



## Phase 2b Western Leg Information Paper

### D1: Design

This paper outlines the design policy for the Proposed Scheme which includes aesthetics and quality.

It will be of particular interest to those potentially affected by the Government's proposals for high speed rail.

This paper was prepared in relation to the promotion of the High Speed Rail (Crewe - Manchester) Bill. Content will be maintained and updated as considered appropriate during the passage of the Bill.

If you have any queries about this paper or about how it might apply to you, please contact the HS2 Helpdesk in the first instance.

**The Helpdesk can be contacted:**

**by email:** [HS2enquiries@hs2.org.uk](mailto:HS2enquiries@hs2.org.uk)

**by phone (24hrs):** 08081 434 434  
08081 456 472 (minicom)

**or by post:** High Speed Two (HS2) Limited  
2 Snowhill, Queensway  
Birmingham  
B4 6GA

# 1 Introduction

- 1.1 High Speed Two (HS2) is the Government's scheme for a new, high speed north-south railway, which is being taken forward in a number of phases. Phase One will connect London with Birmingham and the West Midlands. Phase 2a will extend the route from the West Midlands to Crewe. The Phase 2b Western Leg will connect Crewe to Manchester. As set out in the Integrated Rail Plan, published in November 2021, HS2 East is proposed to deliver a new high speed line from the West Midlands to East Midlands Parkway.
- 1.2 HS2 Ltd is the non-departmental public body responsible for developing and promoting these proposals. The company works under the terms of a Development Agreement entered into with the Secretary of State for Transport.
- 1.3 The construction and operation of Phase One of HS2 is authorised by the High Speed Rail (London – West Midlands) Act 2017 and Phase 2a by the High Speed Rail (West Midlands – Crewe) Act 2021.
- 1.4 In January 2022, the Government introduced a hybrid Bill to Parliament (hereafter referred to as 'the Bill'), to seek powers for the construction and operation of the Phase 2b Western Leg (the Proposed Scheme), which is called the High Speed Rail (Crewe – Manchester) Bill. The Proposed Scheme comprises the Phase 2b Western Leg from Crewe to Manchester and several off-route works. It also facilitates the delivery of Northern Powerhouse Rail by providing the Crewe Northern Connection and junctions and other infrastructure to be used in future schemes.
- 1.5 The work to produce the Bill includes an Equalities Impact Assessment and an Environmental Impact Assessment (EIA), the results of which are reported in an Environmental Statement (ES) submitted alongside the Bill. The Secretary of State has also published draft Environmental Minimum Requirements (EMRs), which set out the environmental and sustainability commitments that will be observed in the construction of the Proposed

Scheme. For more information on the EMRs please see Information Paper E1: Control of environmental impacts.

- 1.6 The Secretary of State for Transport is the Promoter of the Bill through Parliament. The Promoter will also appoint a body responsible for delivering the Proposed Scheme under the powers granted by the Bill. This body is known as the 'nominated undertaker'. There may be more than one nominated undertaker. However, any and all nominated undertakers will be bound by the obligations contained in the Bill, the policies established in the EMRs and any commitments provided in the information papers.
- 1.7 These information papers have been produced to explain the commitments made in the Bill and the EMRs and how they will be applied to the design and construction of the Proposed Scheme. They also provide information about the Proposed Scheme itself, the powers contained in the Bill and how particular decisions about the Proposed Scheme have been reached.

## **2 Overview**

- 2.1 This information paper outlines the design policy for the Proposed Scheme which includes aesthetics and quality. The design policy seeks to enable the Promoter and the nominated undertaker to deliver the railway in an efficient and effective manner.
- 2.2 The design of the Proposed Scheme will be developed in line with the HS2 Design Vision, a link to which can be found in the references section at the end of this paper.
- 2.3 The HS2 Design Vision sets out nine principles grouped under the three themes of People, Place and Time. These principles set the common context for all HS2 design decisions and are re-iterated in the Landscape Design Approach, a link to which can be found in the references section at the end of this paper.

- 2.4 In addition, the Secretary of State has established an Independent Design Panel, so as to act as an independent advisor to HS2 in realising the HS2 Design Vision and principles on the project.

### **3 Design policy**

3.1 The Promoter and the nominated undertaker will seek to ensure that:

- the design is safe, efficient, and meets with the requirements of whole life operation and maintenance alongside initial buildability and will integrate with the local setting;
- the design contributes to the Government's pursuit of sustainable development, as set out in the National Planning Policy Framework, which involves seeking positive improvements in the quality of the built, natural and historic environment, as well as in people's quality of life supported by integrated spatial planning and design;
- the design of all visible elements of the built and landscaped environment in both rural and urban have an integrated design that is sympathetic to the local context, environment and social setting and supports naturally engineered systems including flood risk management and biodiversity where possible;
- the design cohesion is achieved through a strong aesthetic ethos and a recognisable architectural language;
- the design is developed through engagement to seek peoples' views and including integration with setting design of the visible buildings and permanent structures;
- the design has a culture of cost awareness and integrates design decision making early to give cost/quality and sustainability decisions which achieve best value for the funders;
- the design innovation is encouraged to generate best value to funders, users and those affected by the railway; and

- the design considers the passenger experience and delivers a consistent design ethos between the various contracts.

## **4 Promoter's requirements**

4.1 The nine principles set out in HS2 Design Vision support the requirements defined by the Promoter to HS2 Ltd. The key requirements are noted below and are not repeated in the design policy:

- to provide an efficient high speed rail network capable of safe construction and operation;
- to limit adverse environmental and visual impacts during design construction and operation;
- to deliver value and maintain budget compliance;
- to develop a sustainable development policy setting out defining principles;
- trains, stations and associated facilities to be fully accessible to all passengers and provide efficient access to other rail networks and other transport modes;
- to engage with local authorities and other stakeholders to identify additional potential regeneration opportunities within area planning frameworks;
- to comply with National Technical Specification Notices (NTSNs) published by the DfT, which define mandatory standards for mainline railways;
- to develop proposals in order to minimise whole life whole system operation, maintenance and renewal costs; and
- to design a railway with world class levels of safety and risk reduced as low as reasonably practicable.

## **5 Design development and the role of the planning authority**

- 5.1 The design of the Proposed Scheme to date provides the level of detail necessary for the purposes of the Bill and the requirements of the EIA in accordance with the Standing Orders of Parliament. The level of detailed design necessary to enable the Proposed Scheme to be constructed has yet to be carried out and, although detailed design development may commence as the Bill progresses through Parliament, it will not be completed until after the Bill has secured Royal Assent. As part of the development of the design following Royal Assent the nominated undertaker will need to apply for approval of the detailed design of a range of elements of the Proposed Scheme from planning authorities along the route, as explained in Information Paper B2: Main provisions of the planning regime.
- 5.2 This will allow planning authorities to ensure that the design of permanent structures fits into the local environment taking into account other relevant considerations.
- 5.3 A planning authority that becomes a qualifying authority under the planning regime will be required to approve plans and specifications for matters such as buildings and road vehicle parks, terracing, cuttings, embankments and other earthworks, fences, walls or other barriers, transformers, telecommunication masts, pedestrian access to the railway line, artificial lighting, waste and spoil disposal and borrow pits. Information Paper B2: The main provisions of the planning regime provides further detail, including on the role of qualifying and non-qualifying authorities.
- 5.4 The planning authority can only refuse to approve (or impose conditions in respect of) the plans and specifications on the grounds specified in the planning regime.
- 5.5 Ongoing engagement with planning authorities is critical to the design development process. It will ensure the detailed design of the Proposed

Scheme has regard to planning authority aspirations and fits within the local environment.

- 5.6 The Phase 2b (Crewe – Manchester) Planning Forum, once established, will consider common designs for certain structures. Discussions between the nominated undertaker and the relevant planning authority will determine the appropriateness of the common designs to the local environment.
- 5.7 The Planning Memorandum, currently in draft, provides the commitment that the nominated undertaker will engage in proportionate forward discussions about prospective requests for approval with the qualifying authority and statutory consultees. Forward discussions will, as relevant, include design development, submission dates and planning committee cycles.

## **6 Design development and public engagement**

- 6.1 The Promoter recognises the importance of public engagement in the design development process. The exact scope and nature of public engagement will depend on the element being designed. For example, the project would expect a higher degree of public engagement on those parts of the railway that have the most significant impact on people.
- 6.2 The Promoter plans to adopt the following approach for public engagement in design development:
- Stations - the nominated undertaker will undertake public engagement for stations designs. While the exact form and nature of such engagement will be developed closer to the time, it is likely to be an open engagement exercise, with local public exhibitions, leaflet drops, interactive on-line materials and related publicity, reflecting the complexities of station design and the importance of their existing and potential contexts.
  - Key design elements - the nominated undertaker will engage the public on the design development of key elements of infrastructure -

including main viaducts and maintenance buildings in sensitive areas. The engagement exercise is likely to focus on engaging the public in the locality where the infrastructure is located. These key design elements are outlined in Table 1 in Appendix A.

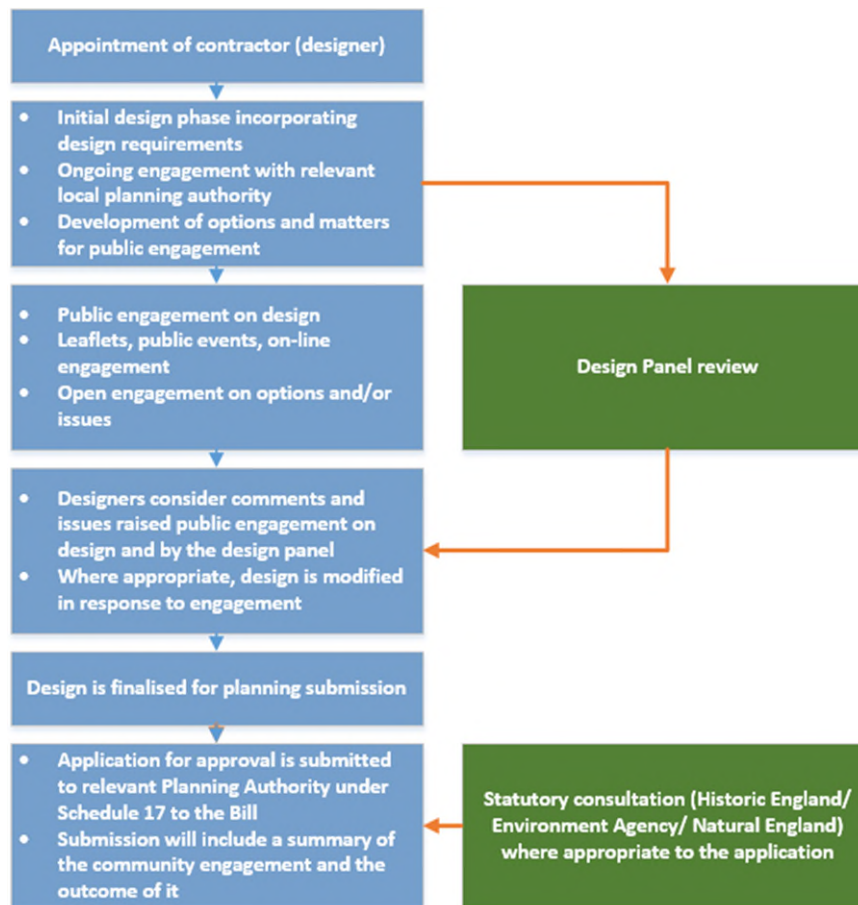
- Common design elements - the nominated undertaker will develop standard or common designs for certain permanent structures associated with the railway (such as road-bridges, foot-bridges, noise barriers). The Promoter will undertake wider public engagement on design development for common design elements, including for example interactive on-line materials, with associated local and route-wide publicity.

## **7 Design Panel**

- 7.1 The HS2 Independent Design Panel has been set up to provide professional expertise and advice, acting as an independent reviewer to HS2 Ltd. It brings together a comprehensive range of design disciplines. The HS2 Independent Design Panel's remit is across all phases of HS2 and includes the Proposed Scheme.
- 7.2 A Chair and pool of panel members covering a wide range of design disciplines is appointed to independently assist the design challenge. The Design Panel will assist HS2 Ltd through advice, and HS2 Ltd will work in partnership with a range of organisations, including planning authorities.
- 7.3 The aim will be to deliver a high standard of design that is also cost-effective, sustainable and meets HS2 environmental policies. Further information on the role of the Design Panel can be found at the link in the references section at the end of this paper.



**Figure 1: Example of design development process**



## 8 More information

8.1 More detail on the Bill and related documents can be found at [www.gov.uk/hs2-phase2b-crewe-manchester](http://www.gov.uk/hs2-phase2b-crewe-manchester).

## Appendix A:

Table 1: Key design elements

	Key design element for engagement
1	Crewe Tunnel North Porous Portal
2	Crewe Rolling Stock Depot
3	Smoker Brook Viaduct
4	River Dane Viaduct
5	Trent and Mersey Canal Viaduct
6	Gad Brook Viaduct
7	Manchester Tunnel South Porous Portal
8	Palatine Road Vent Shaft
9	Birchfield Road Vent Shaft
10	Piccadilly Approach Viaduct & Piccadilly Station Viaduct
11	Wilmslow Road Vent Shaft
12	Middlewich Street Vent Shaft

## References

HS2 Design Vision

<https://www.gov.uk/government/publications/hs2-design-vision>

Landscape Design Approach

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/550791/HS2\\_Landscape\\_Design\\_Approach\\_July\\_2016.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/550791/HS2_Landscape_Design_Approach_July_2016.pdf)

HS2 Design Panel

<https://www.gov.uk/government/publications/hs2-design-panel>

HS2 Independent Design: Case Studies

<https://www.gov.uk/government/publications/hs2-design-case-studies>