HIGH SPEED TWO
PHASE 2a INFORMATION PAPER

E17: EXCAVATED MATERIAL AND WASTE MANAGEMENT

This paper outlines the approach for managing excavated material and waste that will arise from the construction 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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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[1] 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)[2], 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.

1 The High Speed Rail (West Midlands – Crewe) Bill, hereafter 'the Bill'.
2 For more information on the EMRs, please see Information Paper E1: Control of Environmental Impacts.

2. Overview

2.1. This paper outlines the approach for managing excavated material and waste that will arise from the construction of the Proposed Scheme. The approach is set out in full within the Waste and Material Resources topic of the ES.

2.2. Only if excavated material is not required or is unsuitable for the construction of the Proposed Scheme will it be considered waste.

3. Material generation and reuse

3.1. The construction of the Proposed Scheme will lead to the generation of approximately 45 million tonnes of excavated material, approximately 92% of which will be reused as part of the Proposed Scheme for the construction of engineering and environmental mitigation earthworks. The remaining excavated material is surplus to requirements or is unsuitable for reuse due to contamination and cannot be remediated.

3.2. The Proposed Scheme will also lead to the generation of approximately 132,000 tonnes of demolition material. It is anticipated that at least 90% of this material will be diverted from landfill through reuse, recycling and recovery.

3.3. It is estimated that construction of the Proposed Scheme will lead to the generation of approximately 441,000 tonnes of construction waste, at least 90% of which is expected to be diverted from landfill through reuse, recycling and recovery.

3.4. A smaller quantity of domestic type waste will be produced during construction from worker accommodation sites.

4. Environmental effects of Waste Management

4.1. The design, construction and operation of the Proposed Scheme will lead to the generation of solid waste. In England and Wales, waste producers are legally required to apply the waste hierarchy to decisions concerning the management of waste[3].

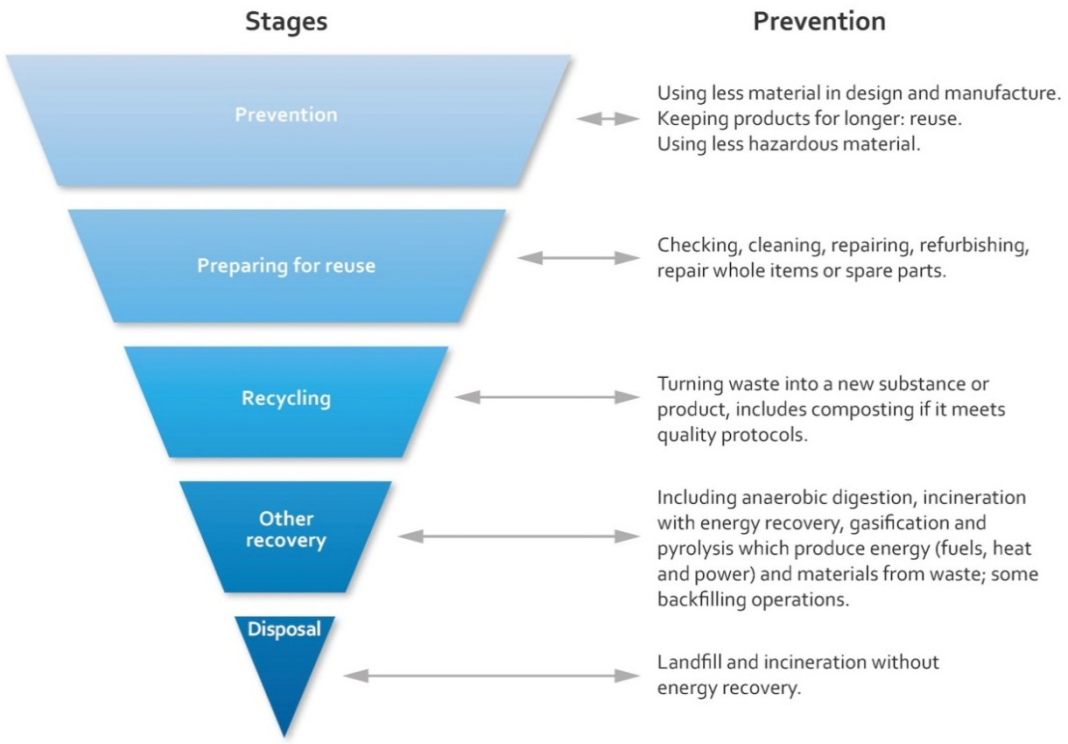
4.2. The waste hierarchy as described in the Government Review of Waste Policy in England 2011[4] (see Figure 1) sets out the preferred approach to the management of waste from waste prevention, to reuse, recycling, energy recovery and landfill. It supports the need to achieve efficient use of material resources, minimise the amount of waste produced (or otherwise increase its value as a resource) and reduce, as far as possible, the amount of waste that is disposed to landfill. In keeping with the HS2 Environmental Policy[5], HS2 will apply the waste hierarchy in relation to the reduction and sustainable

3 The Waste (England and Wales) Regulations 2011 (SI 2011 No. 988) (as amended), article 12 (1). London, HMSO, in accordance with Directive 2008/98/EC on waste (Waste Framework Directive).
4 Defra (2011), Government Review of Waste Policy in England 2011. London, HMSO.
5 The HS2 Environmental Policy is available here: https://www.gov.uk/government/publications/hs2-environmental-policy

management of solid waste generated from the design, construction and operation of the Proposed Scheme to:

- improve resource efficiency and environmental performance; and
- reduce costs.

Figure 1: Waste hierarchy



4.3. All waste generated from the design, construction and operation of the Proposed Scheme will be managed in accordance with the waste hierarchy. This places waste prevention as the preferred option at the top, followed by reuse, recycling and other recovery, with landfill disposal at the bottom as the last resort.

4.4. Disposal is seen as a last resort due to a range of potential adverse effects associated with the use of landfill. These include natural resource depletion, methane production and nuisance effects (e.g. dust and odour). There is also a need to conserve existing landfill capacity for wastes for which there is currently no alternative treatment option that can be used to recover material resources and/or energy.

4.5. Excavated material will only be classified as waste if it is surplus to the design requirements of the Proposed Scheme.

5. Prevention through the design approach and mitigation

5.1. An integrated design approach has been developed to use excavated material to satisfy the fill material requirements wherever reasonably practicable. This

includes reuse of all topsoil and agricultural subsoil as close to the point of excavation as practicable.

5.2. The reuse of excavated material within the Proposed Scheme will be managed in accordance with the Definition of Waste: Code of Practice published by CL:AIRE. This involves the preparation of a Materials Management Plan that will set out how the suitable excavated material is to be used as a resource within the construction of the Proposed Scheme.

5.3. For the excavated material which cannot be reused for the earthworks of the Proposed Scheme, the nominated undertaker will seek timely opportunities for alternative beneficial reuse such as in other local construction projects or the restoration of mineral sites, provided that the transportation of that material does not result in significant environmental effects.

6. Transportation of excavated materials

6.1. Excavated material will be moved along the construction corridor of the Proposed Scheme where this is reasonably practicable. For longer distances or when it is not reasonably practicable to use the construction corridor, excavated material will be transported by public highway along designated construction routes. Where reasonably practicable, rail has been considered for the transportation of large quantities of excavated material over long distances.

6.2. The traffic and transport impacts and effects from the movement of excavated material, demolition material and construction waste are contained in the traffic and transport topic of the ES and the transport assessment appendix in Volume 5.

7. More information

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