



HIGH SPEED TWO PHASE ONE INFORMATION PAPER

E15: GREEN BRIDGES

This paper outlines what green bridges are and how they will contribute to mitigating and compensating impacts on habitats and species, during the operation 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 Bill for Phase One of the scheme which is now enacted. Although the contents were maintained and updated as considered appropriate during the passage of the Bill (including shortly prior to the enactment of the Bill in February 2017) the contents are now historic and are no longer maintained.

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 reached at:

**High Speed Two (HS2) Limited
Two Snowhill, Snow Hill Queensway
Birmingham, B4 6GA**

by email: HS2enquiries@hs2.org.uk

or by phone: 08081 434 434 (lines are open 24 hours)

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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 two phases: Phase One will connect London with Birmingham and the West Midlands and Phase Two will extend the route to Manchester, Leeds and beyond.
- 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 November 2013, HS2 Ltd deposited a hybrid Bill¹ with Parliament to seek powers for the construction and operation of Phase One of HS2 (sometimes referred to as 'the Proposed Scheme'). The Bill is the culmination of nearly six years of work, including an Environmental Impact Assessment (EIA), the results of which were 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.
- 1.4. The Bill is being promoted through Parliament by the Secretary of State for Transport (the 'Promoter'). The Secretary of State will also appoint a body responsible for delivering the Proposed Scheme under the powers granted by the Bill.
- 1.5. This body is known as the 'nominated undertaker'. There may well be more than one nominated undertaker – for example, HS2 Ltd could become the nominated undertaker for the main railway works, while Network Rail could become the nominated undertaker for works to an existing station such as Euston. But whoever they are, all nominated undertakers will be bound by the obligations contained in the Bill and the policies established in the EMRs.
- 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 project have been reached.

¹ The High Speed Rail (London – West Midlands) Bill, hereafter 'the Bill'.

2. What is a green bridge?

- 2.1. This information paper explains what 'green bridges' are, how they will contribute to mitigating the potential environmental impacts of the Proposed Scheme, and the way they will be integrated into the surrounding landscape.
- 2.2. Green bridges are typically footbridges, road bridges or agricultural access bridges which have been adapted to allow wildlife to cross the railway safely.

3. Design approach

- 3.1. Green bridges are usually designed to maintain safe movement and dispersal of animals and plants from one side of the railway to the other and are proposed as mitigation in the Environmental Statements submitted with the Bill and its Additional Provisions.
- 3.2. In certain circumstances, green bridges may also be provided to help mitigate other environmental effects (e.g. impact on a community)
- 3.3. The main difference between a standard bridge and a green bridge is the increased width to allow vegetation, typically including one or two hedgerows comprising a range of local/native species, to be planted along the structure.
- 3.4. The design of the Proposed Scheme includes a number of green bridges along the line of route which have generally been designed specifically for bats and/or to provide safe passage across the route for other species.
- 3.5. In order to encourage species to use green bridges, planting on the structures will be linked to the surrounding vegetation at the entrances to provide connections with the existing habitats.
- 3.6. The safe movement of species between habitats will also be supported by other design elements such as tunnels, viaducts, underpasses and culverts.
- 3.7. As well as providing safe passage and habitat linkages, the addition of vegetation would also help integrate green bridges into the landscape and their wider environmental and social setting.
- 3.8. Typically green bridges would be unlit to ensure that light sensitive species, such as bats, are not discouraged from using them.
- 3.9. For ease of reference, the various designs for green bridges can be categorised into the following types based on their principal purpose:
 - Type 1** – Green bridges for Bechstein's bats.
 - Type 2** – Green bridges for important populations of scarce bat species (other than Bechstein's bats) and high value assemblages of bats.
 - Type 3A** – Green bridges for landscape and habitat connectivity and/or the dispersal and passage of wildlife (with a single vegetated zone).
 - Type 3B** – Green bridges for landscape and habitat connectivity and/or the dispersal and passage of wildlife (with a double vegetated zone).
 - Type 4** – Other types of green bridge with site-specific functionality.

4. Where are they located?

- 4.1. There are 16 green bridges proposed route wide as described in Section 7.5 of the Community Forum Area reports within Volume 2 of the Environmental Statement and in the Environmental Statements accompanying the Additional Provisions. The locations are detailed in the table below:

Community Forum Area	Bridge name	Type	Other function
CFA12 – Waddesdon and Quainton	Bridleway QUA/36 Accommodation Green Overbridge	1	Bridleway / farm access
CFA12 – Waddesdon and Quainton	Bridleway GUN/28 Accommodation Green Overbridge	1	Bridleway / farm access
CFA13 – Calvert, Steeple Claydon, Twyford and Chetwode	Footpath SCL/13 Green Overbridge	1	Footpath
CFA13 – Calvert, Steeple Claydon, Twyford and Chetwode	Calvert Green Overbridge	1	None ²
CFA13 – Calvert, Steeple Claydon, Twyford and Chetwode	School Hill Green Overbridge	1	Road
CFA14 – Newton Purcell to Brackley	Turweston Green Overbridge	4 ³	Road / bridleway
CFA14 – Newton Purcell to Brackley	Footpath AX15 Green Overbridge ⁴	2	Footpath
CFA16 – Ladbroke and Southam	Stoneton Lane Green Overbridge ⁵	3A	Road
CFA16 – Ladbroke and Southam	Footpath SM101 Green Overbridge	3A	Footpath
CFA16 – Ladbroke and Southam	Windmill Lane Green Overbridge	3A	Road
CFA17 – Offchurch and Cubbington	Offchurch Greenway Green Overbridge	3B	Cycleway / footpath
CFA17 – Offchurch and Cubbington	Mill Lane (Footpath W129d) Accommodation Green Overbridge	3B	Private road / footpath
CFA18 – Stoneleigh, Kenilworth and Burton Green	B4113 Stoneleigh Road Green Overbridge	3B	Road

² Originally carried a private access to the relocated waste transfer sidings near Calvert Green but this was moved to a separate structure in the Additional Provisions 4 (AP4) of October 2015

³ Required to mitigate community effects in the village of Turweston.

⁴ Added in the Additional Provisions 2 (AP2) in July 2015 following an assessment of additional ecological survey information for the area.

⁵ Added in AP2 to replace the 'green' function of the nearby Banbury Road Overbridge (Boddington) described in the ES for the Bill following a remodelling of the road and bridge layout in the area.

Community Forum Area	Bridge name	Type	Other function
CFA21 – Drayton Bassett, Hints and Weeford	Brockhurst Lane Green Overbridge ⁶	3A	Road
CFA21 – Drayton Bassett, Hints and Weeford	Swinfen & Packington Bridleway 8 Accommodation Green Overbridge ⁷	3A	Bridleway / farm access
CFA 23 – Balsall Common and Hampton-in-Arden	Footpath M215 Green Overbridge ⁸	2	Footpath / farm access

5. More information

5.1. More detail on the Bill and related documents can be found at: www.gov.uk/HS2

⁶ Added in AP2 to replace the 'green' function of the former Hints Footpath 14 Overbridge described in the ES following a remodelling of the road, footpath and bridge layout in the area.

⁷ Previously known as Horsely Brook Farm Green Overbridge.

⁸ The 'green' function of the nearby Footpath M214 Overbridge described in the ES has been removed in AP2 following an assessment of additional ecological survey information for the area.