

## HIGH SPEED TWO PHASE 2a 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 (West Midlands-Crewe) Bill which is now enacted. It was finalised at Royal Assent and no further changes will be made.

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.

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# D1: DESIGN

## 1. Introduction

- 1.1. High Speed Two (HS2) is the Government's proposal for a new, high speed north-south railway. The proposal is being taken forward in phases: Phase One will connect London with Birmingham and the West Midlands. Phase 2a will extend the route to Crewe. Phase 2b will extend the route to Manchester, Leeds and beyond. The construction and operation of Phase One of HS2 is authorised by the High Speed Rail (London – West Midlands) Act 2017.
- 1.2. HS2 Ltd is the non-departmental public body responsible for developing and promoting these proposals. The company works to a Development Agreement made with the Secretary of State for Transport.
- 1.3. In July 2017, the Government introduced a hybrid Bill<sup>1</sup> to Parliament to seek powers for the construction and operation of Phase 2a of HS2 (the Proposed Scheme). The Proposed Scheme is a railway starting at Fradley at its southern end. At the northern end it connects with the West Coast Main Line (WCML) south of Crewe to allow HS2 services to join the WCML and call at Crewe Station. North of this junction with the WCML, the Proposed Scheme continues to a tunnel portal south of Crewe.
- 1.4. The work to produce the Bill includes 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)<sup>2</sup>, which set out the environmental and sustainability commitments that will be observed in the construction of the Proposed Scheme.
- 1.5. 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'. The nominated undertaker will be bound by the obligations contained in the Bill and the policies established in the EMRs. There may be more than one nominated undertaker.
- 1.6. 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.

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<sup>1</sup> The High Speed Rail (West Midlands – Crewe) Bill, hereafter 'the Bill'.

<sup>2</sup> For more information on the EMRs, please see Information Paper E1: Control of Environmental Impacts.

## 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 HS2 will be developed in line with the HS2 Design Vision, which can be found at: <https://www.gov.uk/government/publications/hs2-design-vision>.
- 2.3. In addition, the Secretary of State has established an independent Design Panel, so as to ensure that designs of major stations and structures and other related design aspects of the new railway will complement local aspirations and contribute to the natural and built environment.

## 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;
  - 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;
  - the design of all visible elements of the built and landscaped environment in both rural and urban areas are sympathetic to their local context, environment and social setting;
  - 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 ideas on the aesthetic design of the visible buildings and permanent structures;
  - the design has a culture of cost awareness to give cost/quality 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.

## 4. Promoter's requirements

- 4.1. The principles 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 relevant European Union Technical Specifications for Interoperability;
- to develop proposals in order to minimise whole life whole system operation, maintenance and renewal costs; and
- to plan with zero-based targets for accidents and injuries.

## **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 Environmental Impact Assessment 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. Once the design is complete 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 set out in the planning regime of the Bill.
- 5.2. This will allow planning authorities to ensure that the design of permanent structures fits into the local environment.
- 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.

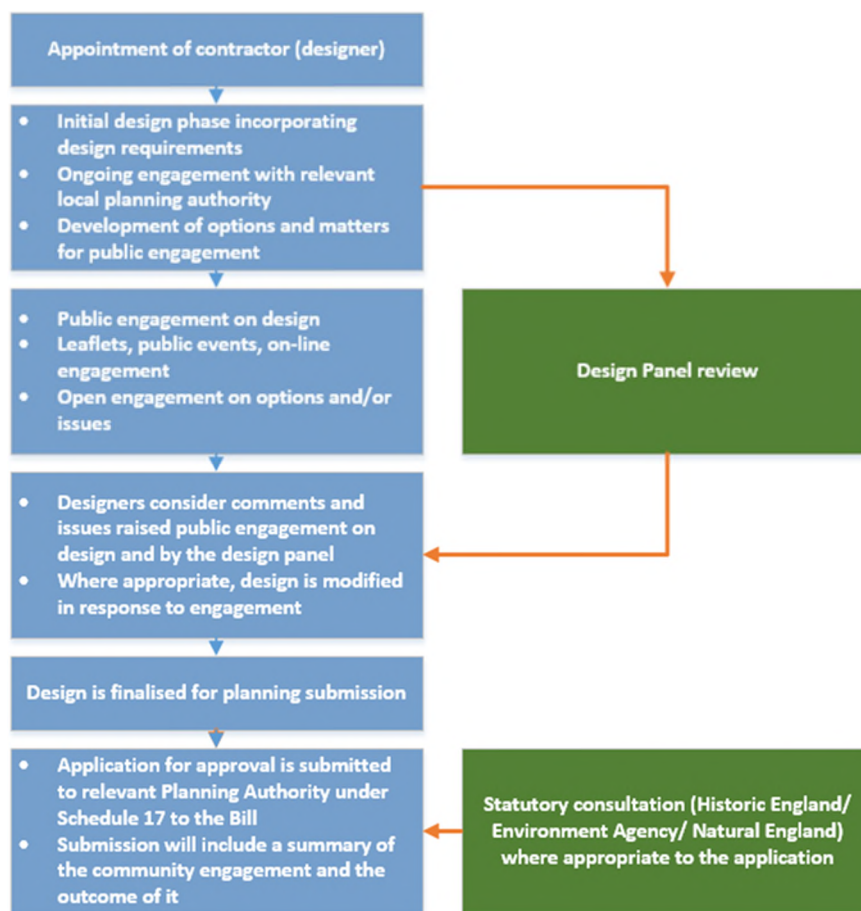
- 5.4. The planning authority can only refuse to approve (or impose conditions in respect of) the plans and specifications on the grounds specified in the planning regime.
- 5.5. Ongoing engagement with planning authorities is critical to the design development process. It will ensure the detailed design of the Proposed Scheme has regard to planning authority aspirations, and fits within the local environment.
- 5.6. The Phase 2a 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:
  - 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 at the end of this paper.
  - 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

Figure 1: Example of design development process



- 7.1. The HS2 Independent Design Panel has been set up to provide professional expertise and advice, acting as an advisor and critical friend to HS2 Ltd. It brings together a comprehensive range of design disciplines. The HS2 Independent Design Panel's remit is route wide and includes Phase 2a.
- 7.2. Sadie Morgan has been appointed Chair of the HS2 Design Panel, and a pool of panel members covering all design disciplines has been 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 and sustainable. Further information on the role of the Panel and its experts can be found at: <https://www.gov.uk/government/publications/hs2-design-panel>

## 8. More information

- 8.1. More detail on the Bill and related documents can be found at: [www.gov.uk/HS2](http://www.gov.uk/HS2)

Table 1: Key design elements

	Key design elements for Engagement
1	Kings Bromley Viaduct
2	River Trent Viaduct
3	Great Haywood Viaduct
4	Stone Infrastructure Maintenance Base-Rail
5	Whitmore Heath Tunnel – South Portal
6	Whitmore Heath Tunnel – North Portal
7	River Lea Viaduct
8	Madeley Tunnel South Portal
9	Madeley Tunnel North Portal