All highway works are to be completed to the reasonable satisfaction of the highway authority.
- i. 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.
- j. Any proposals for erecting traffic signing on lamp columns will be consulted on (and as necessary approved by the highway authority) on the basis that they

remain responsible for monitoring and maintaining the state of their own assets.

- k. Principal Contractors will ensure that best practice industry standards are applied to all aspect of the works; and
- l. The Nominated Undertaker will confirm that any Schedule 33 (Phase One) / 32 (Phase 2a) conditions have been discharged and / or complied with, where reasonable to do so.

7.5.15 **Responsibilities**

- 7.5.15.1. Where appropriate, CDM regulations will apply to the design of temporary highway works and temporary traffic management measures.

Principal Contractors

- 7.5.15.2. In accordance with the CoCP Principal Contractors will prepare and implement Local Traffic Management Plans appropriate to the scale and scope of the works. These should set out the contractors "intent" as to the range of highway works which will be reflected in the draft programme. LTMPs will include, as appropriate:
 - a. temporary and permanent closures and diversions of highways and other PRow;
 - b. phasing of works;
 - c. the proposed traffic management strategy;
 - d. other measures which will affect the highway;
 - e. book, and pay the reasonable costs for, signal switch outs, as necessary;
 - f. 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. Traffic liaison groups will consider appropriate engagement with local communities who are directly affected regarding site specific traffic management plans, on a case-by-case basis; and
 - g. a register of applications for consents associated with temporary traffic management measures.

- 7.5.15.3. 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 consent and approval issues, who shall be the main point of contact for all highway consent and approval matters whilst taking due regard of the requirements of the Route-wide TMP and LTMPs.
- 7.5.15.4. Where Highway notifications are required, Principal Contractors will be required to:
- a. take responsibility for preparing submissions for consultation, consent or approval, in consultation with The Nominated Undertaker and provide sufficient resources for early engagement with (a) highway authority officers, (b) directly affected stakeholders;
 - b. identify for each work undertaken, the point of contact in relation to maintenance of the works;
 - c. not start works until consent or approval has been obtained, where required to be provided by the highway authority in accordance with Schedule 4 of the HS2 Phase One Act and Phase 2a Act;
 - d. ensure that the views of The Nominated Undertaker and relevant Highway Authority and other stakeholders have been considered and incorporated as reasonably appropriate when preparing the submission, in accordance with the designer responsibility;
 - e. comply with the reasonable requirements of the highway authority, in consultation with The Nominated Undertaker;
 - f. provide The Nominated Undertaker with drafts submissions for review at least 5 working days prior to their submission to relevant Traffic Liaison Group meeting;
 - g. invite The Nominated Undertaker to any pre-meetings with the highway authority prior to the preparation of the draft submission;
 - h. maintain a schedule of highway consent and approvals to be obtained;
 - i. ensure that each consent and Approval application is of a sufficiently high standard to facilitate consent or approval;
 - j. pay fees and charges required for any approvals, where this is not disapplied by the provisions of the HS2 Act or Service Level Agreement - including payment

- for the reasonable costs for administering Traffic Regulation Orders, such as the preparation of the order, including costs of advertising and consideration of objections;
- k. ensure that site managers are aware of any restrictions or agreed conditions in relation to carrying out the works (such as commencing works after the morning peak period);
 - l. ensure compliance with submissions, agreed relevant conditions and, where appropriate, consent or approvals;
 - m. ensure that submissions are compliant with any site-specific Undertake and Assurance and traffic management is compliant with the EMR requirements; and
 - n. Immediately report issues and defects with temporary traffic management deployment and ensure rectification of issues and defects as soon as reasonably practicable.

The Nominated Undertaker

7.5.15.5. The Nominated Undertaker will:

- a. ensure that adequate consultation has been undertaken in accordance with this plan;
- b. ensure that contractors provide and regularly update a highway authority master schedule of highway submissions to be obtained, including dates of submission and notification, dates of required consent or approval (if any) - either actual or after the lapse of 28 days (42 for TfL roads), planned and actual dates of works. For temporary interference, this will be undertaken using Street Manager;
- c. attend relevant stakeholder forums including NRSWA meetings, to share HS2's highway works programme;
- d. authorise submissions by the contractor using the powers in the HS2 phase One Act and phase 2a Act and ensure timely submissions to the relevant highway authority and copied to adjoining authorities, where relevant; and
- e. appropriately review that the implementation of works are in accordance with the approved drawings through the compliance team;

- f. appropriately ensure submissions are compliant with the project requirements and as necessary EMRs in relation to impacts across contractor activities including the potential for additional impacts across geographic regions.

Highway authorities

7.5.15.6. Where highway consent or approvals are required, highway authorities will be expected to:

- a. engage with Principal Contractors, their consultant and The Nominated Undertaker 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;
- b. appoint a single point of contact for submissions/notifications, with suitable responsibility to approve submissions/notifications, where consent is required
- c. to promptly review submissions appropriate to the scale and scope of the proposed works – this would normally be to the timescale as for NRSWA submissions for minor or standard scope of works
- d. promptly provide comments or engage on proposed conditions related to submission on the grounds in accordance with the relevant HS2 legislation
- e. enter proposed and actual works onto the street works register as necessary, if not being undertaken by the contractor using Street Manager
- f. provide timely responses to road safety auditor CVs for approval, RSA briefs, reports and exception reports.
- g. promote Traffic Regulation Orders, as necessary.
- h. arrange for parking place removal (and provision of new parking places), as necessary.
- i. reasonably control costs associated with claims for meetings and review of submissions in accordance with the relevant Information Paper (Phase One - C13, Phase 2a - C12)

7.5.16 **Dispute resolution**

- 7.5.16.1. Where an application for consent for temporary interference to a highway is refused (where the highway is not included in the relevant schedule within the Act), the requirements of the Act is that the dispute can be taken to arbitration, should the parties agree, or is otherwise to be determined by the Secretary of State.
- 7.5.16.2. Assuming that all reasonable engagement has been undertaken prior to an authority refusing an application, or seeking to impose conditions beyond those specified in the Act:.
- 7.5.16.3. A dispute resolution process will be discussed with stakeholders through the relevant Highways Sub Group to the Planning Forum, to avoid such refusals to be taken directly to arbitration or resolution by the Secretary of State. For Phase One, the dispute resolution process is as follows:
1. The applicant (normally the contractor) seeks to resolve with the consent granting body and, as necessary makes a new submission.
 2. (a) The HS2 project manager or project engineer would take up the matter with the consent granting body. If necessary, it may be referred to the relevant technical “head of discipline” if the dispute is about interpretation of the Act or a matter of principle.
(b) The HS2 Head of Programme/Area Project Director writes to the consent granting body that HS2 is minded to seek determination by the Secretary of State - most likely in the following 5 working days – but will continue to seek resolution.
 3. A request is made to the Secretary of State for determination.

7.6 Design requirements for temporary highway works and traffic management

7.6.1 **Design of Temporary highway works**

- 7.6.1.1. The geometry of temporary highway works (i.e. where works will be left in place without other traffic management) will be designed to appropriate standards to suit their purpose. As appropriate, a permanent design standard will be followed where the temporary highway work is to be left in situ for a period of at least 6 months. As necessary, designs will be subject to Stage 1 and 2 (or combined) road safety audits or safety statements.

7.6.1.2. Whilst the design may be to a permanent design standard, the materials to be used are likely to be a lower standard than for permanent works with the aim that they will last for the period that the temporary works will be in place.

7.6.1.3. The installing Contractor will be responsible for providing all necessary drawings to enable the highway to be reinstated, either later on as a part of their works or for handover to later contractors.

7.6.2 **Design of Temporary traffic management**

7.6.2.1. Temporary traffic management is to be designed and installed by the contractor in accordance with to the current Traffic Signs Regulations and General Directions, "Safety at Street Works and Road Works - A Code of Practice" and the recommendation of Chapter 8 of the Traffic Signs Manual (specifically, Traffic Safety Measures and Signs for Road Works and Temporary Situations).

7.6.2.2. When designing temporary traffic management, the TfL guidance "Temporary Traffic Management Handbook " shall be considered, where practicable and reasonable in urban areas (<http://content.tfl.gov.uk/temporary-traffic-management-handbook.pdf>)

7.6.2.3. Where the documents in 7.6.2.1 are superceded or additional guidance or best practice documents are published, these will be notified or directed to the Principal Contractor via a Traffic Advice Note as appropriate. .

7.6.2.4. The design should take into account the site-specific requirements of vulnerable road users – pedestrians, cyclists, equestrians, wheelchair users, pram users and motorcyclists - as appropriate to the local circumstance and likely use. Local situations will require layouts which will be based on Chapter 8 standards. Except for standard layouts for minor works notices, temporary traffic management drawings will be required to be provided by the Principal Contract for Nominated Undertaker review and highway authority consultation, consent or approval. Consideration may be needed as to the speed of traffic and if speeds need to be reduced to ensure safety of road users or workforce.

7.6.2.5. Temporary traffic management and access arrangements will be designed to meet access requirements for the fire service and meet the requirements of "Approved Document B - Fire Safety: Volume 2 - Buildings other than dwelling houses".

7.6.2.6. Any design which needs to accommodate unusual local circumstances MUST be brought to the attention of the relevant highway authority as a part of an submission for consent or approval, and details of how significant changes with the general layouts or requirements will be managed and any residual risk eliminated or

as low as reasonably practicable may be provided as a part of the designer risk assessment submitted for information

- 7.6.2.7. 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.
- 7.6.2.8. The layout of worksites on the highway must not interfere with the visibility splay of junctions. Instructions may need to 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 TSCO must review the visibility of junctions – and in particular traffic signals – as soon as practicable after installation.
- 7.6.2.9. Where any temporary highway measures include traffic calming schemes to be designed and constructed in accordance with the Highways (Traffic Calming) Regulations 1999, the contractor is required to undertake consultation with the relevant local Police (either via the appropriate TLG or separately) and consult adjoining households and businesses which will be specifically affected.

7.6.3 **Competency**

- 7.6.3.1. Principal Contractors will be required to ensure that all temporary highway works and traffic management to be undertaken to the highway shall be designed by a competent person and implemented in accordance with industry best practice and to the requirements of CDM regulations. The Contractor shall be responsible for the design of temporary works including: temporary traffic management layouts and guarding, temporary highway layouts, fencing, shuttering and propriety systems, site cabins/welfare, temporary carriageway construction, signing, lighting and diversions of road users.

7.6.4 **Design of Street lighting in temporary traffic management**

- 7.6.4.1. During construction:
- a. lighting columns may require removal; and
 - b. hoardings may be erected which will lead to reduced street lighting levels

7.6.4.2. 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.

7.6.5 **Design of barriers and hoardings on the highway**

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

- a. 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)
- b. Where Heras-type fencing or hoarding are used on the highway, the design will need to accommodate visibility splays, particularly at junction, according to the junction type in accordance with the relevant standards set out in the relevant design standard.
- c. 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. Similarly, pedestrian barriers should not be located close to junctions, as they may create similar canyon effects and could result in left turn vehicles side-swiping cyclists; and
- d. Hoardings are to be installed to avoid ponding on the traffic side. The Nominated Undertaker may issue an advice note for hoarding standards.

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

7.6.6 **Additional temporary traffic management safety requirements for non-motorised users**

7.6.6.1. Drawings which require the unavoidable diversion or deviation of pedestrians and/or cyclists must indicate routes and signage to be provided to indicate re-routed or diverted pedestrian/cycle paths. Where necessary, temporary crossing points must be provided, including physical measures to provide refuges/keep left signs as necessary. Temporary ramps may be deployed for temporary situations, subject to drainage requirements and cycle safety.

7.6.6.2. 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 and vulnerable road users as

appropriate. Footways of adequate width to facilitate pedestrian flows will be provided with signs provided to facilitate safe access around the site boundary.

- 7.6.6.3. Where sharp bends in pedestrian diversions are unavoidable, “trixi” mirrors are to be installed as well as “cyclists dismount” signs, where appropriate to do so. 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.. 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 (Crime Prevention through Environmental Design) and Police crime advisors consulted.

7.6.7 Design for accesses

New accesses

- 7.6.7.1. Contractors will be required to prepare layout drawings for site access points, including arrangements for, and execution of, traffic management arrangements for consent or approval.
- 7.6.7.2. The design of temporary accesses should be adequate for the expected purpose and duration, and be designed to be safe.

Use of, or improvements to, existing accesses

- 7.6.7.3. Contractors must prepare submissions under Schedule 4 for new highway accesses or alterations to existing highway accesses.
- 7.6.7.4. Where an existing access is proposed to be utilised – such as an existing farm access – the contractor should consider the number of additional movements, the swept path and visibility for all expected movements into and out of the access and if the speed of the road is appropriate. Where the speed limit on the road is 50mph or above, the contractor must carry out, and document, this review.
- 7.6.7.5. The access should be signed which may comprise HS2 works traffic signing or appropriate warning signing of the access location, or both as necessary.

Traffic regulation orders

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

However in most cases this is not preferred due to poor compliance with the reduced speed limit and should only be done where other measures are not expected to be effective.

7.6.8 **Temporary carriageway construction requirements**

7.6.8.1. Temporary running lanes and carriageways will be designed and constructed to appropriate design standards to be submitted to the relevant highway authority as plans and specifications in accordance with the relevant Act provisions and will be designed, for the duration of the temporary use of the carriageway and the expected loading.

7.6.9 **Temporary highway boundaries**

7.6.9.1. Where necessary, agreements will need to be entered into with relevant highway authorities for the temporary maintenance of a highway prior to the permanent highway boundary being identified or 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 will need to be met by The Nominated Undertaker.

7.6.10 **Traffic management phasing**

7.6.10.1. For major scheme submissions, the traffic management phasing may need to be prepared, consulted on and submitted for consultation or consent or approval, prior to the preparation of detailed design drawings. This will ensure that the principles of a series of traffic management measures are agreed in advance.

7.6.11 **Maintaining access for emergency services**

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

- a. 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.
- b. The potential impact of required attendance times due to temporary road closures within rural areas; and
- c. The potential need to identify and agree air ambulance landing sites in rural areas;

7.6.12 **Maintaining access to premises**

- 7.6.12.1. Access will be considered at a site-specific level within submissions for consultation or, as required, consent or approval and associated notifications.

Access for pedestrians

- 7.6.12.2. 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 cyclists

- 7.6.12.3. Access to premises in use will be provided for cyclist, as far as reasonably practicable.

Access for mobility impaired

- 7.6.12.4. 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 blue badge holders or (in Central London) local mobility impaired badge holders

Access for vehicular traffic

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

Access for fire appliances

- 7.6.12.6. 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.
- 7.6.12.7. Design of traffic management must consider fire access and reference should be made to London Fire Brigade Fire Safety Guidance Note 29, Access for Fire Appliances, or local Fire and Rescue Authority standards. Consideration must be given to access to public buildings or those at risk and discussions may need to be held with building occupiers or owners with respect to fire access requirements.

7.6.13 **Maintaining site safety**

- 7.6.13.1. At all sites in the highway or temporary road closures where there are gates for access into a working area, these are to be provided with 2 red/white barriers, one at approx. 1m height and one at 1.6m height.

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

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

7.6.14 **Method statements and risk assessments**

7.6.14.1. Method statements and risk assessments (including road safety risk assessments) for the setting out, operation, maintenance and removal of temporary traffic management will be prepared by the contractor prior to commencement of work on the highway appropriate to the scale and scope of the works and associated operations.

7.7 **Engagement**

7.7.1 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.

7.7.2 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.

7.7.3 Full temporary 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. Where long-term significant disruption will occur, advanced warning signings will be used to advise road users. Notices will be placed in local newspapers where appropriate.

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

7.7.5 Prior to works starting, Contractors may be required to undertake the delivery of Advance Notification of Works leaflets to those specifically affected (such as occupiers of premises along roads which are to be closed to vehicular traffic) appropriate to the location, nature and duration of work and which outline the impacts which may arise and any appropriate mitigations.

- 7.7.6 Should temporary road closures or other works which result in significant disruption over-run, additional advice will be provided to those specifically affected will be notified, as soon as reasonably practicable. The need for wider communication will be discussed with the highway authority.

7.8 Temporary traffic management impact review

7.8.1 Impact assessment against ES

- 7.8.1.1. If the contractor's proposals for temporary traffic management significantly depart from that assessed in the ES, then the impacts of temporary traffic management will need to be reviewed against the criteria contained within the ES to ensure that no new significant temporary effects are forecast to be introduced.
- 7.8.1.2. This review will be carried out by the relevant Principal Contractor in consultation with the Nominated Undertaker and, as necessary, reported to the relevant TLG. No new temporary traffic management measures which last less than 4 weeks will require assessment.

7.8.2 Traffic modelling

- 7.8.2.1. The traffic modelling work undertaken to develop the ES will generally not be revisited to test the impact of temporary traffic management unless the proposed arrangements are not in accordance with assumptions in the ES and new significant adverse effects, as defined in the Environmental Statement, could arise as a result of the proposed change.
- 7.8.2.2. There are also likely to be requirements to undertake additional modelling work to ensure that the detailed traffic management designs of the Principal Contractors can be implemented or to select the most appropriate traffic management arrangements which may be the least disruptive option, subject to the cost and programme requirements to mitigate the effects of the project.
- 7.8.2.3. This modelling could comprise:
- a. local modelling (e.g. TRANSYT) to provide detailed signal timings and congestion assessments; and
 - b. potential strategic traffic modelling (e.g. SATURN) to overview how flows reassign with changed network assumptions

- 7.8.2.4. Whilst it may be that this work is undertaken by the Principal Contractor's traffic management consultants, the modelling may be undertaken by others or instructed by The Nominated Undertaker if appropriate due to the following:
- a. the ownership of the models would need to be determined and transferred, including all documentation
 - b. 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; and
 - c. understanding of the model strengths and weaknesses, which will be a key requirement to understanding how the ES process has been developed.
- 7.8.2.5. Any traffic modelling will be consulted upon in pre-application discussions or at TLG meetings, as appropriate.

7.9 Road Safety audits and assessments

- 7.9.1 DMRB document GG 119 'Road Safety Audit' came into effect in October 2018. Whilst application of GG 119 is strictly only mandatory to motorway and all-purpose trunk road works, in practice it also forms the basis for road safety audits carried out for works on almost all local highway authority roads (subject to any organisation-specific modifications to roles and responsibilities, etc.).
- 7.9.2 It may be necessary for road safety audits to be undertaken in accordance with standard GG119 for temporary traffic management schemes lasting less than 6 months. These are expected to be required where:
- a. temporary traffic management or temporary highway schemes alters a highway to the extent that a driver will not be familiar with the route/direction to take and impact on road user behaviour; and
 - b. local circumstances requires that there is substantial changes to the indicative designs set out in Chapter 8 of the Traffic Signs Manual or otherwise will be in place for more than 6 months and impact on road user behaviour.
- 7.9.3 **Requirements, definitions and responsibilities**
- 7.9.3.1. Requirements, definitions and responsibilities for road safety audits are set out in the document "Guidance Note – Road Safety Audits" (HS2-HS2-HW-GDE-000-000004). For working on the Highways England network contractors are to comply with the procedural addendum (HS2-HS2-HW-PRO-000-000005)

7.9.4 Road safety audit procedure

- 7.9.4.1. The requirement for road safety audits should be discussed between the contractor and the highway authority where the above conditions are likely to arise, in advance of a relevant submission for consultation or consent.
- 7.9.4.2. Where appropriate, an exemption certificate may be prepared by the Design organisation and issued to the overseeing organisation to confirm that the circumstances do not warrant a safety audit to be carried out. Particular consideration will need to be given to the requirement for audits to be undertaken where the temporary highway scheme is expected to be in situ for than 6 months if significant impact is anticipated or road safety concerns are identified.
- 7.9.4.3. Stage 1 or 2 Road Safety Audits should be considered to have a shelf life of 2 years in urban areas and 5 years in rural area. Where conditions have not substantially changed, an exemption certificate may be prepared by the Design organisation and issued to the overseeing organisation to confirm that the circumstances do not warrant a safety audit to be carried out.
- 7.9.4.4. It is expected that temporary traffic management or highway schemes 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.
- 7.9.4.5. Audit responses will be prepared by the designer in consultation with the Overseeing organisation and will generally:
- a. Accept an audit recommendation
 - b. Identify if an alternative measure negates the audit recommendation
 - c. Identify that the audit recommendation is outside the scope of the works
 - d. Identify if the audit recommendation is an existing issue and therefore the responsibility of the highway authority to rectify; and
 - e. Reject the recommendation on the grounds that it is disproportionate to the level of risk identified or unreasonable cost to rectify the identified risk
- 7.9.4.6. 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 Overseeing organisation has written to the Design organisation to instruct a change.

- 7.9.4.7. Stage 4 RSAs may be conducted as a part of the installation and operation of temporary traffic management schemes, since the audit standard requires monitoring of 12 months and 36 month of personal injury data. Such data will only be available several months after the end of the 12 or 36 month period. In most cases, the scheme review would be taking place after the highway being restored to its original design following completion of the HS2 main civils works. This is therefore covered by the review of data to be carried out, described in 5.6.4.
- 7.9.4.8. **Road Safety Risk Assessments (Motorways and Trunk Roads)**
- 7.9.4.9. Standard GG104 provides a framework for identifying hazards, assessing, evaluating and managing safety risks and assuring safety risk governance for activities which can impact on safety on motorway and trunk roads.
- 7.9.4.10. The standard notes that it is a framework safety risk assessment process rather than a rigid process, the requirements provide flexibility for safety risk assessments to be as simple or as complex as the activity being risk assessed requires and can be applied appropriately for the many and varied activities undertaken. This in line with the requirements that a contractor produces a risk assessment and method statement which is commensurate with the scale and scope of the works.
- 7.9.4.11. Contractors should only consider reasonable potential risks and consider what measures should be put in place to reduce risks as the scale and scope of the works require and show evidence that the contractor has considered population types in particular and reasonably mitigated risk
- 7.9.4.12. For Categories B or C, the contractor should have early dialogue with Highways England on the scope of the Road Safety Risk Assessment.
- 7.9.4.13. Road Safety Risk Assessments should be provided to Highways England alongside the consent application. Comments which are not related to the grounds in the Act for refusal or modification will be reasonably closed out prior to start of works.

7.10 Traffic signs

- 7.10.1 Traffic signs will be designed to the requirements of the most recent Traffic Signs Regulations and General Directions Order. Non-prescribed signs will require authorisation and, where reasonably practicable, The Nominated Undertaker 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.

7.10.2 Temporary direction signing for road network changes

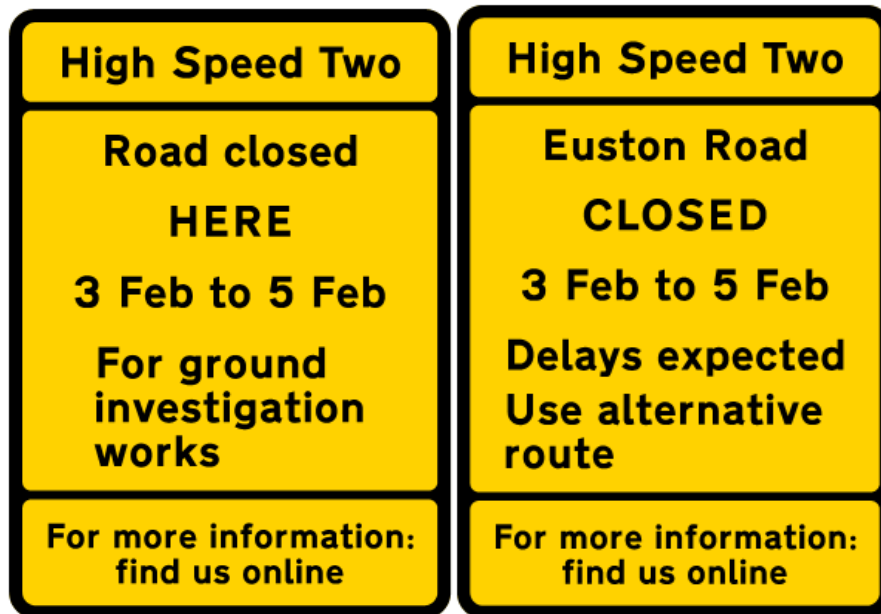
- 7.10.2.1. LTMPs (or separate reports) will establish, as necessary, destination signing requirements to be utilised on temporary road signs.
- 7.10.2.2. Consideration may need to be given to signing destinations (or principal businesses or destinations) on stub ends of roads which are temporarily stopped up.
- 7.10.2.3. Where footpaths are to be diverted, particular attention will be given to continuity of signing long distance footpaths.

7.11 Advanced warning signing

7.11.1 General Traffic advanced warning signage

- 7.11.1.1. Typically, signing will be required to warn road users of expected additional congestion due to reduced capacity and temporary road closures (as well as closures of Rights of Way such as footpaths and bridleways in rural areas). As a minimum, advanced warning of capacity reductions which will last more than three weekdays will be required on A class roads. Advanced warning will be subject to discussions at the relevant TLG meeting.
- 7.11.1.2. 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 typically 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 7.2:

Figure 7.2: Signing for temporary road closures and other constraints

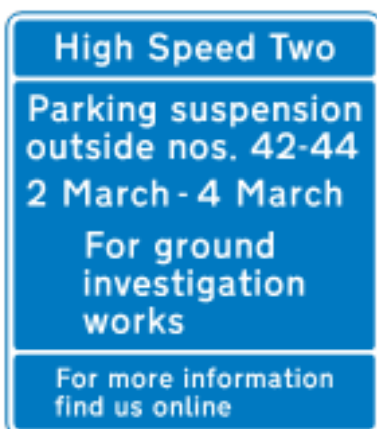


7.11.1.3. Signing to this general design will be required to provide advanced warning of banned turns and other temporary traffic restrictions, where routes are diverted.

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

7.11.2.1. For temporary works in the highway, advanced warning signing for suspension of parking places and other kerbside space required for the works will be 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, wording and other information signing to be agreed with the relevant highway authority. These signs are intended to be used should the highway authority not carry out the suspension signing:

Figure 7.3: Signing for parking place and other kerbside suspensions



7.12 Direction signing to construction sites

- 7.12.1 The need for direction signing is being replaced by new technologies, such as What Three Words. Requirements for direction signing will be discussed with the emergency services and others through the local TLG meetings. Any signing required for emergency services may be supplemented by other signing for deliveries, as necessary.
- 7.12.2 Direction signing to construction sites will be required for:
- a. 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);
 - b. Supplementary signing for deliveries to sites, where necessary and direction signing must be provided where there is a risk of vehicles not being compliant with approved lorry routes, on a risk-based approach.
- 7.12.3 The location of direction signing to construction site access points (which may include office and accommodation/welfare compounds, holding areas, logistics centres/consolidation centres) and RVP points along the trace will be subject to schedule 4 submissions to the relevant highways authorities. The signing and construction site numbering/lettering system has been developed in consultation with the emergency services. This will then be developed into:
- a. a direction signing design standard for consultation with the highway authorities through the Highways Sub group to the Planning Forum
 - b. information packs for emergency services
 - c. driver information packs for routes and deliveries
 - d. information to be used in for workforce inductions and toolbox talks as to how to call the emergency service
- 7.12.4 Where direction signing is required, signs will be:
- e. White text on red background (as used for CTRL, Terminal 5, Olympic Park and Crossrail)
 - f. 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 speeds limits of 70mph will have an x-height agreed with the relevant highway authority.

- g. Have a standard legend either as a top panel or upper text on a chevron sign

7.12.5 Signing to construction sites will commence from locations where considered necessary by the emergency services. Supplementary signing locations will be agreed on a case-by-case basis, to ensure that drivers follow approved lorry routes or other suitable routes. Contractors must take all reasonable measures to ensure that the supply chain is aware that Sat Navs must not be utilised for wayfinding when engaged on driving for HS2 construction activities, when approaching construction sites or delivery points.

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

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

7.12.7 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 7.4 sets out indicative designs:

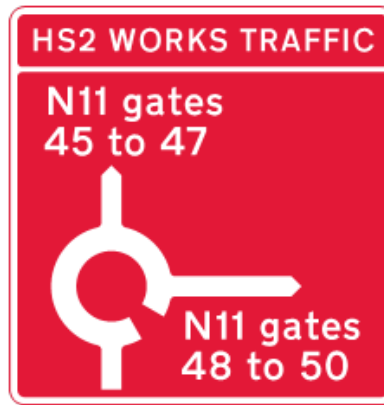
Figure 7.4: Indicative signing (showing alternative straplines)



Approach to a slip road at a grade separated junction



Double sided sign at site access



Approach to a roundabout

- 7.12.8 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 signed “no left/right turn” or “ahead only” signs on the approaches.
- 7.12.9 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.
- 7.12.10 The design, installation, updating, maintenance and removal of direction signing to construction sites will be managed according to the route-wide masterplan.
- 7.12.11 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.
- 7.12.12 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.
- 7.12.13 **Signing of non-permitted routes and providing local access**
- 7.12.14 Direction signing should be provided where there is a risk of vehicles not being compliant with specific restrictions set out in the register of Undertakings and Assurances. This may include positive direction signing (as set out in Figure 7.4) and negative signing starting with “No HS2 Works Traffic” and then the specific restriction

such as “over 7.5t” or “over 3.5t” as appropriate. Such signing may need to be on the approach to a relevant junction as illustrated in Figure 7.5:

Figure 7.5: Advanced signing of a U&A restriction



7.12.14.1. The requirement for such signing in other locations, should be considered by the Contractor on a case-by-case basis but such signing should be considered for information and not enforceable

7.12.15 **Emergency services and access protocols**

7.12.15.1. Emergency access protocols will be developed by the Principal Contractors, in liaison with the emergency services and the nominated undertaker.

7.13 **Exit signing**

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

7.14 Implementation

7.14.1 Permanent stopping up

- 7.14.1.1. Where a highway is to be permanently stopped up, the relevant notification form HW3 is to be submitted to the relevant highway authority and a copy sent to the Chief Police Officer for the location concerned (via the emergency services contact who attends the relevant Local TLG meeting).

7.14.2 Traffic orders

General arrangements

- 7.14.2.1. The Contractor's method of working will, as necessary determine the requirement for temporary Traffic Regulation Orders (TROs). The Principal Contractors will be responsible for identifying where TROs will be required to enable the delivery of HS2 Phase One, including permanent TROs associated with permanent highways, ensuring that they are applied for and paying the relevant charges. Contractors will need to consider the early identification of TRO requirements during the development of temporary traffic management measures in consultation with the relevant highway authority.
- 7.14.2.2. The powers within Schedule 4 of the HS2 Phase One Act/Phase 2a Act enables the nominated undertaker to temporarily stop up any highway required for the delivery of the HS2 phase One/phase 2b project. The use of such powers to temporarily close a highway do not require the promotion of TROs, but how such temporarily closures are implemented, including advanced notification to specifically affected communities, and the travelling public, as well as the signing of suitable diversion routes would be matters for discussion at the relevant local Traffic Liaison Group meetings. It is presumed that diversions would avoid toll roads. Consideration may need to be given to the suitability of a route if prone to flooding or snow
- 7.14.2.3. In all cases, where there is a need to regulate traffic, traffic orders will need to be promoted by the relevant highway authority. The Principal Contractor will pay the reasonable costs of the highway authority to administer proposed Traffic Regulation Orders.
- 7.14.2.4. 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.

7.14.2.5. As the HS2 Act enables the Nominated Undertaker to temporarily stop up a highway and remove street furniture, charges for parking place suspensions are not payable, unless the suspension is carried out by the highway authority at the request of the contractor. However daily charges or compensation for loss of parking revenue will not be payable as the highway will be temporarily stopped up under Schedule 4 of the relevant HS2 legislation. .

Highway authority consultation on proposed TROs

7.14.2.6. The requirements of Schedule 25 of the HS2 Phase One Act (Schedule 30 of the HS2 Phase 2a Act) requires that a highway authority consult on the making of Traffic Regulation Orders: (a) within Act limits (b) on roads set out as proposed lorry routes within the Environmental Statement (c) on roads for which an application for lorry route consent has been submitted under Schedule 17 of the Phase One Act/Phase 2a Act (d) on roads which are approved lorry routes.

7.14.2.7. It would be the intention of the Nominated Undertaker that the requirements to consult are not a burden on the highway authorities or the Nominated Undertaker and that guidance would be given by the Secretary of State (and regularly updated) to limit, as far as reasonably practicable, the requirement to consult.

Additional Powers regarding Traffic Orders

7.14.2.8. Schedule 25 of the Phase One Act/Schedule 30 of the Phase 2a Act also provides powers to the Secretary of State to direct a highway authority with regard traffic orders, similar to those which already exist under the Road Traffic Regulation Act 1984. The nominated undertaker would be required to set out the reasons why a traffic orders would need to be made (or as necessary adjusted or revoked) and the Secretary of State would be required to consult the relevant highway authority.

7.14.3 Vehicle removals

7.14.3.1. Whilst Schedule 4 permits the temporary stopping up of a highway for the purposes of delivering Phase One of the HS2 scheme, the stopping up only temporarily suspends highway status (unlike permanent stopping up, whereby the ownership of the land under the highway may revert to the adjoining land owners). In cases where vehicles remain in the area temporarily stopped up, it would be necessary for a highway authority (or Police authority) to use their powers to remove the vehicle.

7.14.3.2. Schedule 25 of the Phase One Act (schedule 30 of the Phase 2a Act) provides powers for the nominated undertaker to remove vehicles on a highway and place them in the same street or another street, where necessary to comply with temporary stopping up submissions made under Schedule 4, either where the vehicle obstructs the works or which could be reasonably foreseen could be damaged.

7.14.3.3. The use of these powers and practical issues regarding their use are required to be consulted on with the relevant highway authority and Police authority. Such arrangements will include: approvals for lifting specific vehicles, arrangement for recording the state of the vehicle, advanced warning (street notices, letter drops etc.) and notifications (such as leaving notices on vehicles), agreeing locations where vehicles will be removed to (such as within Controlled Parking Zones, relocating from a parking place to a parking place where possible) and notifications for tracing vehicles (such as any trace service).

7.14.4 **Mapping of temporary traffic management**

7.14.4.1. The use of HS2 Street Manager provides an opportunity for members of the public to find out what traffic management is planned within their immediate area via the One.Network platform. This may be advertised on HS2 public websites.

7.14.5 **Unintended effects of traffic management**

7.14.5.1. Where traffic management measures may result in unintended consequences by through traffic which should remain on suitable through routes. Whilst advanced warning signing and diversion signing should generally be sufficient, additional signing may be necessary, including appropriate hazards warning signs “No access to...” or “access to.... only” signs or, where appropriate regulatory signs including “no motor vehicles except for access” and potentially “no entry”, in accordance with a Traffic Regulation Order. The scale of such additional signing will need to be commensurate with the level of additional traffic using routes which are considered inappropriate and impacts.

7.14.5.2. In rural areas or on motorways and trunk roads, there may be fewer alternative routes available for traffic. Should the effects of traffic management result in higher levels of congestion on the network or use of routes which are unsuitable by traffic diverting, these will be discussed with the highway authority and additional information provided to road users, where reasonably practicable.

7.15 **Waterways**

7.15.1 Schedule 2 paragraph 9 of the HS2 Phase One Act and Schedule 2 paragraph 11 of the HS2 Phase 2a Act allows for the following activities:

(2) The nominated undertaker may—

- a. temporarily interfere with a waterway (listed)

(1) at any point within the Act limits, by constructing or maintaining such temporary works, or by carrying out such dredging works, as it considers necessary or expedient;

- b. temporarily moor or anchor barges or other vessels or craft in a waterway mentioned in sub-paragraph (1);
- c. temporarily close a waterway... (listed), or a part of such a waterway, to navigation.

(3) The power under sub-paragraph (2) (c) must be exercised in a way which secures—

- a. that no more of the waterway is closed to navigation at any time than is necessary in the circumstances, and
- b. that, if complete closure of the waterway to navigation becomes necessary, all reasonable steps are taken to secure that the minimum obstruction, delay or interference is caused to vessels or craft which may be using or intending to use it.

7.15.2 Waterway closures will be discussed in advance with the relevant bodies, such as the Canal and River Trust.

7.15.3 Where a canal towpath requires closure, diversion signing will be submitted to the relevant highway authority in relation to diversion routes using highways or other public rights of way.

8 Highway Management

8.1 Scope

8.1.1 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:

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

8.1.2 For Main Civil Works and later contractor activities, principal 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.

8.1.3 Relevant route-wide requirements

8.1.3.1. 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

8.1.3.2. 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.

8.1.3.3. General requirements set out within the CoCP include:

- a. 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;
- b. procedures to be followed to obtain consent to work on or over railways, highways and canals; and
- c. measures for highway reinstatement;

8.1.3.4. Measures will have regard to the nature of the site(s) in question, and will include:

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

8.1.3.5. 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 17)

Table 8.1: Legislative provisions – mud control measures

Requirement	<p>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:</p> <p>(7) Road mud control measures.</p> <p>That the arrangements ought to be modified—</p> <p>(a) to preserve the local environment or local amenity, or</p> <p>(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.</p> <p>The Secretary of State may for the purposes of paragraph 4 make a class approval of arrangements relating to the ancillary matters referred to in paragraph (above). This has been the case for Phase One.</p>
When	<p>Should a class approval not be made by the Secretary of State, construction arrangement submissions will need to be made to qualifying authorities and will need to include general arrangements in respect of Road Mud Control Measures. This no longer applies to Phase One.</p>
Who obtains approval	<p>Nominated undertaker.</p>
Submission package	<p>General Arrangements to control road mud. This no longer applies to Phase One.</p>
Disputes	<p>Schedule 17 contains an appeal process should requests for approval be refused. This no longer applies to Phase One</p>

8.3 Worksites on the highway

8.3.1 Worksites refer to:

- a. Temporary traffic management on the highway using barriers, according the Chapter 8 standards and the works being carried out within the safety zone.
- b. 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; and

- c. Occupation of the whole width of the carriageway, with hoarded sites, possibly with footways being closed or one footway retained, also providing for mounted or dismounted access for cyclists.

8.3.2 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.

8.3.3 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 Nominated Undertaker.

8.3.4 **Competency and supervision**

Contract-wide supervision

8.3.4.1. The implementation, maintenance, amendments, operation and removal of temporary traffic management will be the responsibility of a competent and qualified TSCO. The TSCO will manage qualified Supervisors responsible for each site within the highway.

Street works supervision

8.3.4.2. Works in the highway will be supervised by a qualified Supervisor registered on the Streetworks Qualifications Register. Where required, supervisors will also have a high speed road accreditation.

8.3.4.3. The supervisor will be named on the works commencement notification and ensures that the operatives are suitability qualified and accredited.

Operatives

8.3.4.4. 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.

8.3.5 **HS2 Code of Practice for Streetworks**

8.3.5.1. Contractors undertaking highway works and streetworks will be required to follow HS2's Code of Practice for street works in urban areas and otherwise as appropriate for rural areas and type of roads, appropriate for the location of the works:

- a. Provide suitable advance warning to neighbours and road users;
- b. Be tidy and safe with a clutter-free site so it is safe for pedestrians, cyclists and other road users.
- c. Always explain what's happening through detailed, clear and consistent signage.
- d. Explain if works are delayed (e.g. unexpected buried services).
- e. 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.
- f. 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).
- g. Diversion routes should be clearly signed
- h. Ensure that barriers, cones and signs, including diversion signs are inspected on a daily basis, maintained in good order and regularly cleaned; and
- i. Project hoardings and fencing along the boundary of a road, highway, footway, cycleway or other PROW will need to be checked daily for graffiti and flyposting and should be removed or covered within 4 hours (and for offensive material within two hours).

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

8.3.6 **Site information signing requirements**

8.3.6.1. Signing of worksites on the highway shall include (on non-motorway or trunk roads):

- a. For temporary traffic management (i.e. where barriers are used):
 - i. Contractor signboards including the client, the purpose of works, expected completion date, the contractor name, contractor's emergency contact details, other appropriate information to Traffic Sign Diagram 7008
- b. For larger worksites or occupation of the whole carriageway (i.e. where hoardings are installed):
 - i. Employer and Principal Contractor information boards, including nominated undertaker emergency contact information
 - ii. Relevant health and safety information for employees
 - iii. Relevant safety information for pedestrians and other road users as appropriate
 - iv. Relevant safety information concerning hazard materials used or stored on site.
 - v. Displaying notices confirming that businesses whose access or view may be affected by construction works, remain open with directions for how to access them.

8.3.6.2. The Nominated Undertaker may set out design requirements within HS2 Contractor Advice Notes to ensure a consistent approach.

8.3.6.3. For motorways and trunk roads. the use of "Billboards" will be discussed with Highways England where substantive long-term works are expected to be in place, according to reasonable requirements of the Highway Authority.

8.3.7 **Temporary road closure or temporary traffic management protocols**

8.3.7.1. 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:

- a. All approved diversion signing is in place;
- b. Ensuring that buses are on diversion, where a closure is on a bus route (and as necessary, scheduled coaches);

- c. That sufficient workforce are in place to implement the closure in the correct sequence; and
- d. That workforce is in place to assist drivers on the approach to a closure - as a minimum for the first weekday morning and evening peak period, or for busy locations for the first day (between 7am and 7pm, or from the commencement of the closure and if in daylight hours) (but not deployed to direct traffic), subject to any necessary generic or site specific risk assessment.

8.3.7.2. For road closures (or signs warning of expected congestion ahead etc.), the frequency of checking signage may be subject to discussion at the relevant TLG in advance. The frequency will depend on the location of the closure (at a junction or along a link), the duration and if the signs are on A frames or mounted on street furniture.

8.3.8 **Advertising rights**

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

8.3.9 **Maintenance and inspection of Chapter 8 layouts**

8.3.9.1. Principal Contractors will be required to ensure that the Site shall be subject to routine inspections. The inspection frequency will depend on the potential for traffic disruption. Traffic signal timings at portable traffic signals will need to be reviewed at peak periods, to ensure that it operates efficiently.

8.3.9.2. The contractor must carry out any necessary checks to ensure that unattended temporary traffic management is secure and safe according to site conditions and forecast weather and working reasonably in accordance with the red book.

8.3.9.3. The TSCO will need to arrange for rectification, repair or replacement of traffic management as soon as reasonable practicable, either following inspection or notification of defects. Loss of temporary traffic signals, such as use of portable signals at shuttle working or other closure of a road or carriageway to traffic due to displacement of traffic management (other than by acts of vandalism or crash damage), must be attended to within 2 hours of notification. Contractors who fail to attend site within 2 hours shall reimburse the reasonable costs of the highway authority to attend and make good a worksite as necessary.

- 8.3.9.4. Temporary use of STOP-GO boards should be available as soon as practicable, where safe to do so, where portable signals have failed and operated in accordance with a generic or site-specific method statement and a risk assessment.
- 8.3.9.5. Records of formal inspections including deficiencies identified and the corrective action taken shall be made available to The Nominated Undertaker on request.
- 8.3.9.6. The Nominated Undertaker 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 method statement and may require the works to immediately cease until corrective action is undertaken.
- 8.3.9.7. During deployment or operation of traffic management measures, a qualified TSCO may consider that the scope of traffic management, or method of control may be reduced or altered as appropriate to the site circumstances, as long as such alterations are in accordance with Chapter 8 of the Traffic Signs Manual and in accordance with a written site risk review. The method of control may only be reduced in scope in such circumstances. In all such cases, the alterations will be notified to the highway authority as soon as practicable.
- 8.3.9.8. Except for emergency situations, any works on the highway which have not been subject to consultation or submitted for consent or approval to the highway authority will be immediately suspended and any traffic management removed as soon as reasonably practicable and the incident reported The Nominated Undertaker to the relevant highway authority. The Nominated Undertaker 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.
- 8.3.10 **Safety requirements for worksites on the highway**
- 8.3.10.1. 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. Contractors will be required to maintain work place plant and other equipment are maintained in accordance with a written plan and replaced as necessary. 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.
- 8.3.10.2. 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 the availability of:

- a. 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
- b. Hard hat
- c. Safety boots
- d. Safety goggles or glasses
- e. Ear defenders; and
- f. Gloves

8.3.10.3. 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.

8.3.10.4. 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.

8.3.10.5. Working on motorways and other high speed roads are particularly hazardous. Operatives on motorways must have in their possession any necessary safety passport and agreed with the relevant operator the time and conditions for working on the motorway or hard shoulder. .

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

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

8.3.11.2. 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 The Nominated Undertaker safety managers.

- 8.3.11.3. 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 during the works.
- 8.3.11.4. 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

- 8.4.1.1. Where temporary traffic signals are required to be operated for temporary highway works or for haul road crossings consultation and, as necessary approval will be required in accordance with Schedule 4 of the relevant Act.
- 8.4.1.2. Where appropriate, consideration should be given to the duration of the all-red phase to ensure that cyclists can proceed safely through the road-narrowing before oncoming traffic is allowed to start travelling towards them.

8.4.2 Signal works agreements

- 8.4.2.1. 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.
- 8.4.2.2. Discussions will be held with highway authorities through Local TLG meetings with regard to appropriate agreements how signal works will be designed, procured, installed and commissioned for changes to existing installations or the installation of temporary works. Where these affect signals – and other electronic equipment on the motorway and trunk road network, discussions will be held with Highways England directly.

8.5 Construction, maintenance and reinstatement of temporary highway works

8.5.1 Inspection regime during construction

- 8.5.1.1. Principal Contractors will need to ensure that The Nominated Undertaker is advised of all visits and action by regulators (such as the highway authority, HSE, Environment Agency) or utility companies, in connection with the works, including:

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

8.5.2 **Contractor responsibilities for assets within and outside of the working area**

8.5.2.1 The contractor is responsible for the temporary works carried out to the highway (until the certification of practical completion) and any rectification of damage to other assets, such as repairs to services should they be damaged during the period that the worksite on the highway is occupied and works undertaken to alter the highway. For example, whilst carrying out works a cable strike renders street lighting inoperable.

8.5.2.2 Unless governed by legislation, the contractor does not take responsibility for other damage due to the occupation of the highway, such the carriageway used by traffic within traffic management.

8.5.3 **Certification of works**

8.5.3.1. A certificate of practical completion will be issued by the contractors to the relevant highway authority for all permanent highway works, including permanent accesses.

8.5.3.2. Where the works are temporary, a certificate of practical completion may be sought by the contractor. Reasons for not requesting a certificate are:

- the works are temporary and will be altered within 12 months;
- the contractor wishes to retain some control over them (or a part of the works); or,
- the works will remain under traffic management)

8.5.3.3. The certificate may be accompanied by:

- a. A stage 3 Road Safety Audit, closed out (if stage 1 or 1/2 audits completed); and
- b. A list of defects of materials and workmanship of the works to be closed out.

8.5.3.4. All temporary works which are restored to the former design will be subject to a certificate of practical completion.

8.5.4 **Temporary works takeover from previous HS2 Principal contractors**

8.5.4.1. Temporary highway works constructed by a Contractor may need to be handed over to a later Contractor

8.5.4.2. In order that temporary works are handed over the installing contractor will need to prepare the following documentation as necessary:

- a. Location plan
- b. As built drawings
- c. Health and safety file, to include any manufacture's documented maintenance requirement or warranties; and
- d. The highway authority certificate of practical completion

8.5.4.3. Arrangements for handover will be agreed with the Nominated Undertaker.

8.5.5 **Maintenance, reinstatement and adoption of temporary works**

8.5.5.1. The responsibilities of the Principal contractor to maintain the works will be carried out in accordance with Phase One Information Paper E29: Future Highway Maintenance Responsibilities (Information Paper E7 for Phase 2a).

Highway works

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

- a. 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;
- b. They form a temporary highway work where a certificate of practical completion has been submitted and after the 1 year maintenance period or such shorter period agreed with the relevant highway authority;
- c. 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 and a certificate of practical completion issued, commencing the one year maintenance period; and

- d. Alternative arrangements are agreed with the Highway Authority as set out in the relevant Information Paper.

8.5.5.3. HS2 will require that contractors undertake reinstatements in accordance with the minimum requirements as set out in the Specification for Reinstatement of Openings in the Highway (SROH) (or as otherwise agreed with the relevant highway authority).

8.5.5.4. Where the visibility splay to a temporary accesses or visibility of temporary signage on the approach to site accesses or temporary traffic management is obscured by growth of vegetation, the contractor maintains visibility of the signage on grounds of road safety.

Street Works

8.5.5.5. For street works, the contractor's reinstatement guarantee period will be in accordance with the NRSWA standard. For highway works, the reinstatement guarantee period will be 1 year, as would be the case for new roads or carriageways, unless otherwise agreed on a case-by case basis with the highway authority.

8.5.5.6. Highway Authority will inspect reinstatements in accordance with their normal schedule. The relevant contractor will be responsible for carrying out remedial works as required during the guarantee period, if failure is due to workmanship or materials

8.5.6 Retention of temporary works

Requests for design and construction of temporary highway works to a permanent standard with a view to permanent retention

8.5.6.1. If a highway authority wishes a temporary work to be built and installed as a permanent work, then the principle that the highway authority pays for additional design and construction costs over and above the permanent design (including matters such as lengths of new lanes, additional relocations of lighting columns and diversions of services and depth of construction) will apply. In all cases the highway authority will need to fund and secure any additional land outside the highway boundary to implement such additional measures.

- 8.5.6.2. A written request will need to be made by the relevant highway authority and terms may need to be agreed through an exchange of letters. Matters to be considered may include:
- a. Matters related to additional cost of the design and construction, setting out the additional design scope;
 - b. That no additional diversion or relocation works are required beyond additional design and construction scope (e.g. the highway authority pays for any unknown service diversions which may come to light during construction or to resolve construction issues at the tie-in points, then the highway authority will fund these additional work.
 - c. The design and works will include reasonable adjustment to allow for a stage 2 road safety audit and a stage 3 road safety audit, if necessary. No commuted payments will be made to the highway authority for a stage 4 road safety audit or future maintenance.
 - d. In addition, the highway authority is responsible for any approvals/permissions for the works and that the highway authority will confirm, in writing, that it will be adopting these works as improvements under its Highways Act 1980 powers; and
 - e. The period for the contractor to be responsible for defects of workmanship and materials (but not routine maintenance and crash damage) is 12 months following the issue of the certificate of practical completion.

Requests for retention of a temporary highway work following construction

- 8.5.6.3. Prior to reinstatement of temporary highway works, 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 and the highway authority is responsible for any consent or approvals or permissions for such works. In such cases, the process of issuing a certificate of practical completion will not apply.

8.6 Bridge assessments and asset protection

8.6.1 Bridge assessments and strengthening works

8.6.1.1. Prior to commencement of main civil works the assumed lorry routes set out in the Environmental Statement will be reviewed. Where appropriate, consideration will be given by Principal Contractors to the requirement for:

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

8.6.1.2. Records will be sought from the local highway authority, Network Rail, the Canal and River Trust and other owners, where available.

8.6.1.3. Should further routes be proposed, similar reviews will be undertaken by the Principal Contractor.

8.6.2 Other asset protection

8.6.2.1. Prior to commencement of main civil works Principal Contractors will give consideration to the requirement for protecting assets such as:

- a. 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; and
- b. Width restrictions – provision of upstream collision bollards and additional signing.

8.7 Protection and restoration of services, verge and highways

8.7.1 Summary of responsibilities

8.7.1.1 Responsibilities are summarised as follows:

- Measures for accessibility to worksites which may include:
 - measures related to the pre-construction condition of the highway to reduce project risk based on the baseline highway condition assessment;
 - measures to protect highway assets, buildings or structures;

- measures for journey time reliability;
 - contractor (within their ROMIS plans);
- Preventative measures (such as protection of verges and kerbs etc) damage to highways in the immediate vicinity of worksites (other than non-HS2 related crash damage) – contractor (as it forms a part of the site access restoration);
- Specific damage caused by construction vehicles along lorry routes (crash damage, verge over running where specific to a contractor vehicle) – contractor;
- Wear and tear along lorry routes during or following use by a contractor – HS2 (the highway authority claim is firstly referred to the contractor if they consider that it is due to their specific activities) as it is a schedule 33 protective provision matter across the line of route and related to multiple contractors. Option for advanced payment under Highways Act or other funding arrangements to be considered through the Highways Sub Group to the Planning Forum.
- Damage related to Abnormal Load Movements (the haulier);
- Maintaining the safety of the highway including urgent repairs (the highway authority);
- Claims by public related to damage to vehicles etc due to condition of the highway (the highway authority).

8.7.2 Contractor and project responsibilities for damage to verges and carriageways

- 8.7.2.1. Within the immediate vicinity of the highway access, then the contractor is responsible for restoration of the highway where it is altered or damaged the highway. The contractor is required to (a) record the state of the highway before start of works (b) provide suitable protection of kerbs and verges as a part of their access arrangements
- 8.7.2.2. Along highways the contractor is responsible for any specific damage it causes, such as crash damage, spills etc. and verge damage where it is known to be specifically caused by the contractor. Where it relates to abnormal load movements, the haulier is responsible.
- 8.7.2.3. Regarding the condition of the road surface along roads, HS2 is responsible for managing claims from the highway authority for deterioration. Highway authorities should initially raise the issue with the relevant contractor. If the contractor considers that they are not wholly responsible for the deterioration, the contractor passes the matter to HS2. A claim process has been put in place for highway authorities to seek funding for repair. The highway authority remains responsible for the safety of road users and will necessarily manage any claims related to damage to vehicles or property.
- 8.7.2.4. HS2 will manage any post-construction surveys and make any financial offers for repair, following substantial use of a route for construction traffic.

8.7.2.5. If a contractor considers that the condition of a road is likely to deteriorate and be a risk to the delivery of the project, the relevant PM can request that consideration be given to HS2 funding works – HS2 would normally seek the highway authority to carry out the works, given that carriageway improvement works would be permanent.

8.7.3 **Protection of services and verges including drainage ditches and repair**

8.7.3.1. Buried structures and services represent a significant hazard. The 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. Contractors will be responsible for the detection, avoidance and protection of buried utilities and will be held responsible for damages caused.

8.7.3.2. 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 contacted to affect a repair or confirm that the buried service is not damaged.

8.7.3.3. The contractor will be responsible for protection and works to repair construction-related damage to drainage systems within the highway boundary, including clearance of material in ditches caused by the works or works traffic in the vicinity of construction site accesses or along approved lorry routes.

8.7.4 **Protection of carriageway surface (tracking)**

8.7.4.1. Except at haul road crossings which will be subject to restoration, 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

8.7.5 **Condition surveys and reinstatement of site accesses**

8.7.5.1. Prior to the construction of a new access or use of a construction site access from a carriageway, a condition survey is to be carried out of the carriageway, footway, kerbs and the verge by the Principal Contractor. This requirement also extends to haul road crossings over a highway. The condition survey should be shared with the relevant highway authority.

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

8.7.5.3. The contractor is responsible for the restoration of the access, kerbs and verges.

8.7.5.4. The Principal Contractor will be required to retain the record of the state of the access prior to use for 6 months following any reinstatement works.

8.7.6 **Highway condition surveys along lorry routes**

8.7.6.1. Prior to commencement of main civil works a highway condition survey will be carried out along the lorry routes assumed within the Environmental Statement.

8.7.6.2. The Nominated Undertaker will consult with the relevant local highway authority the scope of the highway condition survey along the assumed lorry routes and along any parallel route to act as a reference. Surveys will be carried out along alternative lorry routes, should they be subject to an application under Schedule 17 of the HS2 Phase One Act or the Phase 2a Act.

8.7.6.3. Highway condition surveys will not apply to the strategic road network. Highway condition surveys will not apply to other A roads, unless subject to extraordinary traffic loadings. Local road highway condition surveys will likely apply only to approved lorry routes.

8.7.6.4. 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. The scope of surveys in these cases will be subject to discussion with the relevant local highway authority via the relevant TLG meeting.

Methodology

8.7.6.5. The methodology for surveys prior to commencement of Phase One main civil works has been subject to independent review and discussion via the Highways Sub Group to the Planning Forum. The same survey scope will apply to Phase 2a.

Initial review prior to start of Main Civil Works

8.7.6.6. An initial assessment of the base survey data is important as it will identify the pavement condition prior to commencement of main works. The results will be provided to the Main Works Contractors to consider if there are any specific risks which need to be mitigated. It may be the case that some preventative works could be required to the carriageway prior to commencement of construction where there could be rapid deterioration. Major reconstruction or works would negate the need for further pavement condition surveys.

- 8.7.6.7. Survey data will be shared with highway authorities, assuming that they will be able to accept the format of the data as provided. Any costs for reformatting data will fall to the relevant highway authority.
- 8.7.6.8. Discussion would then be expected to be undertaken with the relevant highway authority to consider the best approach to the management of the road network and responsibilities, including those of the highway authority in accordance with the provisions of the Highways Act 1980.

Matters arising during construction

- 8.7.6.9. Highway authorities may wish to claim for damage to highways during the construction period. A claims process will be established through the relevant Highways Sub Group to the Planning Forum.
- 8.7.6.10. The nominated undertaker will consider the condition of the highway prior to commencement of substantive use of a route by construction traffic, the nature of the damage, the proposed scope of rectification works and the proportion of HGVs using the route which are related to HS2 construction activities. In such cases, an offer to fund works will be made, subject to HS2 commercial governance. Where funding is over the value of the deterioration caused by HS2 construction traffic, this will settle all future claims for the section of highway to which the claim relates.
- 8.7.6.11. Contractors may wish to consider the level of actual deterioration experienced during construction and consider what risk that this may have for project delivery. In such case, works may be carried out by the contractor – or funding made available to the highway authority to mitigate the deterioration. Where the scope of works or funding is over the value of the deterioration caused by HS2 construction traffic, this will settle all future claims for the section of highway to which the claim relates.

Surveys and works following substantive use of a route by heavy construction traffic

- 8.7.6.12. Following substantive use of a route by heavy construction traffic, the nominated undertaker will arrange for further surveys will be undertaken in consultation with the relevant highway authority (for scope and timing) and identify any proposed remedial work which will be required to maintain the same level of condition, less normal wear and tear, as identified prior to commencement of the works. These work could then be undertaken by the Principal Contractor or via funding to the relevant highway authority.
- 8.7.6.13. Excluded from remedial works would be:

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

8.8 Winter access to construction sites

- 8.8.1 Principal Contractors will need to consider the routes that highway authority gritters and snowploughs follow and the likelihood of routes between strategic routes and construction sites not being prioritised and develop snow and ice response plans accordingly.
- 8.8.2 Discussions will be held with local highway authorities concerning planned gritting routes, to ensure that diversion routes (or temporary highways being used to substitute) which are on gritting routes are considered by the highway authority. Initially this will be led by HS2 and handed over to the relevant Principal Contractors.

8.9 Road cleanliness

- 8.9.1 For Phase One, Class approvals are in place for mud control measures as set out in Schedule 17 of the HS2 Phase One Act. These were published in the document: High Speed Rail (London-West Midlands) Act 2017 Class approval for matters ancillary to development under Schedule 17 in March 2017. Should Class approvals apply to Phase 2a, these would be applicable as appropriate.
- 8.9.2 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:
- a. Hardstanding at the access and egress points will be cleaned at appropriate intervals;
 - b. Vehicle wash down points to clean vehicle wheels at each exit point onto the highway;
 - c. The correct loading of vehicles and sheeting of loads where necessary to avoid spillage during their journeys;
 - d. Appropriate wheel cleaning measures will be employed to prevent the transfer and accumulation of mud and other granular deposits on the public highway;

- e. The use of mechanical road sweepers combined with water sprays for the suppression of dust to clean hardstanding, roads and footpaths in the vicinity of the site;
 - f. Measures to avoid water runoff onto the adjacent highway (footways or carriageways), including avoiding ponding adjacent to hoardings on the carriageway;
 - g. Ensure no material is deposited onto the public highway which will affect drainage interceptors, etc; and
 - h. The flushing of gullies in the vicinity of the site.
- 8.9.3 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.
- 8.9.4 In addition, contractors will undertake the clearance of channels where debris often collects, in relation to the paths taken by two-wheeled vehicles at construction site accesses, where appropriate.
- 8.9.5 **Prevention of water run off onto highways**
- 8.9.5.1. Construction sites 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 and/or silt and debris from the highway.
- 8.9.5.2. Should water run-off be observed in winter, appropriate action will be taken as required to minimise the risk of ice forming.
- 8.9.5.3. Where water runoff is observed which is 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.
- 8.9.6 **Street sweeping – mechanical and hand**
- 8.9.6.1. 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.

8.9.7 Haul routes

- 8.9.7.1. Haul routes will be provided through the works for use by construction vehicles to access the works.
- 8.9.7.2. The construction and maintenance of haul routes, will include the following measures, as appropriate:
- a. 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;
 - b. inspection of haul routes regularly and their prompt repair if required;
 - c. reuse of haul route surfacing materials where the locations of haul routes change during the course of construction;
 - d. provision of areas of hard-standing at site access and egress points to be used by any waiting vehicles;
 - e. 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
 - f. enforcement of speed limits on haul roads for safety reasons and for the purposes of suppressing dust emissions.
- 8.9.7.3. As necessary, damping down will extend to haul route crossings and around construction site accesses.

8.10 Highway accesses

8.10.1 Site access plans

- 8.10.1.1. Principal Contractors will be required to prepare a site access layout plan for acceptance by HS2, 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 construction site, haul road or welfare facilities.
- 8.10.1.2. Where appropriate, drawings will be provided for information to the relevant highway authority, to accompany submissions for temporary highway access as required by Schedule 4 of the HS2 Phase One Act or Phase 2a Act.

8.10.2 **Site safety requirements for employees at site access points**

8.10.2.1. Workforce entering construction sites on foot will be required to be separated from construction traffic at all site 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.

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

8.10.3.1. At site access points, all gates adjoining pedestrian routes will be provided with portable barriers which can be positioned by traffic marshals 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 traffic marshals to temporarily close the footway. Two traffic marshals will therefore be required. In addition, for locations with moderate or heavy traffic flows and which are subject to appropriate speed limits, 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.

8.10.4 **Traffic marshals and use of "STOP WORKS" boards**

8.10.4.1. Traffic marshals operating on roads which are subject to appropriate speed limits 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 construction site or a worksite, two traffic marshals 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.

8.10.4.2. 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 traffic marshals.

8.11 Haul road Crossings over Highways

- 8.11.1 Haul roads will be provided along the trace of the railway under construction to move materials from construction site access points to the location of the works.
- 8.11.2 Where there is no road traffic entering or leaving the haul road where it crosses a highway then the design and installation will be managed through “temporary interference”. This may include works to reinforce the highway or to widen the highway locally if necessary to accommodate the safety or capacity of ahead traffic movements on the highway. Where traffic turns onto or off a highway to enter a haul road (not otherwise travelling along a haul road), then consent for the design of any new or modified access will be required. The intention is that, as far as reasonably practicable, haul roads will be “clean roads”. Although managed by Principal Contractors, Contractors 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.
- 8.11.3 It may be the case that haul road crossings will be used by construction vehicles over 44t and if this is the case, additional requirements for managing the crossing may need to be submitted to the highway authority to enable the crossing to be used.
- 8.11.4 Where a highway which has been temporarily stopped is used as a haul road, the road will be returned to the highway authority in the same condition as was found prior to use of the road as a part of the construction site.
- 8.11.5 Contractors may develop a standard design for haul road crossings will be developed to include:
- a. 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; and
 - b. 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.
- 8.11.6 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.

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

8.11.8 Sweeping tools will be stored at each crossing point, if appropriate, to the risk of mud export.

8.12 Other issues

8.12.1 Abstraction of potable water from standpipes

8.12.1.1. Contractors will need to apply for abstraction licences for standpipes.

8.12.2 Managing the movement of farm livestock

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

8.12.3 Construction tourism

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

8.12.4 Protester activity

8.12.4.1. The construction activities could lead to protester activities on highways around worksite or along lorry routes. This may include protesters defacing roads and signs, removing traffic management, tunnelling into verges, depositing items in the highway, blocking highways, removing street furniture etc. The Nominated Undertaker or principal contractors will not manage actions by third parties affecting the highway. Highway authorities will be alerted to protestor activities damaging the highway as soon as practicable to do so, if Police are not aware.

8.12.5 Trading on the highway around workforce access points

8.12.5.1. 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 to the local authority responsible for enforcing the provisions of the Local Government (Miscellaneous Provisions) Act 1982. 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.

8.12.6 Managing fly tipping and abandoned vehicles

- 8.12.6.1. Relevant local authorities will continue to be responsible for the following:
- a. removal of abandoned vehicles, where the street is to be a worksite or construction site for works;
 - b. removal of fly tipping on highways where the street is to be a worksite or construction site for works; and
 - c. 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.
- 8.12.6.2. The Environment Agency will be notified of any fly tipping which contains (or may contain) hazardous waste.
- 8.12.6.3. 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 local 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 fly tipping 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 reduce the footprint to enable vehicles to enter and exit the site once it is recorded.

8.13 Requirements for working over or under railways and waterways

- 8.13.1 Site specific procedures will be put in place in consultation with Network Rail (or as necessary other rail operators including London Underground and TfL London Rail) and the relevant water authority or owner, such as the Canal and River Trust for their property and the Environment Agency for main rivers, and approval requirements agreed as necessary.
- 8.13.2 Procedures will be put in place concerning:
- a. keeping watercourse free from obstructions to allow the free flow of craft.
 - b. providing advance notice of any closure or temporary termination of moorings to the relevant authority and by signposting the river.
 - c. providing advance notice of closure of any navigable waterways; and

- d. providing advance notice of disruptive works alongside or over waterways where there are moorings.

8.13.3 Appropriate notification periods will be discussed through discussions in respect of consents under Schedule 33 of the HS2 Phase One Act/Schedule 32 of the HS2 Phase 2a Act and adopted as relevant for any works affecting waterways and towpaths.

APPENDIX A

Indicative Contractor Roles and Responsibilities

Position	Purpose & Responsibilities
Travel Plan Co-ordinator	Prepares, implements, monitors and reports on the interim and full travel plans and monitoring as set out within the RTMP
Transport Safety Manager	Implements and maintains the vehicle and driver safety management requirements as set out within the RTMP
Transport Manager	Manages the vehicle management requirements for delivery of the project as set out within the RTMP
Traffic Manager	Programmes, prepares and submits temporary traffic management schemes and interference with highways to the <i>Project Manager</i> for consent or approval and implements the approved schemes, including any required scheme consultation and notification as set out within the RTMP.
Supervisors	Supervisors are responsible for managing the flow of vehicles into and out of the Site or Working Area accessed to or from the highway and for associated satellite compounds, laydown areas or other facilities accessed to or from the highway.
Streetworks and Highway works Supervisor(s)	Provides qualified assurance for carrying out <i>works</i> on the highway, including excavation on the highway and reinstatement and monitoring
Traffic Safety and Control Officer(s) (TSCOs)	Provides qualified management of the installation, amendment, management, maintenance and removal of temporary traffic management on the highway.
Highway operatives / workers	Carries out <i>works</i> on the highway.
Traffic marshals	Assists the Supervisors including undertaking routine management of vehicles at holding areas, Site access points, haul road crossings and as required in respect of temporary traffic management measures.
Designers and Traffic Engineers	Carries out the design of temporary highways and temporary traffic management and traffic modelling using suitable junction and area models
Road Safety Auditors	Carries out road safety audits (including Non-motorised user audits). Road Safety Auditor CVs, audit briefs, designer responses and audit exceptions reports are prepared by the Road Safety Auditors in accordance with standards.

Note – Some roles may not be necessary or may be combined. Some may be provided by appropriate consultancies, appointed by the Principal Contractors.

APPENDIX B

Indicative Contents of Logistics documents

B1. Excavated Material Plan [EMP]

Material Management

- a. An Excavated Material Strategy which identifies and qualifies the material volumes excavated and placed;
- b. stockpiling and management of all materials that are excavated, reused and suitable for treatment in order to be re-used in the works. This also applies to material that is excavated and not used in the works (surplus materials);
- c. treatment of materials in order to bring those materials to a standard suitable for re-use within the works;
- d. a materials testing regime to ensure the quality of materials being utilised in the works is in accordance with this Works Information and provide timely reporting on the testing undertaken;
- e. management of the import of all fill materials utilised within the works;
- f. coordination of all material excavated, re-used, imported, stockpiled and treated with the traffic management and/or rail management plans; and
- g. arrangements for contaminated materials that are to be removed from site(s) to appropriate licensed sites.

Data Upload

- a. the Contractor, in-line with the Employer's BIM Requirements, outlines their approach for providing Excavated Material Plan data in their BIM Execution Plan (BEP);
- b. the Contractor provides Excavated Material Plan data in-line with the relevant AD4s and Asset Information Transfer Standard outlined in the Employer's BIM Requirements;
- c. Monthly reporting on individual date, type, volume, distance and mode of transport of materials to be excavated and placed for all earthworks assets. Data to be reported in SEQs and MTD; and
- d. the Contractor, where required, cooperates and collaborates with the Employer, Subcontractors, other Suppliers and Others to identify other related mass haul data requirements.

B2 Construction Logistics Strategy [CLS]

The CLS defines how the Contractor's Project Logistics Management team uses their experience, competency and training aligned to producing CLP(s) for all compounds, the sites they support and support facilities used. The strategy should clearly define how the logistics support structure has been created to service the project efficiently, including any consolidation or logistics control zones. Areas covered by each CLP need to be agreed within this document, for it to be accepted.

The CLS sets out the strategy that determines how the contractor will respond to the CLP contents requirements (contained later in this WI), through considering material flows and management; specifications, design and procurement strategy, delivery mode, assembly and commissioning of required materials and mechanical handling equipment required. The document should also cover elements such as decommissioning and reinstatement of the Site (and its access routes) to original condition upon completion, or alternative arrangements and compliance with operating and licencing requirements. Where common to all CLPs, Policies and procedures (section 2 of the CLP contents), where common to all CLPs, should be set out in this document.

The document must include a RACI matrix (identifying staff) that confirms: not only who is responsible for the elements of this Works Information, but also how those team members deliver or co-ordinate with others on:

- a. cumulative impacts in or outside of the site(s);
- b. Site Waste Management Plan(s);
- c. Local Traffic Management Plan(s);
- d. Route Management, Improvement and Safety Plans;
- e. Highway Condition, Maintenance and Cleansing Management Plan(s);
- f. Environment, Sustainability and Safety Management Plan(s);
- g. Interim and Final Travel Plan(s) and Monitoring Report(s); and
- h. Community Engagement Plan(s) and associated commitments.
- i. consents, including analysis and interpretation of monitoring results and actions;
- j. Reporting; and
- k. liaison with Others, including other contractors and local authorities, to co-ordinate Equipment, Plant and Materials and people vehicle movement requirements.

Where modularisation or off-site manufacture and assembly techniques have been selected by the Contractor, the Contractor is to advise, outlining anticipated efficiencies, learning and co-operation and collaboration required with Others. Verification of the access and transport implications and demonstrate the adequacy of the existing highway infrastructure.

Where the Contractor has adopted methods that limit the amount of on-site fabrication due to space constraints, programme improvement, environmental, health, safety, cost or design efficiency, the Contractor details the following:

- a. improved productivity;
- b. reduced number of deliveries;
- c. commissioning advantages by installing pre-tested items;

- d. improved product quality and operational control;
- e. health and safety benefits by reducing work on-site; and
- f. details of space being rented or provided to manufacture 'build off site' elements.

The Contractor develops and implements a modularisation and off-site manufacture and assembly plan for the works. The modularisation and off-site manufacture and assembly plan forms part of the CLS and includes:

- a. the location of off-site manufacture facilities;
- b. overall journey mileage;
- c. the items to be manufactured off-site;
- d. details of the modular components to be introduced into the works;
- e. the nominated persons responsible for each task;
- f. the mode of transport;
- g. the number of vehicle trips;
- h. reduced CO2 emissions;
- i. product quality and quality control;
- j. likely impact on site productivity;
- k. the Sustainable Transport Plan; and
- l. health and safety risks.

The strategy should include a Reverse Logistics Plan which sets out to minimise vehicle movement by considering elements such as: waste, materials, plant and Equipment being returned to suppliers, samples and tests, packaging for re-use and re-usable elements such as lifting equipment, frames and returnable transit packing systems employed by the Contractor to deliver efficiency savings. Organisational details to be included in the CLPs.

It should also incorporate a Courier Management Plan, which should show how courier deliveries are received to one point, consolidated and then processed as onward deliveries that minimise unnecessary small vehicle attendance at sites. This engenders high quality, focussed construction process. Site delivery is encourage to be by 'milk round' service provided by the Contractor if using any consolidation points. The Courier Management Plan details environmentally focussed delivery function appropriate to the site(s), load, route distance and unloading requirements.

B3. Construction Logistics Plans [CLP]

The CLP meets the contractual, legislative and operational requirements of the works. The CLP includes, but is not limited to, the following as appropriate:

a. Section 1: Introduction

- i. name(s) of the site(s);
- ii. overview of the site(s); and
- iii. main issues or challenges.

b. Section 2: Processes and policies.

Details of processes and policies to be in place prior to construction, including:

- i. schedule and format of all communications;
- ii. lesson learnt capture and communication;
- iii. supply chain delivery performance evaluation and monitoring;
- iv. lean logistics, continuous improvement and issue resolution methodology;
- v. details of reverse logistics plans for waste, equipment returns etc
- vi. waste carrier notices;
- vii. receipting of components, materials and equipment;
- viii. contaminated materials;
- ix. demolition material
- x. equipment refuelling and charging;
- xi. equipment and material storage techniques and facilities that minimise the risk of damage, loss and theft.
- xii. winter working;
- xiii. lifting plan coordination;
- xiv. security of equipment and stored materials; and
- xv. a sustainable solution for the production and delivery of Plant and Materials and Equipment using just-in-time techniques.
- xvi. in support of the Courier Management Plan, set out in the CLS, the detail of this to each site should be set out, considering techniques such as 'milk round' service provided by the Contractor from any consolidation points. The Courier Management Plan details environmentally focussed delivery function appropriate to the site(s), load, route distance and unloading requirements.

c. Section 3: Site information

- i. location of the site(s);
- ii. named logistics personnel for the site(s);
- iii. classification of the site(s), main compound, stock pile road head etc; and
- iv. lorry parking areas linked to the site(s).

d. Section 4: Construction details

- i. outline works programme showing dates for each stage of construction;
- ii. materials planning schedule including modularisation and off-site manufactured items;
- iii. Excavated Materials Management Plan;

- iv. a Bulk Materials Management Plan details: types; timing; quantity; transportation method; storage; and usage. It details planning to ensure that maximum construction traffic is not exceeded for each area and highway;
- v. a forecast of number of deliveries, by day, week and month detailing how transportation is to be consolidated. The Contractor identifies how they minimise vehicle movements by allowing part-deliveries to be consolidated into full loads and parcel loads in such a way that they are incorporated into the works with limited storage duration in the site). The CLP shows how maximum load densities are to be achieved, delivering lowest transport costs using upstream consolidation where opportunities exist. Consideration to be given to: an analysis of the vehicle monitoring system to take delivery consolidation opportunities within contract or with Others; a 'milk round' consolidated delivery or collections. (Delivering / collecting from more than one location to and from a consolidation point);
- vi. modularisation and Off Site Assembly Plan;
- vii. details of any consolidation or logistics centres employed that the Contractor provides to deliver the works, identifying activities it supports by material type;
- viii. where modularisation or off-site manufacture and assembly techniques have been selected by the Contractor, the Contractor is to clearly detail this within CLP. Verification of the access and transport implications and demonstrate the adequacy of the existing highway infrastructure and local access routes to, and within, the site.
- ix. for any consolidation or pre-fabrication centres details are provided of the planned receipt, storage, pick, consolidation, pre-assembly, pre-fabrication, kitting, inspection, and load for dispatch. Any centre provided facilitates reverse logistics. Details are required of location, journey times, servicing frequency, and space requirements across life-cycle. Plant and Equipment use and deliveries over time;
- x. produce a Sustainable Transport Plan for the construction phase. Sustainable logistics solutions that are economically viable should be maximised where possible;
- xi. for either centre, the Contractor demonstrates that they have analysed these opportunities to reduce overall costs where the benefit of delivering full vehicle loads exceeds the cost of holding stock. They also confirm collaboration with Others involved in the Project has been sought to bring economies of scale to the Project;
- xii. details of Courier Management Plan;
- xiii. a Reverse Logistics Plan;
- xiv. forecast number, type and timing of abnormal load movements;
- xv. hours of site(s) operation including any known constraints;
- xvi. number and type of major construction equipment for each development phase;
- xvii. details of storage for Equipment, Plant and Materials;
- xviii. Sustainable Transport Plan;
- xix. A Wharf, Railhead and Roadhead Plan;
- xx. parking, loading and unloading arrangements within the site(s); and
- xxi. any on-site common user facilities such as plant or tool hire facilities and how they are integrated.

e. Section 5: site(s) layouts

- i. welfare and office space;
- ii. security arrangements e.g. manned entry points, security cabins;

- iii. portable cabins/ISO containers;
- iv. off load and storage / laydown areas;
- v. excavation/demolition storage and processing area;
- vi. designs that enable vehicles and Equipment to be turned within the sites safely;
- vii. every effort for vehicles to be facing forwards at exit from site
- viii. vehicle and pedestrian routes within the Working Areas;
- ix. haul routes within the Working Areas;
- x. crossings;
- xi. utilities;
- xii. emergency rendezvous;
- xiii. medical and first aid points;
- xiv. waste stream areas;
- xv. vehicle clean down and wheel wash facilities (designed and carefully maintained, with consideration given to noise insulation and run off).
- xvi. water treatment;
- xvii. waste treatment areas
- xviii. equipment charging and refuelling areas;
- xix. sample/mock up locations;
- xx. fuel storage facilities including diesel storage compounds and bundling;
- xxi. vehicle checking area; and
- xxii. on site tool hire.

All of the above elements should be demonstrable by evidence and calculation.

f. Section 6: Monitoring, compliance, reporting and review by site

- i. details for monitoring the CLP, including compliance arrangements, maintaining data accuracy, reporting and review;
- ii. issue reporting and resolution toolkit;
- iii. continuous improvement in logistics processes and activities;
- iv. materials planning schedule to be updated monthly;
- v. excavated and bulk materials reporting;
- vi. details of how the CLP reviewed and managed;
- vii. load consolidation reporting; and
- viii. receiving discrepancies.

APPENDIX C

Indicative Structure and Content of Main Civil Works and Later Local TMPs

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
- 3.7 Predicted impacts of longer road closures on social care transport and school journeys
- 3.8 Locations of community facilities along lorry routes
- 3.9 Impacts of road closures on emergency service travel from ambulance stations and fire stations and to A&E hospitals

4 Temporary highway works

- 4.1 Construction site 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 Asset protection

- 5.1 Protection of highway assets
- 5.2 Temporary site 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 Opportunities for rail and water
 - 6.1.1 Rail facilities and paths
 - 6.1.2 Water facilities and freight
- 6.2 Expected working hours (including start up and close down) (and hence time of traffic movements)
- 6.3 ES forecast flows by vehicle types and activities
- 6.4 Contractor forecast flows by vehicle types and activities (Note 1)
- 6.5 Local construction site capacities, holding areas and other local measures
- 6.6 U&As restrictions vehicle flows
- 6.7 Sites and flow assumptions in ES
- 6.8 Sites and flow forecasts and comparison with ES
- 6.9 Lorry Routes approvals and monitoring
- 6.10 Other management measures, including planned holding areas or facilities for consolidation
- 6.11 Resilience planning

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

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

Indicative Structure and Content of Enabling/Advanced or Early Works TMPs

Requirements in each column are indicative only

Chapter and Paragraph	Site specific LTMPs – GI, utilities, single Enabling/Advanced packages	Enabling works combined LTMP (accumulative review)	MWCC LTMP, including “remaining” Enabling/Advanced works scope
4. The transport context			
1.1 High Speed 2 in (authority name)	Summary of how the works relate to the HS2 route.	Describe the route	Describe the route
1.2 The overall scope of construction and main feature and high level timetable	The scope of works within the package or packages.	The overall scope of enabling works for which the LTMP has been prepared <ol style="list-style-type: none"> 1. Ongoing GI, utilities and Enabling/Advanced packages 2. The scope of all enabling works in outline <ul style="list-style-type: none"> • Demolitions 	As Enabling/Advanced Works, with the addition of MWCC scope

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		<ul style="list-style-type: none"> • Site establishment • Ecology, archaeology • Tree planting • Continuing ground investigation • Highway works <p>3. The scope of utility works in outline</p> <ul style="list-style-type: none"> • Utility company works • Other utility works 	
e	<p>Preceding:</p> <ul style="list-style-type: none"> • ES • CoCP • LEMPs • RTMP <p>This site specific LTMP</p> <p>Following:</p> <ul style="list-style-type: none"> • MWCC LTMP • SWCC LTMP (where relevant) 	<p>Preceding:</p> <ul style="list-style-type: none"> • ES • CoCP • LEMPs • RTMP • Site specific LTMPs <p>This area-wide Enabling/Advanced works LTMP</p> <p>Following:</p> <ul style="list-style-type: none"> • MWCC LTMP 	<p>Preceding:</p> <ul style="list-style-type: none"> • ES • CoCP • LEMPs • RTMP • Site specific LTMPs • Area-wide LTMP (as applicable) <p>This MWCC LTMP</p> <p>Following:</p> <ul style="list-style-type: none"> • SWCC LTMP (where relevant)

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1.4 On-going liaison processes- TLG and other liaison (e.g. NRSWA)	Traffic Liaison Group meetings etc		
1.5 Other construction activities	Not used	Not used	Describe where relevant
1.6 The security context	Works may require some consideration of protest and how we will advise contractors and drivers to take these risks into account. Discuss with Security team and insert as necessary.		
5. The TMP context			
2.1 Purpose of the TMP	Short section	Short section	Short section
2.2 Scope of the TMP	Short section	Short section	Short section
2.3 The geography of the local TMP	Not used	Insert map of the LTMP area, the boundary between highway authority area and HS2 alignment, CFA areas, contract boundaries (including each Enabling/Advanced works contractor, utilities contractor(s) as necessary, GI contractor(s) as necessary	
2.4 Structure of the local TMP	Short section		
6. Transport networks and services			

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3.1 Road networks and significant construction changes	Short section, where relevant	Summary of road network in authority area <ul style="list-style-type: none"> • Map of authority area and roads The scope which affects roads/Public Rights of Way over the period of the LTMP in more detail <ul style="list-style-type: none"> • Utility works – by utility companies • Utility works – by contractors • Highways to be built or altered, including site accesses • Other major schemes in outline 	
3.2 Amendments to traffic, bus, cycle, walking and riding routes (including footpaths)	Short section, where relevant	Summary of any significant changes to infrastructure and any consequential changes to transport services (if any)	
Signed diversion destinations	<i>Not used</i>	<i>Not used</i>	Short section, where relevant
3.4 Rail networks infrastructure and significant construction changes	<i>Not used</i>	<i>Not used</i>	Short section, where relevant
3.5 Amendments to passenger and freight services	<i>Not used</i>	<i>Not used</i>	Short section, where relevant
3.6 Waterway and towpaths and significant changes	<i>Not used</i>	<i>Not used</i>	Short section, where relevant

3.7 Predicted impacts of longer road closures on social care transport and school journeys	Not used, unless relevant	Summary of road network in authority area <ul style="list-style-type: none"> • Map of authority area and roads The scope which affects roads/Public Rights of Way over the period of the LTMP in more detail <ul style="list-style-type: none"> • Utility works – by utility companies • Utility works – by contractors • Highways to be built or altered, including site accesses • Major schemes in outline 	
3.8 Locations of community facilities along lorry routes	<i>Not used</i>	Identify specific facilities and summary of any significant changes to infrastructure during Works and any consequential changes to transport services to/from facilities (if any)	
Impacts of road closures on emergency service travel from ambulance stations and fire stations and to A&E hospitals	<i>Not used, unless relevant</i>	<i>Not used, unless relevant</i>	Full description of effects, where relevant
7. Temporary highway works			
4.1 Worksites and access points for construction activities	Worksites, type of works, when they come into use and for how long.		
4.2 Temporary highway works to deliver the project	Any temporary works required for access to worksites.	List of temporary highway works Access points (Schedule 6)	

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		<p>Capacity requirements (U&As)</p> <p>Safety requirements (U&As)</p> <p>Accessibility requirements for Large Vehicles (to be detailed within the ROMIS):</p> <ul style="list-style-type: none"> • Site access • Junction works (including haul road crossings) • Link works <p>Any works required for Abloads</p>	
<p>Expected scope/sequence of significant highway works to deliver permanent works</p>	<p>Not used, unless relevant</p>	<p>Any plans for sequence of:</p> <ul style="list-style-type: none"> • Road closures and diversions <p>Sequence of temporary traffic management (e.g. moving roads over etc)</p>	
<p>4.4 Temporary traffic management programme (including footpath diversions)</p>	<p>Expected programme of temporary traffic management submissions (highway consents register draft in the Appendix)</p>		
<p>4.5 Temporary traffic modelling</p>	<p><i>Not used, unless relevant</i></p>	<p><i>Not used, unless relevant</i></p>	<p><i>Not used, unless relevant</i></p>

4.6 Road safety audit schedule	<i>Not used, unless relevant</i>	<i>Not used, unless relevant</i>	<i>Not used, unless relevant</i>
4.7 Local direction signing requirements for emergency services and deliveries	Not used, unless contractor requires to provide signing	Construction site numbering and direction signing, when comes into effect Direction signing scope	
4.8 Signals design requirements and procurement	Any plans for works to signals for construction being undertaken this period		
4.9 Temporary enhancements for travel to work	<i>Not used</i>	<i>Not used</i>	<i>Development of any schemes required for interim travel plan implementation</i>
8. Road Network Management			
5.1 Protection of highway assets	<i>Not used</i>	Identification of asset protection (bridge strengthening, bash beams, protection of verges as necessary etc) as per ROMIS plan or at site access points	
5.2 Temporary access points	Note as required	Note as required	Note as required
5.3 Haul roads and crossings	<i>Not used</i>	Note as required	Note as required
5.4 Monitoring highway condition	<i>Not used</i>	<i>Not used</i>	Note as required
5.5 Safety management	<i>Not used</i>	<i>Not used</i>	Note as required

5.6 Crash data recording and review	<i>Not used</i>	<i>Not used</i>	Note as required
9. Managing construction movements			
6.1 Opportunities for rail and water 6.1.1 Rail facilities and paths 6.1.2 Water facilities and freight	<i>Not used</i>	<i>Not used</i>	Details of any proposals
6.2 Expected working hours (including start up and close down) (and hence time of traffic movements)	Not used, unless expected lorry route requirement	Include map of lorry routes as necessary, if lorry route submissions possible or required.	Include map of lorry routes
6.3 ES forecast flows by vehicle types and activities	<i>Not used</i>	Summary of flows from the ES	
6.4 Contractor forecast flows by vehicle types and activities	<i>Outline of expected flow profile by vehicle type</i>	Provision of vehicle flow information in comparison with the ES	
6.5 Local construction or worksite capacities, holding areas and other local measures	<i>Not used</i>	<i>Not used, unless any known issue</i>	Details to be provided
6.6 U&As restrictions vehicle flows	Note any specific U&A from the register related to flow restrictions (numbers, routes and times of day)		
6.7 Sites and flow assumptions in ES	Not used	Notes regarding flow monitoring as required by U&As	

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6.8 Sites and flow forecasts and comparison with ES	<i>Not used</i>	<i>Not used</i>	Details to be provided
6.9 Lorry Routes approvals and monitoring	<i>Not used</i>	<i>Not used</i>	Details to be provided
6.10 Other management measures, including planned holding areas or facilities for consolidation	<i>Not used</i>	<i>Not used</i>	Details to be provided
6.11 Resilience planning	<i>Not used</i>	<i>Not used</i>	Details to be provided
7. Workforce transport			
7.1 Local travel plan(s) which will be prepared and associated monitoring	Outline any specific measures to be implemented, as appropriate	Outline travel management arrangements, as appropriate	Summary - details to be provided within the Outline travel plan
7.2 Traffic and parking management measures to support local travel plans	Not used	Not used, unless any specific measures required	
7.3 Travel plan monitoring	Not used	Not used	
7.4 Any specific measures to support travel to work (e.g. interchange facilities)	Not used	Not used, unless any specific measures required	

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Appendices			
Undertakings and Assurances	List relevant ones as a schedule and, where relevant, how they will be implemented, monitored, managed and the point where they are closed. <i>Subject to agreement of Bill team as to the governance of U&As.</i>	Include as appropriate	
Supplementary ES for (a) additional lorry routes (b) traffic flows exceeding ES	If new lorry routes are proposed compared to set out in the ES and/or the number of vehicles exceed the assumptions in the ES and which lead to a new significant effect (unlikely for Enabling/Advanced work) then a supplementary ES will be required.	Not used	Not used, unless required
Highway Consents Register	Schedule of expected highway and temporary traffic management consents.	Indicative schedule of temporary highway works	

APPENDIX D

Terms of Reference for the Establishment of Local Traffic Liaison Group Meetings (Phase One)

Objectives

1. The key objectives of the TLG meetings will be to:
 - i. be a forum between The Nominated Undertaker (or The Contractor) and Key highway, traffic and transport management stakeholders to consult on the temporary traffic management programme and submissions;
 - ii. discuss formal submissions for highway consent or approval (or submission for consultation);
 - iii. review and comment on other relevant plans and documents including relevant planning applications to the local planning authority submitted to enable delivery of the HS2 phase One scheme;
 - iv. assist the highway authority carry out its obligations to ensure there is a co-ordinated approach to traffic management in their area and relevant neighbouring highway authority areas;
 - v. 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 routes, routes and access;
 - vi. manage construction traffic and highway issues; and,manage local workforce movement issues, unless delegated to a sub-group, which may involve alternative membershipAreas
2. The geographic areas for which Local Traffic Liaison Group (TLG) meetings are to be established, in the first instance, are to be agreed by the Highways Sub Group to the Planning Forum. The areas of the TLGs shall be reviewed, as necessary, by the Highways Sub Group to the Planning Forum.

Commencement of meetings

3. Early TLG meetings are expected to occur prior to Royal Assent to consider any Enabling/Advanced Works Local TMP(s) and prior to submission of Lorry Route approvals.

Route-wide Traffic Mangment Plan

4. The Highways Authorities along the HS2 Phase One route will be consulted on with regard to amendments to the Route-wide TMP through the Highway Sub Group to the Planning Forum.

Local Traffic Management Plans

5. TLG meetings are to consider draft Local Traffic Management Plans and co-ordinate appropriate engagement on draft Local Traffic Management Plans with other local stakeholders who represent local communities affected by the construction of the HS2 phase One route, such as District Councils, Parish Councils, Town Councils and other appropriate bodies in accordance with the RTMP.
6. The TLG shall be consulted on with regard to amendments to the Local Traffic Management Plan(s) and engaged on during the preparation of Interim and Full Workforce Travel Plans (unless devolved to a Travel Planning Sub Group). Documents will be updated as necessary in accordance with changes to the Code of Construction Practice and relevant Local Environmental Management Plan(s). The Route-wide Traffic Management Plan and the Local Traffic Management Plan will be the agreed reference documents 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 in the relevant local area
7. The need for an update to any one live LTMP will be considered on an annual basis, where a change could trigger a new environmental effect or where it will assist in co-ordination of works, which may be provided within a supplement.

Topic specific meetings

8. Highway Authorities and HS2 to agree, for any particular case, the need for a separate Local TLG meeting to review future updates or supplements to current LTMPs, for their geographic area, prior to an update being undertaken in accordance with 3.5.4.1 of the RTMP.
9. Highway Authorities and the Nominated Undertaker to agree the need for a separate Local TLG meeting to review the current transport-related U&As where there are no specific beneficiaries (i.e. derived from Information Papers) or where the Highway Authority is the beneficiary. Meetings will be co-ordinated by the Nominated Undertaken U&A Compliance team

Meeting specific Undertakings and Assurances

10. At the first meeting of the Local TLG meeting, the relevant Undertakings and Assurances related to establishing the TLG will be reviewed. The terms of reference may be modified with the agreement of the members.

Membership

11. The Traffic Liaison Group meetings are to comprise representative(s) of:

- i. The relevant highway authority or authorities within the TLG area (or successor bodies).
- ii. Relevant Strategic road network operators including Highways England or Transport for London or successor bodies.
- iii. Adjoining highway authorities and any other highway authority with significant traffic impacts caused by the proposals for the delivery of HS2 phase One shall be invited to attend.
- iv. Relevant transport stakeholder representation for bus operations (in London, Transport for London)
- v. Appropriate emergency service representatives for the TLG area.
- vi. The Nominated Undertaker's Area Traffic Manager, and community engagement representatives, along with contractor representatives and other attendees relevant to the agenda as appropriate.
- vii. Bodies where the Secretary of State for Transport is the highways authority (such as Midlands Expressway Limited for the M6Toll).

12. The Nominated Undertake to ensure that community engagement teams are invited to attend and a regular agenda item should be included regarding plans for community engagement related to traffic and highways prior to the next Local TLG meeting, where requested by the relevant highway authority.

13. Specific attendees will be agreed at the first TLG meeting and may be varied at subsequent meetings, with the approval of the members.

Chairing and administration of Local TLG meetings

14. The TLG meetings shall normally be chaired by The Nominated Undertaker, but otherwise by the lead highway authority (or an agreed lead highway authority). The Nominated Undertaker shall request. The Nominated Undertaker to provide a draft agenda 7 days and material prior to meetings and a final agenda 3 working days in advance, where possible. Highway Authorities to provide agenda items for inclusion once they have received the draft agenda.

. Draft minutes and actions should be circulated within a maximum of 5 working days and final minutes and actions circulated within 10 working days of each meeting. TLG meetings may agree to receive action logs in place of minutes. Highway authorities may request that information regarding complaints routinely collected by attendees of the meeting be presented to the meeting.

15. The schedule of meetings will be agreed at the first TLG meeting and may be varied at subsequent meetings.

16. The TLG will agree the common e-mail addresses to be used for notification, submission, consultation and consent or approval of temporary traffic management schemes.

Scope

17. 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(s) and the Local Workforce Travel Plan and resulting submissions. Initially this will include:

- i. draft submissions for consultation or consent as identified within the Route-wide TMP, including lorry routes approvals;
- ii. highway works necessary for the movement of construction vehicles, including the design and layout of site access points to the construction sites from the highway;
- iii. temporary traffic management measures including bus diversions and other temporary bus measures and temporary highway schemes;
- iv. implementation of temporary road, footway, footpath and rights of way closures and associated warning and diversion signing for traffic, pedestrians and cyclists;
- v. implementation of direction signing to construction sites, including emergency access;
- vi. travel demand management measures related to construction workforce travel
- vii. forecasting and monitoring of construction traffic volumes and Large Goods Vehicle routing
- viii. vehicle and driver safety standards
- ix. the protection of highway assets, including highway condition surveys
- x. vehicle rejection procedures, such as for M25 slip roads and A38 compound accesses
- xi. Compliance with Undertakings and Assurances given by HS2 that are relevant to traffic management issues in the TLG area or other relevant compliance issues
- xii. Review of crash data (in accordance with the RTMP).

18. 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

consent or approval of temporary traffic management schemes. The standard proformas may be amended to cater for specific authority requirements with the agreement of The Nominated Undertaker.

Programme and Co-ordination

19. The Principal Contractors shall prepare and continuously update a programme of transport and traffic management schemes and consultation or consent 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.
20. The chair of Local TLG meetings will endeavour that contractors provide updated forward programmes where possible or manage this requirement through separate construction programme meetings with local highway and planning authorities, managed by Nominated Undertaker or Contractor Engagement Teams
21. The Nominated Undertaker will assist the highway authorities carry out their network management duty by ensuring as far as practicable contractor programme of works on the highway are co-ordinated and that contractors are collaborating to reduce impacts on the road network. As necessary, a lead contractor will co-ordinate works in any one geographical area, where needed.

Effect and Mitigations

22. 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.
23. Should there be any reasonably potential or actual new significant adverse effect in accordance with the criteria set out within the Environmental Statement, these are to be reported to the Local Traffic Liaison Group.

Other liaison

24. The TLG is to ensure appropriate liaison with Highway Authority and Utility Committee (HAUC) Local Co-ordination meetings.
25. 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. The TLG is to review proposed scheme notifications to affected road users, residents, businesses, community facilities and other groups, where appropriate.

Unresolved matters, escalation

26. Site-specific unresolved matters related to the scope of the RTMP should be resolved in accordance with the dispute resolution procedure set out in the RTMP or otherwise directly referred to the Nominated Undertaker Traffic Manager – Route-wide where appropriate and will be managed with other members of the wider Logistics team as necessary
27. Highway authority and Nominated Undertaker members of the Local TLG can bring such matters which are of a route-wide significance to the attention of the Highways Sub Group meeting in accordance with its Terms of Reference. .

APPENDIX E

Highway Consent or 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 26
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 disappplied
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 disappplied
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 disappplied
Advance notice of street works	New Roads and Street Works Act 1991, S54	Not specifically disappplied, 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 disappplied, but arrangements for consultation and notification is compliant.
Roadworks	Traffic Management Act (2004) Part 3	Disappplied

<p>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</p>	<p>s14 Road Traffic Regulation Act 1984 ("RTRA 1984") The Road Traffic (Temporary Restrictions) Procedure Regulations 1992 Reg 3.</p>	<p>Remains in place in relation to requirements to regulate moving traffic or parking/waiting/loading on the highway.</p>
<p>Abnormal temporary and permanent load routes</p>	<p>The Motor Vehicle (Construction and Use Regulations) 1998, as amended; The Motor Vehicles (Authorisation of Special Type) General Order 1973, as amended.</p>	<p>Continues to apply</p>
<p>Permit providing exemption from restriction on movement of goods vehicles within specified area</p>	<p>The Greater London (Restriction of Goods Vehicles) Traffic Order 1985 (made under section 6 Road Traffic Regulation Act 1984)</p>	<p>Specific exemption applies under Schedule 26</p>
<p>Authorisation for non-prescribed traffic signs</p>	<p>Traffic Sign Regulations and General Directions 2016 Reg 8</p>	<p>Continues to apply</p>
<p>Permission for portable light signals</p>	<p>Traffic Sign Regulations and General Directions 2016 Direction 53</p>	<p>Notification or Approval to be applied for under "temporary interference" Schedule 4</p>