



Phase 2b Western Leg 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 (Crewe - Manchester) Bill. Content will be maintained and updated as considered appropriate during the passage of the Bill.

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 scheme for a new, high speed north-south railway, which is being taken forward in a number of phases. Phase One will connect London with Birmingham and the West Midlands. Phase 2a will extend the route from the West Midlands to Crewe. The Phase 2b Western Leg will connect Crewe to Manchester. As set out in the Integrated Rail Plan, published in November 2021, HS2 East is proposed to deliver a new high speed line from the West Midlands to East Midlands Parkway.
- 1.2 HS2 Ltd is the non-departmental public body responsible for developing and promoting these proposals. The company works under the terms of a Development Agreement entered into with the Secretary of State for Transport.
- 1.3 The construction and operation of Phase One of HS2 is authorised by the High Speed Rail (London – West Midlands) Act 2017 and Phase 2a by the High Speed Rail (West Midlands – Crewe) Act 2021.
- 1.4 In January 2022, the Government introduced a hybrid Bill to Parliament (hereafter referred to as 'the Bill'), to seek powers for the construction and operation of the Phase 2b Western Leg (the Proposed Scheme), which is called the High Speed Rail (Crewe – Manchester) Bill. The Proposed Scheme comprises the Phase 2b Western Leg from Crewe to Manchester and several off-route works. It also facilitates the delivery of Northern Powerhouse Rail by providing the Crewe Northern Connection and junctions and other infrastructure to be used in future schemes.
- 1.5 The work to produce the Bill includes an Equalities Impact Assessment and 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), which set out the environmental and sustainability commitments that will be observed in the construction of the Proposed

Scheme. For more information on the EMRs please see Information Paper E1: Control of environmental impacts.

1.6 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'. There may be more than one nominated undertaker. However, any and all nominated undertakers will be bound by the obligations contained in the Bill, the policies established in the EMRs and any commitments provided in the information papers.

1.7 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.

2 Overview

2.1 This information 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 24 million tonnes of excavated material, approximately 83% of which will be likely to be reused as part of the Proposed Scheme for the construction of engineering and environmental mitigation earthworks. The remaining excavated material is surplus to the requirements of the Proposed Scheme or is unsuitable for reuse due to

contamination and cannot be remediated. It is assumed for the AP2 revised scheme, as a reasonable worst-case, that 35% of inert surplus excavated material will be diverted from landfill to off-site beneficial reuse.

- 3.2 The Proposed Scheme will also lead to the generation of approximately 524,000 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 1.7 million tonnes of construction waste, at least 90% of which is expected to be diverted from landfill through reuse, recycling and recovery.

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, under the Waste (England and Wales) Regulations 2011, to apply the waste hierarchy to decisions concerning the management of waste, a similar approach is applicable in Scotland under the Environmental Protection Act 1990.
- 4.2 The waste hierarchy as described in the Government Review of Waste Policy in England 2011 (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, HS2 will apply the waste hierarchy in relation to the reduction and sustainable management of solid waste generated from the design, construction and operation of the Proposed Scheme to:
- improve resource efficiency and environmental performance; and

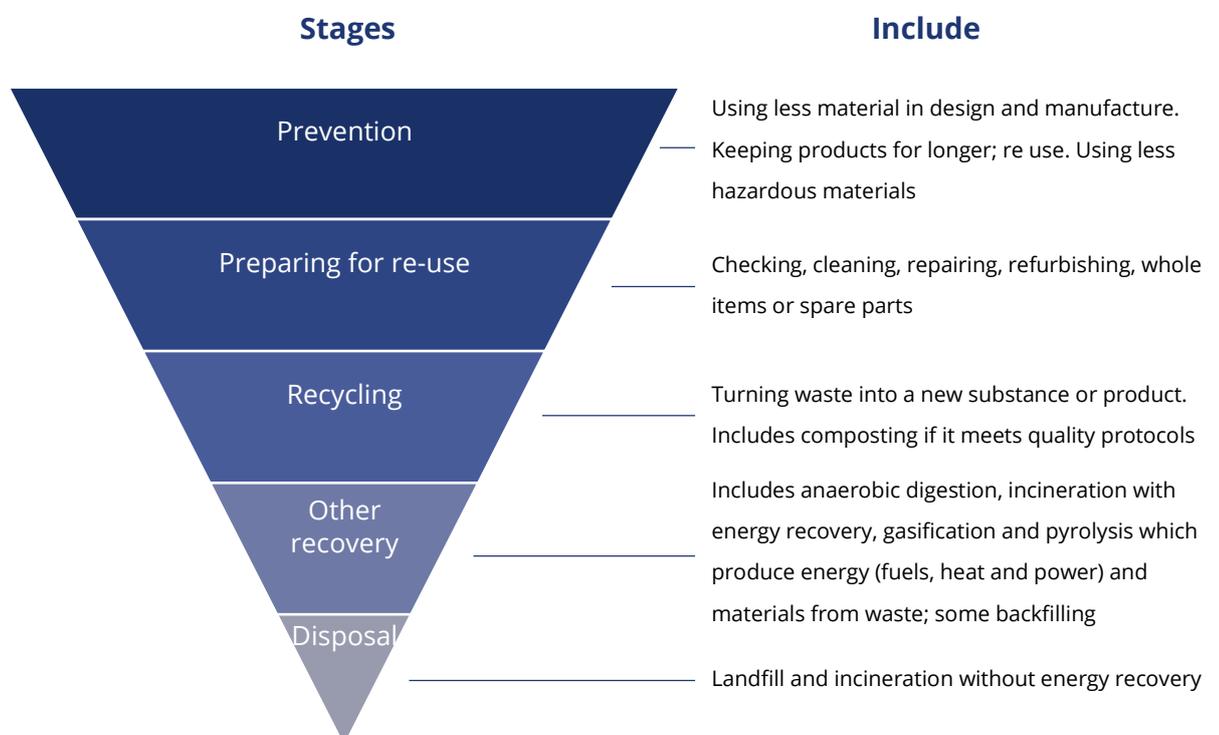
- reduce costs.

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.

Figure 1: The 'Waste Hierarchy'



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 of the Proposed Scheme 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: Development Industry 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-phase2b-crewe-manchester.

References

HS2 Environmental Policy:

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

The Waste (England and Wales) Regulations 2011:

https://www.legislation.gov.uk/ukxi/2011/988/pdfs/uksi_20110988_en.pdf

Government Review of Waste Policy in England 2011:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69401/pb13540-waste-policy-review110614.pdf

Guidance on applying the waste hierarchy (Scotland) 2017:

<https://www.gov.scot/publications/guidance-applying-waste-hierarchy/pages/3/>

Definition of Waste: Development Industry Code of Practice:

<https://www.claire.co.uk/component/phocadownload/category/8-initiatives?download=212:definition-of-waste-development-industry-code-of-practice>