



Lime Down

Solar Park

Environmental Statement

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List of Contents

Appendix 20-3: Materials and Waste Methodology and Baseline	1
1.1 Introduction	1
1.2 Study Area	1
1.3 Assessment Methodology	2
1.4 Baseline Conditions	10
1.5 References.....	18

List of Tables

Table 1 Outline Scope of Materials and Waste Assessment	3
Table 2 Materials Receptor Sensitivity	5
Table 3 Inert and Non-hazardous Landfill Capacity Sensitivity	6
Table 4 Hazardous Waste Landfill Sensitivity.....	7
Table 5 Materials Magnitude of Impacts.....	8
Table 6 Method W1 Inert and Non-hazardous Waste - Magnitude of Impact.....	9
Table 7 Method W1 Hazardous Waste - Magnitude of Impact	9
Table 8 Effect Thresholds	10
Table 9 Significance of Effects	10
Table 10 National Consumption and Sales for Key Construction Materials	12
Table 11 Construction Material Sales by Region (Ref 8).....	12
Table 12 Potential Recycled Content (Percentage by Weight).....	13
Table 13 Landfill Capacity (end of 2023) in the South West and England (Ref 2).....	14
Table 14 Summary of Waste Inputs by Facility for the South West Region 2023 (Ref 10).14	
Table 15 Standard, Good and Best Practice Recovery Rates by Material	16

Appendix 20-3: Materials and Waste Methodology and Baseline

1.1 Introduction

- 1.1.1 This appendix provides the impact assessment methodology and baseline conditions of relevance to the assessment of Materials and Waste within **ES Volume 1, Chapter 20: Other Environmental Matters [EN010168/APP/6.1]**.

1.2 Study Area

- 2.1.1 The Study Areas for the assessment of impacts related to Materials and Waste have been defined in line with the Institute of Environmental Management and Assessment (IEMA) Guidance (Ref 1). Two Study Areas are defined: a Scheme Study Area (within which waste associated with the Scheme is generated, construction materials are used and allocated/safeguarded mineral and waste sites are present), and an Expansive Study Area (within which landfills and other waste management facilities that manage waste generated by the Scheme are likely to be located and construction materials are available).
- 2.2.1 Together the Scheme Study Area and Expansive Study Area are referred to as 'the Study Areas'.

Scheme Study Area

- 2.3.1 The Scheme Study Area for construction and operation waste generation, and for use of construction materials (key construction materials only), comprises the Scheme Site (i.e. the footprint of the proposed works, together with any temporary land requirements during permitted preliminary works and construction). This includes temporary offices, compounds and storage areas.

Expansive Study Area

- 2.4.1 The Expansive Study Area for non-hazardous and inert waste management is the South West region. The sub-regions (including Wiltshire) considered within the South West region are described in Section 20.4.22 of **ES Volume 1, Chapter 20: Other Environmental Matters [EN010168/APP/6.3]**.
- 2.5.1 The Expansive Study Area for hazardous waste management is England. The Study Area for hazardous waste management is defined based on professional judgement and informed by consideration of the proximity principle. The proximity principle for hazardous waste in England is outlined in Principle 2 - Infrastructure Provision in the Strategy for Hazardous Waste Management in England (Ref 3), and states: "*we look to the market for the*

development of hazardous waste infrastructure, which implements the hierarchy for the management of hazardous waste and meets the needs of the UK to ensure that the country as a whole is self-sufficient in hazardous waste disposal, facilities are put in place for hazardous waste recovery in England, and the proximity principle is met". Planning for hazardous waste management is also undertaken at a national level.

- 2.6.1 The Expansive Study Areas for the availability of key construction materials (aggregates, asphalt, concrete and steel) are national (United Kingdom (UK) or Great Britain (GB), depending upon baseline information availability), and the South West region.

1.3 Assessment Methodology

Scope of Assessment

- 3.1.1 The assessment of materials and waste considers the following:
- Waste producers have a legal duty of care to manage their waste in accordance with regulations and to ensure that any waste leaving the site where it is generated is transferred to a suitably licensed facility for further treatment or disposal;
 - Facilities transferring, treating or disposing of waste must be either licensed or apply for an exemption from a licence, and impacts arising from the operation of waste management facilities are considered as part of the planning and permitting process for these facilities themselves;
 - Waste Planning Authorities (WPAs) are required to ensure that sufficient land is available to accommodate facilities for the treatment of all waste arising in the area, either within the WPA area, or through export to suitable facilities in other areas; and
 - Mineral Planning Authorities are similarly required to ensure an adequate supply of minerals, sufficient to meet the needs of national and regional supply policies, and local development needs.
- 3.2.1 The following matters are not considered in the assessment of materials and waste:
- Waste arising from extraction, processing and manufacture of construction components and products. This assumes that these products and materials are being developed in a manufacturing environment with their own waste management plans, facilities, and supply chain, which are potentially in different regions of the UK or the world and therefore outside of the geographical scope of this study. Such matters cannot be accurately predicted and assessed as they

relate to procurement decisions that cannot be assured. Waste arising from extraction, processing and manufacture of construction components and products are scoped out of the assessment;

- Other environmental impacts associated with the management of waste from the Scheme (e.g. on water resources, air quality, noise or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste) are not included in this assessment, as they are addressed separately in other relevant chapters of this ES; and
- Effects on the availability of materials during the operation and maintenance, and decommissioning of the Scheme. Forecast materials are (using professional judgement) considered negligible in relation to the scale and nature of the Scheme.
- Effects on Mineral Safeguarding Areas (MSAs). Mineral safeguarding sites are assessed in the materials and waste assessment as per IEMA Guidance (Ref 1), however, MSAs do not constitute mineral safeguarding sites and are therefore included instead in the Minerals Assessment within **ES Volume 1, Chapter 20: Other Environmental Matters [EN010168/APP/6.1]**. According to the National Planning Policy Guidance for Minerals (Ref 4), a MSA is “*an area designated by a Mineral Planning Authority which covers known deposits of minerals which are desired to be kept safeguarded from unnecessary sterilisation by non-mineral development*”. In contrast, a mineral safeguarded site is defined by National Highway’s Design Manual for Roads and Bridges (Ref 5) as “*operational sites or sites identified within strategic planning documents for the extraction of minerals e.g. quarries, wharves and depots*”.

3.3.1 **Table 1** below provides a summary of the outline scope of materials and waste assessment.

Table 1 Outline Scope of Materials and Waste Assessment

Scheme Phase	Potential Effects	Scope In/Out
Construction, Operation and Maintenance, and Decommissioning	Waste arising from extraction, processing and manufacture of construction components and products.	Out - further details are provided in Section 3.2.1 above.
	Other environmental impacts associated with the management of waste from the Scheme.	Out - further details are provided in Section 3.2.1 above.

Scheme Phase	Potential Effects	Scope In/Out
	Changes to allocated/safeguarded mineral site	Out - there are no safeguarded mineral and waste sites identified within the Scheme boundary based on the Wiltshire and Swindon Minerals and Waste Development Framework: Policies Map (Ref 6).
	Changes to allocated/safeguarded waste site	As noted in paragraph 3.2.1 above, MSAs are not considered to be mineral safeguarding sites (Ref 4). An assessment of MSAs can be found within the Minerals section of ES Volume 1, Chapter 20: Other Environmental Matters [EN010168/APP/6.1] .
Construction	Changes in the availability of materials	In
	Changes in available landfill void capacity	In
Operation and Maintenance	Changes in the availability of materials	Out - further details are provided in Section 3.2.1 above.
	Changes in available landfill void capacity	In
Decommissioning	Changes in the availability materials	Out - further details are provided in Section 3.2.1 above.
	Changes in available landfill capacity	In

Impact Assessment Methodology

Receptor Sensitivity

3.4.1 The sensitive receptors for the assessment of the construction, operation and maintenance, and decommissioning phases of the materials and waste impacts are:

- Materials, national and regional availability of key construction materials – as outlined in the IEMA Guidance (Ref 1):
“Materials are, in their own right, sensitive receptors. Consuming materials impacts upon their immediate and (in the case of primary material) long-term availability; this results in the depletion of natural resources and adversely impacts the environment”; and
- Landfill void capacity in the Expansive Study Area of the South West (non-hazardous and inert landfill void capacity) – as defined in the IEMA Guidance (Ref 1):

“Landfill is a finite resource, and hence – through the ongoing disposal of waste – there is a continued need to expand existing and develop new facilities, this requires the depletion of natural and other resources which, in turn, adversely impacts the environment.”

Materials

- 3.5.1 The sensitivity of materials relates to the availability and type of construction materials to be consumed by the Scheme. The IEMA Guidance (Ref 1) criteria described within **Table 2** is used to determine the sensitivity of materials.

Table 2 Materials Receptor Sensitivity

Effects	Criteria for Materials Receptor Sensitivity
Negligible	On balance, the key materials required for the construction of the Scheme are forecast (through trend analysis and other information) to be free from known issues regarding supply and stock. <i>And/or</i> are available comprising a very high proportion of sustainable features and benefits compared to industry-standard materials. *
Low	On balance, the key materials required for the construction of the Scheme are forecast (through trend analysis and other information) to be generally free from known issues regarding supply and stock. <i>And/or</i> are available comprising a high proportion of sustainable features and benefits compared to industry-standard materials.
Medium	On balance, the key materials required for the construction of the Scheme are forecast (through trend analysis and other information) to suffer from some potential issues regarding supply and stock. <i>And/or</i> are available comprising some sustainable features and benefits compared to industry-standard materials.
High	On balance, the key materials required for the construction of the Scheme are forecast (through trend analysis and other information) to suffer from known issues regarding supply and stock. <i>And/or</i> comprise little or no sustainable features and benefits compared to industry-standard materials.
Very High	On balance, the key materials required for the construction of the Scheme are forecast are known to be insufficient in terms of production, supply and/or stock. <i>And/or</i> comprise no sustainable features and benefits compared to industry-standard materials.

** Subject to supporting evidence, sustainable features and benefits could include, for example, materials or products that: comprise reused, secondary or recycled content*

(including excavated and other arisings); support the drive to a circular economy; or in some other way reduce lifetime environmental impacts.

- 3.6.1 As noted within Paragraph 20.3.23 of **ES Volume 1, Chapter 20: Other Environmental Matters [EN010168/APP/6.1]**, material receptor sensitivity is determined as 'low'. On balance, the key construction materials required for the construction of the Scheme are forecast (through trend analysis and other information) to be generally free from known issues regarding supply and stock. Key materials required for construction and operation and maintenance are likely to be available comprising a high proportion of sustainable features and benefits (e.g. recycled content).
- 3.7.1 Potential recycled content for the main construction materials is outlined in **Table 12**.

Waste

- 3.8.1 The sensitivity of waste relates to availability of landfill capacity in the absence of the Scheme. This is outlined in the IEMA Guidance (Ref 1): *"landfill capacity is recognised as an unsustainable and increasingly scarce option for managing waste."* The sensitivity of landfill capacity is assessed based on a review of historic landfill void capacity trends where available and information from relevant policy documents.
- 3.9.1 The criteria described within **Table 3** and **Table 4** has been used to determine the sensitivity of landfill capacity.
- 3.10.1 As stated in the IEMA Guidance (Ref 1) *"due to uncertainties relating to future technologies and infrastructure, this first edition of the guidance does not incorporate a proposed methodology to assess impacts and effects during decommissioning or end of first life"*. However, the criteria in the IEMA Guidance are applied to decommissioning for the Scheme.

Table 3 Inert and Non-hazardous Landfill Capacity Sensitivity

Effects	Criteria for Inert and Non-Hazardous Landfill Capacity Sensitivity
Negligible	Across construction, operation and maintenance, and decommissioning phases, the baseline/future baseline (i.e. without the Scheme) of regional inert and non-hazardous landfill capacity is expected to remain unchanged or is expected to increase through a committed change in capacity.
Low	Across construction, and/or operation and maintenance, and decommissioning phases, the baseline/future baseline (i.e., without the Scheme) of regional inert and non-hazardous landfill capacity is expected to reduce minimally by <1% as a result of wastes forecast.

Medium	Across construction, and/or operation and maintenance, and decommissioning phases, the baseline/future baseline (i.e., without the Scheme) of regional inert and non-hazardous landfill capacity is expected to reduce noticeably by 1 to 5% as a result of wastes forecast.
High	Across construction, and/or operation and maintenance, and decommissioning phases, the baseline/future baseline (i.e. without the Scheme) of regional inert and non-hazardous landfill capacity is expected to reduce considerably by 6 to 10% as a result of wastes forecast.
Very High	Across construction, and/or operation and maintenance, and decommissioning phases, the baseline/future baseline (i.e. without the Scheme) of regional inert and non-hazardous landfill capacity is: <ul style="list-style-type: none"> • Expected to reduce very considerably (by >10%); • End during construction or operation; • Is already known to be unavailable; or • Would require new capacity or infrastructure to be put in place to meet forecast demand.

Table 4 Hazardous Waste Landfill Sensitivity

Effects	Criteria for hazardous landfill capacity sensitivity
Negligible	Across the construction, and/or operation and maintenance, and decommissioning phases, the baseline/future baseline (i.e., without the Scheme) of regional (or where justified, national) hazardous landfill capacity is expected to remain unchanged or is expected to increase through a committed change in capacity.
Low	Across the construction, and/or operation and maintenance, and decommissioning phases, the baseline/future baseline (i.e., without the Scheme) of regional (or where justified, national) hazardous landfill capacity is expected to reduce minimally by <0.1% as a result of wastes forecast.
Medium	Across the construction, and/or operation and maintenance, and decommissioning phases, the baseline/future baseline (i.e., without the Scheme) of regional (or where justified, national) hazardous landfill capacity is expected to reduce noticeably by 0.1 to 0.5% as a result of wastes forecast.
High	Across the construction, and/or operation and maintenance, and decommissioning phases, the baseline/future baseline (i.e., without the Scheme) of regional (or where justified, national) hazardous landfill capacity is expected to reduce considerably by 0.5 to 1% as a result of wastes forecast.
Very High	Across the construction, and/or operation and maintenance, and decommissioning phases, the baseline/future baseline (i.e., without the Scheme) of regional (or where justified, national) hazardous landfill capacity is: <ul style="list-style-type: none"> • expected to reduce very considerably (by >1%);

	<ul style="list-style-type: none"> • end during construction or operation; • is already known to be unavailable; or • would require new capacity or infrastructure to be put in place to meet forecast demand.
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- 3.11.1 As noted within Paragraph 20.3.25 of **ES Volume 1, Chapter 20: Other Environment Matters [EN010168/APP/6.1]**, the waste receptor sensitivity is determined as “*very high*”. A scenario in which no landfill void space is available is deemed to be unrealistic as outlined in the future baseline below (Sections 4.13.1 to 4.15.1), however, since there is no publicly available information on any potential changes to landfill capacity by the time of the construction and operation and maintenance and decommissioning of the Scheme, a worst-case scenario is considered (e.g. landfill capacity is assumed to remain the same but a very considerable reduction in capacity cannot be excluded).

Magnitude of Impacts

- 3.12.1 The magnitude of impact describes the degree of variation from the baseline conditions as a result of the Scheme. The IEMA Guidance (Ref 1) for assessing the magnitude of impact from materials comprises a percentage-based approach that determines the influence of construction materials use on the baseline national demand from the construction of the Scheme.
- 3.13.1 The criteria used to assess the magnitude of impact for materials are provided in **Table 5**.

Table 5 Materials Magnitude of Impacts

	Criteria for Materials Magnitude of Impacts
No change	Consumption of no materials is required.
Negligible	Consumption of no individual material type is equal to or greater than 1% by volume of the baseline availability.
Minor	Consumption of one or more materials is between 1 to 5% by volume of the baseline availability.
Moderate	Consumption of one or more materials is between 6 to 10% by volume of the baseline availability.
Major	Consumption of one or more materials is >10% by volume of the baseline availability.
A national baseline is used in the absence of regional construction material availability data for steel. A regional baseline is used for aggregates, asphalt and concrete.	

- 3.14.1 The IEMA Guidance (Ref 1) offers two methods to assess waste effects, Method W1 – Void Capacity and Method W2 – Landfill Diversion. For this assessment, Method W1 has been used, which is described as follows:

- W1 – Void Capacity, a detailed methodology where the magnitude of impact from waste is assessed by determining the percentage of the remaining landfill void capacity that will be depleted by waste produced during the construction and/or operation and maintenance. In a worst case, where landfill sensitivity is very high, a significant effect would occur at a magnitude of minor, which for Scheme non-hazardous and inert waste is more than 1% of landfill capacity and for hazardous waste is more than 0.1% of landfill capacity. The criteria used to assess the magnitude of impact for inert and non-hazardous and hazardous waste is provided within **Table 6** and **Table 7**, respectively.

Table 6 Method W1 Inert and Non-hazardous Waste - Magnitude of Impact

	Criteria for Inert and Non-hazardous Waste Magnitude of Impacts
No change	Zero waste generation and disposal from the Scheme.
Negligible	Waste generated by the Scheme will reduce Expansive Study Area landfill capacity baseline [#] by <1%.
Minor	Waste generated by the Scheme will reduce Expansive Study Area landfill capacity baseline [#] by 1 to 5%.
Moderate	Waste generated by the Scheme will reduce Expansive Study Area landfill capacity baseline [#] by 6 to 10%.
Major	Waste generated by the Scheme will reduce Expansive Study Area landfill capacity baseline [#] by >10%.
*Forecast as the worst-case scenario, during a defined construction, operation and maintenance and decommissioning phase.	

Table 7 Method W1 Hazardous Waste - Magnitude of Impact

	Criteria for Hazardous Waste Magnitude of Impacts
No change	Zero waste generation and disposal from the Scheme.
Negligible	Waste generated by the Scheme will reduce Expansive Study Area landfill capacity baseline by <0.1%.
Minor	Waste generated by the Scheme will reduce Expansive Study Area landfill capacity baseline by <0.1 to 0.5%.
Moderate	Waste generated by the Scheme will reduce Expansive Study Area landfill capacity baseline by <0.5 to 1%.
Major	Waste generated by the Scheme will reduce Expansive Study Area landfill capacity baseline by >1%.
*Forecast as the worst-case scenario, during a defined construction, operation and maintenance and decommissioning phase.	

Significance Criteria

- 3.15.1 The effect thresholds and the associated significance of effects are described within **Table 8** and **Table 9**.

Table 8 Effect Thresholds

		Magnitude of Impact				
		No Change	Negligible	Minor	Moderate	Major
Sensitivity of Receptor	Very High	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
	Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

Table 9 Significance of Effects

Effect	Materials	Waste
Neutral	Not Significant	Not Significant
Slight		
Moderate	Significant	Significant
Large		
Very large		

- 3.16.1 Where a significance of effect could fall into two categories (i.e. neutral or slight, slight or moderate), professional judgement has been used to justify and determine which category a receptor falls into, to arrive at a single rating. Where professional judgement has been utilised in these cases a justification has also been provided.

1.4 Baseline Conditions

Sources of Information

- 4.1.1 The following sources of information have been reviewed and have informed the assessment of Materials and Waste:

- Environment Agency's 2023 Waste Summary Tables for England - Version 1 (Ref 2) - remaining land capacity;
- Steel UK's Key Statistics Guide May 2023, 2022 data (Ref 7);
- Mineral Products Association's Profile of the UK Mineral Products Industry, UK production of minerals and mineral products, 2021 and estimated production/sales in Great Britain, 2022 data (Ref 8);
- Environment Agency's Environmental Permitting Regulations - Waste Sites (Ref 9);
- Environment Agency's 2023 Waste Data Interrogator (Ref 10);
- Environment Agency's Permitted Waste Sites - Authorised Landfill Site Boundaries (Ref 11);
- Environment Agency's Historic Landfill Sites (Ref 12);
- Project-specific information provided by the design team; and
- Relevant legislation and national policy, as detailed in **ES Volume 3, Appendix 20-2: Materials and Waste Legislation, Policy and Guidance [EN010168/APP/6.3]**.

Existing Baseline

Regional and National Availability of Key Construction Materials

- 4.2.1 **Table 10** outlines the national consumption and sales (providing an indication of availability) in 2023 for steel (Ref 7) and 2021 for aggregates, asphalt and concrete (Ref 8) (i.e. the most recent years for which data is available). These are expected to be the key materials used during the Scheme's construction.
- 4.3.1 Regional data is presented in **Table 11**. Sales of construction materials by region are provided for the region in which the Scheme is located (i.e., the South West).
- 4.4.1 Potential recycled content for the main construction materials is outlined in **Table 12**. These good practice rates are derived from the Waste and Resources Action Programme (WRAP) Designing Out Waste Tool for Civil Engineering (Ref 13).

Table 10 National Consumption and Sales for Key Construction Materials

Material	National availability (Million Tonnes, Year)	10% of National availability (Million Tonnes, Year) *	Baseline Data Year	Data Description
Steel	15	1.5	2022	UK requirement (Ref 2)
Aggregates of which:	279.8	27.98	2021	Minerals and mineral products sales in Great Britain (Ref 8)
• Crushed rock	148.2	14.82		
• Sand and gravel - land won	47.7	4.47		
• Sand and gravel - marine	14.3	1.43		
• Recycled and secondary	69.6	6.96		
Asphalt	28.3	2.83		
Concrete of which:	77.5	7.75		
• Ready-mixed concrete	52.7	5.27		
• Concrete products	24.8	2.48		

*10% of national availability noted as the point of significance for materials based on a sensitivity of low (see Table 5).

Table 11 Construction Material Sales by Region (Ref 8)

Construction Material	Regional (South West) availability	10% of Regional (South West) availability*
Crushed rock** (million tonnes)	25.5	2.55
Sand and gravel** (million tonnes)	3.1	0.31
Ready-mixed concrete (converted to million tonnes from m ³ using a density of 2.4 t/m ³)	2.6	0.26
Asphalt (million tonnes)	2.1	0.21

Construction Material	Regional (South West) availability	10% of Regional (South West) availability*
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*10% of national availability noted as the point of significance for materials based on a sensitivity of 'low' (see Table 5).

**Accumulated to form overall aggregate availability.

Table 12 Potential Recycled Content (Percentage by Weight)

Material Type	Potential Recycled Content (% by Weight)
Concrete	16
Asphalt	25
Aggregates	50
Steel reinforcement	100
Structural steel	60

Landfill Capacity

- 4.5.1 The remaining landfill capacities at the end of 2023 for the non-hazardous and inert waste Expansive Study Area (South West) and the hazardous waste Expansive Study Area (England) is shown in **Table 13** (Ref 2).
- 4.6.1 Merchant landfills are operated for commercial purposes, accepting waste from construction projects and operating businesses. Merchant landfills are therefore considered to form the baseline. In contrast, restricted landfills are sites that deal with their own produced waste (i.e. not operating for commercial purposes). Therefore, additional capacity is excluded from the baseline. Some non-hazardous landfills have a Stable Non-Reactive Hazardous Waste (SNRHW) cell (e.g. for asbestos). SNRHW cells usually form only a small fraction of the overall capacity. Therefore, for assessment purposes non-hazardous landfills with SNRHW cells are considered in the same way as non-hazardous landfills.

Table 13 Landfill Capacity (end of 2023) in the South West and England (Ref 2)

Landfill Type	South West	England	Point of significance based on a sensitivity of “very high”
	Landfill Capacity ('000s m ³)		m ³
Hazardous merchant	Not applicable, assessment is completed at a national level only.	9,680	9,680 (0.1% of national landfill capacity)
Non-hazardous with SNRHW cell	1,711	Not applicable, assessment is completed at a regional level only.	74,216 (1% of national landfill capacity)
Non-hazardous	5,711		
Inert	9,163		91,630 (1% of national landfill capacity)
Total non-hazardous and inert	16,585		165,850

Waste Management Infrastructure

- 4.7.1 There are no permitted waste sites or waste site applications located within the Scheme boundary (Environmental Permitting Regulations – Waste Sites, Ref 9).
- 4.8.1 Some capacity data for waste management infrastructure is publicly available (e.g. Environmental Permitting Regulations – Waste Sites (Ref 9) and waste site permits). However, the permitted capacity is not necessarily representative of the actual operational capacity of the infrastructure. Therefore, inputs data are collated from the Environment Agency’s Waste Data Interrogator for 2023 – Waste Received (Excel) – Version 1 (Ref 10). A summary of waste inputs by facility within the South West regions is provided in **Table 14**. Inputs are not totalled since the double counting of waste moving between the site types listed in the Waste Data Interrogator cannot be discounted.

Table 14 Summary of Waste Inputs by Facility for the South West Region 2023 (Ref 10)

Facility Type	South West (Tonnes Received)
Landfill	2,302,729
Metal Recycling Site (MRS)	1,456,450
On/in land	2,268,363

Facility Type	South West (Tonnes Received)
Transfer	3,729,181
Treatment	8,593,800
Use of Waste	39,663
Burial	7
Combustion	24,258
Incineration	1,672,194
Storage	103,449
Processing	8,990
Refining	9

Historic and Authorised Landfills

- 4.9.1 There are no historic and/or authorised landfills identified within the Scheme boundary as outlined in the Environment Agency's Permitted Waste Sites - Authorised Landfill Site Boundaries (Ref 11) or Historic Landfill Sites (Ref 12) datasets.

Waste Targets

- 4.10.1 The national target for recovery of construction and demolition (C&D) waste is 70% by weight, as set out in the Waste Framework Directive (Ref 14) and the Waste Management Plan for England (Ref 15). The target specifically excludes naturally occurring materials with EWC Code 17 05 04 (17 05 04 soil and stones other than those mentioned in 17 05 03* (soils and stone containing dangerous substances)). An asterisk (*) at the end of an EWC code indicates that the waste is hazardous. Recovery is deemed to include reuse, recycling, and other recovery (e.g. energy recovery). A recovery rate of 70% is assumed be achievable for the purpose of the waste assessment.
- 4.11.1 A good practice landfill diversion target of 90% has been achieved and exceeded by major UK developments as outlined in the IEMA Guidance (Ref 1). In 2020, the most recent year for which data is available, the UK generated 59.1 million tonnes of non-hazardous C&D waste, of which 54.8 million tonnes was recovered. This represents a recovery rate of 92.6% (Ref 16).
- 4.12.1 Standard, good and best practice recovery rates by material are provided by WRAP (Ref 13). Recovery rates for key construction materials and other construction wastes relevant to the Scheme are provided in **Table 15**.

Table 15 Standard, Good and Best Practice Recovery Rates by Material

Material	Standard Practice Recovery (%)	Good Practice Recovery (%)	Best Practice Recovery (%)
Metals	95	100	100
Packaging	60	85	95
Concrete	75	95	100
Inert	75	95	100
Plastics	60	80	95
Miscellaneous	12	50	75
Electrical equipment	Limited information	70	95
Cement	Limited information	75	95
Liquids and oils	100	100	100
Hazardous	50	Limited information, cannot be 100% since some hazardous waste (e.g. asbestos) must be landfilled.	

Future Baseline

- 4.13.1 There is no publicly available information on any potential changes to national or regional material availability by the time of the construction of the Scheme. Construction material demand, such as ready mixed concrete, is closely aligned to both the quantity of construction taking place and the general economy. It is deemed inappropriate to forecast future availability as the demand is unlikely to be linear and it is not possible to set a future baseline for materials. As such, future availability is assumed to remain the same as the current baseline as outlined in **Table 10** and **Table 11**.
- 4.14.1 There is no publicly available information regarding any potential changes to landfill capacity by the time of the Scheme's construction, operation and maintenance, and decommissioning.
- 4.15.1 Due to the cyclic nature of inert and hazardous landfill capacity (e.g. landfill capacity decreasing, and then new sites or landfill cells being opened with landfill capacity increasing), it is not realistic to forecast future landfill capacity. Therefore, inert and hazardous landfill capacity is assumed to remain the same as the current baseline as outlined in **Table 13**.
- 4.16.1 For non-hazardous waste, using the current rate of decline of landfill capacity and forecasting into the future would lead to the inevitable

conclusion that there would be no void space remaining. However, this is not a credible scenario as if there is still a need for landfill, then the WPA will need to consent new landfill capacity to replace that which has been used up. Therefore, non-hazardous and hazardous landfill capacity is assumed to remain the same as the current baseline, as outlined in **Table 13**.

1.5 References

- Ref 1 Institute of Environmental Management and Assessment (IEMA) (2020). IEMA guide to: Materials and Waste in Environmental Impact Assessment, Guidance for a Proportionate Approach. Available at: [Redacted]
[Redacted] [Accessed May 2025].
- Ref 2 Environment Agency (2024). 2023 Waste Summary Tables for England – Version 1. Available at: <https://www.data.gov.uk/dataset/59ab8448-3905-49c6-9122-ae762f96f66b/2023-waste-data-interrogator#:~:text=Three%20resources%20are%20available%20on%20this%20record%20for%202023:%20-> [Accessed May 2025].
- Ref 3 Department for the Environment, Food and Rural Affairs (Defra) (2010). The Strategy for Hazardous Waste Management in England. No longer available online.
- Ref 4 Ministry of Housing, Communities and Local Government (MHCLG) & Department for Levelling Up, Housing and Communities (DLUHC) (2014). National Planning Policy Guidance (NPPG) for Minerals. Available at: <https://www.gov.uk/guidance/minerals>. [Accessed May 2025].
- Ref 5 National Highways (2020). Design Manual for Roads and Bridges (DMRB). Available at: <https://nationalhighways.co.uk/suppliers/design-standards-and-specifications/design-manual-for-roads-and-bridges-dmr/> [Accessed May 2025].
- Ref 6 Swindon Borough Council and Wiltshire Council (2013). Wiltshire and Swindon Minerals and Waste Development Framework: Policies Map. Available at: <https://www.wiltshire.gov.uk/media/8558/Aggregate-Minerals-Site-Allocations-Local-Plan-May-2013/pdf/minerals-adopted-sites-local-plan-may-13.pdf?m=1644848312187> [Accessed May 2025].
- Ref 7 UK Steel (2023). Steel UK's Key Statistics Guide May 2023. Available at: [Redacted]
[Redacted]
[Redacted] [Accessed May 2025].
- Ref 8 Mineral Products Association (MPA) (2023). Profile of the UK Mineral Products Industry: 2023 Edition. Available at: [Redacted]
[Redacted] [Accessed May 2025].
- Ref 9 Environment Agency (2024). Environmental Permitting Regulations - Waste Sites. Available at: <https://www.data.gov.uk/dataset/e2cc8101-d8b7-434d-a26a-9115061bb57c/environmental-permitting-regulations-waste-sites> [Accessed May 2025].

- Ref 10 Environment Agency (2024). 2023 Waste Data Interrogator – Waste Received (Excel) – Version 1. Available at: [https://environment.data.gov.uk/api/file/download?fileDataSetId=4f93894b-bac5-4ce1-9475-10f09c185a2a&fileName=2023%20Waste%20Data%20Interrogator%20-%20Wastes%20Received%20\(Excel\)%20-%20Version%201.zip](https://environment.data.gov.uk/api/file/download?fileDataSetId=4f93894b-bac5-4ce1-9475-10f09c185a2a&fileName=2023%20Waste%20Data%20Interrogator%20-%20Wastes%20Received%20(Excel)%20-%20Version%201.zip). [Accessed May 2025].
- Ref 11 Environment Agency (2024) Permitted Waste Sites - Authorised Landfill Site Boundaries. Available at: <https://www.data.gov.uk/dataset/ad695596-d71d-4cbb-8e32-99108371c0ee/permitted-waste-sites-authorised-landfill-site-boundaries> [Accessed May 2025].
- Ref 12 Environment Agency (2024) Historic Landfill Sites. Available at: <https://www.data.gov.uk/dataset/17edf94f-6de3-4034-b66b-004ebd0dd010/historic-landfill-sites> [Accessed May 2025].
- Ref 13 Waste and Resources Action Programme (WRAP) (undated). Designing Out Waste: A Design Team Guide for Civil Engineering. No longer available online
- Ref 14 Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on Waste and repealing certain Directives (Waste Framework Directive). Available at: [REDACTED] [Accessed May 2025].
- Ref 15 Defra (2021). The Waste Management Plan for England. Available at: <https://www.gov.uk/government/publications/waste-management-plan-for-england-2021> [Accessed May 2025].
- Ref 16 Defra (2023). UK Statistics on Waste. Available at: <https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste#recovery-rate-from-non-hazardous-construction-and-demolition-cd-waste> [Accessed May 2025].
- Ref 17 WRAP (2007). Waste Recovery Quick Wins. Improving Recovery Rates without Increasing Costs. No longer available online.