



Phase 2b Western Leg Information Paper

A4: Consideration of alternatives

This information paper outlines the site selection process and how alternatives have been considered on the Proposed Scheme

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.

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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

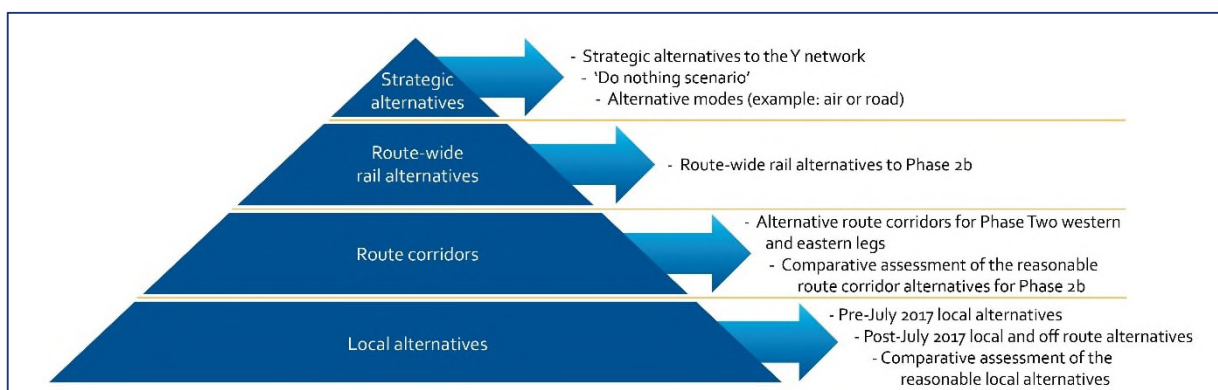
Scheme. For more information on the EMRs please see Information Paper E1: Control of environmental impacts.

- 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 sets out the site selection process and how alternatives have been considered on the Proposed Scheme.
- 2.2 The Alternatives Report is available in Volume 5 of the Environmental Statement and sets out how Government and HS2 Ltd have considered reasonable alternatives in accordance with the hierarchy shown in Figure 1.

Figure 1 Hierarchy of reasonable alternatives studied



2.3 Further explanation of the stages in the hierarchy is set out below, and the full considerations are available in the Environmental Statement: Volume 5.

3 Strategic alternatives

3.1 The strategic alternatives stage considered ways to meet the future travel needs of Britain, including a high-speed rail network, domestic aviation, new motorways, a new conventional speed railway and upgrading existing roads and rail.

4 Route-wide rail alternatives

4.1 The Department for Transport considered alternatives to the Proposed Scheme throughout its development, in line with the requirements of the HM Treasury *Green Book*. Studies were commissioned to appraise the route-wide rail alternatives to the Proposed Scheme which considered the following factors, in addition to the consideration of costs:

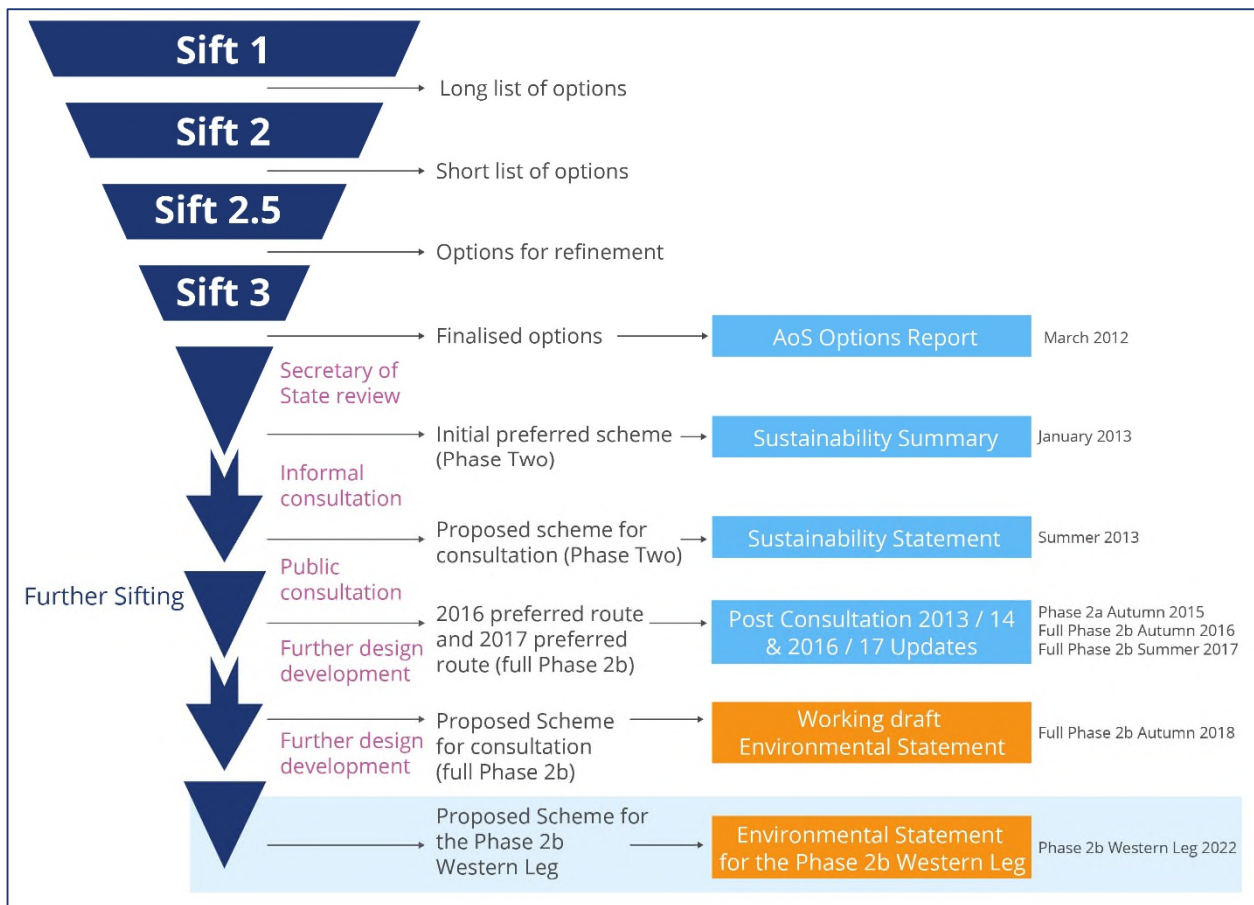
- Journey times
- Additional network capacity
- Train seating capacity and crowding
- Reliability and punctuality
- Disruption
- Environmental Impacts

4.2 This study considered a range of alternative rail options, including upgrades to the existing rail network, building shorter sections of route to integrate into the existing rail network, and different lengths of high speed rail.

5 Route corridors

- 5.1 The route corridors stage considered the reasonable options for the line of route of the Proposed Scheme from Crewe – Manchester, known at that point as the Western Leg of HS2 Phase 2b. Further detail on the evolution of the 2b route corridor is available in Information Paper A1: Evolution of the Proposed Scheme.
- 5.2 Consideration of sustainability (including environmental impacts) has been integral to the development of the Proposed Scheme throughout the appraisal process. Since the initial option development, HS2 Ltd has continued to develop route and station proposals that seek to reduce environmental and community impacts within the engineering and financial constraints of the scheme through a refinement process referred to as ‘sifting’.
- 5.3 The sifting process followed for the Proposed Scheme is detailed in Figure 2 below. This consisted of a sequentially more detailed appraisal of route options. At the end of each appraisal stage or sift, sustainability performance was formally studied alongside other cost, operational and engineering information by HS2 Ltd, who identified preferred options for progression to the next level of design. The selected options were then subject to the next sift for more detailed appraisal.
- 5.4 As part of considering the sustainability of the Proposed Scheme, the following environmental factors were considered: climatic factors and adaptability; greenhouse gases; landscape; townscape and cultural heritage; biodiversity and geodiversity; water resources; flood risk; air quality; noise and vibration; community integrity; accessibility; health and well-being; security and safety; economic prosperity; economic welfare; soil and land resources; waste generation; traffic and transport; and resource use.
- 5.5 Full detail on regional corridor options can be found in the full Alternatives Report in Volume 5 of the Environmental Statement.

Figure 2: Sifting process followed for the Proposed Scheme



6 Local alternatives

6.1 Local alternatives within different geographic areas have been studied and sifted as part of the development of the scheme. For local alternatives studied, each option was appraised for sustainability performance against the preferred option taken forward. Further detail on the local alternative sifts for each geographical location is available in the Alternatives Report in Volume 5 of the Environmental Statement.

6.2 Amongst other factors, public consultations have influenced the consideration and development of local alternatives. More detail on public consultations on the Proposed Scheme is available in Information Paper G1: Consultation and engagement.

7 More information

- 7.1 More detail on the Bill and related documents can be found at www.gov.uk/hs2-phase2b-crewe-manchester.

References

HM Treasury, (2013), The Green Book: Appraisal and Evaluation in Central Government

http://webarchive.nationalarchives.gov.uk/20080305121602/http://www.hm-treasury.gov.uk/media/3/F/green_book_260907.pdf