Chetwode Embankment Waste Recovery Permit Application EPR/LB3404KN/A001

Waste Recovery Plan

EKFB Joint Venture

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Waste Recovery Plan
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Prepared by:

RPS

Tom Hatch

Consultant

6-7 Lovers Walk
Brighton
East Sussex
BN1 6AH

T +44 1273 546 800

E thomas.hatch@rpsgroup.com

Prepared for:

EKFB JV

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1 INTRODUCTION

1.1.1 This document constitutes the Waste Recovery Plan (WRP) in support of an application for an environmental permit for a waste recovery activity allowing the permanent deposit of waste on land.

1.1.2 The WRP covers the deposit of waste in constructing a landscape and visual bund (landscape bund) at Chetwode Embankment to mitigate impacts associated with the HS2 rail line development. The landscape bund at Chetwode Embankment provides for noise and visual mitigation from the operational railway line.

1.1.3 The landscape and visual bund at Chetwode Embankment is required in order to provide landscape and visual mitigation to receptors in the areas surrounding Chetwode Embankment. In addition the landscape bund will also provide noise screening to Rosehill Farm.

1.2 Background

1.2.1 HS2 is Britainôs new high speed rail line being built from London to the North-West.

1.2.2 The route of the rail line will intercept some historic landfill sites, including the historic Finmere landfill which will require partially or completely excavating and removal of the deposited waste. As part of the required mitigation for the scheme a number of landscape bunds need to be formed, including the landscape bund at the Chetwode Embankment section of the development. Suitable waste excavated from the Finmere landfill site is to be used to form part of the landscape bund and it is proposed will be placed using a bespoke deposit for recovery permit.

1.2.3 The landscape bund at Chetwode Embankment is required to mitigate against landscape and visual impacts generated by HS2 during operation and to also assist with noise screening. This is further discussed in section 3.6.1.

1.3 The Applicant

1.3.1 The applicant and operator is the joint venture Eiffage, Kier, Ferrovial and Bam (EKFB) JV.

1.4 Pre-application Discussions

1.4.1 Initially the intent was to reuse the suitable wastes under a Material Management Plan (MMP) following treatment via a Mobile Plant Licence and approved Deployment Form. However, the Environment Agency has confirmed that they are no-longer accepting the reuse of such treated wastes originating from certain former historic landfill sites under an MMP.

1.4.2 Basic pre-application advice was sought and a conservation screening report received relating to the proposed area of waste use (reference EPR/LB3404KN/A001).

1.4.3 Further enhanced discussions took place with the EA on the 19/04/2023 with regards to permitting the waste recovery activity and the obligation in this Waste Recovery Plan. The members of the EA that attended this meeting were:

- Katie Baker ï Waste and Materials Technical Specialist
- Liz Platts - Senior Permitting Officer (Waste Deposit)

1.4.4 These pre application discussions with the EA agreed the waste code that reflected the waste type and they agreed that the presence of fines within the waste material meant that Standard Rules 2015 No39 permit was not applicable. This Waste Recovery Plan will therefore support the application for a bespoke environmental permit. Furthermore, the use of 19 12 12 within the SR permit is restricted to crushed bricks, tiles, concrete and ceramics only.

1.5 Structure of the Application Document

1.5.1 This section provides an overview of the proposals. This is supplemented by further details in Sections 2 ï 5 as follows:

- Section 2 gives a description of the site;
- Section 3 demonstrates why this is a recovery activity;
- Section 4 details the suitability of the waste to be used for the recovery activity; and
- Section 5 summarises the conclusions of the waste recovery plan.

2 SITE DESCRIPTION

2.1 Site Location

2.1.1 The deposit of waste within the landscape bund subject to this WRP is located at the Chetwode Embankment site, Preston Bissett Road, Chetwode, Buckinghamshire, MK18 4LF and is centred at National Grid Reference SP 64678 28638. Site plans can be found in Appendix A.

2.1.2 There are no designated sensitive ecological receptors identified within a 2km screening distance of the site. Tingewick Meadows SSSI is the closest designated site and lies approximately 2.6km to the northeast of the Chetwode Embankment landscape bund. A protected habitat (Deciduous Woodland) has been identified within 500m of the site.

2.1.3 The closest human receptors are at Rosehill Farm house approximately 0.4km to the north west.

2.1.4 The geology at the site is as follows:

- Bedrock ï Peterborough Member ï Mudstone. Sedimentary bedrock formed between 166.1 and 163.5 million years ago during the Jurassic period. This is part of the Oxford Clay Formation. This does not have any aquifer designation.
- Superficial Deposits ï Till, Mid Pleistocene ï Diamicton. Sedimentary superficial deposit formed between 860 and 116 thousand years ago during the Quaternary period. This is designated as a Secondary (undifferentiated) aquifer.

2.1.5 The Chetwode Embankment landscape bund is not within Groundwater Source Protection Zones 1 or 2. There are no abstractions within 1km. Groundwater Vulnerability at the site is classified as Unproductive. The nearest watercourse is the Padbury Brook[1][2] located approximately 190m to the southeast of the site boundary.

2.1.6 The EA flood risk maps[3] have been consulted and it is shown that the areas of the site to be used for the waste recovery activity are located in flood zone 1. This means it has a low probability of flooding from rivers and the sea.

2.1.7 The DEFRA data services platform[4] has been reviewed for historic landfills and it has been confirmed that the nearest historic landfill is at Calvert approximately 5km to the southeast.

2.2 Site History

2.2.1 A review of Google Earth Pro historical maps indicate that the site has been used for agricultural use since the earliest map shown in 1945. No other land uses are identified on the historical maps.

2.3 Proposed Development

2.3.1 The Chetwode Embankment site is being developed as part of the HS2 rail scheme.

2.3.2 The landscape bund at the Chetwode Embankment site is required to mitigate landscape and visual and noise impacts generated by HS2. The landscape bunds will need to be developed in

[1] https://environment.data.gov.uk/catchment-planning/WaterBody/GB105033038220

[2] https://environment.data.gov.uk/catchment-planning/WaterBody/GB105033038210

[3] https://flood-map-for-planning.service.gov.uk/confirm-location?easting=575103&northing=154110&nationalGridReference=TQ7510354110

[4] https://environment.data.gov.uk/DefraDataDownload/?mapService=EA/HistoricLandfill&Mode=spatial

accordance with the approved plans and also need to be constructed in accordance with the Environmental Memorandum, Environmental Minimum Requirements (Appendix B) and Code of Construction Practice Environmental Minimum Requirements (Appendix C) (see section 3 below). EKFB are required to comply with these Environmental Minimum Requirements set out within High Speed Rail (London-West Midlands) Environmental Minimum Requirements Annex 1: Code of Construction Practice.

2.3.3 An example of a typical section of the railway with a landscape bund is shown in Appendix A. Please not this is not representative of the railway or the landscape bund at Chetwode Embankment but can be used to demonstrate how they interact.

2.4 Planning Permission

2.4.1 The High Speed Rail (London - West Midlands) Act 2017 [the Act][5] provides the powers to construct, operate and maintain Phase One of HS2 and make necessary changes to existing legislation to facilitate the project.

2.4.2 Under schedule paragraph 26(1) of Schedule 17 of the Act the Secretary of State can issue statutory guidance (ñthe Guidanceò) to planning authorities about the exercise of their functions under Schedule 17 ï Conditions of Deemed Planning Permission (the Planning Conditions Schedule). A planning authority is required to have regard to this Guidance when considering a request for approval made under Schedule 17 to the Act (paragraph 26(2) of Schedule 17).

2.4.3 Specifically the works at Chetwode Embankment, AVDC P14 Schedule 17, has been approved by Buckinghamshire Council (BC Reference 21/03691/HS2). Chetwode Embankment is included within this planning permission i.e. ñ*The landscape mitigation earthworks will be up to 9m above existing ground level, which ranges from 85m to 90m AOD*.ò

2.4.4 The Chetwode Embankment and its associated mitigation including the landscape bund is an integral design feature linked to the HS2 rail development.

2.4.5 A copy of the Decision Notice is shown in Appendix D

2.5 Site Remediation

2.5.1 There is no requirement for any site remediation prior to the construction of Chetwode Embankment landscape bund.

[5] https://www.legislation.gov.uk/ukpga/2017/7/contents/enacted

3 DEMONSTRATION OF RECOVERY

3.1 Overview

3.1.1 This section details the evidence to demonstrate that the waste deposit is a recovery activity and the works could and would be carried out using non-waste material and follows the principles detailed in the Environment Agency guidance for waste recovery[6].

3.1.2 The waste to be used is from a single source and has been excavated from the Finmere Quarry historic landfill site and physically screened prior to its proposed use in the area of the deposit for recovery activity. The physical treatment has been undertaken using a separate mobile plant treatment permit. The treatment of the waste takes place off site prior to being delivered to the site. Unsuitable wastes will be segregated from the material to be used under the WRP and they will be taken off site either for further treatment or disposal at an appropriately authorised site. The remaining suitable for use wastes are to be sampled and analysed to demonstrate that it meets set chemical and geotechnical parameters.

3.2 Purpose of the Work

3.2.1 The site is being developed for the HS2 scheme which will link London to Birmingham. In order to develop the scheme a number of railway embankments alongside the HS2 line are required to be constructed, the waste will be used in the landscape bund at Chetwode Embankment.

3.2.2 The purpose of the creation of the landscape bund at Chetwode Embankment is part of the mitigation strategy associated with the HS2 project.

3.2.3 It is relevant to note that as part of the scheme crosses the Finmere landfill there is a need to excavate material from the former landfill site and that the proposals are to use suitable wastes from the Finmere landfill that has been treated offsite as part of the material to construct the landscape bund.

3.2.4 The landscape bund will be constructed of circa 20% of the suitably treated waste and circa 80% of non-waste material comprising virgin clay.

3.3 Type and Volumes of Waste

3.3.1 The total volume of waste to be deposited in the formation of the landscape bund is 60,000m^3.

3.3.2 The waste to be recovered at Chetwode Embankment within the landscape bund has been excavated from the Finmere Quarry historic landfill site and have physically screened/ treated prior to the proposed use. The waste types to be accepted and recovered in constructing the landscape bund will be limited to inert wastes. The Waste Classification Report (Appendix E) produced prior to excavation and treatment identified that the wastes from Finmere quarry to be used at the site are non-hazardous and would be classified as 17 05 04 if not for the mechanical treatment undertaken by the mobile plant prior to be moved from Finmere Quarry.

3.3.3 The waste will undergo mechanical treatment prior to being accepted at the site and therefore it is categorised as a Chapter 19 code.

3.3.4 The waste type to be used according to its European Waste Catalogue (EWC) code is detailed in Table 3.1 below:

[6] https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/waste-recovery-plans-and-deposit-for-recovery-permits

Table 3.1: Waste Types

Waste Code	Description of the Waste
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11

3.4 Evidence the Waste is Serving a Useful Purpose.

3.4.1 The waste recovery plan guidance requires that it must be considered if a waste is suitable in principle for the proposed use. Within the Environment Agency Guidance, ôCheck if your waste is suitable for deposit for recoveryô(Updated 31 October 2022), waste code 17 05 04 has an acceptable use for landscaping associated within construction work and general fill material which meets the use of this operation. The waste as dug prior to processing is classified as 17 05 04, however, after processing it them is classified as 19 12 12. Although the waste code accepted at the site is 19 12 12 the properties are similar to that of 17 05 04 and therefore it is considered suitable for use for the same purpose. 19 12 12 is deemed as similar as only simple screening has resulted in the waste being classified as chapter 19 and not 17.

3.4.2 The HS2 Specification for Engineering Works (SCEW) Series 0600: Earthworks, Document Number: HS2-HS2-CV-SPE-000-010600 presents part of the Specification for Civil Engineering Works (Appendix F).

3.4.3 As per the SCEW the treated waste from Finmere Quarry is a combination of Class 2 and Class 4 materials, specifically falling under the following fill classes; 2A4, 2B4, 2C4, 2D4 and 4A1.

3.4.4 Class 2 materials can be used for general cohesive fill .Class 4 materials can be used for landscape fill. The waste being excavated from Finmere quarry will be subject to testing prior to use which will determine if it will be Class 2 or Class 4. Class 2 and Class 4 materials will have slightly different uses and therefore will be used in different locations within the bund.

3.4.5 As this testing has not been completed prior to the submission of this waste recovery plan the location of the waste within the embankment has not been confirmed. Therefore the cross sections within Appendix A show the location of both the Class 2 and Class 4 material. After testing this waste recovery plan will be updated in order to confirm the type of material being placed and therefore, the location of the placed material.

3.5 Design and Construction

3.5.1 The waste material will be placed in layers of 100mm ï 200mm thick and rolled in position. Non-waste is also being used in the construction of the landscape bund and will be used for approximately 80% of the bunds material with waste material being recovered making up the further approximate 20%. The non-waste material will be virgin dug high plasticity clays acting as an attenuation layer as well as elsewhere in the construction of the landscape bund.

3.6 Obligations to Complete the Scheme

3.6.1 The justification to support the recovery of waste is being made on the basis of an obligation to carry out the scheme. Evidence to support this obligation is set out below.

High Speed Rail (London – West Midlands) Act 2017

3.6.2 As stated in section 2.4, the High Speed Rail (London - West Midlands) Act 2017 provides the powers to construct, operate and maintain Phase One of HS2.

3.6.3 The High Speed Rail Act grants deemed planning permission for HS2 Phase One of the route, but elements of the detailed design and construction are subject to further approval in accordance with

Schedule 17 of the Act. It puts a process in place for the approval of certain matters relating to the design and construction of the railway.

3.6.4 Under schedule paragraph 26(1) of Schedule 17 of the High Speed Rail Act 2017 the Secretary of State can issue statutory guidance (ñthe Guidanceò) to planning authorities about the exercise of their functions under Schedule 17 ï Conditions of Deemed Planning Permission (the Planning Conditions Schedule). A planning authority is required to have regard to this Guidance when considering a request for approval made under Schedule 17 to the Act (paragraph 26(2) of Schedule 17).

3.6.5 Schedule 17 submissions are not the same as planning applications - planning permission for the proposed work has already been granted by the High Speed Rail Act.

3.6.6 It requires that the nominated undertaker (HS2 Ltd) seeks approval for matters of construction and design from the appropriate planning authority. Planning approval related to Chetwode Embankment is provided within AVDC Schedule 17.

Schedule 17 Submission (Deemed Planning Permission)

3.6.7 Schedule 17 submission grants the approval for the structures, earthworks and other work required for the construction of the HS2 Line which works include Chetwode Embankment.

3.6.8 For the works at Chetwode Embankment, AVDC P14 Schedule 17 has been approved by Buckinghamshire Council (BC Reference 21/03691/HS2). A copy of the decision notice is included Appendix C.

3.6.9 The plans approved within the Schedule 17 submission are listed below and provided in Appendix G.

- 1MC06-CEK-TP-DSE-CS06_CL10-000003 -Twyford to Chetwode Earthworks Cross Sections Sheet 3 of 3

3.6.10 The above plans show the extent of the Chetwode Embankment landscape bund and therefore establishes a requirement for material to form the landscape bund in accordance with the approved plans. The above approved plans also show the embankment at Chetwode that the railway track is being built upon thus creating the need to screen the railway.

3.6.11 As such this WRP relies not on the fact that planning permission is in place via the Act, but the Conditions imposed in the issued Schedule 17 Notice, including the specific plans relating to Chetwode Embankment and specifically the required landscape bund. Now issued and implementation has started the approved plans are enforceable conditions which provide an obligation to carry out the specified works.

High Speed Rail (London-West Midland) – Environmental Minimum Requirements – General Principles

3.6.12 The High Speed Two (HS2) Phase One Environmental Statement (ES) was published in November 2013. A number of additional volumes have supplemented the ES as additional information has become available and due to proposed changes. The ES defines and explains the relevant minimum requirements, which are referred to as the ôEnvironmental Minimum Requirementsô(EMR). The EMRs and the HS2 Act and the Undertakings given by the Secretary of State, will ensure that impacts assessed in the ES will not be exceeded. Hence those requirements that relate to Chetwode are specific obligations that have to be complied with.

3.6.13 Section 1.1.1 states ñIt is the intention of the Secretary of State to carry out the project so that its impact is as assessed in the ES. The Secretary of State will require the nominated undertaker to adhere to the arrangements provided for in the Environmental Minimum Requirements (EMRs) in designing and constructing the Phase One of High Speed Two Works.ò

3.6.14 Section 1.1.4 of the EMR goes on to states, ñAny nominated undertaker will be contractually bound to comply with the controls set out in the EMRs and as may be developed during the passage of the Act through Parliament.ò

3.6.15 The EMR specifically mentions ñobligationsòwith regards the proposed construction in Section 1.1.5 in that ñThe nominated undertaker will in any event, and apart from the controls and obligations referred to in paragraph 1.1.3, use reasonable endeavours to adopt mitigation measures that will further reduce any adverse environmental impacts caused by Phase One of HS2, insofar as these mitigation measures do not add unreasonable costs to the project or unreasonable delays to the construction programme.òWhich specifically apply to the landscape bund at Chetwode embankment.

3.6.16 The High Speed Rail (London-West Midlands) EMR Annex 4 identify principles by which future environmental decisions on Phase One of HS2 will be taken. This includes requirements for re-use of excavate materials and waste management.

Re-use of Excavated Materials

3.6.17 Section 4.12 of Annex 4 of the EMR states that the ñThe nominated undertaker will utilise excavated materials in the construction of Phase One of HS2 (which includes the Chetwode Embankment and its associated mitigation such as landscaping bunds) where feasible and reasonably practicable, in accordance with the Contaminated Land: Applications in Real Environments (CL: AIRE) 1 Definition of Waste: Development Industry Code of Practiceò

3.6.18 In this instance because the recovered waste is from a former historic landfill the waste cannot be reused under CL: AIRE because of the Environment Agencyôs changed position (unpublished). However this WRP seeks to alternatively meet the intent of this requirement via re-use under a deposit for recovery permit. At the time of the passage of the Bill and subsequent Act through the Houses of Parliament the draftspersons were of the view that the DoWCoP would apply to the reuse of such treated wastes.

3.6.19 The EMR also discourages the deposit of this material in landfill through stating that ñ*Where it is not feasible or reasonably practicable to use excavated materials in the construction the nominated undertaker will minimise the quantity of excavated materials that are disposed of to landfill. This may include providing surplus materials for use in other construction projects including environmental improvement projects*.ò(Section 4.12.2).

3.6.20 This section also states that ñ*Where the off-site transport of surplus excavated material would result in significant environmental effects sustainable placement may be used. Where sustainable placement is to be undertaken this will be permitted in line with the Environmental Permitting Regulations (England and Wales) 2016 and approval may be required in accordance with Schedule 17 Planning Conditions Schedule of the HS2 High Speed Rail (London - West Midlands) Act 2017*ò It should be noted that planning and the Schedule 17 submission has already been granted.

3.6.21 This section of Annex 4 clearly identifies that there is an obligation for EKFB to utilise excavated materials as well as minimising the quantity of excavated materials deposited at landfill. The approved plans for the landscape bund at Chetwode Embankment set out where materials are required during construction providing a mechanism for delivery of this obligation i.e. the approved plans listed above and the need for the landscaping bund.

Waste Management

3.6.22 Furthermore, section 4.13 of Annex 4 of the EMR states that ñ*All waste generated from the design, construction and operation of Phase One of HS2 will be managed in accordance with the waste hierarchy as described in the Government Review of Waste Policy in England 2011*ò

3.6.23 The waste hierarchy 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 Sustainability Policy. More information is available in Information Paper E3: Excavated material and waste management (Appendix H).

3.6.24 This paper outlines the approach for managing excavated material and waste that will arise from the construction of the Proposed Scheme. This is addressed under the Waste and Material Resources topic of the Environmental Statement (ES) written in support of the hybrid Bill.

HS2 Phase One Environmental Statement, published 25 November 2013

3.6.25 The Environmental Statement (ES) accompanies the Hybrid Bill for Phase One of the HS2. The ES sets out the proposed scheme and its likely significant environmental effects. The ES is produced as a result of the Environmental Impact Assessment (EIA) Directive (92/2011/EU).

3.6.26 Noise effects from the scheme including the Chetwode Embankment section were considered within the London-West Midlands Environmental Statement, Volume 5, Technical Appendices is a Baseline (SV-0002-013) report for noise, noise and vibration (Appendix I). This report identified that the baseline sound environment for this area is generally typical of a rural area, with some variation due to local sound sources. The area contains a number of small villages such as Twyford and Calvert in addition to isolated residential dwellings and farms. In the area around Chetwode, there are several isolated working farms and residential properties. At these properties occasional local road traffic is audible, with natural sounds otherwise prevailing. The operational assessment of impacts and effects is based on year 1 (2026), year 15 (2041) and year 60 (2086) of the Proposed Scheme. A process of iterative design and assessment has been employed to avoid or reduce adverse effects during the operation of the Proposed Scheme and this process will continue as the design develops further.

3.6.27 Measures that have been incorporated into the design of the Proposed Scheme include embankment and cuttings. The landscape bund will provide the required mitigation so that the Environmental Minimum Requirements are not breached. The use of the landscape bund at Chetwode Embankment means that visually intrusive noise barriers are not required. .

3.6.28 The London to West Midland Environmental Statement Volume 2, Community Forum Area Report, CFA13, Calvert, Steeple Claydon, Twyford and Chetwode in section 2.6.27 includes earthworks at this location in order to provide mitigation for landscape and visual effects and to assist with noise screening. The ES in section 9.3.10 identified that residential receptors have a high sensitivity to change and are located in the main villages of Calvert, Steeple Claydon, Twyford and Chetwode.

3.6.29 In Volume 2 of the ES, Community Forum Area Report section 6.4.2 the following measure is incorporated into the design of the Proposed Scheme to reduce the impacts on assets:

- the provision of landscape bunds and planting to further reduce the impact within the setting of Chetwode.

3.6.30 The Acoustic Mitigation Design Report Twyford Viaduct to Turweston Cutting (1MC06-CEK-EV-REP-CS06-000002) as included within Appendix I recommends an acoustic mitigation solution based on an evaluation of the whole-life costs and benefits of noise barrier options that are used to specify the acoustic mitigation design and consideration of material change. This report is an addendum to the ES and explains how the assessment from ES to Addendum ES evolved and how the Design has progressed and changed through Scheme Design.

3.6.31 The Chetwode Embankment Asset includes landscape mitigation earthworks (the landscape bund associated with this waste recovery operation). The landscape bund has been graded out in order to return the land to agricultural use and to tie-in with existing smooth flowing contours. There will also be woodland and hedgerow planting to help integrate and/or screen the HS2 assets.

3.6.32 The landscape bund at Chetwode Embankment ensures that noise impacts at receptors in proximity to Chetwode Embankment do not require further mitigation.

3.6.33 Therefore, in absence of the noise barrier the landscape bund at Chetwode Embankment is also providing limited noise screening which was included as part of the mitigation in the updated Acoustic Design report in Appendix I.

Code of Construction Practice

3.6.34 A Code of Construction Practice (CoCP) is in place for HS2 works (Appendix C). The CoCP contains control measures and the standards to be implemented throughout Phase One of HS2. The CoCP forms a component of the HS2 Environmental Minimum Requirements (EMRs). As stated above an obligation flowing from the Secretary of State / Government.

3.6.35 Section 3.1.9 states ñthe nominated undertaker shall adopt and implement the CoCP, which is set out in Annex 1 and shall develop and implement the Local Environmental Management Plansò

3.6.36 The CoCP will be implemented during the planning and undertaking of construction works. The provisions of the CoCP will be imposed by the nominated undertaker on the lead contractors by means of the works contracts.

3.6.37 Section 15 (Waste and Materials) of the CoCP states that ñ*The principal objectives of sustainable resource and waste management are to use material resources more efficiently, reduce waste at source and reduce the quantity of waste that requires final disposal to landfill in accordance with the waste hierarchy*.ò

3.6.38 The measures to reduce potential impacts from waste are as follows:

> ñ*All waste will be managed in accordance with the waste hierarchy (i.e. prevention, preparing for re-use, recycling, other recovery and disposal as set out in the Waste (England and Wales) Regulations 2011) and in such a way as to prevent harm to human health, amenity and the environment. Waste management measures will be prepared that facilitate the re-use and recovery of excavated material and diversion of waste from landfill in line with the waste hierarchy.*
>
> *Excavated material that is uncontaminated (or can be remediated to a suitable standard and can be used for site engineering and restoration purposes) will be managed in accordance with the controls specified by the CL:AIRE Definition of Waste: Development Industry Code of Practice or in accordance with an appropriate environmental permit or exemption from permitting*.ò

3.6.39 The proposed development is required to achieve the following as set out in Section 12, landscape and visual of Annex 1: Code of Construction Practice of the Environmental Minimum Requirements. The requirements that are relevant to this operation to protect the landscape and visual receptors are set out below:

- Re-usable excavated material will be handled in an appropriate manner to ensure it is of sufficient quality to be used for either structural embankments, environmental mitigation earthworks or agreed third-party use.

3.6.40 Furthermore, section 4.6.2 of the Environment Minimum Requirements Annex 4: Environmental Memorandum states that the nominated undertaker ñwill design the landscape and external spaces in line with the principles and promoterôs requirements as set out in HS2 Information Paper D1: Design Policy. In particular, DfT[7] and the nominated undertaker will seek to ensure that:

- the design of all landscape and external spaces will be safe, efficient, and meet the requirements of whole-life operation and maintenance alongside initial buildability;
- the design of all landscape and external spaces will contribute to the governmentôs pursuit of sustainable development, as set out in the National Planning Policy Framework, which

[7] The Department for Transport

involves seeking positive improvements in the quality of the built, natural and historic environment, as well as in peopleôs quality of life;

- the design of all landscape and external spaces will limit adverse environmental and visual impacts during design construction and operation.

3.7 Conclusions

3.7.1 The landscape bund at Chetwode Embankment is to be constructed in order to mitigate against the landscape and visual impacts and also provides noise screening from impacts generated by HS2 .

3.7.2 The HS2 Act provides the powers to construct Phase One of HS2 and grant development consent. The Act requires further approval for elements of the detailed design and construction which are subject to approval in accordance with Schedule 17 of the Act by the Local Planning Authority. Planning approval related to Chetwode Embankment is provided within AVDC Schedule 17.

3.7.3 The plans approved within the Schedule 17 submission evidence that there is a requirement for material to be used in the construction of the landscape bund Chetwode embankment and this bund was included within the noise model that informed the assessment on which planning consent was issued. The waste forms a small part of the overall construction of the landscape bund (as above waste deposited within the bund represents circa 20% of the total volume of material required).

3.7.4 Minimum quantities of waste are being used for the scheme in the fact that only waste generated from the scheme itself is being considered and no further waste will be imported from outside of that generated by the HS2 construction scheme. Furthermore, the majority of material used to form the embankment is non-waste.

3.7.5 The HS2 Phase One Environmental Statement (ES) defines EMRs for the works associated with HS2. There are two sections of the ES which are related to this Waste Recovery Plan. As previously stated section 4.12 of Annex 4 requires that excavated materials are utilised and that the deposit of material in landfill are discouraged. This section of Annex 4 clearly identifies that there is an obligation for EKFB to preferentially utilise excavated materials as well as minimising the quantity of excavated materials deposited at landfill.

3.7.6 It is also worth reiterating the statement within the EMR that ñIt is the intention of the Secretary of State to carry out the project so that its impact is as assessed in the ES. The Secretary of State will require the nominated undertaker to adhere to the arrangements provided for in the Environmental Minimum Requirements (EMRs) in designing and constructing the Phase One of High Speed Two Works.òHence the EMR are an obligation from the Secretary of State. Section 3.1.9 states ñThe nominated undertaker shall adopt and implement the CoCP, which is set out in Annex 1 and shall develop and implement the Local Environmental Management Plans.òAnd therefore the CoCP as it applies to the Chetwode Embankment is an obligation.

3.7.7 Section 4.13 requires that all waste generated from the construction of HS2 is managed in accordance with the waste hierarchy. Therefore, this supports the need to recover the waste as recovery is higher up the hierarchy than disposal at landfill, which supports the reuse of waste within the scheme.

3.7.8 The above demonstrates that there is both a requirement for material to reach the approved levels in the plans and an obligation to recover waste material within the works.

3.7.9 As the scheme will generate waste as part of the construction, it is sensible to utilise this waste material where appropriate in the scheme under a waste recovery permit.

3.7.10 There is an obligation to undertake the scheme as detailed in the High Speed Rail (London - West Midlands) Act and this is detailed as a key national infrastructure by the UK government.

3.7.11 Minimum quantities of waste are being used for the scheme in the fact that only waste generated at Finmere Quarry is being considered and no further waste will be imported from anywhere else from the scheme or outside of that generated by the HS2 construction scheme.

3.7.12 There is a requirement for the landscape bund at Chetwode Embankment. It will be constructed if wastes are not utilised.

4 EVIDENCE OF SUITABILITY OF THE WASTE

4.1 Overview

4.1.1 All the material to be used in preparing the landscape bund will be generated from construction of the HS2 scheme itself. Only waste materials which are suitable for the intended purpose will be used in the construction of the landscape bund.

4.1.2 The waste materials to be used in the development of the site are shown in Table 3.1 above.

4.1.3 No additional waste materials from off-site are proposed, therefore, the risk of contaminated materials being incorporated in the development are low as all materials used have undergone screening and assessment.

4.1.4 The waste has been through several phases of testing to demonstrate suitability, further details are provided in sections 4.2 and 4.3 below.

4.2 Physical Properties

4.2.1 The physical properties of wastes to be recovered in the landscape bund is detailed within the Specification for Civil Engineering Works (SCEW) Series 600 in Appendix F. Two classes of materials have been identified and based on their gradings and other properties, classify as follows:

- Class 2 ï General cohesive fill
- Class 4 ï Landscape fill

4.2.2 Testing is yet to be undertaken and only materials that meet the specification post testing will be used.

4.2.3 The tests to take place are detailed within Appendix F.

4.2.4 It is proposed that the remediated material from Finmere cutting will be used as fill to landscape bunds.

4.2.5 The actual fill class is determined by:

- the zone of the bund that the fill is used, which requires different geotechnical properties.
- Zone 1 - slopes facing the high speed railway ï 2A3, 2B3, 2C3, 2D3.
- Zone 2 ï landscape core fill ï 2A4, 2B4, 2C4, 2D4
- Class 4 ï slopes facing away from high speed railway ï 4A1, 4A2.

4.2.6 Zone 1 has the most onerous geotechnical requirements with Class 4 having the least onerous. The difference in fill classes is based on moisture content, grading and effective stress parameters, which govern compaction characteristics and slope stability.

4.3 Chemical Properties

4.3.1 The classification report in Appendix E demonstrates that materials excavated from the Finmere Quarry historic landfill have been fully characterised using the HazWasteOnline software and are classified as non-hazardous waste (17 05 04 in the List of Waste).

4.3.2 Only 2 out of the 109 samples characterised by their chemical composition using the HazWasteOnline software were classified as hazardous waste. It is confirmed that the waste that has been classified as hazardous will not be included in the materials to be used as part of the deposit for recovery activity and have been segregated and removed. This will be achieved by excavating the waste, testing it and then sorting. Any material that tests as hazardous will be clearly segregated from non-hazardous waste.

4.3.3 Sorting of the waste materials will be undertaken to ensure that the materials comply with both the chemical and geotechnical re use criteria, to produce an engineering fill, compliant with one of the fill classes stated above.

5 CONCLUSIONS

5.1.1 The waste recovery plan has made an assessment of the activity following the Environment Agency guidance on Waste recovery plans and permits[8][9] and has concluded the following:

- **Section 1** introduce the background of the operation, application and details pre application discussions that have taken place.
- **Section 2** provides a site description, history and the proposed development. It also details the relevant planning permission through `Schedule 17 of the High Speed Rail (London - West Midlands) Act 2017.
- **Section 3** demonstrates show the proposed operation meets the definition of recovery through means of an obligation to undertake the works.
- **Section 4** shows how the waste is suitable for the operation by identifying its physical and chemical properties.

5.1.2 The Waste Framework Directive (WFD)[10] states that the recovery of waste and the use of recovered materials as raw materials should be encouraged in order to conserve natural resources. This scheme meets these fundamental requirements.

5.1.3 The proposed scheme will allow waste to move up the waste hierarchy by enabling recovery and reuse instead of disposal. The use of waste as a replacement for non-waste materials will conserve natural resources in line with Article 1 of the Waste Framework Directive.

5.1.4 As shown above, the proposed use of the waste meets all the requirements to be deemed a waste recovery activity rather than waste disposal.

5.1.5 The approved plans provide for an obligation to carry out the works flowing from the Act and granted Schedule 17. The embankment and landscape bund is an integral part of the construction of the railway line and is required to mitigate against the landscape and visual impacts of the railway and to provide screening of noise from the development. The obligation is further enhanced by the guidance issued by the Secretary of State that obliges the Undertakings to comply with that guidance in its design and use of wastes and materials.

5.1.6 It is important note is that the landscape bund at Chetwode Embankment will be constructed to the permitted design without wastes, if the WRP is not accepted.

[8] https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/waste-recovery-plans-and-deposit-for-recovery-permits

[9] https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/check-if-your-waste-is-suitable-for-deposit-for-recovery

[10] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0098

References

1. Geology of Britain Viewerô- http://mapapps.bgs.ac.uk/geologyofbritain/home.html?
2. Flood Maps - https://flood-map-for-planning.service.gov.uk
3. Historical Landfill Maps - https://environment.data.gov.uk/DefraDataDownload/?mapService=EA/HistoricLandfill&Mode=spatial
4. Waste Recovery Plans Guidance - https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/waste-recovery-plans-and-deposit-for-recovery-permits
5. Check if your waste is suitable for deposit for recovery Guidance - https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/check-if-your-waste-is-suitable-for-deposit-for-recovery
6. The Waste Framework Directive - https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0098

Appendices

Appendix A

Site Plans

Appendix B

Environmental Minimum Requirements

Appendix C

Code of Construction Practice

Appendix D

Decision Notice

Appendix E

Waste Classification Report

Appendix F

SCEW

Appendix G

Schedule 17 Plans

Appendix H

Information Paper E3: Excavated material and waste management

Appendix I

Environmental Statement Extracts