

## HIGH SPEED TWO PHASE 2a INFORMATION PAPER

### E28: GREEN INFRASTRUCTURE AND THE GREEN CORRIDOR

This paper outlines the concepts of green infrastructure and the green corridor that inform development of 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 (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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# E28: GREEN INFRASTRUCTURE AND THE GREEN CORRIDOR

## 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. Green infrastructure (GI) is a term used in planning and development that aims to create a network of high quality, multifunctional green (land) and blue (water) spaces. It occurs in both urban and rural contexts, and is capable of delivering a wide range of environmental and quality of life benefits for local communities.
- 2.2. It is a form of environmental best practice and planning policy<sup>3</sup> that has been used to inform HS2 Ltd's approach to developing the Proposed Scheme.

## 3. What is green infrastructure?

- 3.1. GI is not simply an alternative description for conventional open space. It is a network of natural and semi natural features, ranging in scale from: individual street trees, allotments, verges, green roofs and private gardens, through to parks, playing fields, woodlands and at a landscape scale, wetlands and forests. It can also include streams, canals and other water bodies and connections via public rights of way, bridleways and cycle ways. This network should function sustainably and meet various needs from a national to a local level.
- 3.2. GI can be applied to new projects and to the regeneration of urban areas. It is a broad idea: it can relate to the built or natural environment, and informs various aspects of project development, including design, engineering and environmental management. Considerations such as landscape, biodiversity, cultural heritage, socio economics and public access are all relevant.
- 3.3. GI is most successful when it is designed and managed as a multi-functional resource, providing a range of different benefits at the same time.

## 4. Green infrastructure and HS2

- 4.1. HS2 Ltd's Sustainability Policy and Environmental Policy aim to support the Government's goal to encourage well-being and protect the environment. These policies identify that HS2 constitutes a major opportunity to help make the UK transport system more sustainable. A number of the aims of these policies relate to GI concepts:
  - growth and regeneration - support sustainable economic development and the localism agenda for regeneration;
  - environmental change - seek to avoid significant adverse effects on communities, businesses, and the natural, historic and built environment. Minimise impacts where they occur, and enhance the environment where appropriate to seek to achieve no net loss to biodiversity;

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<sup>3</sup> National Planning Policy Framework (NPPF) – Paras 18. 47. 56 . 69. 93 and 109

- resilience - build a well connected GI network that is adaptive, resilient for the long term, and seek to minimise the combined effect of the Proposed Scheme and climate change;
  - contribute to good design - well-designed GI helps create a sense of place by responding to, and where appropriate enhancing, local landscape character;
  - promoting healthy communities – GI can help improve public health and community wellbeing by creating environmental quality and maintaining opportunities for recreation and exercise. GI also helps reduce air pollution, noise and the impacts of extreme heat and extreme rainfall events.
- 4.2. The components of GI exist within the wider landscape context and can enhance local landscape character and contribute to place-making. High quality networks of multifunctional GI can make a contribution to creating habitats and to halting the decline in biodiversity.

## 5. The green corridor

- 5.1. Where the GI approach is applied to the line of route of the Proposed Scheme, this will also be referred to as a 'green' or 'environmental corridor'.
- 5.2. The green corridor is not a single piece of infrastructure. The term refers to HS2 Ltd's aim that the GI network will have sustainability benefits for landscape, ecology and people. It informs HS2 Ltd's considerations regarding the railway corridor itself, but also the land directly around the Proposed Scheme and any wider opportunities for mitigation and enhancement beyond the railway.

## 6. Green infrastructure and the Environmental Statement

- 6.1. The ES refers to the 'environmental corridor' that will be developed as part of the Proposed Scheme. Among other things, it considers:
- ecological mitigation and compensation - in the form of new or enhanced grassland and wetland habitats, woodland and hedgerows;
  - landscape and visual mitigation - in the form of locally designed earthworks to reflect local landform, to help integrate the Proposed Scheme into the local landscape character and to provide additional visual screening with the use of tree planting and hedgerows;
  - heritage mitigation - responding to the context of heritage assets and their setting;
  - access and community space - including public rights of way, cycleways, bridleways, open spaces, access tracks and bridges across the railway; and
  - drainage and flood amelioration - including balancing ponds, sustainable drainage systems (SuDs) including drainage ditches and flood risk compensation land.

- 6.2. The tenets of GI and the green corridor are outlined in HS2's Landscape Design Approach document. This is available here:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/550791/HS2\\_Landscape\\_Design\\_Approach\\_July\\_2016.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/550791/HS2_Landscape_Design_Approach_July_2016.pdf)
- 6.3. An independent Design Panel has been established to secure that HS2 acts as an exemplar of scheme design for others across the world. The Design Panel will have an important role in taking forward the GI concept through detailed design of the Proposed Scheme.
- 6.4. The environmental or green corridor is integral to HS2's aim of leaving a positive route legacy. It is linked to the Promoter's aim for the Proposed Scheme to seek no net loss in biodiversity, and also the Government's commitment to planting at least four million trees as part of the mitigation proposals for Phase One and Phase Two of HS2.

## 7. Policy and legislative context

- 7.1. The importance of GI in HS2 Ltd's approach reflects the Government's environmental aims, as set out in the following documents.
- 7.2. The Government's 25 Year Environment Plan sets out to improve the environment over a generation by creating richer habitats for wildlife, improving air and water quality, while mitigating and adapting to climate change. The plan outlines how government will work with communities and businesses to do this and sets goals and targets for each of the environmental benefit and pressures identified<sup>4</sup>.
- 7.3. The Government's Natural Environment White Paper refers to the role of planning in protecting and improving the natural environment and facilitating coherent and resilient ecological networks that reflect the value of natural systems, and advocates that green spaces should be factored into the development of all communities.
- 7.4. The Government's Biodiversity Strategy for England builds on the Natural Environment White Paper, advocating the reduction of environmental pressures from planning and development, by taking a strategic approach to planning for nature and retaining the protection and improvement of the natural environment as core objectives of the planning system.
- 7.5. The National Planning Policy Framework supports the objectives of the Natural Environment White Paper, stressing a proactive and strategic approach to planning for the natural environment.

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<sup>4</sup> <https://www.gov.uk/government/publications/25-year-environment-plan>

## 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)
- 8.2. HS2 Ltd's Sustainability Policy can be found here:  
<https://www.gov.uk/government/publications/hs2-sustainability-policy>
- 8.3. Hs2 Ltd's Environmental Policy can be found here:  
<https://www.gov.uk/government/publications/hs2-environmental-policy>