



HIGH SPEED TWO PHASE ONE INFORMATION PAPER

E7: LAND QUALITY (CONTAMINATION)

This paper outlines HS2 Ltd's approach to the assessment and treatment of contaminated land affected by Phase One 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the Bill (including shortly prior to the enactment of the Bill in February 2017) the contents are now historic and are no longer maintained.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)

Version 1.3

Last updated 23rd February 2017

E7: LAND QUALITY (CONTAMINATION)

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.

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

2. Contaminated land

- 2.1. This Information Paper outlines HS2 Ltd's approach to the assessment and treatment of contaminated land affected by Phase One of the Proposed Scheme.
- 2.2. Constructing HS2 Phase One will require the use of land with a range of existing condition. In some cases this will involve construction on contaminated land. Contaminated land is defined in Part IIa of the Environmental Protection Act (1990) as land that contains substances in or under it, which have the potential to pollute local watercourses or groundwater, or otherwise cause significant harm. This could include land with a previous industrial use.
- 2.3. An assessment of the potential presence of contaminated land in or around the route was carried out as part of the HS2 Phase One Environmental Impact Assessment. The results were reported in the HS2 Phase One Environmental Statement submitted with the hybrid Bill.
- 2.4. A total of 1,969 sites were assessed along the HS2 Phase One route. The sites were selected based on records of their previous use, such as a chemical works, which may have caused contamination. Of these sites, 541 were taken forward for further assessment as they were located either on or near areas where construction will take place and either singly or in combination considered to potentially contain substances harmful to:
 - human health (i.e. affecting construction workers or site visitors during the construction period, as well as eventual users of the railway);
 - groundwater;
 - surface water resources;
 - ecosystems; or
 - building fabric.
- 2.5. The principal high risk sites identified by the assessment are located at:
 - Old Oak Common, London;
 - the former Alstom Depot at Washwood Heath, Birmingham;
 - tunnel portals at Bromford, Birmingham;
 - various former military sites (mostly former RAF airfields);
 - on or adjacent to various landfills along the route, particularly at Calvert, Buckinghamshire, and Finmere, Oxfordshire; and
 - Curzon Street station, Birmingham.

- 2.6. Very few of the sites assessed have been identified formally by the respective local authorities as being "contaminated land" within the meaning of Part IIa of the Environmental Protection Act. However, the nominated undertaker will consult with local authorities on proposals for the remediation of contamination where this has been identified prior to or during construction.

3. Management during design

- 3.1. Prior to construction of the Proposed Scheme, the assessed sites (Section 2 above) where construction will take place will be investigated by means of intrusive works. These works consist of site investigations and quantitative risk assessments, which will assess the precise level and nature of contamination that will be encountered by the construction of the Proposed Scheme.
- 3.2. The HS2 Code of Construction Practice (CoCP) will require the nominated undertaker to assess individual sites in accordance with relevant legislation and guidance wherever construction work is planned and to develop a remediation strategy, which details the most practical solutions to remediate the site from a range of options, taking account of all project factors.
- 3.3. The design of the construction works will identify ways to reduce the risks associated with contamination by means of, for example, remediation of the ground, or treatment of the soil. The design will include the integration of the remediation strategy.

4. Management during construction

- 4.1. Prior to or during construction, treatment of contamination will be undertaken in accordance with the remediation strategy (Section 3 above). This includes treatment of any unexpected contamination encountered in other parts of the construction works in accordance with the HS2 Code of Construction Practice.
- 4.2. The nominated undertaker will be responsible for carrying out individual mitigation proposals in line with the Environment Agency's Pollution Prevention Guidance Notes (PPGs), water pollution guidance (PPGo1, PPGo2, PPGo5, PPGo6, PPG21 and PPG23) and Model Procedures for the Management of Land Contamination (CLR11). Where on-site works to fully recover contaminated materials are carried out, the relevant environmental permits will be obtained. On completion of remedial works, a record will be retained of the works undertaken to comply with the remediation strategy.

5. Disposal of contaminated materials

- 5.1. Where it is necessary to remove contaminated material from site, the nominated undertaker will develop a strategy for disposal that promotes waste minimisation, recycling, recovery, and re-use ahead of disposal at landfill. For contaminated material, alternatives to landfill could include the use of remedial technologies (both in situ and ex situ) that reduce the quantity of soil requiring

disposal, and/or the treatment of soils to a standard such that they can be reused at a site or be disposed of as non-hazardous waste.

- 5.2. Contaminated material which needs to be disposed of to landfill will be subject to the application of the Landfill Regulations 2002, which prevents the co-disposal of contaminated and non-contaminated waste.
- 5.3. The Environment Agency may, amongst other matters, require as part of its regulatory function the nominated undertaker to construct, at its own expense, protective works to safeguard Controlled Waters from the potential effects of any contamination during the construction of the specified works.

6. More information

- 6.1. More detail on the Bill and related documents can be found at: www.gov.uk/HS2
- 6.2. More information on the impacts to groundwater from existing land contamination can be found in Volume 2 of the community forum areas reports, Section 8 and the associated Volume 5 Appendices 1².
- 6.3. Land contamination is covered specifically in the Land Quality section of the ES which can be referred to for further information³. The Land Quality topic has three distinct parts comprising land contamination, geo-conservation sites and mineral resources.

² http://assets.dft.gov.uk/hs2-environmental-statement/volume-2/Volume_2_CFA2_Camden_Town_HS1_Link.pdf

³ <https://www.gov.uk/government/publications/hs2-phase-one-environmental-statement-volume-5-land-quality/hs2-phase-one-environmental-statement-volume-5-land-quality>