

HS2

HS2 Phase 2a

Traffic and Transport Briefing
Select Committee

Presentation structure

- Overview of Environmental Statement and Transport Assessment approach
- Transport Assessment has assessed a reasonable worst case scenario
- Main traffic and transport issues
- Traffic and transport standard exhibits
- Mitigation of impacts/significant effects (physical/operational)
- Future controls and scheme refinement

Introduction

- The Transport Assessment forms part of the Environmental Assessment.
- It identifies traffic and transport impacts in both construction and operation.
- The Environmental Statement reports any significant residual traffic effects.
- Traffic data also informs assessments on air quality, noise, community, health and equality.

Methodology

- Consistent with Phase One and discussed with highway/ transport authorities
- HS2 impacts assessed against a future baseline – an estimate of the level of future travel demand without Phase 2a with future growth taken from:
 - Local Plan projections using local models or planning data in the area of the Proposed Scheme,
 - DfT's transport forecasting Trip End Model Presentation Program (TEMPro).
- Combined Phase One/2a effects are also presented.
- Peak level of construction traffic impacts assessed against a common future baseline (2023).
- Operational traffic impacts assessed against opening year (2027) and design year (2041).

Scope

- Effects assessed are:
 - Public transport delay and station disruption
 - Increased traffic flows
 - Traffic delays
 - Vulnerable road user severance, delay, amenity and ambience
 - Accidents and safety
- AM and PM network peak period assessment for junctions and traffic flows – the assessment also considers the impacts that may occur outside these times.
- In consultation with the relevant highway authority, local junction models have been developed to assess changes to vehicle user delays.

A reasonable worst case assessment

- The assessment makes a number of precautionary assumptions based on a reasonable worst case.
- In practice, the impacts are likely to be less than as assessed:
 - average daily trips are based on peak month of construction activity; for most of the time the actual number of construction trips will be lower than this peak.
 - all the workforce is assumed to travel to/from the construction compounds by car; some workers will use public transport, works buses or other methods and some will stay in residential compounds.
 - 50% of the workforce is assumed to arrive between 0800-0900 and depart 1700-1800, overlapping with construction traffic; in practice, more of the workforce is likely to arrive/depart outside these peak times.
 - construction traffic on the road (including transport of excavated material - mass haul) is assessed for road capacity purposes as taking place over an eight hour day, for five days each week; whereas the compounds are able to operate for longer (core working hours will be 0800 to 1800 on weekdays and 0800 to 1300 on Saturdays).

Main traffic and transport issues

- Operational traffic generally low and focused on the maintenance base at Stone and shift patterns mean peak hour impacts low.
- Construction traffic impacts will arise as a result of:
 - diversion of existing traffic due to temporary or permanent road closures required for the HS2 works
 - construction traffic generated by the construction of HS2
 - workforce traffic
 - diversion of public rights of way.

Traffic and transport standard exhibits

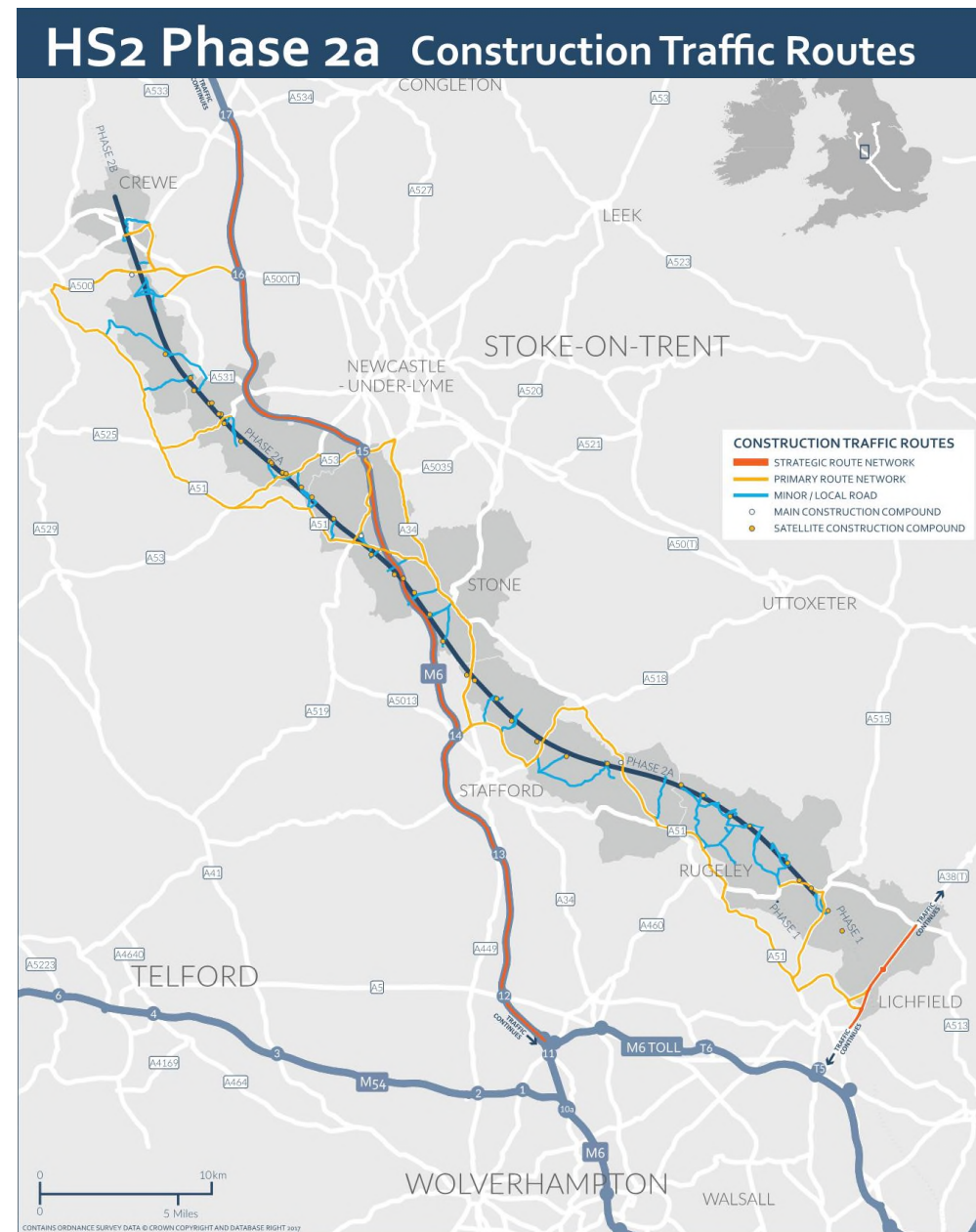
The standard traffic exhibits comprise:

- access to the Strategic Road Network map
- construction traffic routes and vehicle numbers map
- daily weekday traffic flows construction phase map
- construction traffic histogram

Access to the Strategic Road Network

Shows:

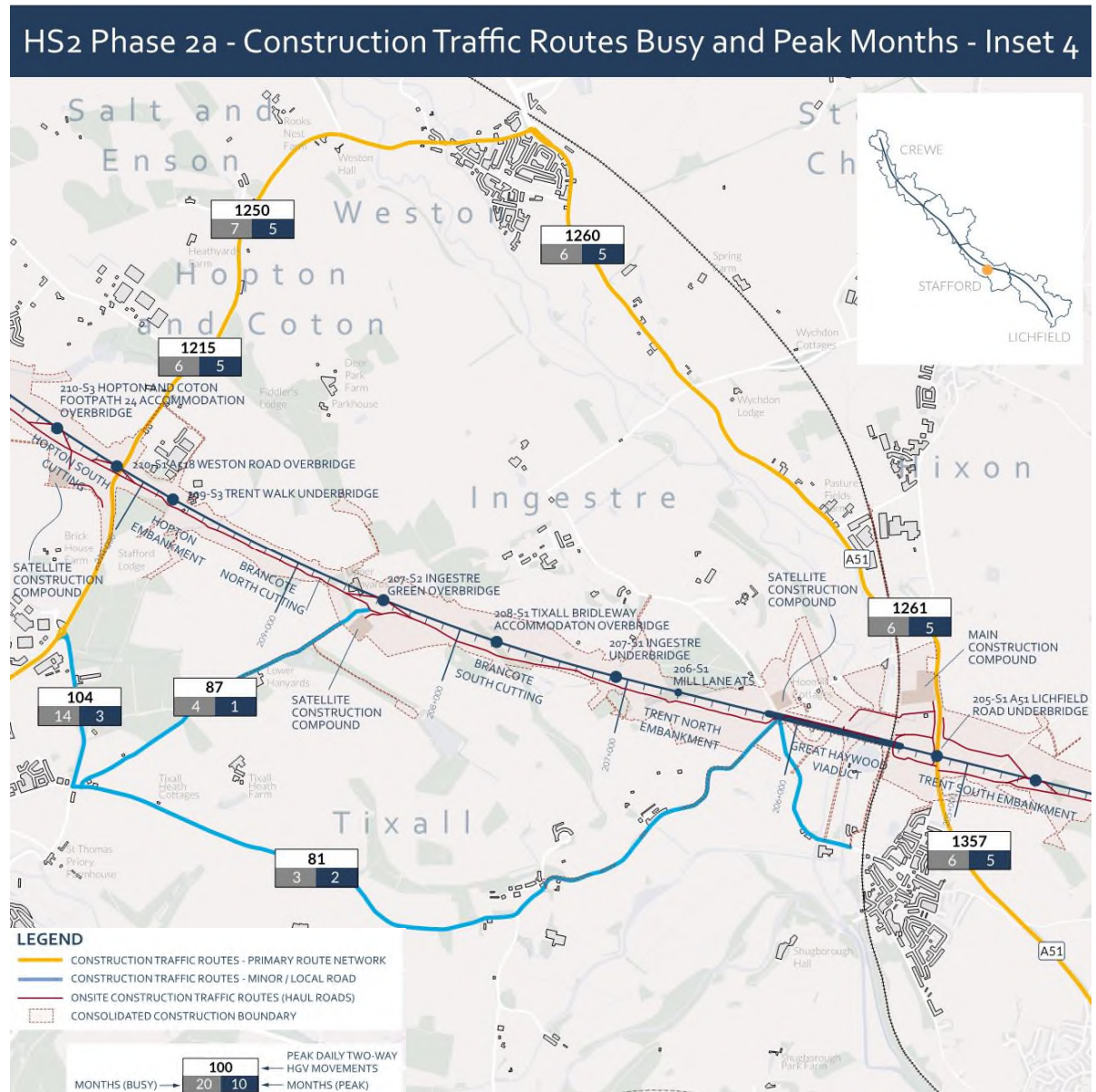
- the HS2 railway alignment
- the main road network
- proposed construction traffic routes



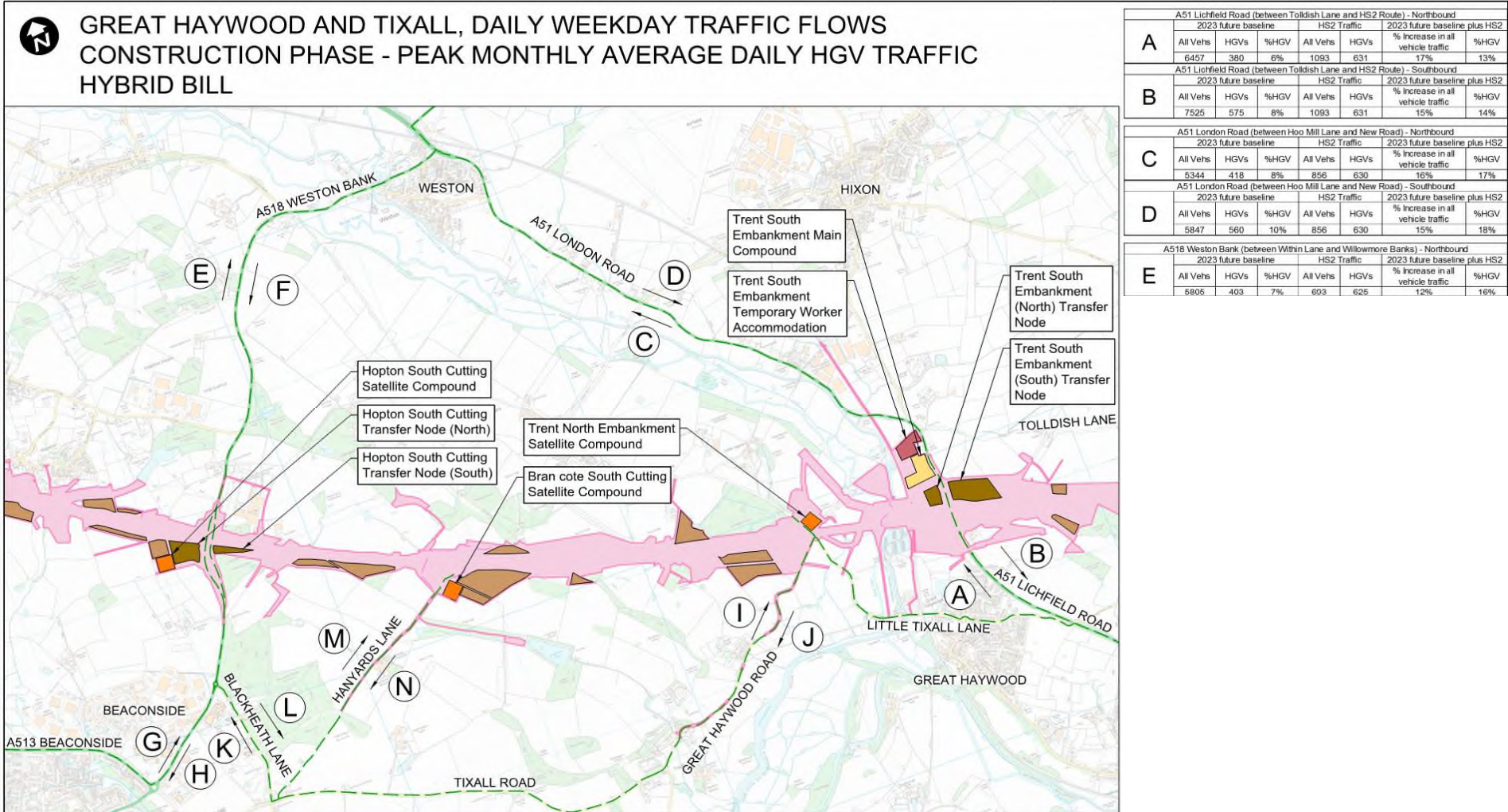
Construction traffic routes

Shows:

- All construction routes
- Average daily two-way (both directions combined) HGV flows in peak month
- Duration of busy period when flows greater than 50% of peak month flows
- Duration of peak period when flows greater than 70% of peak month flows



Daily weekday construction traffic flows – Alphabet Maps



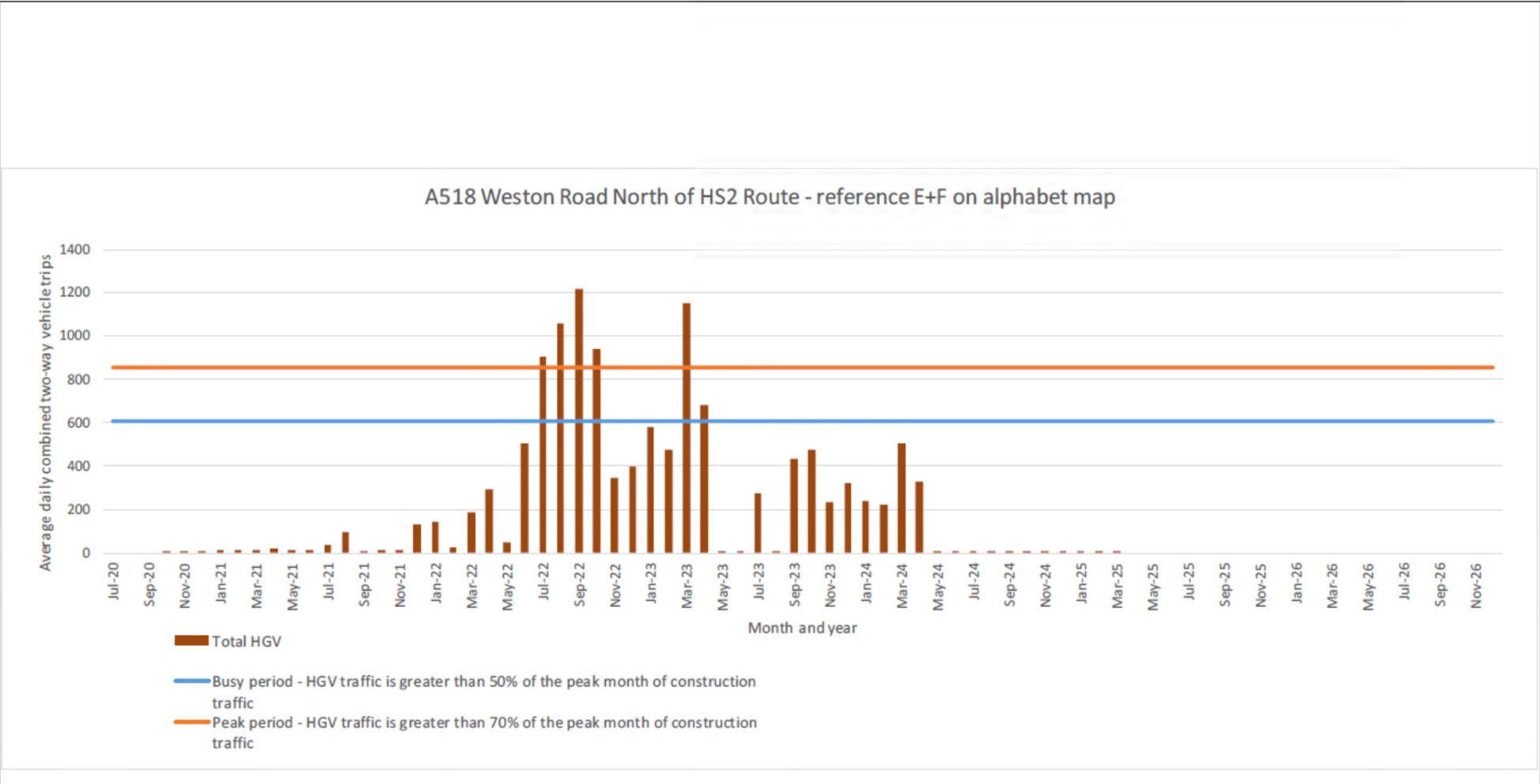
Alphabet maps explained

- They present the assessed traffic flow information for key locations, as follows:

A518 Weston Bank (between Within Lane and Willowmore Banks) - Northbound							
E	2023 future baseline			HS2 Traffic		2023 future baseline plus HS2	
	All Vehs	HGVs	%HGV	All Vehs	HGVs	% Increase in all vehicle traffic	%HGV
	5805	403	7%	693	625	12%	16%

- Construction traffic flows are based on the average daily (12hr) flows over the peak month for each location – depending upon programme the peak months may vary between locations
- % HGV represents the proportion of total traffic that is HGVs without and with HS2
- % increase in vehicle traffic represent the change from baseline flows resulting from the introduction of HS2 construction traffic

Construction traffic histogram



Construction traffic histogram

- Construction traffic histograms show the forecast daily two-way (both directions combined) HS2 construction HGV traffic flows for a specific location, throughout the duration of the construction programme.
- Flows are presented as a daily average for each month
- The level of HGV traffic is shown that would represent the period defined as:
 - **Busy Period** - where HGV traffic exceeds 50% of the peak month flows
 - **Peak Period** - where HGV traffic exceeds 70% of the peak month flows

Mitigation of traffic impacts during construction - physical

HS2 has used physical measures to mitigate construction traffic impacts:

- roads kept open, where reasonably practicable, including the provision of off-line diversions
- use of the HS2 railway trace as a haul road where reasonably practicable
- specific highway improvements to address potential delays or road safety issues
- temporary highway measures (eg slip roads from M6 to Stone compounds)
- provision of overnight workforce accommodation at three main construction compounds
- use of borrow pits to reduce the need to import material by road and to reduce the export of surplus material by road

Mitigation of traffic impacts during construction – operational controls

Operational measures to mitigate traffic impacts during construction include:

- Main construction routes submitted to planning authority for approval under the Bill
- Use of routes with direct access to the strategic road network and use of local roads limited where reasonably practicable
- Code of Construction Practice: transport measures
- Traffic Management Plans (including measures to protect cyclists, pedestrians and others)
- HS2 Ltd is continuing to work with highway authorities to ensure substantial traffic and transport effects are addressed where reasonably practicable

Construction traffic routes

- Construction routes used by large goods vehicles (over 7.5t) will require the approval of the local planning authority (Schedule 17) – except Motorways and Trunk Roads and access to compounds with less than 24 two-way trips per day
- Planning authority may refuse to approve the proposed arrangements and seek modification on the grounds of:
 - preserving the local environment or amenity
 - road safety or congestion concerns
 - archaeological, historic or nature conservation concerns

Traffic management site specific measures

Measures set out in the draft code address:

- phasing of works
- timing of operations
- road traffic management, layouts and signage
- parking controls
- a list of roads that may be used as construction routes by large goods vehicles, including any restrictions to the use of these routes
- monitoring of vehicles arriving and leaving construction compounds
- monitoring for deviation from authorised routes
- measures for highway reinstatement
- emergency access protocols
- proposals for transport of construction workforce and measures to ensure safe access to and from site
- arrangements for liaison with the relevant highway authorities and emergency services

Workforce travel plans

- Construction workforce travel plans will encourage the use of sustainable modes of transport
- The plans will include as appropriate:
 - key issues to consider for each compound/construction site or group of sites
 - site activities and surrounding transport network including relevant context plans
 - expected workforce trip generation and how it may change during the construction process
 - travel mitigation measures that will be introduced to reduce the impact of construction workforce on the transport network
 - targets to reduce individual car journeys for construction workers