

HS2

Climate change adaptation and resilience

This factsheet outlines how the combined impact of the Proposed Scheme and potential climate change on the receiving environment and community will be assessed. It also outlines how the Proposed Scheme's resilience and capacity to cope with potential climate change impacts will be assessed.

Version 2.0

Last updated: June 2019

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 'Proposed Scheme').
- 1.2 The construction and operation of Phase One of HS2 is authorised by the High Speed Rail (London – West Midlands) Act (2017). In July 2017, the Government introduced a hybrid Bill to Parliament to seek powers for the construction and operation of Phase 2a. A hybrid Bill to seek powers for the construction and operation of Phase 2b is expected to be introduced to Parliament in 2020.
- 1.3 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.
- 1.4 The work to produce the Phase 2b Bill will include an Environmental Impact Assessment (EIA), the results of which will then be reported in an Environmental Statement (ES). The ES would be submitted alongside the Phase 2b Bill when it is introduced to Parliament. The emerging findings of the EIA were reported in a working draft Environmental Statement (WDES)¹ that was consulted on in late 2018.
- 1.5 As was the case with Phase One and Phase 2a, when the Phase 2b Bill is introduced to Parliament, the Secretary of State will also publish draft Environmental Minimum Requirements (EMRs). The EMRs will set out the environmental and sustainability commitments that will be observed in the construction and operation of Phase 2b.
- 1.6 A series of information papers were produced for the Phase One and Phase 2a hybrid Bills, explaining the commitments made in those Bills and EMRs. It is the Secretary of State's intention to follow a similar process for the Phase 2b Bill. These information papers for Phase 2b will be used to provide information about Phase 2b itself, the powers contained in the Phase 2b Bill when it is introduced to Parliament and how decisions on Phase 2b have been reached. It is currently proposed that these information papers for Phase 2b will be published at the time the Phase 2b Bill is introduced in Parliament.

¹ The WDES presented draft environmental information based on a stage in the ongoing design and assessment process for the Proposed Scheme. It included a description of the existing environment; an evaluation of the anticipated environmental impacts of the Proposed Scheme; and the measures being proposed at the time to manage the anticipated impacts. The ES submitted alongside the hybrid Bill will reflect any changes made following further work on the design and EIA, the WDES consultation, and any further consultation on the Proposed Scheme.

- 1.7 The Secretary of State for Transport will be ‘the Promoter’ of the Phase 2b Bill. The Promoter will also eventually appoint a body responsible for delivering the Proposed Scheme under the powers to be granted by the Phase 2b Bill. This body will be known as the ‘nominated undertaker’. There may well be more than one nominated undertaker. However, any and all nominated undertakers will be bound by the obligations contained in the Phase 2b Bill, the policies established in the Phase 2b EMRs and any commitments provided in the Phase 2b information papers.
- 1.8 These Phase 2b Factsheets have been produced to provide information on the emerging proposals for measures to manage the design process for Phase 2b and to control impacts which may arise from the construction and operation of the Proposed Scheme. These measures may then be applied to Phase 2b as commitments made through the eventual Phase 2b Bill, EMRs or information papers.

2 Overview

- 2.1.1 This factsheet outlines how the combined impact of the Proposed Scheme and potential climate change on the receiving environment and community will be assessed. It also outlines how the Proposed Scheme's resilience and capacity to cope with potential climate change impacts will be assessed.

3 The Proposed Scheme and climate change

- 3.1.1 The ES will assess the impact of climate change and the Proposed Scheme in two ways:
- The in-combination climate change impacts assessment, which will consider the combined effect of the Proposed Scheme and potential climate change impacts on the receiving environment during construction and operation².
 - The climate change resilience assessment, which will consider potential climate change impacts on the design, construction and operation of the Proposed Scheme’s infrastructure and assets over their lifetime.

² The term in-combination climate change impacts refers to the combined effect of the impacts of the Proposed Scheme and potential climate change impacts on the receiving environment.

4 Policy background

- 4.1.1 European Directive 2014/52/EU on the assessment of environmental effects sets out the requirement for a climate change adaptation assessment in the ES for the Proposed Scheme.
- 4.1.2 UK climate change policy is set out in the Climate Change Act 2008, supported by the national Climate Change Risk Assessments (2012³, 2017⁴) and National Adaptation Programme (2018)⁵. The Government has identified the resilience of UK infrastructure to climate change as a major 21st century challenge that needs to be addressed.

5 HS2 Ltd policy

- 5.1.1 HS2 Ltd.'s Sustainability Policy⁶ sets out the aim to “build a network which is resilient to climate change in the long term”. HS2 Ltd.'s Environmental Policy sets out the aim to “minimise the combined effect of the project and climate change on the environment”⁷.

6 Climate change in-combination impact assessments

- 6.1.1 HS2 Ltd is considering how climate change, in-combination with the impacts of the Proposed Scheme, may affect communities, businesses and the natural, historic and built environment along the Phase 2b route.
- 6.1.2 Each environmental topic will consider changes to long-term, seasonal averages and extreme weather events, in order to undertake preliminary qualitative consideration of the combined effects of climate change and the Proposed Scheme for both the construction and operational phases of the railway. The methodology is described in the Scope and Methodology Report⁸.

³ Department for Environment, Food and Rural Affairs, (2012), The UK Climate Change Risk Assessment 2012 Evidence Report.

⁴ Department for Environment, Food and Rural Affairs (2017), the UK Climate Change Risk Assessment 2017

⁵ Her Majesty's Government (2018), The National Adaptation Programme and the Third Strategy for Climate Adaptation Reporting, Her Majesty's Stationery Office.

⁶ <https://www.gov.uk/government/publications/hs2-sustainability-policy>

⁷ <https://www.gov.uk/government/publications/hs2-environmental-policy>

⁸ These are available here: www.hs2.org.uk/phase2b

7 Climate change resilience

- 7.1.1 A high level climate change resilience assessment will be reported in Volume 3 of the ES, and will identify the potential risks of climate change on the Proposed Scheme and will assess the Proposed Scheme's resilience and capacity to cope with these potential risks. The assessment will consider risks posed by climate related hazards such as extreme hot and cold weather, heavy rain, high winds and storms to the infrastructure and assets associated with the railway including tracks, tunnels, overhead line equipment, rolling stock, stations and earthworks.
- 7.1.2 For any significant climate change resilience effects identified, a range of mitigation measures would be considered within the design of the Proposed Scheme or within development of maintenance and monitoring procedures.
- 7.1.3 Work during further design stages would assess the impacts of climate change on interdependencies between the Proposed Scheme and other organisations such as rail, road, power and telecoms infrastructure operators.
- 7.1.4 Climate change resilience assessments will continue to take place throughout the design, construction and operation stages of the Proposed Scheme.

8 More information

- 8.1.1 Further factsheets and details on the Proposed Scheme can be found at: www.hs2.org.uk/phase2b