Cottam Parkway Railway Station

Environmental Statement

Volume 2: Main Statement

Chapter 16: Materials and Waste

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16 Materials and Waste

ES Chapter Number	Environmental Topic	Relevant Chapters or Appendices
16	Materials	Chapter 10: Soils, Geology and Hydrogeology Chapter 12: Climate Change Chapter 14: Traffic and Transport

16.1 Introduction

16.1.1 This chapter of the ES provides an overview of the effects of the use of material assets and any waste related to the Scheme which are to be addressed as part of the appropriate environmental topics and associated strategies.

16.2 Assumptions

Sustainable resource and waste management:

16.2.1 A Resources Management Plan would detail resource management in the construction and operations phases of the Scheme, covering waste, energy and water. Potential mitigation measures to address any potential adverse impacts associated with resources and waste management would be outlined in a Resources Management Plan as part of a Construction Environmental Management Plan (CEMP). The construction of the Scheme would employ best practice techniques to manage the additional waste arisings associated with the construction and operation of the Scheme.

Environmental effects from construction, demolition and excavation wastes arising from the Scheme:

16.2.2 Mitigation and enhancement for waste and resources management during construction of the Scheme would be set out in an overall construction practice guidance, the Resource Management Plan, and further detailed in the site waste management plan(s) produced by works contractors. Effects associated with construction, demolition and excavation wastes arising from the Scheme would be outlined in the Resources Management Plan.

Capacity of existing waste management facilities:

16.2.3 As the Scheme progresses, mitigation to avoid or reduce the likely effects from the export of waste arisings off-site would be developed and outlined in the CEMP.

Transport impacts from the management of materials and waste:

16.2.4 This would be assessed in the Traffic and Transport (Chapter 14) and Climate Change chapter (Chapter 12) of this ES.

Carbon and other greenhouse gas (GHG) emissions from the management of material and wastes

16.2.5 This would be assessed in the Climate Chapter (Chapter 12) of this ES. It is likely that GHG emissions would arise from the transportation (i.e. vehicle fuel combustion) and management (landfilled, re-used, recycled etc) of waste generated from construction and operational phases of the Scheme.

Environmental impacts resulting from waste generated due to interaction during the construction phase with landfill sites, fly-tipped waste and contaminated land

16.2.6 This would be assessed in the Soils chapter (Chapter 10) of this ES, as appropriate.

Safeguarding and the extraction of mineral resources

16.2.7 This would be assessed in the Soils chapter (Chapter 10) of this ES, as appropriate.

16.3 Mitigation Assumptions

Design / Embedded mitigation assumptions

Re-use and recovery of material – Class 5A material Top soil, Class 2 fill and Class 1 fill.

- No processing would be undertaken to change the state of any site won materials as it would not be suitable for the site area (i.e. open countryside).

Material optimisation

- Use of polymer modified binders in asphalt pavement layers

Off-site construction

- The access road bridge beams would likely be prefabricated in addition to any kerbs and edgings, manhole rings, bases, and cover slabs.
- The station building would be a modular building. The foot bridge, platform deck system, lighting columns would be built off-site.

Material Assets

16.3.1 The depletion of any finite material resources would occur through extraction of primary aggregates (e.g. sands and gravels). Structures, drainage, lighting and electric equipment and signage products would be procured with consideration of the environmental impacts associated with their manufacture, as well as other considerations such as structural design,

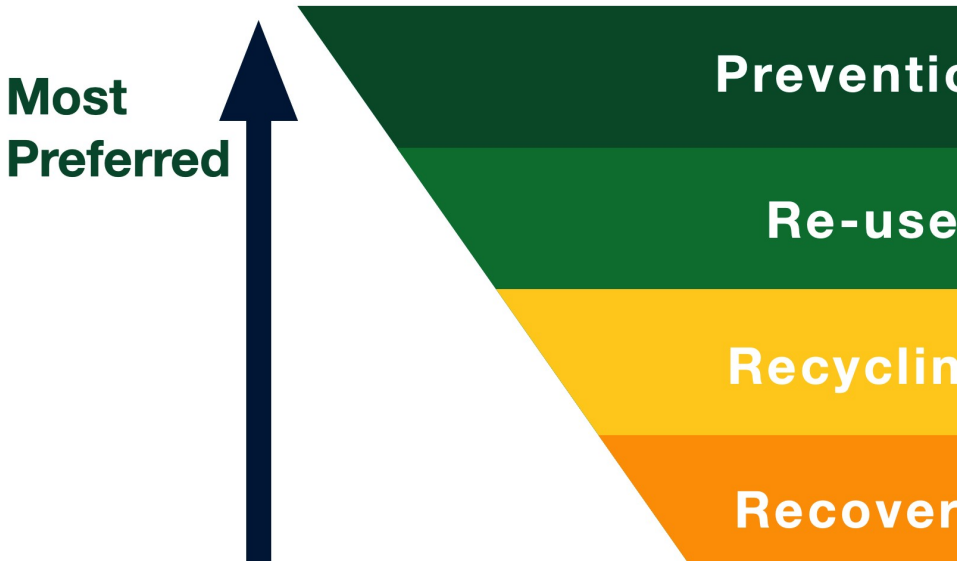
carbon footprint (PAS 2050), energy consumption, long-life performance, visual impacts, durability and cost.

16.3.2 There would be a commitment to sourcing other construction materials with a high recycled content.

Waste

16.3.3 The CEMP would take into consideration the upper tiers of the waste hierarchy as required by DMRB LA 110 in Figure 16.1 with a view to minimising the overall volume of waste arisings via designing out waste and maximising efficient use of materials, ultimately to prevent and minimise waste sent to landfill.

Figure 16.1: Waste hierarchy



16.3.4 In addition to these assumed mitigation measures, other materials and waste measures that would be considered as part of the CEMP may include:

- Specifying the use of materials with a high percentage of recycled content.
- Local sources for aggregate supplies should be considered whenever possible.

- Re-using packaging by returning it to the supplier or manufacturer or using it for other purposes (e.g. non-treated timber packaging pallets can be chipped and used for landscaping top mulch).
- Ensuring arisings generated are handled, stored, managed and re-used or recycled as close as possible to the point of origin.
- Identifying areas for stockpiling and storing arisings that will minimise degradation, damage and loss.

16.3.5 It is proposed that any mitigation measures would be included as requirements of a Materials Management Plan (MMP) for the Scheme.

16.3.6 While reduction of waste should remain the highest priority, where feasible waste produced shall also be segregated for recycling. This would allow materials to be recycled and ultimately reduce the amount of waste that has to be finally disposed of.

16.3.7 For any waste taken off site or brought onto site, the Waste duty of care: code of practice (Department for Environment, Food & Rural Affairs, 2018[1]) must be complied with through the use of registered waste carriers and appropriately permitted sites.

16.3.8 Hazardous waste shall be correctly labelled and should not be mixed with non-hazardous waste. It should be securely contained and disposed of at an appropriately permitted facility via a registered waste carrier.

Materials Management Plan (MMP)

16.3.9 The MMP will be prepared by the appointed contractor pre-construction and would include the proposals for the handling of waste material following the protocols within the CL:AIRE Definition of Waste.

[1] Department for Environment Food & Rural Affairs (2018) Waste duty of care: code of practice, available at: https://www.gov.uk/government/publications/waste-duty-of-care-code-of-practice/waste-duty-of-care-code-of-practice [accessed 30 September 2021]

Table 16.1: Mitigation and monitoring strategies

Activity	Impact	Mitigation	Monitoring
Site Clearance	Disposal of demolition waste	Re-use of materials onsite where feasible. Recycle materials onsite. Recycling and recovery of materials offsite at recycling facilities.	Outlined and monitored in MMP.
Earthworks	Consumption of primary resources Disposal of excavation waste	Design to maximise the earthworks balance. Re-use of excavated materials onsite where feasible.	Outlined and monitored in MMP.
Construction Waste	Disposal of construction waste	Re-use pavement planings in sub-base in footpaths. Re-use existing planings in pavement construction.	Outlined and monitored in MMP.

16.4 Summary

16.4.1 In summary, the independent assessment of the likely significant environmental effects arising from waste, materials or use of natural resources has been essentially scoped out of this ES, as these topics would be sufficiently addressed within the Scheme design, relevant discipline chapters and management plans.

16.5 References

National Highways. January 2019. Design Manual for Roads and Bridges, Sustainability & Environment Appraisal LA 110 'Material assets and Waste'