



# OTTERPOOL PARK

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ENVIRONMENTAL STATEMENT  
OP5 CHAPTER 17 – **WASTE AND RESOURCE  
MANAGEMENT**

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March 2022



# OTTERPOOL PARK

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## APPLICATION CONTENTS

### Application Administration

OP1	Covering Letter
OP2	Planning Fee
OP3	Outline Planning Application Form, including relevant certificates & CIL Form.

### Environmental Statement

OP4	Non-technical Summary
OP5	Environmental Statement which assesses the impact of the proposed development on the following topics:

Chapter 1	Introduction
Chapter 2	EIA Approach and Methodology
Chapter 3	Development and Consideration of Alternatives
Chapter 4	The Site and Proposed Development
Chapter 5	Agriculture and Soils
Chapter 6	Air Quality
Chapter 7	Ecology and Biodiversity
Chapter 8	Climate Change
Chapter 9	Cultural Heritage
Chapter 10	Geology, Hydrology and Land Quality
Chapter 11	Human Health
Chapter 12	Landscape and Visual Impact
Chapter 13	Noise and Vibration
Chapter 14	Socioeconomic effects and community
Chapter 15	Surface water resources and flood risk
Chapter 16	Transport
Chapter 17	Waste and resource management

Please refer to ES Contents page which provides a full list of ES Appendices

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OP5 Appendix 4.2	Site Boundary and Parameter Plans
OP5 Appendix 2.8	Alternative Parameter Plans (with permitted waste facility in situ)
OP5 Appendix 4.3	Strategic Design Principles

### Documents submitted in support

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OP5 Appendix 2.7	Infrastructure Assessment (regarding the permitted waste facility)
OP5 Appendix 4.4	Illustrative accommodation schedule
OP5 Appendix 4.5	Illustrative plans

OP5 Appendix 4.6	Indicative phasing plan
OP5 Appendix 4.8	Utilities Strategy
OP5 Appendix 4.9	Energy Strategy
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OP10	Monitoring and Evaluation Framework document
OP11	Mobility Vision Report
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# OTTERPOOL PARK

Environmental Statement Volume 2: Main ES  
Chapter 17: Waste and Resource Management

MARCH 2022



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## APPENDIX

- Appendix 17.1 – Waste Strategy
- Appendix 17.2 – Mineral Resource Assessment
- Appendix 17.3 – Outline Site Waste Management Plan

## 17 Waste and Resource Management

### 17.1 Introduction

- 17.1.1 This Chapter of the ES reports the environmental impact of construction and operation of the proposed Development with respect to solid waste management. The assessment considers impacts on the environment as a result of the generation of construction, demolition and excavation (CD&E) waste, as well as operational waste, and includes measures to mitigate these impacts.
- 17.1.2 This Chapter should be read in conjunction with Chapters 1-4 (the introductory chapters) and Chapter 10: Geology, Hydrogeology and Land Quality.
- 17.1.3 It has also been prepared alongside and informed by the Waste Strategy (ES Appendix 17.1), Mineral Resource Assessment (ES Appendix 17.2) and the Outline Site Waste Management Plan (SWMP)(ES Appendix 17.3).

### Relevant Aspects of the Proposed Development

- 17.1.4 The assessment here within utilises the Framework Masterplan (10,000 homes) and committed developments to provide a worst-case scenario for the assessment of the proposed Development (8,500 homes). This chapter considers the environmental impact of demolition, construction and operation associated with the proposed Development upon waste, notably waste generation, waste disposal facility capacity and void space.

### 17.2 Assessment Methodology

#### Legislation, Policy and Guidance

##### UK Legislation

- 17.1.5 Waste is defined in Article 3 of the European Framework Directive on waste (2008/98/EC) (Ref 17.1) as “*any substance or object which the holder discards or intends or is required to discard*”, where the term:
- ‘**Waste holder**’ is defined as the waste producer or the natural or legal person who is in possession of the waste.
  - ‘**Waste producer**’ is defined as anyone whose activities produce waste (original waste producer) or anyone who carries out pre-processing, mixing or other operations resulting in a change in the nature or composition of this waste.

##### ***The Environment Act 2021***

- 17.2.1 For the first time this Act will set clear statutory targets for the recovery of the natural world in four priority areas: air quality, biodiversity, water and waste. The Act outlines new and ambitious requirements for waste management and reduction. This includes a need for full segregation of waste streams at source (i.e. household, commercial and industrial).

##### ***The Waste (Miscellaneous Amendments) (EU Exit) (No. 2) Regulations 2019***

- 17.2.2 The Waste (Miscellaneous Amendments) (EU Exit) (No. 2) Regulations 2019 amends 12 domestic waste regulations, which implement different European directives related to waste management to ensure that the waste regime can continue to operate effectively after the UK leaves the EU.
- 17.2.3 The amended 12 domestic waste regulations include the following.

***European Union (EU) Landfill Directive (Directive 1999/31/EC on the landfill of waste)***

17.2.4 The EU Landfill Directive (Ref 17.2) establishes a framework for the management of waste across the European Community. It also defines certain terms, such as 'waste', 'recovery' and 'disposal', to ensure that a uniform approach is taken across the EU.

***EU Directive on Waste (Waste Framework Directive) (Directive 2008/98/EC on waste)***

17.2.5 The Waste Framework Directive (Directive 2008/98/EC on waste) (Ref. 17.3) contains the definition of waste. This definition is used to establish whether a material is a waste or not. It sets targets for recycling non-hazardous construction and demolition waste (Article 10: 70% by weight by 2020).

***The Waste (Circular Economy) (Amendment) Regulations 2020***

17.2.6 The 2020 Circular Economy Package (CEP) sets out the European Commission's planned initiatives for a framework to make sustainable products, services and business models the norm. Most of the substantive changes under the 2020 CEP affect the Waste Framework Directive 2008 and the Landfill Directive 1999.

***The Clean Neighbourhoods and Environment Act, 2005***

17.2.7 It is the responsibility of everyone working in the construction industry to ensure that all waste is disposed of properly, as per the Clean Neighbourhoods and Environment Act (2005) (Ref. 17.4). All employees need to be made aware that if they are tasked with waste disposal this must be carried out in accordance with the law, or they risk being fined.

***Environmental Permitting (England and Wales) Regulations, 2016 (as amended)***

17.2.8 The Environmental Permitting (England and Wales) Regulations (EPR) (Ref. 17.5) were created to standardise environmental permitting and compliance in England and Wales to protect human health and the environment.

***Waste (England and Wales) Regulations, 2011 (as amended)***

17.2.9 The Waste Regulations (Ref. 17.6) transpose the WFD into English and Welsh law. The Regulations require businesses to confirm that they have applied the waste management hierarchy, introduce a new waste hierarchy permit condition and a two-tier system for waste carrier and broker registration. WMPs are no longer mandatory for developments commencing after 1 December 2013. They are, however, recommended as best practice.

***Environmental Protection Act 1990 (Part 2)***

17.2.10 The Act outlines the basic provisions for the management of all waste, which includes details on the definition of waste and outlines Duty of Care placed on those involved in managing wastes.

***The Hazardous Waste (Miscellaneous Amendments) (England) Regulations 2015***

17.2.11 The Hazardous Waste (Miscellaneous Amendments) Regulations 2015 make amendments to one Act and seven Regulations that concern hazardous waste or make reference to other legislation concerning hazardous waste. The following:

- Environmental Protection Act 1990
- Cremation (England and Wales) Regulations 2008
- Environmental Permitting (England and Wales) Regulations 2010
- Waste (England and Wales) Regulations 2011
- Controlled Waste (England and Wales) Regulations 2012

- Hazardous Waste (England and Wales) Regulations 2005
- are updated to change:
- references to the Waste Directive to now refer to Directive (EC) 2008/98 on waste; and
- the definition of the “List of Wastes” from “the list of wastes established by Commission Decision (EC) 2000/532 on hazardous waste” to include “as amended from time to time”; this includes Commission Decision (EU) 2014/955 which amends the “List of Wastes” to comply with the changes in the classification of chemical hazards, brought about by Regulation (EC) 1272/2008 on classification, labelling and packaging of substances and mixtures.
- The following regulations:
- Batteries and Accumulators (Placing on the Market) Regulations 2008; and
- Waste Batteries and Accumulators Regulations 2009
- are amended to change the definition of an “appliance” to include “electrical or electronic equipment, as defined by Directive (EU) 2012/19 on waste electrical and electronic equipment”.
- The Regulations also revoke:
- List of Wastes (England) Regulations 2005
- List of Wastes (England) (Amendment) Regulations 2005.

## UK Policy

### ***National Planning Policy Framework (NPPF) Ministry of Housing, Communities and Local Government, 2021***

17.2.12 The 2021 revised NPPF updates the Government’s planning policies for England and sets out how these should be applied and should be read in conjunction with the Government’s planning policy for waste. The 12 core principles provide policies and guidance for a variety of areas and advocates that planning policies and decisions should apply a presumption in favour of sustainable development. Paragraph 4 advises that the policies within the Framework should be read in conjunction with the Government’s planning policy for waste.

17.2.13 Paragraph 8 outlines the NPPF approach to sustainable development, listing economic, social and environmental objectives. The environmental objectives state:

‘an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.’

17.2.14 The NPPF does not contain any other specific waste policies, as these are contained in the Waste Management Plan for England (Department for Environment, Food and Rural Affairs (Defra), 2013

17.2.15 Section 17 of the NPPF sets out the requirements for planning policy to facilitate the sustainable use of minerals, including the requirement to safeguard minerals from sterilisation by non-mineral development (paragraph 210c).

### ***National Planning Policy for Waste, 2014***

17.2.16 The National Planning Policy for waste sets out the Government’s planning policies for England and how these should be applied. It advises that it should be read in conjunction with the NPPF, the Waste Management Plan for England and National Policy Statements for Waste Water and Hazardous Waste, or any successor documents.

**Waste Management Plan for England, 2013**

17.2.17 The Waste Management Plan for England (WMPE) provides an analysis of the current waste management situation in England and fulfils the mandatory requirements of Article 28 of the revised Waste Framework Directive. The plan does not introduce new policies or change the landscape of how waste is managed in England. Its core aim is to bring current waste management policies under the umbrella of one national plan. It sets out the Government’s ambition to work towards a more sustainable and efficient approach to resource use and management, including ensuring that the design and layout of new residential and commercial development and other infrastructure complements sustainable waste management.

**Our Waste, Our Resources: A Strategy for England, 2018**

17.2.18 This document sets out the UK Government’s strategy on how it will preserve the stock of material resources by minimising waste, promoting resource efficiency and moving towards a circular economy, minimise the damage caused to our natural environment by reducing and managing waste safely and carefully, and deal with waste crime. It combines actions to be taken with firm commitments for the coming years and gives a clear longer-term policy direction in line with the UK Government’s 25 Year Environment Plan.

**A Green Future: Our 25 Year Plan to Improve the Environment**

17.2.19 The 25 Year Environment Plan sets out government action to help the natural world regain and retain good health. It aims to deliver cleaner air and water in our cities and rural landscapes, protect threatened species and provide richer wildlife habitats. It calls for an approach to agriculture, forestry, land use and fishing that puts the environment first. The Plan looks forward to delivering a Green Brexit – seizing this once-in-a-lifetime chance to reform our agriculture and fisheries management, how we restore nature, and how we care for our land, our rivers and our seas.

**Design Manual for Roads and bridges (DMRB) LA 104 Environmental assessment and monitoring**

17.2.20 This document (Ref. 17.23) sets out the requirements for environmental assessment of projects, including reporting and monitoring of significant adverse environmental effects.

**Local Policy**

17.2.21 The assessment has considered the relevant policies of the A Green Future: Our 25 Year Plan to Improve the Environment (2018) (Ref. 17.9), Kent Mineral and Waste Local Plan (KMWLP) 2013-2030 as amended by the Early Partial Review (Adopted September 2020) (Ref. 17.10), Folkestone and Hythe District Council Places and Policies Local Plan (2020) and the Folkestone and Hythe District Council Core Strategy Review (2022) (Ref. 17.11). These have been summarised within Table 17-1.

Table 17-1 Summary of Relevant Adopted Policies

Document	Policy/Reference	Description relevant to Waste and Resource Management	Project Response
A Green Future: Our 25 Year Plan to Improve the Environment (2018)	Chapter 4: Increasing resource efficiency and reducing pollution and waste	i. Maximising resource efficiency and minimising environmental impacts at end of life. ii. Reducing food supply chain emissions and waste iii. Reducing litter and littering iv. Improving management of residual waste	The assessment has considered the existing and future waste capacities of local and regional facilities including associated logistics; incorporates re-purpose bring sites and surveillance through the Otterpool Stewardship scheme; and, underground waste storage.



Document	Policy/Reference	Description relevant to Waste and Resource Management	Project Response
		v. Cracking down on fly-tippers and waste criminals	
	Policy CSW2 (Waste Hierarchy)	To deliver sustainable waste management solutions for Kent, proposals for waste management must demonstrate how the proposal will help drive waste to ascend the Waste Hierarchy whenever possible.	<p>The assessment proposes a community closed-loop composting initiative and a reuse/re-purpose site.</p> <p>The accompanying waste strategy commits to fully segregate waste streams – across all building categories. It also details recommended floor space allocation for waste storage for each building type that needs to be factored into design.</p>
<p>Kent Mineral and Waste Local Plan (KMWLP) 2013-2030 (Adopted July 2020 – as amended by Early Partial Review)</p> <p>KCC- Minerals and Waste Local Plan 2013-30 Proposed Refresh (Regulation 18 Consultation) (December 2021)</p>	Policy CSW3 (Waste Reduction)	<p>All new development should minimise the production of construction, demolition and excavation waste and manage any waste in accordance with the objectives of Policy CSW 2.</p> <p>The following details shall be submitted with the planning application, except for householder applications:</p> <ol style="list-style-type: none"> <li>1. the measures to be taken to show compliance with this policy</li> <li>2. the details of the nature and quantity of any construction, demolition and excavation waste and its subsequent management</li> </ol> <p>New development should include detailed consideration of waste arising from the occupation of the development including consideration of how waste will be stored, collected and managed.</p> <p>In particular proposals should ensure that:</p> <ol style="list-style-type: none"> <li>1. there is adequate temporary storage space for waste generated by that development allowing for the separate storage of recyclable materials; and</li> <li>2. as necessary, there is adequate communal storage for waste, including separate recyclables, pending its collection; and</li> <li>3. storage and collection systems (e.g. any dedicated rooms, storage areas and chutes or underground waste collection systems), for waste are of high quality design and are incorporated in a manner which will ensure there is adequate and convenient access for users and waste collection operatives and will contribute to the achievement of waste management targets; and</li> <li>4. adequate contingency measures are in place to manage any mechanical</li> </ol>	<p>The assessment has considered modern methods of construction to minimise construction waste; reuse of demolition waste on site such as hardcore; and a neutral cut and fill of excavation waste.</p> <p>A Detailed Code of Construction Practice (CoCP) would be developed detailing the management of waste during construction. An Outline CoCP is included in ES Appendix 4.17.</p> <p>The assessment considers the types and quantity of waste and recyclables collected and how it is stored.</p> <p>It assesses where the collected waste will be taken for bulking, the capacity/availability of local Waste Transfer Station- and associated logistical arrangements.</p> <p>A Site Waste Management Plan (SWMP)(ES Appendix 17.3) has been prepared for as best practice during construction to management and minimise waste generated.</p>

Document	Policy/Reference	Description relevant to Waste and Resource Management	Project Response																																																																										
	Policy CSW4 (Strategy for Waste Management Capacity)	<p>breakdowns. All relevant proposals should be accompanied by a recycling &amp; waste management strategy which considers the above matters and demonstrates the ability to meet local authority waste management targets.</p> <p>The strategy for waste management capacity in Kent is to provide sufficient capacity to manage at least the equivalent of the waste arising in Kent plus some residual non-hazardous waste from London. As a minimum it is to achieve the targets set out in Table 1 for recycling and composting and other forms of recovery.</p> <table border="1" data-bbox="611 734 1034 1055"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2"></th> <th colspan="3">Milestone Year</th> </tr> <tr> <th>2015/16</th> <th>2020/21</th> <th>2025/26</th> <th>2030/31</th> </tr> </thead> <tbody> <tr> <td colspan="5"><b>Local Authority Collected Waste</b></td> </tr> <tr> <td>Recycling/Composting<sup>(77)</sup></td> <td>n/a</td> <td>50%</td> <td>55%</td> <td>60%</td> </tr> <tr> <td>Other Recovery</td> <td>n/a</td> <td>45%</td> <td>43%</td> <td>38%</td> </tr> <tr> <td>Remainder to Landfill</td> <td>n/a</td> <td>2%</td> <td>2%</td> <td>2%</td> </tr> <tr> <td colspan="5"><b>Commercial and Industrial Waste</b></td> </tr> <tr> <td>Recycling/Composting<sup>(78)</sup></td> <td>n/a</td> <td>50%</td> <td>55%</td> <td>60%</td> </tr> <tr> <td>Other Recovery</td> <td>n/a</td> <td>35%</td> <td>32.5%</td> <td>30%</td> </tr> <tr> <td>Remainder to Landfill</td> <td>n/a</td> <td>15%</td> <td>12.5%</td> <td>10%</td> </tr> <tr> <td colspan="5"><b>Construction &amp; Demolition Waste (Non-Inert only)</b></td> </tr> <tr> <td>Recycling</td> <td>n/a</td> <td>12%</td> <td>13%</td> <td>14%</td> </tr> <tr> <td>Composting</td> <td>n/a</td> <td>1%</td> <td>1%</td> <td>1%</td> </tr> <tr> <td>Other Recovery</td> <td>n/a</td> <td>5%</td> <td>5%</td> <td>5%</td> </tr> <tr> <td>Remainder to Landfill</td> <td>n/a</td> <td>2%</td> <td>1%</td> <td>0.5%</td> </tr> </tbody> </table>			Milestone Year			2015/16	2020/21	2025/26	2030/31	<b>Local Authority Collected Waste</b>					Recycling/Composting <sup>(77)</sup>	n/a	50%	55%	60%	Other Recovery	n/a	45%	43%	38%	Remainder to Landfill	n/a	2%	2%	2%	<b>Commercial and Industrial Waste</b>					Recycling/Composting <sup>(78)</sup>	n/a	50%	55%	60%	Other Recovery	n/a	35%	32.5%	30%	Remainder to Landfill	n/a	15%	12.5%	10%	<b>Construction &amp; Demolition Waste (Non-Inert only)</b>					Recycling	n/a	12%	13%	14%	Composting	n/a	1%	1%	1%	Other Recovery	n/a	5%	5%	5%	Remainder to Landfill	n/a	2%	1%	0.5%	A Waste Strategy has been developed detailing how waste will be managed during construction and operation.
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The Places and Policies Local Plan (PPLP) 2020	Policy T2 Parking Standards, Residential Parking	8. Spaces are of sufficient size to comfortably host a larger car, and on-plot spaces have sufficient space for the movement of wheeled waste bins to a collection point (as required);	A Waste Strategy has been developed detailing design considerations and how waste will be managed during operation.																																																																										
	Para 15.22	Specific planning policies on waste are contained in the National Planning Policy for Waste (DCLG, 2014); all local planning authorities must have regard to this and the National Waste Management Plan for England (DEFRA, 2013). Although the district does not have any waste planning responsibility it must play its role in delivering the waste hierarchy. As Planning Practice Guidance states, this could include measures such as "including a planning condition promoting sustainable design of any proposed Development through the use of recycled products, recovery of on-site material and the provision of facilities for the storage and regular collection of waste."	A Waste Strategy has been developed detailing waste management opportunities during design, construction and operation.																																																																										
	Policy CC2: Sustainable design and construction	The development provides discretely designed and accessible storage for waste, recycling and composting	A Waste Strategy has been developed detailing how waste will be managed during operation.																																																																										

Document	Policy/Reference	Description relevant to Waste and Resource Management	Project Response
Folkestone and Hythe District Core Strategy Review (CSR) Adopted 2022	<p>Policy SS6: New Garden Settlement Development Requirements</p> <p>Policy SS8 (New Garden Settlement – Sustainability and Healthy New Town Principles)</p>	<p>The Core Strategy sets out the vision, broad principles and spatial approach for development across the district to 2031. The Places and Policies Local Plan 2020 and the Core Strategy Review (2022) and other Development Plan Documents take the lead from the Core Strategy to ensure that they are in conformity with its vision, spatial strategy and policies.</p> <p>The application shall be accompanied by a site-wide waste strategy that demonstrate how a significant reduction in household waste and an increase in recycling rates will be delivered in comparison with the average across the county. Internal and external storage for recycling and waste shall be provided for all homes and businesses.</p>	A Waste Strategy has been developed detailing how waste will be managed during construction and operation. This will be updated during Tier 2 and Tier 3 stages.

## Guidance

17.2.22 The following relevant guidance have been referred to in the assessment:

### ***Building Research Establishment (BRE) Site Methodology to Audit, Reduce and Target Waste (SMARTWaste)***

17.2.23 SMARTWaste (Ref. 17.7) is a flexible, online-reporting platform for all company types across all sectors that can help to manage and reduce waste outputs, impacts and costs. It is intended for clients, contractors, owners, operators and occupiers. SMARTWaste can be used to prepare, implement and monitor SWMPs. The SMARTWaste SWMPs describe how materials will be managed efficiently and disposed of legally during construction, explaining how the reuse and recycling of materials will be maximised. This involves estimating how much of each type of waste is likely to be produced and the proportion of this that will be reused or recycled on-site, or removed from the site for reuse, recycling, recovery or disposal.

### ***Contaminated Land: Applications in Real Environments (CL:AIRE) The Definition of Waste: Development Industry Code of Practice (CoP), 2011***

17.2.24 The CL:AIRE CoP (Ref. 17.12) provides best practice for the development industry to use when assessing if materials are classified as waste, or not, and determining when treated waste can cease to be waste for a particular use. It also describes an auditable system to demonstrate that the CL:AIRE CoP has been adhered to.

### ***Waste Resources and Action Programme (WRAP) NetWaste Tool***

17.2.25 WRAP (Ref. 17.13) is a charity that provides support and guidance to business, organisations and consumers to maximise the value of waste by increasing the quantity and quality of materials collected for reuse and recycling. WRAP's Net Waste Tool is a freely accessible online resource, that enables the generation of waste forecasts and prioritises waste reduction and recovery actions.

### ***Repealed SWMP Regulations 2008***

17.2.26 Under the SWMP Regulations 2008 (Ref. 17.14), all construction projects in England over £300,000 were required to have a SWMP in place. Even though this requirement (regulation) was repealed in 2013, many developments recognise the value of a SWMP as a useful resource efficiency tool and SWMPs continue to be prepared and implemented as best practices.

### ***Design Manual for Roads and Bridges (DMRB) LA 110 Material assets and waste (formerly IAN 153/11, August 2019)***

17.2.27 This DMRB guidance (Ref. 17.15) informs the methodology for assessments of waste and material resources effects associated with new development. DMRB LA110 provides guidance on matters such as study areas, receptor sensitivity and significance criteria. This guidance, published in August 2019, was set out in the Otterpool Park Scoping Report as being the key guide for the assessment methodology used for this chapter.

### ***Institute of Environmental Management and Assessment (IEMA) guide to: Materials and Waste in Environmental Impact Assessment – Guidance for a proportionate approach***

17.2.28 This IEMA publication on materials and waste in environmental impact assessment (Ref. 17.16) provides guidance on undertaking a material resources and waste assessments as part of an EIA. This document was published in April 2020 and is specifically intended for residential developments. It provides guidance for matters including receptor sensitivity, significance criteria and study areas and has informed the methodology used in this Chapter.

17.2.29 The methodology used in this Chapter for assessing the effects on material resources and waste, as a result of the proposed Development, primarily conforms with the DMRB LA110 (Ref. 17.15) guidance from August 2019. However, the more recent IEMA guidance published in April 2020 (Ref. 17.16) has also informed the methodology used in this Chapter.

### ***British Standard 5906:2005 Waste Management in Buildings. Code of Practice***

17.2.30 BS5906 sets out “a Code or Practice for methods of storage, collection, segregation for recycling and recover, and on-site treatment of waste from residential and non-residential buildings and healthcare establishments.”

17.2.31 The standard is applicable to new buildings, refurbishments and conversions of residential and non-residential buildings.

17.2.32 The Standard sets out:

- General principles of the design of facilities;
- Older persons and persons with disabilities;
- Systems of waste storage, handling, on-site treatment and collection;
- Choice of method of storage and collection of waste in various types of building;
- Waste storage chambers;
- Storage for bulky articles;
- Roads and approaches to buildings
- Collection of containers; and
- Hygiene.

## Consultation and Scoping

### Consultation

17.2.33 Table 17-2 provides a summary of the consultation undertaken for this chapter prior to and following the submission of the 2019 application (Y19/0257/ FH). The table summarises how the comments have been addressed in this chapter, where relevant.

Table 17-2 Summary of Consultation

Consultee/Contact/Date	Summary of Consultee Issue	Outcome
F&HDC Post Consultation Planning Report (11 July 2019)	The LPA wish for the Waste Strategy to include initiatives to reduce household waste and increase recycling rates.	<p>The Waste Strategy (ES Appendix 17.1) includes details of the following to incentivise waste reduction and increase recycling rates:</p> <ul style="list-style-type: none"> <li>• Waste targets: <ul style="list-style-type: none"> <li>○ Household waste per household – Reduce year on year</li> <li>○ Recycling and composting – at least 65% of waste; and</li> <li>○ Household waste to landfill – 1% or less.</li> </ul> </li> <li>• Voluntary Incentive Schemes; and</li> <li>• Innovative techniques for waste management within the development.</li> </ul> <p>The success of these measures will be limited by current F&amp;HDC collection methods and KCC disposal methods.</p>
	The application includes proposed redevelopment of the existing waste site at Otterpool Quarry and therefore Policy DM8 of the Waste and Minerals Local Plan is engaged.	As part of the planning submission, we have considered the cumulative effects with the planning permission for the Permitted Waste Facility in Section 17.5. Chapter 2: EIA Approach and Methodology provides further information on the status of the Permitted Waste Facility.
F&HDC Post Consultation Planning Report (11 July 2019) – Appendix D ES Review IRR	Provide the Waste Strategy as indicated in the list of appendices.	The Waste Strategy is provided as ES Appendix 17.1.

#### Consultations since 2019

This mainly includes addressing the following LPA and key consultee comments to the previously submitted Outline Planning Application Otterpool Park (Y19/2057/FH)

Consultee/Contact/Date	Summary of Consultee Issue	Outcome
F&HDC Waste Strategy review James Farrer 25 October 2021	Discussed and reviewed Waste Strategy targets and actions outlined in Table 2 of section 17.10 Delivering the strategy.	Agreement on targets and actions for the Tier 1 outline planning application
KCC Waste ES chapter & Waste Strategy review David Beaver/Charlotte Beck 16 November 2021	Discussed and reviewed Waste ES chapter and Waste Strategy comments, provided by KCC.  Discussed current/future WTS capacity and management within F&HDC.	Both this chapter and the Waste Strategy have been updated following discussions on constrained WTS capacity and logistical challenges.
KCC Otterpool Waste Management David Beaver/Charlotte Beck 3 February 2022	Update following meeting held on 16 November to discuss WTS requirements within F&HDC.	A discussion was undertaken with Otterpool LLP regarding the use of a WTS outside of the district, namely Ashford and Thanet.

## Scoping

- 17.2.34 A previous EIA Scoping Opinion was undertaken for the 2019 application, where relevant, the comments from this process have been incorporated within Table 17-3. For this amended application, a request for a Scoping Opinion was submitted to F&HDC in June 2020. This outlined the work that had been undertaken to date and sets out the proposed approach to the EIA. A Scoping Opinion was issued by F&HDC in July 2020. Table 17-3 provides a summary of the scoping opinion comments relevant to this chapter, and how they have been addressed. An assessment of materials resource management has been scoped out.
- 17.2.35 Additionally, a Scoping Addendum was submitted on 5 October 2021 to outline key changes to the application. These comprised additional land in the north-west corner of the site for provision of the waste water treatment works (WWTW), additional land for highway junction works at Newingreen Junction, minor amendments to clarify land ownership boundaries and a change in the assessment approach in relation to the future uses of Westenhanger Castle. A response was received from F&HDC on this Scoping Addendum as set out in Chapter 2: EIA Approach and Methodology. All relevant changes since the submission of the scoping report have been assessed in this ES.

Table 17-3 Summary of the Scoping Opinion

Consultee	Summary Scoping Opinion Response	Location in the ES
F&HDC	<p>The 2020 Scoping Report notes that there is a relatively long construction timeframe (25 years) and phasing is not known. A reasonable worst case scenario approach should be taken to construction phasing, taking into account early phase occupation as well as the order in which retail and community infrastructure is delivered, which will have implications particularly for noise, air quality, traffic, socioeconomics, health, and landscape and visual impact. We recommend a section or broader commentary explaining how reasonable worst case assessments have been derived and whether any sensitivity testing has been applied to allow for flexibility within any future uses.</p>	<p>Section 17.4</p> <p>Construction:</p> <p>A peak construction year of 2030 has been used.</p> <p>The total waste has been calculated for 10,000 homes in the Framework Masterplan, as a worst case. Where floor areas are not available (residential development) the average 3-bedroom floor area has been used which is considered a reasonable worst case.</p> <p>Operation:</p> <p>To capture the phased occupation over the construction programme, operational waste has been calculated at three time periods; the first year of construction (2024), the mid-year of construction (2034) and the final year of construction (2044).</p>
F&HDC	<p>A Mineral Assessment has been prepared which notes that a large impact is anticipated, although the economic viability of extraction at the site is limited. This was presented with the submission of the 2018 Scoping Report. KCC's Post Consultation Planning Report stated that 'the submitted Mineral Assessment evidence justifies this conclusion and an exemption from the presumption to safeguard the economic minerals present on the site is acceptable.' As such, further assessment of the impacts on mineral safeguarded areas has been scoped out. This is agreed, however the findings of the Mineral Assessment should be summarised in the Waste and Resources Management chapter to demonstrate no significant effects would occur and the report should be appended to the ES.</p> <p>The Mineral Assessment was updated in March 2022.</p>	<p>Findings are summarised in Section 17.5.</p>
F&HDC	<p>The site for the materials recycling facility and anaerobic digestion plant at Otterpool Quarry (granted planning permission by KCC under reference SH/08/124) lies within the site of the proposed Development. The Applicant has advised as part of the revised planning submission they will justify the loss of the facility. The County Council previously recommended that Policy SS8 of the Core Strategy Review should make specific reference to the need for a planning application to be submitted with an Infrastructure Assessment (IA). This advice was given to ensure the retention of the safeguarded facility, to assess the acceptability of the proposed Development in this part of the</p>	<p>Section 17.5 details that there is insufficient WTS capacity (bulking) within F&amp;HDC to manage forecast waste from the development. There is capacity and infrastructure within Kent to manage the final disposal of waste arisings forecast, as per the Kent Waste Needs Assessment</p>

Consultee	Summary Scoping Opinion Response	Location in the ES
	strategic allocation, and to provide an assessment against the exemptions to safeguard the facility (as set out in adopted Policy DM 8: Safeguarding Minerals Management of the Kent Mineral and Waste Local Plan (KMWLP) 2013-2030. The ES should also summarise the findings of this assessment. This is to demonstrate that the proposed Development would not have an adverse effect on waste management capacity due to the loss of this facility.	2017 without the Permitted Waste Facility, a MRF and Anaerobic Digestion (AD) plant. However, it is acknowledged that the 2017 (Kent Waste Needs) Assessment is out of date and doesn't include the Otterpool development or other recent committed developments.
F&HDC	The methodology for this chapter has primarily been informed by DMRB LA110 Material assets and waste (2019). The chapter should also be informed by the IEMA Guide to Materials and Waste in Environmental Impact Assessment (IEMA, 2020).	Included in methodology Section 17.2.
F&HDC	Cross reference should be made to parts of the Climate Change assessment relevant to energy use and efficiency, and other supporting documents where available, to show how resource use and waste will be reduced.	Included in Section 17.5.
F&HDC	A cumulative assessment is scoped out for materials and waste on the ground that meaningful data would not be available. This is not agreed – schemes requiring EIA will have provided some information about materials and wastes and a cumulative effects assessment using professional judgement should be possible. This assessment for each cumulative scheme considered provide information about the availability, quality and certainty of materials and waste data, the development's likely start date and construction duration.	Cumulative section included in 17.6.

17.2.36 Temple, on behalf of F&HDC, undertook a review of the Draft ES in December 2021. There were no specific comments on this chapter.

## The Study Area

17.2.37 Both the DMRB LA 110 (Ref. 17.15) and IEMA guidance (Ref. 17.16) recommend two geographically different study areas:

- The construction footprint or project boundary of the proposed Development (site level), and
- Sufficient area to include all waste infrastructure that is suitable for accepting waste arisings generated by the proposed Development (local/regional/national level).

17.2.38 The study area approach used for the waste assessments, as set out in Table 17-4, aligns with both guidance documents.



Table 17-4 Study area approach for waste assessments

Waste	Study area			
	Site (Framework Masterplan boundary)	Local (administrative boundaries of KCC)	Regional	National
Demolition	✓	✓	X	X
Construction	✓	✓	(✓)*	X
Operation	✓	✓	X	X
Cumulative	X	✓	✓	X

\*as last option e.g. to utilise a facility that has higher recycling rate or diverts waste from landfill.

## Methodology for Establishing Baseline Conditions

### Establishing the Existing Baseline

17.2.39 A desk study was undertaken to establish the existing waste generation rates and disposal facilities within Kent using waste statistics obtained from the following sources:

- DEFRA Best Value Performance Indicators ([www.defra.gov.uk](http://www.defra.gov.uk));
- SMARTWaste ([www.smartwaste.co.uk](http://www.smartwaste.co.uk));
- Capital Waste Facts ([www.capitalwastefacts.com](http://www.capitalwastefacts.com));
- The nature and scale of waste produced by schools in England (WRAP, 2008);
- The Composition of Mixed Waste (WRAP, 2012);
- 13th Annual Minerals and Waste Monitoring Report 2018-2019 (Kent County Council, 2020)
- ENV18 – Local authority collected waste: annual results (DEFRA);
- Environmental Permitting Regulations (EPR) Dataset (Environment Agency, 2019);
- Remaining Landfill Capacity Datasets (Environment Agency, 2019);
- Kent Waste Needs Assessment (KCC, 2017);
- Kent Waste Disposal Strategy 2017- 2035 (KCC, 2016)
- Assessment report on commercial and industrial C&I waste (KCC, 2017);
- Kent Mineral and Waste Local Plan (KMWLP) 2013-2030 (Adopted July 2020 – as amended by Early Partial Review)
- Draft Waste and Minerals Plan (Regulation 18 consultation), 2022;
- Folkestone and Hythe District Core Strategy Review (CSR) Adopted 2022;
- Folkestone and Hythe District Council Places and Policies Local Plan (2020); and
- KCC Website.

### Forecasting the Future Baseline

17.2.40 In addition to the above, British Standard BS5906:2005 has been used to calculate the future baseline operational waste arisings. Future arisings have been forecast at three time periods; the first year of construction (2024), the mid-year of construction (2034) and the final year of construction (2044).

17.2.41 The proposed Development is expected to be constructed over an approximately 19-year period from 2023 to 2042. The first year of occupation is anticipated to be 2024. The Otterpool Park Framework Masterplan is expected to provide a further 1,500 homes anticipated to be completed approximately 2 years after the completion of the proposed Development, in 2044. This chapter assesses the forecast waste arisings from the Framework Masterplan, as a worst-case scenario.

17.2.42 In line with the requirements of DMRB LA 110 Material assets and waste (Highways England, 2019), the future baseline forecasted the local and regional waste capacity (including landfill and treatment and recovery facilities) in the absence of the Project.

## Defining the sensitivity of resource

17.2.43 In relation to waste, receptors relate to those persons/facilities that might be affected by the inappropriate and unsustainable management of waste. The key receptors for the materials and waste topic are:

- Materials and aggregates used in the proposed works; and
- The waste management infrastructure (including landfill void capacity) within Kent which is likely to be used to manage the majority of the waste generated through the proposed works.

17.2.44 The sensitivity of receptors has been calculated as per IEMA Method W1 Void capacity guidance, for void capacity only. There is no specific methodology for calculating sensitivity for the capacity of other waste facilities. Therefore, the generic sensitivity of receptor criteria, as set out in Table 17-5, has been adapted from DMRB LA104. (Ref. 17.23)

Table 17-5 Defining the sensitivity of receptor

Value (sensitivity of receptor/resource)	Typical Description
High	High importance and rarity, national scale, and limited potential for substitution.
Medium	Medium or high importance and rarity, regional scale, limited potential for substitution.
Low	Low or medium importance and rarity, local scale.

17.2.45 This chapter does not consider nuisance impacts to human receptors, as these are covered in the following chapters; Chapter 6: Air Quality, Chapter 12: Landscape and Visual, Chapter 13: Noise and Chapter 16: Transport.

## Methodology for Assessing Impacts

### Impact Characterisation

17.2.46 The following assessment methodologies have been informed by DMRB LA104 Environmental Assessment and Monitoring, DMRB LA110 Material assets and waste (2019) and IEMA Guide to Materials and Waste in Environmental Impact Assessment (IEMA, 2020).

### Demolition

17.2.47 An estimate of the amount of waste generated from demolition clearing, site preparation and excavation on the site has been made in consultation with the project engineers and a quantity surveyor.

17.2.48 In estimating the demolition and excavation waste, the following has been considered:

- The extent of existing buildings and building materials;
- The extent of excavated required;

- The appropriate level of remediation required on-site;
- The potential for re-use on the site; and
- Planning resource for sustainable communities: waste management and infrastructure-Code of Practice.

17.2.49 The potential for waste arisings as a result of remediation (if required) has not been considered at this stage as this would be informed by site investigation works, which at the time of writing were unavailable.

### Construction

17.2.50 Consideration has been given to the guidance and indicators developed by IEMA and the Building Research Establishment (BRE). These performance indicators and benchmarks have been developed based on data entered into the SMARTWaste system, which relies on companies supplying waste data. The indicator relevant to this study is the Environmental Performance Indicator (EPI): m<sup>3</sup> of waste/100m<sup>2</sup> of floor area.

17.2.51 The peak construction year (2030) has been used to assess a worst-case scenario with regard to waste arisings.

### Operation

17.2.52 British Standard BS5906:2005 is a code of practice for methods of storage, collection, segregation for recycling and recovery and on-site treatment of residual waste, to ensure the integration of the principles of the waste hierarchy into new developments. The calculation methodologies set out within the Standard have been used to estimate the likely waste generated by the proposed Development once completed, fully occupied and operational.

17.2.53 To capture the phased occupation over the construction programme, operational waste has been calculated at three time periods; the first year of construction (2024), the mid-year of construction (2034) and the final year of construction (2044).

17.2.54 The proposed Development's anticipated future waste arisings have been assessed against this current baseline. Table 17-6 provides a summary of the calculation methodologies set out in BS 5906 that are applicable to the proposed Development.

Table 17-6 Summary of calculation methodologies from BS 5906

BS5906 Waste Arisings for the proposed Development	
Type of Building/Use	Calculation for weekly waste arisings
Domestic (residential)	Number of dwellings x {(volume arising per bedroom [70L] x average number of bedrooms) +30}
Office	Volume arising per employee [50L] x number of employees
Shopping Centre*	Volume per m2 of sales area [10L] x floor area [m2]
4/5 star hotel	Volume per bedroom [350L] x number of bedrooms
Entertainment complex/ leisure centre	Volume per m2 of floor area [100L] x floor area [m2]
Industrial unit	Volume per m2 of floor area [5L] x floor area [m2]

L = Litre; m = metre; m2 = square metre

\* There is no directly applicable 'retail' use class in BS5906. It has been assumed that 'Shopping Centre' is the nearest classification.

17.2.55 The standard also indicates that suitable waste management facilities should provide adequate storage and, where appropriate, sufficient space to allow for on-site treatment of commercial and / or household waste and recyclable waste. In addition, kerbside recycling boxes, wheeled bins or bags should be provided to the householder to encourage the segregation and recycling of waste from home. British Standard BS 5906:2005 sets out methods of storage, collection, segregation for recycling and recovery, and on-site treatment of residual waste, to ensure the integration of the Waste Hierarchy principles. BS 5906 also sets out calculations to estimate the likely waste generated by a development, and consequently the storage requirements.

17.2.56 The recommended storage area to be allocated for recyclable waste should ideally be 30% of the total waste output by weight, or 50% by volume, according to BS 5906:2005.

17.2.57 The use of compaction should be considered for larger developments, those greater than 100 domestic units, also according to BS 5906:2005.

#### Cumulative

17.2.58 The SmartWaste Environmental Performance Indicator (EPI) of m<sup>3</sup> of waste/100m<sup>2</sup> of floor area has been used to calculate the forecast construction waste associated with the committed developments.

#### Magnitude of impact criteria

17.2.59 The magnitude of impact has been assigned using the above methodology and the generic criteria adapted from DMRB LA104 (Ref. 17.23), as reproduced in Table 17-7.

Table 17-7 Defining the magnitude of impact

Magnitude of impact (change)		Typical description
High	Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
	Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.
Medium	Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.
	Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Low	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
	Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring
Negligible	Adverse	Very minor loss or detrimental alteration to one or more characteristics, features or elements.
	Beneficial	Very minor benefit to or positive addition of one or more characteristics, features or elements.
Neutral		No loss or alteration of characteristics, features or elements; no observable impact in either direction.

## Assessing Significance of Effect

17.2.60 With the exception of landfill void capacity (DMRB & IEMA), there is no published or formalised technical guidance or criteria available in regard to the assessment of waste impacts and effects. Professional judgement and experience have therefore been relied upon in assessing the significance of likely effects from the proposed Development.

17.2.61 At the time of publication, a single and unified method for assessing the magnitude of impact from the generation and disposal of waste is felt to be too restrictive by comparison with the number and variety of development types potentially subject to environmental assessment.

17.2.62 Professional judgement has been applied to select and justify the method that best suits the scale and nature of the development under consideration. For this assessment, IEMA's Method W1 Void Capacity has been used in conjunction with an assessment of wider waste facilities. It is felt this gives a robust detailed holistic methodology.

17.2.63 All developments would generate waste. However, the management of waste can significantly alter its potential environmental impact. As such, this assessment considers whether the design of the waste management facilities of the proposed Development are likely to contribute to, or hinder, the achievement of statutory targets and accord with the principles of sustainable waste management.

17.2.64 Significance have been evaluated based on the following criteria:

- The type of effect, i.e., beneficial, adverse, neutral or unknown;
- The probability of the event occurring, i.e., certain, likely or unlikely;
- The geographical context of prevailing policy, i.e., international, national, regional or local; and
- The magnitude of the impact, quantified, if possible, otherwise substantial, moderate, minor or negligible.

17.2.65 Table 17-8 sets out the significance of effect matrix which has been applied. Effects that are classified as major or moderate adverse would be considered significant.

Table 17-8 Significance of effect matrix

		Sensitivity of Receptor			
		High	Medium	Low	
Impact Magnitude	High	Major adverse/ beneficial	Major adverse/ beneficial	Moderate adverse/ beneficial	
	Medium	Moderate adverse/ beneficial	Moderate adverse/ beneficial	Minor adverse/ beneficial	
	Low	Moderate adverse/ beneficial	Minor adverse/ beneficial	Negligible	
	Negligible/ Neutral	Minor adverse/ beneficial	Negligible	Negligible	

17.2.66 Table 17-19 sets out the significance criteria that have been used in this assessment.

Table 17-9 Significance criteria

Significance	Definition
Major adverse	Substantial increase in waste generation comparative to existing regional/local generation rates, resulting in the need for the expansion of regional collection or waste disposal sites and hindering the achievement of regional/local recycling/re-use targets.
Moderate adverse	Noticeable increase in waste generation comparative to existing regional/local generation volumes, resulting in the need for additional local disposal sites or transfer facilities and hindering the achievement of regional/local recycling/re-use targets.
Minor adverse	Barely perceptible increase in waste generation, comparative to existing regional/local generation volumes, a minor decrease in local recycling/re-use rates and/or a noticeable increase in waste generation at a site level.
Negligible	No discernible effect on waste generation, disposal capacity and recycling/re-use targets.
Minor beneficial	Barely perceptible decrease in waste generation comparative to existing regional/local generation volumes, a small decrease in disposal activity comparative to existing regional/local rates, a small increase in recycling and re-use rates comparative to existing regional/local rates and/or a noticeable decrease in waste generation at a site level.
Moderate beneficial	Noticeable improvement in waste generation e.g. tangible decrease in disposal activity comparative to existing regional/local rates and/or tangible increase in recycling/re-use in accordance with regional/local waste policy objectives or targets.
Major beneficial	Substantial improvements in waste generation, e.g. substantial decrease in disposal activity comparative to existing regional/local rates and/ or a substantial increase in recycling and re-use beyond regional/local waste policy objectives or targets.

17.2.67 The above criteria have been used to categorise the significance of each effect once mitigation measures have been taken into account. The assessment relies upon professional judgement rather than any scoring mechanism.

## Limitations and Assumptions

### Limitations

17.2.68 There are no published or formalised significance criteria relating to the assessment of waste impacts. Professional judgement has, therefore, been drawn upon to assess the significance of the proposed Development’s residual environmental effects.

17.2.69 The assessment of impacts is carried out against waste baseline conditions. There are a number of limitations related to the baseline data relied upon in the assessment, as detailed within the section commentary.

17.2.70 Forecast data for CD&E waste generation from the proposed Development has been estimated based upon proposed land use and environmental performance indicators from the BRE since detailed waste generation data is not available.

- 17.2.71 Assumptions have been made based upon the nature of uses that would occupy the proposed commercial and industrial (C&I) uses in compliance with the Waste Management in Buildings – Code of practice BS5906:2005. This is considered to provide a reliable basis for assessment of the conditions at the proposed Development.
- 17.2.72 Forecasts of household waste arisings associated with the operational phase of the proposed Development have been estimated based upon Defra's ENV18 – Local authority collected waste: annual results tables (2020/21) (Ref. 17.17).
- 17.2.73 Forecasts of waste arisings associated with the operational phase of the proposed schools within the proposed Development have been based on the compositional waste analysis study undertaken by WRAP in 2008 (Ref. 17.18).
- 17.2.74 Forecasts of waste arisings associated with the operational phase of healthcare facilities as part of the proposed Development have been based on indicators from the WRAP report on the composition and amount of mixed waste disposed of by Scottish Health and Social Care, Education, Motor, Wholesale and Retail Sectors (Ref. 17.19) due to the lack of specific indicators for England.
- 17.2.75 Forecasts of the traffic movements associated with transporting material resources and waste to and from the site have been based on standard dimensions of heavy goods vehicles (HGVs) and use dwelling numbers and non-dwelling gross internal area (GIA) figures.
- 17.2.76 C&I waste forecast data has been reported as total waste because individual benchmarks for recycling and residual waste were not available. C&I (non-household) waste has been calculated to increase at 1% annually.
- 17.2.77 There are numerous committed schemes planned for in the surrounding area that would have a cumulative impact throughout the CD&E and operational phases of the proposed Development. As such, a worst-case scenario cumulative assessment has been undertaken which may result in an overestimation of the waste arisings and materials use of surrounding developments. This would likely result in the prediction of more significant effects than would occur.

### Assumptions

- 17.2.78 The amount of waste produced during the CD&E phase would be affected by the specific types and methods of construction proposed by the works contractor(s). Given the outline nature of the proposals, assumptions have been made regarding types and methods of construction in order to estimate volumes of waste arising from the CD&E phases.
- 17.2.79 In cases where waste has been calculated as a volume, WRAP's waste conversion factors (Ref. 17.13) have been applied to convert volume to weight.
- 17.2.80 In the absence of suitable recycling and reuse rate data for C&I waste in the region, current recycling and reuse rates for domestic properties in the KCC area have been used to forecast the non-recyclable waste that would be generated by proposed C&I uses. It is anticipated that proposed C&I properties of the proposed Development would meet and exceed the existing domestic recycling and reuse rates, which currently stand at 46% for KCC and 48% for F&HDC.

## 17.3 Baseline

### Existing Baseline

#### Existing site waste generation

17.3.1 Current land uses on the site comprise mainly agricultural land, limited retail, and a small area of light industrial use to the south, although it is understood at present that industrial operations are limited being either at a reduced capacity or not in use. Accordingly, this assessment is based on zero waste generation from the site (which represents a worst case).

#### Existing Local and Regional Waste Generation

##### **Municipal waste**

17.3.2 There are three waste related National Indicators set up to measure performance of local authorities. These are set annually for all local authorities in England and comprise:

- NI 191 – Residual waste per household;
- NI 192 – Percentage of household waste sent for reuse, recycling or composting; and
- NI 193 – Percentage of Municipal Solid Waste sent to landfill.

17.3.3 Table 17-10 to Table 17-12 below, gives the NI performance data for KCC and F&HDC.

Table 17-10 NI 191 Performance Data

Planning Authority	Performance against NI 191 2017/18 (kg)	Performance against NI 191 2018/19 (kg)	Performance against NI 191 2019/20 (kg)	Performance against NI 191 2020/21 (kg)
KCC	541	535	529	549
F&HDC	531	374	401	437

17.3.4 The KCC target for 2020/21 was 476 kg per household.

Table 17-11 NI 192 Performance Data

Planning Authority	Performance against NI 192 2017/18 (%)	Performance against NI 192 2018/19 (%)	Performance against NI 192 2019/20 (%)	Performance against NI 192 2020/21 (%)
KCC	46.7	47.2	46.7	44
F&HDC	37.3	48.0	44.2	48.1

17.3.5 The KCC household waste recycling target for 2020/21 was 50%.

Table 17-12 NI 193 Performance Data

Planning Authority	Performance against NI 193 2017/18 (%)	Performance against NI 193 2018/19 (%)	Performance against NI 193 2019/20 (%)	Performance against NI 193 2020/21 (%)
KCC	1.1	1.7	1.5	2.1
F&HDC	N/A	N/A	N/A	N/A



17.3.6 The KCC municipal waste to landfill target for 2020/21 was below 2% (Ref. 17.24)

17.3.7 In terms of residual waste per household (NI191), for 2020/21 F&HDC is significantly below the regional South-East average of 529 kg/household, whilst KCC is over. F&HDC is also significantly below the England average of 553 kg/household, whilst KCC marginally under.

17.3.8 For percentage of household waste sent for reuse, recycling or composting (NI192) both KCC and F&HDC are currently below the 2020/21 National target of 50%. For 2020/21, F&HDC is above both the SE average of 46.1% and the England average of 42.3%. Whilst KCC is over above the England average.

17.3.9 In terms of percentage of municipal waste sent to landfill (NI193), KCC is significantly lower than the 2020/21 SE average of 3.9%, and the England average of 7.8%.

**Construction waste**

17.3.10 There is little reliable data about construction waste in Kent. For the purposes of this study the WRAP waste tool composition has been used (see Figure 17-1 below). This shows the typical make up of construction waste in Kent.

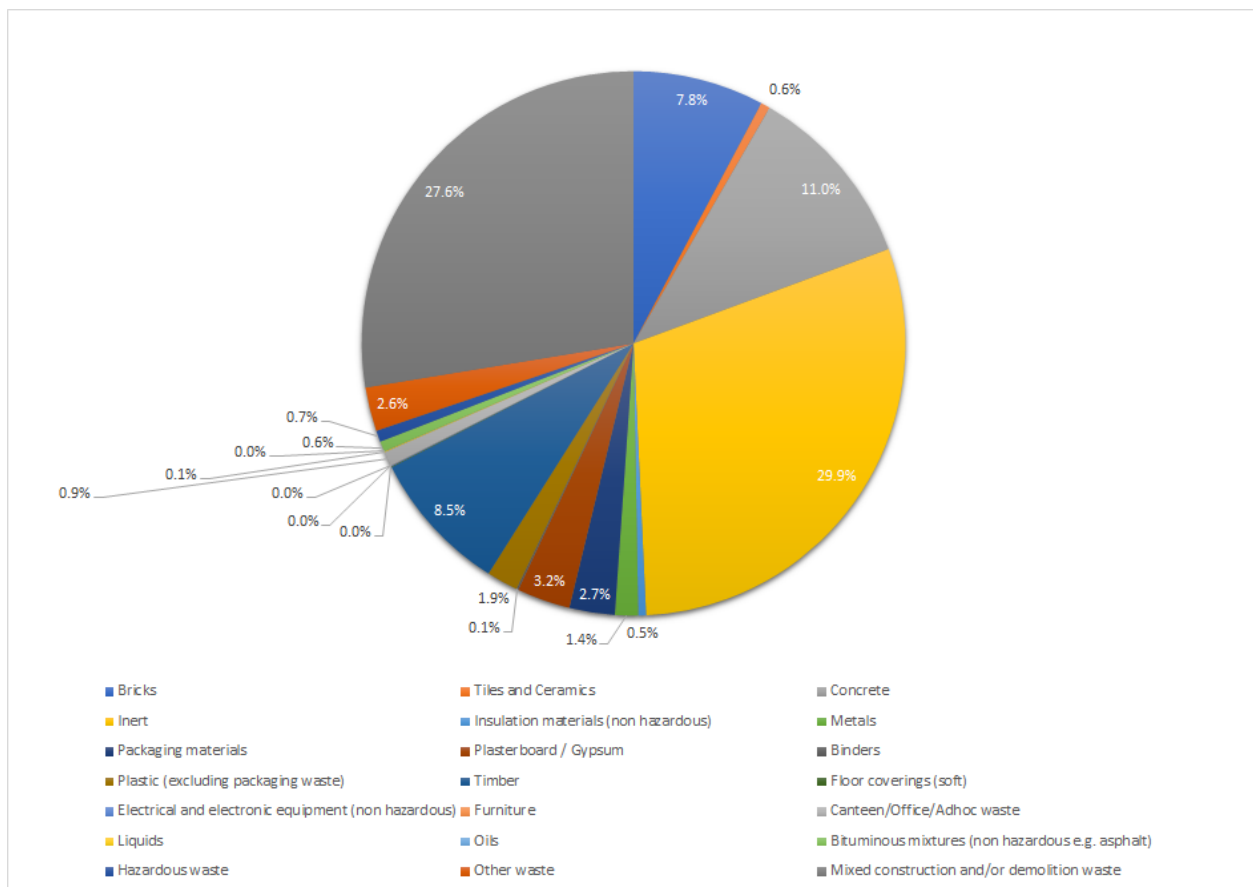


Figure 17-1 Typical make up of construction waste in Kent

### **Commercial and Industrial waste**

- 17.3.11 There is little reliable data about Commercial and Industrial waste in Kent. With this in mind, the forecasts for the Kent Minerals and Waste Development Framework (MWDF) uses the 2006 estimate of 1,206,000 tonnes. The C&I topic report (May 2011) suggested that if only 917,000 tonnes of C&I waste was sent to licenced facilities in 2008, then at least 300,000 tonnes were sent to recycling and recovery facilities that did not need a waste permit. The report suggested that there is already more than sufficient capacity to divert 86% of C&I waste from landfill.
- 17.3.12 There was a noticeable decrease in C&I waste generation in England between 2002/3 and 2009 with a decrease of 29% from 67.9 million tonnes in 2002/3 to 48 million in 2009 (DEFRA).
- 17.3.13 According to the Kent State of the Environment report 2020, it is anticipated that commercial and industrial waste will continue to increase from 1.1 million tonnes (2016) to 1.3 million in 2031.

### **Hazardous waste**

- 17.3.14 There are two hazardous waste landfill sites in Kent. Pinden Quarry (near Dartford) which accepts asbestos from a wide catchment and Norwood Landfill on Sheppey which accepts flue ash from Allington. It is worth noting, that only a small proportion of the hazardous waste managed in Kent originated in the county.

### **KCC Waste facilities**

- 17.3.15 In 2020/21, 678,987 tonnes of waste were collected by Kent Waste Collection Authorities (WCA) for disposal by KCC. Of this, 673,331 tonnes was collected household waste.
- 17.3.16 Of this 44% was recycled, reused or composted, 53.9% was sent for Energy from Waste (EfW), and the remaining 2.1% was sent to landfill. It is to be noted that the percentage sent to landfill has decreased dramatically from 30% in 2009/10 to 2.1% in 2020/21. This is in part due to a new contract for dealing with materials that would have previously been sent to landfill. Kent is one of the top performing local authorities for percentage of household waste diverted from landfill.
- 17.3.17 The 2019 Remaining Landfill Capacity dataset shows that there are 13 landfills in Kent, with 8,000,000m<sup>3</sup> void capacity combined. The closest landfill to the site; Shelford Landfill in Canterbury has 1,734,833m<sup>3</sup> of void capacity.
- 17.3.18 As detailed in the Kent Waste Disposal Strategy 2017-2035, KCC currently operates a network of 18 HWRCs providing facilities for re-use, recycling and safe disposal, for a range of material streams delivered by Kent residents. These are located at Ashford, Canterbury, , Dartford, Deal, Dover, Faversham, Folkestone, Herne Bay, Maidstone, Margate, New Romney, Pepperhill, Richborough, Sevenoaks, Sheerness, Sittingbourne, Swanley and Tunbridge Wells. (Kent County Council, 2018). The Folkestone and New Romney sites are located within the F&HDC boundaries.
- 17.3.19 Co-located at 5 of these sites are Waste Transfer Station (WTS) for the deposit and bulk loading of waste materials collected and delivered by the District and Borough councils of Kent, as well as trade waste from businesses. There are also 2 transfer stations at Allington.
- 17.3.20 There are no council operated WTS in Folkestone & Hythe. Currently, a converted 1930's tank shed, located in Ross Way is being used to bulk the district's collected recyclables, however, this is due to close imminently .
- 17.3.21 The remainder of F&HDC collected waste is going to a WTS in Ashford for bulk loading. KCC pay a premium to send F&HDC's waste into Ashford.

17.3.22 The recycling rate for waste delivered to Kent HWRCs by residents, is 61.4% (2019/20) (Ref. 17.21). Waste that is not reused, recycled or composted is treated at Allington EfW facility near Maidstone. As detailed above, a very small percentage goes to landfill.

17.3.23 The closest recycling centre to the proposed Development is Folkestone Household waste recycling centre, CT20 3UJ, which is approximately 10 miles away.

17.3.24 A Permitted Waste Facility (PWF), comprise a MRF with WTS and AD plant, was granted planning permission by KCC (SH/08/124) on a site within the proposed Development, at Otterpool Quarry. The planning application has assessed the need for the joint facility and this chapter illustrates that there is insufficient WTS provision in Folkestone & Hythe to accommodate the proposed Development's forecast waste. Therefore, should the Permitted Waste Facility not come forward there will be insufficient local transfer capacity to manage the waste generated. The above planning permission provides provision for a WTS onsite, the findings of this assessment show that in the absence of any wider provision of a WTS within F&H this permitted waste facility is required to address both current and future waste generation in Kent.

17.3.25 Table 17-13 below details the waste facilities within Kent that accept CD&E waste and their annual capacity in tonnes.

Table 17-13 Non-exhaustive list of waste management facilities accepting CD&E waste (Ref 17.21)

Facility Name	Facility Type	Permit Number	Post Code	Distance from site (km)	Annual Tonnage
Ridham Waste Transfer Station	Permitted Waste Facility	EA/EPR/PB3931RK/A001	ME9 8SR	35.46	800,800
Hermitage Quarry	Physical Treatment Facility	EA/EPR/XP3898HM/V008	ME16 9NT	41.01	585,000
Richborough Park	Household and CI Waste Transfer Station	EA/EPR/ZP3292EL/A001	CT13 9NW	31.54	450,000
Richborough Hall Waste Transfer and Recycling Centre	Household and CI Waste Transfer Station	EA/EPR/MP3898HW/V003	CT13 9NW	31.03	380,000
Berth 6, Chatham Dockyard	Physical Treatment Facility	EA/EPR/AB3007XN/V003	ME4 4SR	45.73	280,000
Pelican Reach	Permitted Waste Facility	EA/EPR/TP3495HH/V007	ME2 4NF	46.39	261,975
Waste Transfer Station at Ridham Dock	Transfer Station taking Non-Biodegradable Wastes	EA/EPR/CB3704FX/A001	ME9 8SR	35.43	250,000
Medway Materials Recycling Facility and Waste Transfer Station	Household and CI Waste Transfer Station	EA/EPR/BP3396LD/A001	ME2 4DZ	47.11	249,999
Brett Aggregates Ltd	Physical Treatment Facility	EA/EPR/FB3731RA/A001	ME9 8SR	35.10	249,999
Aylesford Recycling Facility	Household and CI Waste Transfer Station	EA/EPR/DB3104KP/V003	ME20 7PA	43.83	210,000

Facility Name	Facility Type	Permit Number	Post Code	Distance from site (km)	Annual Tonnage
<b>Total</b>					<b>3,717,773</b>

### Existing Waste and Recycling Services

17.3.26 Weekly and fortnightly collection arrangements are provided by F&HDC. This serves 52,800 households (2019). Table 17-14 below summarises waste streams that are collected.

Table 17-14 Waste collection arrangements for FHDC households (Folkestone & Hythe District Council, 2018)

Waste Stream	Waste Type	Collection arrangements
Co-mingled materials	Clean cans, tins, glass jars and bottles, empty aerosol cans, clean tin foil, plastic containers, tetra-packs	Wheeled bin with purple lid or purple box – collected fortnightly with paper and card
Paper and card	Clean paper and cardboard	Black box – collected fortnightly with co-mingled dry recyclables
Residual waste	Non-recyclable household rubbish	Wheeled green bin – collected fortnightly
Organics	Food waste (raw or cooked)	Green caddy – collected weekly with co-mingled waste or residual waste
Garden	Everyday garden waste (e.g. grass cuttings, leaves, and cut flowers)	Collected fortnightly (subscription service)
Batteries	Domestic batteries	Self-seal recycling bags (provided by F&HDC) or clear food bag – collected fortnightly with co-mingled waste
Bulky waste	Non-commercial white goods (e.g. fridges, freezers and washing machines), cookers, lawnmowers, furniture (including bed frames and mattresses), carpets, TVs and small electrical items (DVD players, toasters and kettles)	Collection on request (chargeable service)
Other	Computer parts and other electrical equipment Clothes and other textiles Polystyrene foam Light bulbs, mirrors and Pyrex glass	Deposit at local household recycling centre

17.3.27 New and converted multi-occupancy dwellings must have sufficient capacity to allow for all materials to be stored for a minimum of eight days (to allow for public holidays). Table 17-15 sets out the minimum capacity required for each waste stream.

Table 17-15 Minimum waste capacity by waste stream

Number of bedrooms	Minimum Capacity per week (litres)	
	Waste	Dry Recyclables (co-mingled)
1	120	60
2	140	60
3-4	180	80
5-6	240	100

17.3.28 Wheeled bins must be of a standard construction, compliant with the British Standard for Mobile Waste Containers, BS EN 840.

17.3.29 At present, KCC considers the following types of system as acceptable for the storage of waste and recyclables at new developments:

- Wheeled Eurobins from 140 to 1,280 litres capacity; and
- Wheeled Chamberlain containers.

#### Existing sensitive receptors

17.3.30 In relation to waste, sensitive receptors relate to those persons/facilities that might be affected by the inappropriate and unsustainable management of waste. This might include for example:

- The available capacity of WTS and waste treatment sites used by F&HDC and KCC respectively.
- The available landfill capacity of sites used by waste management contractors (when used). Currently, in the case of Folkestone & Hythe, this would include the EfW facility at Allington, the MRF at Ridham and the existing landfill in Canterbury (Shelford) and Sevenoaks (Greatness); and
- Local recycling points which may not have the capacity to accept increased volumes of recyclable waste.

#### Future baseline

17.3.31 The future baseline is the situation that would prevail should a proposed Development not proceed. The future baseline is further defined by the assessment scenario that the topic adheres to. The future baseline for Waste and Resource Management has identified the following.

17.3.32 The Kent Waste Needs Assessment 2017<sup>1</sup> predicts the increase in waste generation within Kent:

- Municipal waste arisings are predicted to rise from 775,800 in 2021 to 869,800 in 2031 (20% increase);
- Commercial and industrial waste is predicted to rise from 1,274,000 tonnes in 2021 to 1,407,000 tonnes in 2035 (9.45% increase).
  - This equates to roughly, a 10% increase in recycling/composting, a 10% increase in recovery and a 12% increase in landfill;
- CD&E is predicted to stay the same, at 2,600,000 tonnes per year between 2021 and 2035. However, it is predicted that there will be an increase of 6.7% in recovery, and a 16.7% decrease in waste to landfill. The percentage recycled will stay constant.

17.3.33 In addition, Kent County Council's Minerals and Waste Local Plan 2013-30 Proposed Refresh (Regulation 18 Consultation) (December 2021) outlines future targets for C&I and non-inert C&D waste, as per Table 17-16.

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<sup>1</sup> It must be noted that the Kent Waste Needs Assessment 2017 was written in 2016, and therefore it is unlikely that the Otterpool Development and other committed developments, that are relevant now were included in growth forecasts.

Table 17-16 C&I and C&D waste targets for period 2021 – 2031

Waste Type	Management Method	2021/22	2025/26	2030/31
C&I	Recycling/composting	50%	55%	60%
	Other Recovery	35%	32.5%	30%
	Remainder to landfill	15%	12.5%	10%
C&D waste (non-inert)	Recycling	12%	13%	14%
	Composting	1%	1%	1%
	Other Recovery	5%	5%	5%
	Remainder to Landfill	2%	1%	0.5%

17.3.34 Local CD&E waste (inert and non-hazardous) going to landfill is thought to be around 15% and expected to reduce over the next 10 years. As per IEMA W1 Void Capacity guidance, landfill void capacity is deemed of a low sensitivity.

17.3.35 Local C&I waste going to landfill in Kent is currently unknown but is expected to remain constant over the next 10 years. As per IEMA W1 Void Capacity guidance, landfill void capacity is deemed of a low sensitivity.

17.3.36 Local hazardous waste going to landfill is thought to be about 4% and expected to be consistent over the next 10 years. As per IEMA W1 Void Capacity guidance, landfill void capacity is of a low sensitivity.

#### Sensitive receptors

17.3.37 The proposed Development is located within a Minerals Safeguarding area, however it is not allocated as a Preferred or Reserve site in the adopted Kent Minerals and Waste Local Plan 2016. As per the Minerals Assessment 2022 (ES Appendix 17.2), four deposits have been identified within the site. Two of which are of insufficient extent or quality, the Sandgate Formation, and sub-alluvial river terrace. The safeguarded Hythe Formation and Folkestone Formation, whilst considered as potential viable mineral deposits, have been deemed economically unviable for extraction at the site. This is in part due to lack of local and regional demand, and to the timescales appropriate to prior extraction.

17.3.38 Consequently, the proposed Development should be exempt from the safeguarding criteria, and therefore further assessment of the impacts on mineral safeguarded areas has been scoped out.

## 17.4 Design and Mitigation

17.4.1 The following section sets out:

- The embedded design measures, including good practice approaches, relied on in this assessment; and
- The potential significant effects remaining after the application of embedded design measures and good practice approaches, and any additional mitigation required to address these potential significant effects.

- 17.4.2 The potential significant effects prior to additional mitigation are identified in the Assessment Summary table.
- 17.4.3 Environmental considerations have influenced the proposed Development throughout the design development process, from early options assessment through to refinement of the Project design. An iterative process has facilitated design updates and improvements, informed by environmental assessment and input from the Project design teams, stakeholders and public consultation.
- 17.4.4 Impacts would be reduced by measures embedded into the design of the development, as well as by additional mitigation, and together these measures would act to avoid, reduce and mitigate effects. The measures have been summarised by whether they are embedded design measures, which are secured through the documents for approval, or additional mitigation secured, for example, by planning condition or legal agreement. Embedded measures are described as measures that form part of the design, developed through the iterative design process and good practice standard approaches and actions commonly used on development projects to avoid or reduce environmental impacts, typically applicable across the whole Development. Additional mitigation is described as any additional Development-specific measures needed to avoid, reduce or offset potential impacts that could otherwise result in effects considered significant in the context of the EIA Regulations.

## **Embedded Design Measures**

### Introduction

- 17.4.5 The proposed Development has followed the principles of the waste hierarchy shown in Figure 17-2 below. The waste hierarchy ranks waste management options according to what is best for the environment. It gives priority to prevention, then preparing it for reuse, then recycling, then recovery, and last of all disposal (e.g. landfill).
- 17.4.6 In addition, the five key principles of waste minimisation (design for reuse and recovery, off-site construction, materials optimisation, waste efficient procurement and deconstruction and flexibility) have been applied at the early design stage to support the use of materials in a more efficient manner and to consider how reuse, recycling and recovery of materials can be incorporated into the proposed Development and ultimately reduce waste to landfill.

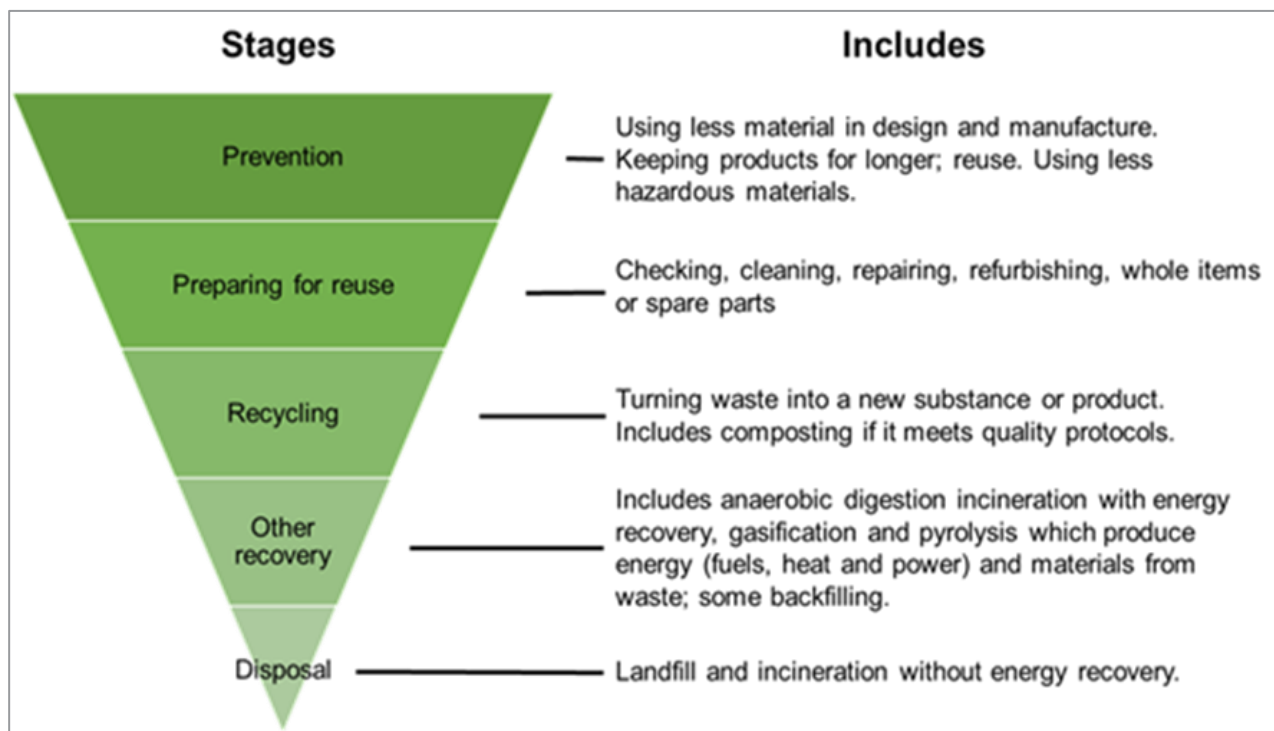


Figure 17-2 Waste Hierarchy

17.4.7 Other key aspects of waste minimisation that have been accounted for during the design of the proposed Development include:

- Design complexity: Reduce the complexity of the design to standardise the construction process and reduce the quantity of material resources required (e.g., ensure that floor to ceiling heights are consistent to encourage off-site fabrication, standardising room heights to match plasterboard dimensions and standard brick dimensions, etc.);
- Specifications: Avoid over specification and minimise variation in material resources, components and joints; evaluate the reuse and recycling opportunities for the specified material resources before specification (e.g. specify windows that could be recycled in the future, etc.); and evaluate the use of materials with high recycled content (e.g. ceramic tiles, reconstituted faced stones and reconstituted slates, etc.); and
- Alignment, location, level and grading of the proposed Development: These have been designed to minimise excavation volumes. It has also been designed to enable flexibility in the landscaping, so that it can accommodate the changes in spoil volumes that may arise when site conditions differ from those assumed during the design. Both these approaches should enable all excavation waste (except where contaminated) to be reused on-site where conditions allow.

### Demolition

17.4.8 Maximising the recovery of materials and components during the demolition works has economic, as well as environmental benefits. For example, the recycling and re-use of demolition waste reduce disposal costs and the amount of landfill tax.

17.4.9 In accordance with contractor tender requirements, contractors would be required to segregate demolition waste prior to removal for off-site recycling purposes. This approach would enable 85% recycling targets to be achieved.



17.4.10 Excavated material that is not re-used on-site would require off-site disposal and would be dealt with in accordance with relevant legislation. This includes the Duty of Care Regulations 1991, which require parties transferring waste to complete and retain a 'transfer note' containing a written description of that waste.

### Construction

17.4.11 A Code of Construction Plan (CoCP) would be agreed and in place prior to construction. This would provide a suite of mitigation measures of particular relevance to waste and would require the contractors to:

- Promote opportunities for the potential reuse and recycling of all material resources and waste;
- Sort and segregate waste into different waste streams (where technically and economically feasible); and
- Manage material use to maximise the environmental and proposed Development's benefits from the use of surplus materials.

17.4.12 The CoCP would also mandate several subsidiary management plans, which would form part of the suite of mitigation measures of particular relevance to waste. These include:

- The Outline SWMP (separately submitted with the planning application) which would be developed into the full SWMP by the appointed Contractor. The SWMP would ensure that waste is managed in accordance with the waste hierarchy and other relevant legislative requirements. The SWMP would also detail information on the waste carriers and waste management facilities that would be used; and
- A Materials Management Plan (MMP) would be produced by the appointed Contractor to identify ways to reuse site-won or excavated materials within the construction of the proposed Development, provided it meets the requirements of the CL:AIRE Code of Practice (CoP).

17.4.13 As of 1 December 2013, the SWMP Regulations 2008 were repealed. However, the implementation of a SWMP remains as industry best practice.

17.4.14 A SWMP is used to plan, implement, monitor and review waste minimisation and management on construction sites. The SWMP is also used to record how waste is reduced, reused, recycled and disposed of on a construction site. This effectively means:

- Recording decisions taken to prevent waste through concept and design;
- Forecasting waste produced on-site;
- Planning how to reduce, reuse or recover the forecasted waste;
- Implementing and monitoring the planned activity; and
- Reviewing the SWMP and record lessons learnt.

17.4.15 The SWMP is a live document and would be updated regularly during the course of the project. Preparing a SWMP at the early planning stage facilitates the identification and implementation of waste minimisation at the design stage, and reuse and recycling opportunities during on site operations, thereby potentially reducing the quantities of construction waste sent to landfill. Preparing a SWMP also encourages the review of current waste reduction and recovery practice levels, highlighting areas where good and best practice can be achieved.

- 17.4.16 In addition to the SWMP, the use of Modern Methods of Construction (MMC) would be considered for use in the construction of the proposed Development, subject to commercial and technical viability. MMC typically involves the manufacture of wall/floor/roof panels and/or the manufacture of entire room modules offsite in a factory. It can also include innovative site-based methods, such as use of concrete moulds. The Government is promoting the use of MMC as it is thought to offer potential benefits such as reductions in energy use, through improved air tightness and insulation, and reductions in waste, as materials are less likely to be spoiled in a factory environment and materials are more often ordered to exact specifications.
- 17.4.17 An additional mitigation measure is the diversion of construction waste from landfill, through the concept of 'waste neutrality'. This involves sourcing construction materials that are derived from recycled and/or reused content.
- 17.4.18 Recycled content is the proportion, by mass, of recycled material in a product, excluding waste material (such as process scrap) re-utilised within the same process that generated it. Where a product material is reused (e.g., is removed and replaced or is moved to another location), then it is considered to have a 100% recycled content.
- 17.4.19 In order to reduce the consumption of natural resources and the energy associated with extracting, processing and manufacturing them, reclaimed and recycled materials would be considered initially and, where possible, materials and components would be reused during construction.
- 17.4.20 There would also be a commitment to source materials responsibly and the following would be undertaken where feasible:
- Selecting material and building components from sustainable sources;
  - Securing sustainable materials with reference to the National Green Specification for example: timber from legal and well managed sources such as the Forestry Stewardship Council (FCS);
  - Reviewing insulation materials containing substances known to contribute to global warming in light of their impact; and
  - Sourcing materials from the local area or from recycled sources.
- 17.4.21 In addition, the Waste and Resources Action Programme's (WRAP's) online tool kit gives information regarding the recycled content of standard practice materials. The WRAP toolkit makes assumptions about the recycled material content of a number of mainstream products which could be specified, such as blockwork and pipework, and helps to identify alternatives which have a greater recycled material content.
- 17.4.22 Upon completion of the proposed Development, the contractor would be required to report on the performance of the construction works against the agreed targets. The recommended method for demonstrating compliance is to provide evidence of the actual volumes of waste collected for disposal at landfill and the volumes collected for re-use and recycling. The contractor would be further required to report on the materials used and their source, recycled/re-used content and provide evidence through the collation of waste transfer notes, invoices and manufacturers' data on recycled content of materials.
- 17.4.23 Where possible waste would be managed in accordance with the proximity principle by using the most suitable sites located closest to the site, however this would depend upon the contractor employed and the location of their waste management sites.

## Operational

17.4.24 The Waste Strategy in ES Appendix 17.1 sets out the floor areas required for waste storage; storage for refuse and recycling is separated between commercial and residential accommodation and provided upon a block-by-block basis. In addition, it sets out the requirements in regard to waste segregation, storage areas and collection points.

### **Residential**

17.4.25 Internal storage areas would have sufficient space for all the necessary waste and recycling containers.

### **Commercial**

17.4.26 Commercial refuse storage areas would be located at ground floor away from the main frontage of the buildings, where possible. This waste would be collected on a bi-weekly basis, however the storage area would be sized to accommodate five days of storage in the event of any disruption to the collection service.

17.4.27 All offices would be provided with sufficient space for the segregation of all recyclables. The storage provision would be clearly labelled, in a dedicated location, and in easy reach of all building areas. The nature of the internal waste storage facilities would be given due consideration at the detailed design stage.

17.4.28 Recoverable material will typically be baled and stored in the commercial waste storage area. The waste will be collected from the waste storage area, when required by an external waste contractor.

17.4.29 The Waste Management Plan for England 2021 requires that waste storage allows for the recycling and composting of household waste of at least 50%. KCC's statutory target is also 50% for 2020/2021.

17.4.30 It is considered that the general waste is likely to be removed by both KCC Waste Collection Authorities and private waste operators with appropriate access for collection waste vehicles.

## **Additional Mitigation**

17.4.31 An iterative appraisal of the proposed Development taking into account the embedded design measures and good practice was undertaken to identify any potentially significant effects that would require additional mitigation. Effects on waste and material resources that could be significant and therefore required further consideration for additional mitigation comprised:

- Effects of residential household waste arisings on waste facilities, namely WTS capacity, associated logistics and local residents

## Operation

17.4.32 In the short term, (first 3-5 years of occupation) Otterpool LLP would make a proportional financial contribution to KCC to secure the use of Ashford and/or Thanet WTS, this would be secured through a S106 agreement.

17.4.33 For a long-term solution, discussions are currently ongoing between F&HDC, KCC and Otterpool LLP to find a suitable site for a WTS within F&H. Otterpool LLP would make a proportional financial contribution to the WTS. This would be secured through a S106 agreement.

## 17.5 Assessment of Residual and Cumulative Effects

17.5.1 The following section sets out the residual effects following the implementation of the embedded measures and additional mitigation set out above.

### Residual Effects of Demolition

17.5.2 Anticipated volumes of demolition waste at the site are shown in Table 17-17 below. The volumes take into account the likely demolition waste arising associated with the demolition of the residential, agricultural and former racecourse buildings – based on market knowledge and professional judgement. The buildings to be demolished are those set out in Chapter 4: The site and proposed Development as either demolished, or demolished or retained, to provide a worst-case assessment for this topic. Therefore, it assumes 96 of the 102 buildings will be demolished.

Table 17-17 Estimated demolition waste arisings from the proposed Development

Material Type	Estimated m3
Bricks	2,350
Tiles and Ceramics	324
Concrete	3,879
Inert	8,872
Insulation materials (non-hazardous)	747
Metals	1,291
Packaging materials	4,734
Plasterboard / Gypsum	3,672
Binders	34
Plastic (excluding packaging waste)	2,862
Timber	9,486
Floor coverings (soft)	191
Electrical and electronic equipment (non-hazardous)	66
Furniture	46
Canteen/Office/Ad hoc waste	1,513
Liquids	39
Oils	3
Bituminous mixtures (non-hazardous e.g. asphalt)	337
Hazardous waste	254

Material Type	Estimated m3
Other waste	5,392
Mixed construction and/or demolition waste	12,499
<b>TOTAL</b>	<b>58,591</b>

- 17.5.3 The majority of the demolition waste generated by the proposed Development would likely be taken to the MRF in Ridham, or similar for segregation and recycling, with any residual waste going to Allington EfW facility for recovery. The waste facility capacity is low sensitivity and magnitude of impact from demolition is medium and therefore would result in a **minor adverse effect (not significant)**, as this would result in an increase in demand on disposal facilities.
- 17.5.4 As per IEMA guidance, Method W1 has been used to assess void capacity. In line with the strategy to divert all inert and non-hazardous demolition waste from landfill through reuse or recycling on or off site. The landfill void capacity is low sensitivity and magnitude of impact from demolition is low and therefore **negligible (not significant)** to current void capacity in Kent.
- 17.5.5 Any hazardous waste generated as a result of demolition will be dealt with by a qualified person and sent to landfill. Likely quantities are deemed minimal. As per IEMA guidance, hazardous waste arisings would have a negligible effect on void capacity.
- 17.5.6 The impact demolition waste has on air quality, human health, landscape & visual, noise and traffic is dealt with in Chapter 6: Air Quality, Chapter 11: Human Health, Chapter 12: Landscape and Visual, Chapter 13: Noise and Vibration and Chapter 16: Transport.

## Residual Effects of Construction

- 17.5.7 Based on the average BRE SMARTWaste EPI's, Table 17-18 provides an estimation of the waste arisings during construction of the proposed Development and Framework Masterplan. It is anticipated that the proposed Garden Town Development in the Framework Masterplan of (10,000 homes) could result in about 177,357 m<sup>3</sup> of waste during construction.
- 17.5.8 It should be noted that in practice the precise quantities of waste would be affected by the specific construction techniques used, which at this stage are unknown. There is therefore an element of uncertainty around the exact figures and so, where appropriate, the worst-case scenario has been assumed.

Table 17-18 Estimated construction waste arisings from the proposed Development and Framework Masterplan

Waste Stream	List of Waste (LOW) Code	Forecast volume of waste (m <sup>3</sup> ) for the proposed Development (8,500 homes) including associated land-uses	Forecast volume of waste (m <sup>3</sup> ) for Framework Masterplan (10,000 homes) including associated land-uses
Bricks	17 01 02	11,801	13,552
Tiles and ceramics	17 01 03	785	909
Concrete	17 01 01	18,769	21,244
Inert	17 05 04	44,327	51,043

Waste Stream	List of Waste (LOW) Code	Forecast volume of waste (m <sup>3</sup> ) for the proposed Development (8,500 homes) including associated land-uses	Forecast volume of waste (m <sup>3</sup> ) for Framework Masterplan (10,000 homes) including associated land-uses
Insulation materials (non-hazardous)	17 06 04	783	887
Metals	17 04 07	2,307	2,616
Packaging materials	15 01 06	3,949	4,555
Plasterboard / gypsum	17 08 02	4,911	5,625
Binders	17 01 01	163	189
Plastic (excluding packaging waste)	17 02 03	2,631	3,049
Timber	17 02 01	12,733	14,647
Floor coverings (soft)	20 01 11	123	134
Electrical and electronic equipment (Non-hazardous)	20 01 36	61	70
Furniture	20 03 07	29	31
Canteen / office / ad-hoc waste	20 03 01	1,534	1,728
Liquids	16 10 01	124	136
Oils	13 01 13	10	12
Bituminous mixtures (Non-hazardous (e.g., asphalt))	17 03 02	1,369	1,505
Hazardous waste	17 09 03	1,063	1,215
Other waste	17 09 04	4,121	4,708
Mixed construction and/or demolition waste	17 09 04	43,299	49,497
<b>TOTAL</b>		<b>154,893</b>	<b>177,356</b>

17.5.9 As with demolition waste, the majority of construction waste would likely be taken to the MRF in Ridham, or similar for segregation and recycling, with any residual waste going to Allington EfW facility for recovery. The waste facility capacity is low sensitivity and magnitude of impact from construction is medium and therefore would result in a **minor adverse effect (not significant)**, as this would result in an increased demand on disposal facilities.

- 17.5.10 The peak construction year of 2030 (10,000 homes) has been used to assess the worst-case scenario for construction waste arisings. This year will see the highest amount of waste arisings generated. The total waste generated in 2030 is forecast to be 18,767m<sup>3</sup>. In keeping with the above, the local waste disposal facilities will have sufficient capacity to cope with waste arisings during the peak construction year. In addition, this is a small percentage of the total annual construction waste forecast to be generated in Kent. The waste facility capacity is low sensitivity and magnitude of impact from construction is medium and therefore would result in a **minor adverse effect (not significant)**,
- 17.5.11 As per IEMA guidance, Method W1 has been used to assess void capacity. In line with the strategy to divert inert and non-hazardous construction waste from landfill through reuse or recycling on or off site, and recovery. The landfill void capacity is low sensitivity and magnitude of impact from construction is low and therefore would result in a **negligible adverse effect (not significant)** to current void capacity in Kent (<1%). As a worst-case scenario: If 20% of the total forecast CD&E waste went to landfill it would fill 0.78% of the current landfill void capacity in Kent.
- 17.5.12 Any hazardous waste generated as a result of construction will be dealt with by a qualified person and sent to landfill. Likely quantities are deemed minimal due to the sustainable procurement of project materials commitment. The landfill void capacity is low sensitivity and magnitude of impact from construction is low. As per IEMA guidance, hazardous waste arisings would have a **negligible effect (not significant)** on void capacity (<0.1%).
- 17.5.13 It is estimated that 235,948m<sup>3</sup> of waste is likely to be generated during the demolition and construction of the proposed Development. The Applicant's commitment to the implementation of a SWMP and other measures as outlined in Section 17.4 would facilitate the reuse and recycling of waste and reduce the unnecessary landfilling of waste. It is therefore considered that the proposed Development would accord with the principles of the waste hierarchy. All waste would be managed in accordance with the relevant waste legislation. The use of modern methods of construction would also be employed to reduce waste creation as well as the sourcing of construction materials that are derived from recycled and/or reused content. There would be ongoing monitoring and measuring of waste production and recycling rates on-site throughout the construction period.
- 17.5.14 Taking the proposed Development's construction, demolition and excavation waste figures together is necessary in order to provide a comparison to the predicted figures for KCC in; they comprise approximately 0.5% of the predicted C,D&E waste arisings in KCC for 2031. The waste facility capacity is low sensitivity and magnitude of impact from CD&E is medium and therefore would result in a **minor adverse effect (not significant)**,
- 17.5.15 With regard to inert and non hazardous CD&E waste, the landfill void capacity is low sensitivity and magnitude of impact from the waste is low and therefore would result in a **negligible adverse effect (not significant)**,
- 17.5.16 With regard to hazardous CD&E waste, the landfill void capacity is low sensitivity and magnitude of impact from the waste is low and therefore would result in a **negligible adverse effect (not significant)**,
- 17.5.17 There are **no significant** residual effects of construction waste.

### **Residual Effects from Operation (Occupation)**

- 17.5.18 The Application would comprise residential, retail, healthcare, school, community, leisure and commercial space, as well as green infrastructure and public realm enhancements. As such, the proposed Development would generate a wide variety and quantity of waste types.

17.5.19 By application of BS5906 calculations, the typical annual waste arisings for different land uses can be estimated. In order to generate a worst-case scenario, the commercial units have therefore been assumed to be 'shopping centres'.

17.5.20 Table 17-19 shows that the total waste generated by the proposed Development on a yearly basis once complete (2044).

Table 17-19 Forecast waste arising from the operation of the proposed Development

Waste stream	Tonnes per annum
Residential – recycled	3,765.
Residential – residual	4,368
<b>Total household waste per annum</b>	<b>8,133</b>
Education	2,070
Community Facilities	8,736
Hotel/Leisure	6,864
Mixed retail and related uses	12,064
Employment	1,213
<b>Total non-household waste per annum</b>	<b>30,947</b>
<b>Total Operational waste per annum</b>	<b>39,080</b>

17.5.21 The operational waste generated by the proposed Development would be collected by F&HDC and taken to Ashford WTS (as per existing arrangement) or Thanet WTS for bulking, before being disposed of at one of the MRFs in Kent, with residual waste being taken to Allington EfW facility for recovery. The impact would be greatest when the proposed Development is fully occupied.

17.5.22 With a marked increase against the existing baseline, the current issue of insufficient WTS facilities in F&H and the logistical constraints at Ashford WTS, the generation of operational waste from the proposed Development would place added pressure on the already constrained local bulking infrastructure. In the short term, (first 3-5 years of occupation) Otterpool LLP would make a proportional financial contribution to KCC to secure the use of Ashford and/or Thanet WTS. For a long-term solution, discussions are currently ongoing between F&HDC, KCC and Otterpool LLP to find a suitable site for a WTS within F&H. Otterpool LLP would make a proportional financial contribution to the WTS. It is assumed that a WTS in F&H will be in operation when the greatest impact from the proposed Development is felt.

17.5.23 Due to lower occupancy rates in the first 5 years (Table 17-20), the forecast maximum operational waste is 15% of that calculated per year during full occupation (2044). That, in conjunction with secured but limited capacity at Ashford/Thanet WTS would result in a significant effect. The waste facility capacity is medium sensitivity and magnitude of impact from operational waste is medium also, therefore would result in a **moderate adverse effect**  
There would be a short-term increase in demand on local WTS



17.5.24 In the long term, a new WTS in F&H would address the growing demand for household waste disposal in the district. With a local WTS, the proposed Development would result in a non-significant effect on waste management facilities. With the WTS, the waste facility capacity is low sensitivity and magnitude of impact from operational waste is medium and therefore would result in a **minor adverse effect (not significant)**,

Table 17-20 Forecast waste generation (based on the Indicative Accommodation Schedule – ES Appendix 4.4)

	20/21 N191/192	2024	2025	2026	2027	2028	2044
Residential number of units (cumulative)		121	385	716	1,066	1,489	10,000
Residual /household	436.8kg	52.85t	168.17t	312.75t	465.63t	650.40t	4,368.00t
Recycled /household	376.52kg	45.56t	144.96t	269.59t	401.37t	560.64t	3,765.20t
<b>Total</b>		<b>98.41t</b>	<b>313.13t</b>	<b>582.34t</b>	<b>867.00t</b>	<b>1,211.03t</b>	<b>8,133.20t</b>
<b>% of 2044</b>		<b>1.21</b>	<b>3.85</b>	<b>7.16</b>	<b>10.66</b>	<b>14.89</b>	<b>100</b>

17.5.25 As per IEMA guidance, Method W1 has been used to assess void capacity. For the completed Development and Framework Masterplan scenario (2044), the forecast total annual operational waste equates to 0.10% of current landfill void capacity. In line with the strategy to divert (operational) municipal waste from landfill through recycling and recovery, the magnitude of impact from waste is deemed to have negligible effect on void capacity in Kent (<1%).

17.5.26 Hazardous municipal wastes will be recovered where possible, and residual sent to landfill. In keeping with current municipal volumes, quantities disposed of to landfill are deemed minimal. The landfill void capacity is low sensitivity and magnitude of impact from hazardous waste is low and therefore would result in a **negligible adverse effect (not significant)** (<0.1%).

17.5.27 Household operational waste would be collected by F&HDC, and non-household operational waste predominantly collected by private waste contractors.

#### Residential

17.5.28 The incorporation of internal waste storage and recycling facilities in a suitable dedicated position within each household would encourage residents to sort and segregate their waste. The waste recycling information pack (provided by the Otterpool Park LLP in conjunction with F&HDC) would provide additional information for the user to maximise recycling at source. It is therefore considered that the proposed Development would accord with the principles of the waste hierarchy in terms of building design principles. and support KCC and F&HDC in meeting their local and regional targets.

17.5.29 The waste management provision would be in accordance with the Waste Management Plan for England 2021, the Environment Act 2021, and statutory targets for both F&HDC and KCC.

- 17.5.30 The proposed Development would produce a noticeable increase in quantities of municipal waste compared to the existing site but this will be managed through a fully segregated collection service. This chapter has also illustrated in Section 17.3 (2019 Remaining Landfill Capacity dataset) that there is both capacity and infrastructure within Kent to manage the waste arisings forecast, as detailed in the Kent Waste Needs Assessment 2017. As noted above, there is an extant permission on the Site for a permitted waste facility (application ref: SH/08/124). The findings of this assessment show that the proposed Development would use less than 5% of the local waste facility capacity available, or less than 1% of the void capacity, and therefore illustrates that the permitted waste facility is not required to address current or future waste generation in Kent. The sensitivity of the receptor is low and the magnitude of impact is medium. Therefore, at the site level it is considered that the proposed Development's effect would be **minor adverse (not significant)**.
- 17.5.31 It has been assumed that for the opening year of occupation (2024) the predicted municipal waste arisings for Kent are assumed to have increased in line with the 'The Kent Waste Needs Assessment 2017' assessment from 775,800 tonnes in 2021 to 869,800 tonnes in 2031.
- 17.5.32 The total quantity of household waste generated by this proposed Development (and Framework Masterplan) in the final year of construction (2044) is 8,133.20 tonnes per year. Locally i.e., within KCC, that is only a small proportion of the total amount of municipal waste generated in Kent in 2019/20 (approximately 1%) and a marginally smaller proportion of that forecast in 2031, the final year of construction (about 0.9%).
- 17.5.33 The impact will be felt greatest by F&HDC at a local level as the waste will fall within their district to manage. The sensitivity of receptor is low and the magnitude of impact is medium. Therefore, on balance, with the long-term solution of a WTS in Folkestone & Hythe and correct management at the local level, the proposed Development's effect would be **minor adverse (not significant)**.
- 17.5.34 With regard to residential waste, as per IEMA guidance, the sensitivity of receptor is low and the magnitude of impact is low. Therefore, the proposed Development is considered to have a **negligible effect (not significant)** on landfill void capacity.
- 17.5.35 There is a short-term **significant** residual effect for residential operational waste on waste facility capacity. However, with the introduction of a WTS to Folkestone and Hythe the residual effect will reduce to **non-significant**.

## Commercial

- 17.5.36 The measures described in this Chapter and the accompanying Waste Strategy in ES Appendix 17.1 would encourage commercial tenants to segregate their waste and thus maximise recycling within the proposed Development. In particular the information packs to be provided (by Otterpool LLP in conjunction with F&HDC) and the encouragement from facilities management would be key to maximising participation in recycling.
- 17.5.37 The proposed Development would also ensure sufficient storage space for waste and recyclables enabling waste to be recycled and thus diverted from landfill.
- 17.5.38 It is considered that the proposed Development would accord with the principles of the waste hierarchy and support the Kent Waste Needs Assessment (2017) by helping to meet its targets with regard to disposal of commercial and industrial waste (recycling (65%), recovery (19%) and to landfill (16%)) by 2031.
- 17.5.39 The total quantity of commercial waste generated by the proposed Development is forecast to be 576 tonnes per week (or equating to approximately 29,931 per annum), which is only a small proportion of the total amount of commercial and industrial waste estimated to be generated in Kent in 2031 (about 2.13%).

- 17.5.40 At a local and regional level however the increase in waste generated at the site is considered to be negligible as the increase represents a marginal proportion of the commercial waste arisings within Kent. The waste facility capacity is low sensitivity and magnitude of impact from C&I waste is low and therefore would result in a **negligible adverse effect (not significant)**,
- 17.5.41 With regard to C&I waste, as per IEMA guidance, the landfill void capacity is low sensitivity and magnitude of impact is low and therefore would result in a **negligible adverse effect (not significant)**,
- 17.5.42 On balance, therefore, it is considered that the commercial element of the completed development would have a **negligible effect (not significant)** on waste generation.
- 17.5.43 There are **no significant** residual effects on commercial operational waste.

## 17.6 Cumulative Effects

17.6.1 There is relatively little guidance regarding cumulative effects assessment. This assessment has been based on the IEMA Waste Guidance but has been adapted to suit the particular characteristics of the region and information available. As such, a quantitative assessment considering the cumulative effect of waste arisings from the construction of committed developments likely to use the same waste facilities as the proposed Development has been undertaken. A qualitative assessment has also been undertaken to consider the cumulative operational impacts of the committed developments in addition to the proposed Development on local and regional waste handling capacity, based on professional judgement

### Cumulative Effects with Other Developments

#### Local Level

17.6.2 A review of committed developments (within a 3km radius) with the potential to generate waste arisings with cumulative effects with the waste arisings from the proposed Development was undertaken. Table 17-21 below sets out the waste arisings from the developments identified and shows that in combination all of these developments would produce approximately 432,000m<sup>3</sup>. The waste arisings for each development were generated using SmartWaste EPIs and floor areas from the planning applications. Where floor areas were not available (residential development) the average 3-bedroom floor area of 1,300m<sup>2</sup> was used per residential unit which is considered a reasonable worst case.

17.6.3 For the purpose of this waste assessment, the Framework Masterplan detailing 10,000 homes has been used, to provide a worst case scenario.

Table 17-21 Waste arisings from the closest committed developments

ID	LPA	LPA Ref	Address	Waste Arisings (m <sup>3</sup> )
H	F&H	Y14/0873/SH	Land adjacent to The Surgery, Main Road Sellindge Kent	56,723
AQ	F&H	20/0604/FH	Land at Grove House	12,000
AM	F&H	Y16/1122/SH	Land Rear Rhodes House Main Road Sellindge Kent	38,303
AJ	F&H	Y17/0105/SH	Land Adjoining Enterprise Way Enterprise Way Link Park Lympne Kent	6,072
AK	F&H	Y15/0880/SH	Land Adjoining The Link Park Lympne Industrial Estate Lympne Kent	10,296
S38	Ashford	S38	Land south of Church Road, Smeeth	4,706
S51	Ashford	S51	Land north of Church View, Aldington	2,353
S52	Ashford	S52	Land south of Goldwell Court, Aldington	4,706
S50	Ashford	S50	Land at Caldecott, A20, Smeeth	11,765
G	F&H	Y06/1079/SH	Nickolls Quarry Dymchurch Road Hythe Kent CT21 4NE	250,421
AO	F&H	Y16/0794/SH	St Saviours Hospital 71 - 73 Seabrook Road Hythe Kent CT21 5BU	12,000

ID	LPA	LPA Ref	Address	Waste Arisings (m <sup>3</sup> )
UA13	F&H	Y19/0071/FH	Smiths Medical UK, Boundary Road, Hythe, Kent, CT21 6JL	22,854
<b>Total</b>				<b>432,199</b>

- 17.6.4 As shown in Table 17-13, there is sufficient capacity at Ridham, Allington and Canterbury to accompany waste arisings from the construction of the proposed Development, as well as the committed developments outlined in Table 17-21 above, if the latter choose the same disposal facilities.
- 17.6.5 As with the proposed Development, it is assumed that all committed developments will produce a CoCP and SWMP to ensure that excavated materials are re-used appropriately, sustainably and remain legitimately outside the waste hierarchy
- 17.6.6 With the above in mind, the waste facility capacity is low sensitivity and magnitude of impact from cumulative construction waste is medium and therefore would result in a **minor adverse effect (not significant)**.
- 17.6.7 Cumulative operational waste associated with the above residential committed developments will put further pressure on current limited WTS capacity in the area. Those committed developments that are due to be occupied before a new WTS is available will have a **significant effect** on waste facility capacity in the short-term. The waste facility capacity is medium sensitivity and magnitude of impact from operational residential waste is high and therefore would result in a **major adverse effect (significant)**.
- 17.6.8 For operational waste generated from the occupation of the above committed developments when a WTS is in operation, the waste facility capacity is low sensitivity and magnitude of impact from operational residential waste is medium and therefore would result in a **minor adverse effect (not significant)**,
- 17.6.9 Cumulative operational waste associated with commercial properties of the committed developments is assumed to be collected by private waste companies and therefore the waste facility capacity is low sensitivity and magnitude of impact from operational commercial waste is medium and therefore would result in a **minor adverse effect (not significant)**,

#### Regional Level

- 17.6.10 There are over 100 committed developments within 10km of the proposed Development, as shown in ES Appendix 2.5 of the ES. With 13 regional landfills, with over 8,000,000m<sup>3</sup> void capacity combined and over 3,500,000 tonnes capacity in local disposal facilities, and the development of a local WTS, it can be assumed that there is sufficient long-term capacity to accommodate all committed developments over the lifetime of the proposed Development. On balance, therefore, it is considered that the cumulative effect of committed developments would have a **negligible effect (not significant)** on waste generation at a regional level.

### Cumulative Effects with the Permitted Waste Facility

- 17.6.11 If the Permitted Waste Facility, comprising a MRF and Anaerobic Digestion (AD) plant (SH/08/124) were built as part of the proposed Development, the waste assessment would show an improvement, as the new facilities would provide greater capacity to deal with local and regional waste arisings. However, this chapter has also illustrated in Section 17.3 (2019 Remaining Landfill Capacity dataset) that with the introduction of a local WTS, there is both capacity and infrastructure within Kent to manage the waste arisings forecast, as detailed in the Kent Waste Needs Assessment 2017 and therefore the permitted waste facility is not required to address current or future waste generation in Kent.

## **17.7 Monitoring**

- 17.7.1 Monitoring requirements and review dates are outlined in the Waste Strategy (ES Appendix 17.1). Monitoring of waste generation during the construction phase would be undertaken via the SWMP, The focus of the SWMP will be monitoring the quantities and types of waste generated, as well as the duty of care information for the contractors transferring the waste and the sites the waste is taken to for management.

## **17.8 Assessment Summary**

- 17.8.1 Table 17-22 provides an assessment summary with respect to Waste and Resource Management including the potential significant effect with embedded design measures in place, and additional measures required to reach the residual significance of effect.

Table 17-22 Summary of waste and resource management effects

Receptor	Embedded Design Measures	Potential Significant Effect (pre-mitigation)?	Phase	Additional Mitigation	Mitigation Delivery Mechanism	Residual Effect Significance
Waste Facilities	Prior to off-site removal of demolition waste, material would be separated into separate waste streams, for off-site recycling purposes. Implementation of a SWMP including measures for the re-use and recycling of waste on-site. Secured through the CoCP.	Generation of demolition and excavation waste and export off-site for recycling and recovery, and potentially some landfill = Not Significant	Construction	No additional mitigation required	N/A	Minor adverse Not Significant
Waste Facilities	Implementation of a SWMP including measures for the re-use and recycling of waste on-site. Use of modern methods of construction where considered appropriate to reduce waste creation. Sourcing of construction materials with recycled content. Monitoring and measuring of waste production and recycling rates on-site. Secured through the CoCP.	Generation of construction waste = Not Significant	C	No additional mitigation required	N/A	Minor adverse Not Significant
Waste Facilities	A Waste Strategy would be included for the operational management of the Proposed Development, to best practice guidance. Provision of sufficient waste storage areas.	Residential (household) waste arisings =  <b>Short term:</b> Significant  <b>Long term:</b> Not Significant	O	Short term ie First 3-5 years, financial contribution to KCC to secure the use of Ashford and/or Thanet Waste Transfer Station  Long-term, a financial contribution to provision of a WTS in Folkestone and Hythe	N/A	<b>Short term:</b> Moderate Adverse – site level Significant  Moderate Adverse – local level Significant  <b>Long term:</b> Minor Adverse – site level Not Significant  Minor Adverse – local level Not Significant

Receptor	Embedded Design Measures	Potential Significant Effect (pre-mitigation)?	Phase	Additional Mitigation	Mitigation Delivery Mechanism	Residual Effect Significance
Waste Facilities	Provision of adequate internal and external designated (segregated) waste storage areas (as per British Standard BS 5906:2005 “Waste management in buildings – Code of practice). Information and encouragement from the Facilities Management to support recycling. Secured through the Waste Strategy.	Commercial waste arising= Not Significant	O	No additional mitigation required	N/A	Minor Adverse - site level Not Significant Negligible – local level Not Significant
Waste Facilities	N/A	Cumulative waste arisings = Not Significant	C	No mitigation required	N/A	Minor Adverse - site level Not Significant Negligible – local level Not Significant
Waste Facilities	N/A	Cumulative Residential (household) waste arisings = <b>Short term:</b> Significant <b>Long term:</b> Not Significant	O	Long-term, a financial contribution of Otterpool LLP towards provision of a WTS in Folkestone and Hythe	S106 Agreement	<b>Short term:</b> Major Adverse – Significant <b>Long term:</b> Minor Adverse – Not Significant

Table note: Phase column, C= Construction, O = Operation



## 17.9 References

Reference	Title
Ref 17.1	The EU Waste Framework Directive (Directive 2008/98/EC on waste)
Ref 17.2	The EU Landfill Directive 1(999/31/EC)
Ref 17.3	The EU Waste Framework Directive (Directive 2008/98/EC on waste)
Ref 17.4	The Clean Neighbourhoods and Environment Act (2005)
Ref 17.5	The Environmental Permitting (England and Wales) Regulations 2016
Ref 17.6	Waste (England and Wales) Regulations, 2011 (as amended) 2014
Ref 17.7	SMARTWaste Tool ( <a href="http://bresmartsite.com">bresmartsite.com</a> )
Ref 17.8	The Hazardous Waste (England and Wales) Regulations 2005
Ref 17.9	A Green Future: Our 25 Year Plan to Improve the Environment (2018)
Ref 17.10	Kent Mineral and Waste Local Plan (KMWLP) 2013-2030 as amended by the Early Partial Review (Adopted September 2020) KCC- Minerals and Waste Local Plan 2013-30 Proposed Refresh (Regulation 18 Consultation) (December 2021)
Ref 17.11	Folkestone and Hythe District Core Strategy Review (CSR) Adopted 2022
Ref 17.12	Contaminated Land: Applications in Real Environments (CL:AIRE) The Definition of Waste: Development Industry Code of Practice (CoP), 2011 ( <a href="http://DoW:CoP.claire.co.uk">DoW:CoP (claire.co.uk)</a> )
Ref 17.13	Waste Resources and Action Programme (WRAP) NetWaste Tool
Ref 17.14	Repealed SWMP Regulations 2008
Ref 17.15	Design Manual for Roads and Bridges (DMRB) LA 110 Material assets and waste (formerly IAN 153/11, August 2019)
Ref 17.16	Institute of Environmental Management and Assessment (IEMA) guide to: Materials and Waste in Environmental Impact Assessment - Guidance for a proportionate approach
Ref 17.17	Defra's ENV18 - Local authority collected waste: annual results tables
Ref 17.18	WRAP ( <a href="#">WRAP - Circular Economy &amp; Resource Efficiency Experts</a> )
Ref 17.19	WRAP report on the composition and amount of mixed waste disposed of by Scottish Health and Social Care, Education, Motor, Wholesale and Retail Sectors
Ref 17.20	Reference not used
Ref 17.21	Kent Waste Needs Assessment 2017
Ref. 17.22	Kent County Council (15 March 2021). Kent residents clean up in latest waste recycling stats. Available online: <a href="https://kccmediahub.net/kent-residents-clean-up-in-latest-waste-recycling-stats745">https://kccmediahub.net/kent-residents-clean-up-in-latest-waste-recycling-stats745</a> [Accessed 11 March 2021]

Reference	Title
Ref. 17.23	Design Manual for Roads and bridges (DMRB) LA 104 Environmental assessment and monitoring
Ref. 17.24	Kent State of the Environment Report: Waste Update. July 2020

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