

Appendix: Outline Operational Waste Management and Recycling Management Strategy

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Document Control

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Executive Summary

i. KaNect Limited ('KaNect') has been commissioned by Northfleet Central 1 Limited ('Client') to prepare an Outline Operational Waste Management Strategy ('Strategy') for the proposed land surrounding Ebbsfleet United Football Club, bounded by Lower Road, railway line, Grove Road and River Thames ('Proposed Development') located in the administrative boundary of Gravesham Borough Council (GBC).

ii. The Applicant is seeking an outline planning application with all matters reserved (apart from access into and out of the site) to allow the demolition of all existing buildings and structures and the phased construction of a mixed use development comprising residential units, a hotel, a new football stadium with associated business and leisure facilities, a range of commercial, business and service uses including retail and food and beverage uses, community uses and a range of sui generis uses, with associated public realm and hard and soft landscaping, highways works, car parking, access and servicing arrangements, infrastructure and ancillary works and associated works.

iii. The principal aim of this Strategy is to demonstrate how sustainable methods for waste and recycling management have been considered for the operational phase of the Proposed Development. Furthermore, with regards to waste and recycling management within the Proposed Development, this Strategy has the following aims:

- To contribute towards achieving current and long-term government, regional (Kent County Council (KCC)), and GBC targets for waste minimisation, recycling and re-use;
 - To comply with all applicable legal requirements for handling operational waste;
 - To achieve high standards of waste management performance, through giving due consideration to the waste generated during operation of the Proposed Development; and
 - To provide a convenient, clean, and efficient waste management strategy that enhances the operation of the Proposed Development and promotes recycling.
- iv. Once operational, the Proposed Development is anticipated to produce 1,397,677 (L) of waste from all Plots per week, equating to approximately 8,570 tonne per year (i.e., based on the following approximate densities: Mixed dry recyclables (MDR) – 84 kg/m³, Food – 695 kg/m³ and Residual waste – 81 kg/m³).
- v. The Proposed Development will comprise of 19 Plots providing 3,500 residential units (including studios, 1 bed, 2 bed and 3 bed apartments) and 94,000 m² Gross External Area (GEA) of commercial land uses (including spaces for retail, food & beverages, local services, football stadium, office spaces, community spaces, indoor sports and recreational spaces and medical spaces).
- vi. The residential units will be provided in Plots 5 – 19, whereas the commercial uses will be provided in Plots 1-14 and Plots 16-19.
- vii. At the time of writing this Strategy, detailed information of the Proposed Development including the internal layouts is not available, however, it is envisioned that each residential Plot will have its separate bin store, which will be within 30 m distance to each residential apartment of that Plot. These bin stores will provide space to hold bins for Mixed Dry Recyclables (MDR), Food and Residual waste streams on a weekly collection frequency.
- viii. These bin stores will be located within 10 m distance to the Refuse Collection Vehicle (RCV) stopping point, allowing the council waste operatives to directly access these and transfer them to the RCV for emptying.

ix. Once emptied, the council's waste collection operatives will return these empty bins back to the bin stores.

x. For the commercial land uses, it is envisioned that bin stores will be provided either combined or separate for different land uses. These bin stores will be designed based on a weekly collection frequency. A private waste collection contractor will be commissioned to collect the waste and recycling material from these different commercial units.

xi. Due to the outline nature of this planning application, not all information related to the Proposed Development is available. Therefore, this Strategy has been written using the maximum quantum for the land uses, to consider the worst-case scenario. However, it is envisioned that this Strategy will be updated and detailed as the design evolves, and other waste management options such as use of automated waste collection systems, and a more frequent waste collection service specific to the commercial land uses will be further explored.

xii. These provisions will result in waste produced during the operation of the Proposed Development being managed in accordance with the Waste (England and Wales) Regulations, 2011 (as amended). Additionally, all waste infrastructure introduced to the Proposed Development will comply with guidelines published by the KCC and GBC, British Standard (BS) 5906:2005 Waste Management in Buildings Code of Practice and Part H6 of the Building Regulations (2010).

1. Introduction

- 1.1 This Outline Operational Waste Management Strategy (hereafter referred to as the 'Strategy') has been prepared by KaNect Limited ('KaNect') for Northfleet Central 1 Limited (hereafter referred to as the 'Client') for the proposed Northfleet Harbourside development (hereafter referred to as the 'Proposed Development') located within the administrative boundary of Gravesham Borough Council (GBC).

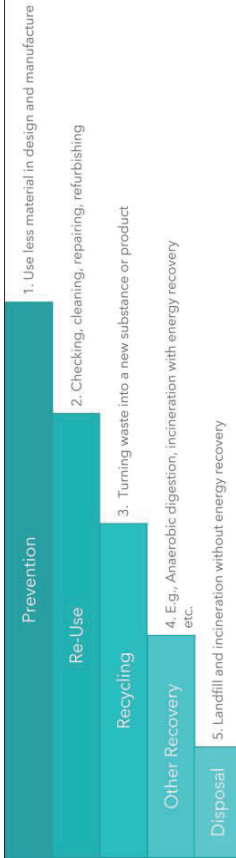
Strategy Overview

- 1.2 Through the lens of the Circular Economy Model, the Strategy aims to promote a circular approach by exploring opportunities for reusing and recycling during the operation of the Proposed Development in accordance with the Waste Hierarchy.
- 1.3 Following on from the prevention and reduction of waste, this Strategy will encourage the separation and sorting of waste and recycling in-line with the Waste Hierarchy. Measures will be implemented to maximise the amount of material arising from the Proposed Development that is recycled/composed and minimise the amount of waste that is sent to landfill.
- 1.4 This Strategy provides a review of the requirements placed upon the Proposed Development under legislation and implemented policy at all levels of government (i.e., national (England), regional (KCC) and local (GBC)). Consideration has also been given to the requirements included in local standards, local planning policy and guidance documents to comply with relevant objectives and targets.
- 1.5 The methodology used to identify and estimate volumes of waste generated during operation of the Proposed Development is provided in the Section 5. Following this, the approach taken towards waste management within the Proposed Development is discussed. This includes a breakdown of the waste management process, including waste handling, storage area provision, and collection arrangements. All waste reduction measures are compliant with British Standards 5906:2005 (Ref. 1), the Waste (England and Wales) Regulations, 2011 (as amended) (Ref. 2) and Part H6 of the Building Regulations (2010) (incorporating all amendments) (Ref. 3) Document (hereafter referred to as 'Part H6').
- 1.6 This Strategy has been written by KaNect, using information provided by the UN Studios ('Masterplan Architects'), HLM Architects and C+W O'Brian ('Residential Architects') collectively referred to as Architects.

2. Waste Hierarchy and Circular Economy

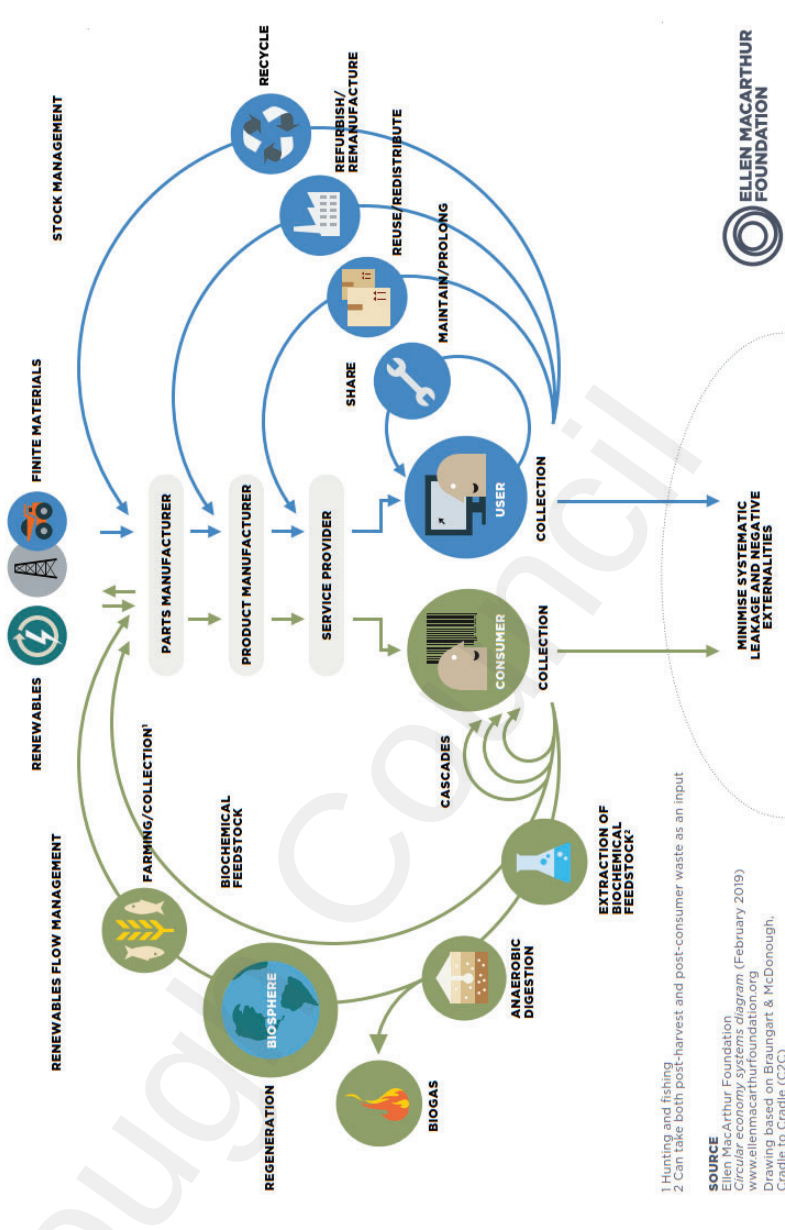
- 2.1 The Waste Hierarchy encourages the management and reduction of waste material. It is representative of a complex process influenced by the optimal management of any given product/waste material. A basic representation of the Waste Hierarchy is provided in Figure 1.

Figure 1 Waste Hierarchy



- 2.2 The prevention of waste sits at the top of the Waste Hierarchy. Prevention involves trying to reduce the amount of waste generated in the first place, for example by redesigning a product to use less, and fewer materials during manufacture.
- 2.3 The generation of waste in the UK has historically been linked with economic growth, as demonstrated by a marked decline in waste generation timed with the onset of the recession in 2008. The Circular Economy Model (see Figure 2) aims to decouple economic growth from resource consumption, by keeping resources in use for as long as possible and trying to regenerate them at the end of their life.

Figure 2 Circular Economy Model



- 2.4 It is likely that the future of waste prevention will look to adopt leasing/rental business models on a range of items (i.e., white goods, tools, phones, and clothes) which in doing so will promote an economy of repair and refurbishment. Reduction of waste will also occur by reducing the amount of packaging per item through innovation. Several initiatives will be explored to reduce waste arising from the Proposed Development including:
- Shared Community Fridges;
 - Tool Hire and Share; and
 - Collaboration with Charities for Food waste.
- 2.5 Reuse is the next tier of the Waste Hierarchy; it can involve the cleaning or repairing of products so they can be reused and redistributed as the same product. This helps to prevent products being disposed of once they become broken or dirty. Innovative exchange platforms to enable the reuse of materials include Globechain.
- 2.6 The third tier of the Waste Hierarchy and outermost loop of the Circular Economy Model is recycling – the act of turning waste materials into new products. Recycling benefits the environment as it reduces the consumption of raw materials and diverts waste materials from final disposal routes (i.e., landfill and incineration).
- 2.7 The fourth tier of the Waste Hierarchy is other recovery. This means that the waste material that cannot be recycled, it may be possible to recover energy in the form of ‘waste to energy’. This process can help to reduce carbon emissions.
- 2.8 Disposal is the final tier of the Waste Hierarchy. This would imply that the waste material collected are of no value (‘economic and environment’) and as a last resort are sent to the landfill (or incineration without energy recovery) for disposal. Due to the negative effects towards the environment (that may include impacts to air quality, climate change etc.), this is the least sustainable option.

3. Legislation/Planning Policy

- 3.1 A summary list of the legislation relevant to the management of operational waste is provided in this section:

National Waste Legislation

- The Animal By-Products (England) Regulations 2009 (as amended) (Ref. 4),
- Clean Neighbourhoods and Environment Act 2005 (as amended) (Ref. 5),
- Control of Pollution Act (COPA) 1974 (as amended) (Ref. 6),
- The Controlled Waste (England and Wales) Regulations 2012 (as amended) (Ref. 7),
- The Environment Act 1995 (Ref. 8),
- Environmental Protection Act 1990 (EPA) (Ref. 9),
- The Landfill Tax Regulations 1996 (as amended) (Ref. 10),
- The List of Wastes (England) Regulations (as amended) (Ref. 11),
- The Pollution Prevention and Control (Fees) (Miscellaneous Amendments) Regulations 2017 (Ref. 12),
- The Producer Responsibility Obligations (Packaging Waste) Regulations 2007 (as amended) (Ref. 13),
- The Hazardous Waste Regulations 2005 (as amended) (Ref. 14),
- The Waste (England and Wales) Regulations, 2011 (as amended),
- The Waste Batteries and Accumulators Regulations 2009 (as amended) (Ref. 15), and
- The Waste Electrical and Electronic Equipment (WEEE) Regulations 2015 (Ref. 16).
- The Environmental Act 2021 (Ref. 17).

Waste and Planning Policy

- 3.2 The national, regional, and local waste and recycling management planning policies in Table 1 contain information applicable to the Proposed Development.

Table 1 Waste and Recycling Management Policies

Waste Planning Policy Document				Date	Policy	Detail
A Green Future: Our 25 Year Strategy to Improve the Environment (Ref. 18)			2018	Chapter 4: Increasing resource efficiency and reducing pollution and waste	- Make sure that resources are used more efficiently and kept in use for longer to minimise waste and reduce its environmental impacts by promoting reuse, remanufacturing, and recycling. - Work towards eliminating all avoidable waste by 2050 and all avoidable plastic waste by end of 2025.	Extended Producer Responsibility - The Extended Producer Responsibility (EPR) is "a policy approach through which a producer's responsibility for a product is extended to the post-use stage. This incentivises producers to design their products to make it easier for them to be reused, dismantled and/or recycled at end of life", this also applies to certain materials within the construction and demolition section. Deposit Return Scheme - In a Deposit Return Scheme (DRS), a small deposit will be added to the price of a drink container brought to a store. Once the container has been used, the consumer will dispose of it in a reverse vending machine and the deposit will be returned to the consumer. Consistent Collections - Subject to consultation, legislation enforcing the government to "specify a core set of materials to be collected by all local authorities and waste operators" will be introduced. It is envisioned that specifying a consistent set of dry recyclable materials to be collected from all households and businesses will improve England's recycling rate, (subject to consultation) it will include mandatory separate food waste collections. At the current time these policy instruments are out for consultation and (subject to proposals) will be rolled out from 2023.
Regional						
Kent Joint Municipal Waste Strategy (KJMMWS) (Ref. 20)		2018-2021	Overarching Vision	- The Kent Resource Partnership (KRP) will lead the transformation to a circular economy, where the value of material resources flowing into and through Kent are retained, generating employment, skills and training opportunities, and realising wider economic, environmental, health and wellbeing benefits for the local and regional community and beyond. - In particular proposals should ensure that: - there is adequate temporary storage space for waste generated by that development allowing for the separate storage of recyclable materials; - there is adequate communal storage for waste, including separate recyclables, pending its collection;		
Kent Minerals and Waste Local Plan 2013-30 (Ref. 21)		2020	Policy CSW 3 Waste Reduction			
Client: Northfleet Central 1 Limited Project: Northfleet Harbourside						
District and Local						
Gravesham Local Plan Core Strategy (Ref. 22)		2014	Policy CS19	New developments will incorporate appropriate facilities for the storage and recycling of waste	- 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 - adequate contingency measures are in place to manage any mechanical breakdowns. All relevant proposals should be accompanied by a recycling & waste management strategy which considers the above matters and demonstrates the ability to meet local authority waste management targets.	



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4. The Proposed Development

- 4.1 The Proposed Development will comprise of 19 plots providing 3,500 residential units (including studio, one bed, two bed and three bed apartments) and approximately 94,000 m² of Gross External Area (GEA) of commercial land uses (including spaces for retail, food & beverages, local services, football stadium, office spaces, community spaces, indoor sports and recreational spaces and medical spaces).
- 4.2 The residential apartments will be provided in Plots 5-19, whereas the commercial spaces will be provided in Plots 1-14 and Plots 16-19. for schools including Pre-Preparatory School, Junior School and Senior School. Table 2 provides information on the residential breakdown per Plot, whereas Table 3 provides the commercial breakdown per Plot.
- 4.3 It should be noted that due to the outline nature of this planning application, not all information is available including the detailed land uses of the commercial spaces. Therefore, this Strategy has used the maximum quantum for both residential and commercial spaces, to consider for the worst-case scenario. However, it is envisioned that this Strategy will be updated as the design evolves.

Table 2 Residential Apartment - Breakdown per Plot

Plot	Type of Units	Quantity
5	Studio	9
	1 Bed	105
	2 Bed	84
	3 Bed	12
	Total	210
6	Studio	2
	1 Bed	23
	2 Bed	17
	3 Bed	3
	Total	45
7	Studio	4
	1 Bed	45
	2 Bed	36
	3 Bed	5
	Total	90
8	Studio	6
	1 Bed	64
	2 Bed	49
	3 Bed	8
	Total	127
9	Studio	8
	1 Bed	91
	2 Bed	73
	3 Bed	11
	Total	183

10	Studio	11
	1 Bed	127
	2 Bed	100
	3 Bed	15
	Total	253
11	Studio	10
	1 Bed	109
	2 Bed	86
	3 Bed	13
	Total	218
12	Studio	33
	1 Bed	371
	2 Bed	292
	3 Bed	44
	Total	740
13	Studio	10
	1 Bed	113
	2 Bed	90
	3 Bed	13
	Total	226
14	Studio	11
	1 Bed	123
	2 Bed	97
	3 Bed	14
	Total	245
15	Studio	3
	1 Bed	30
	2 Bed	23
	3 Bed	4
	Total	60
16	Studio	8
	1 Bed	84
	2 Bed	65
	3 Bed	10
	Total	167
17	Studio	14
	1 Bed	155
	2 Bed	122
	3 Bed	18
	Total	309
18	Studio	11
	1 Bed	126
	2 Bed	100
	3 Bed	15
	Total	252
19	Studio	17

	1 Bed	188
	2 Bed	148
	3 Bed	22
	Total	375
Overall Total		3,500
Area schedule taken from 220916_Northfleet Harbourside- Area and Use Schedule_Per Plot Areas.xlsx		

Table 3 Commercial Unit - Breakdown Per Plot

Plot	Land Use	GIA (m²)
1	F&B – Café	750
	F&B - Restaurant	750
	Retail	4,800
	Stadium	15,000
	Total	21,300
2	Retail	15,500
	F&B – Café	500
	F&B - Restaurant	500
	Office	1,000
	Community Space	1,800
3	Total	19,300
	F&B – Café	500
	F&B - Restaurant	500
	Office	17,000
	Total	18,000
4	F&B – Café	200
	F&B - Restaurant	200
	Local Services	200
	Hotel	20,000
	Total	20,600
5	Local Services	300
	Creche	300
	Community	250
	Total	850
	F&B – Café	200
6	F&B - Restaurant	200
	Sports	300
	Creche	300
	Total	1,000
	F&B – Café	200
7	F&B - Restaurant	200
	Sports	300
	Community	250
	Total	950
	F&B – Café	200
8	F&B – Restaurant	200

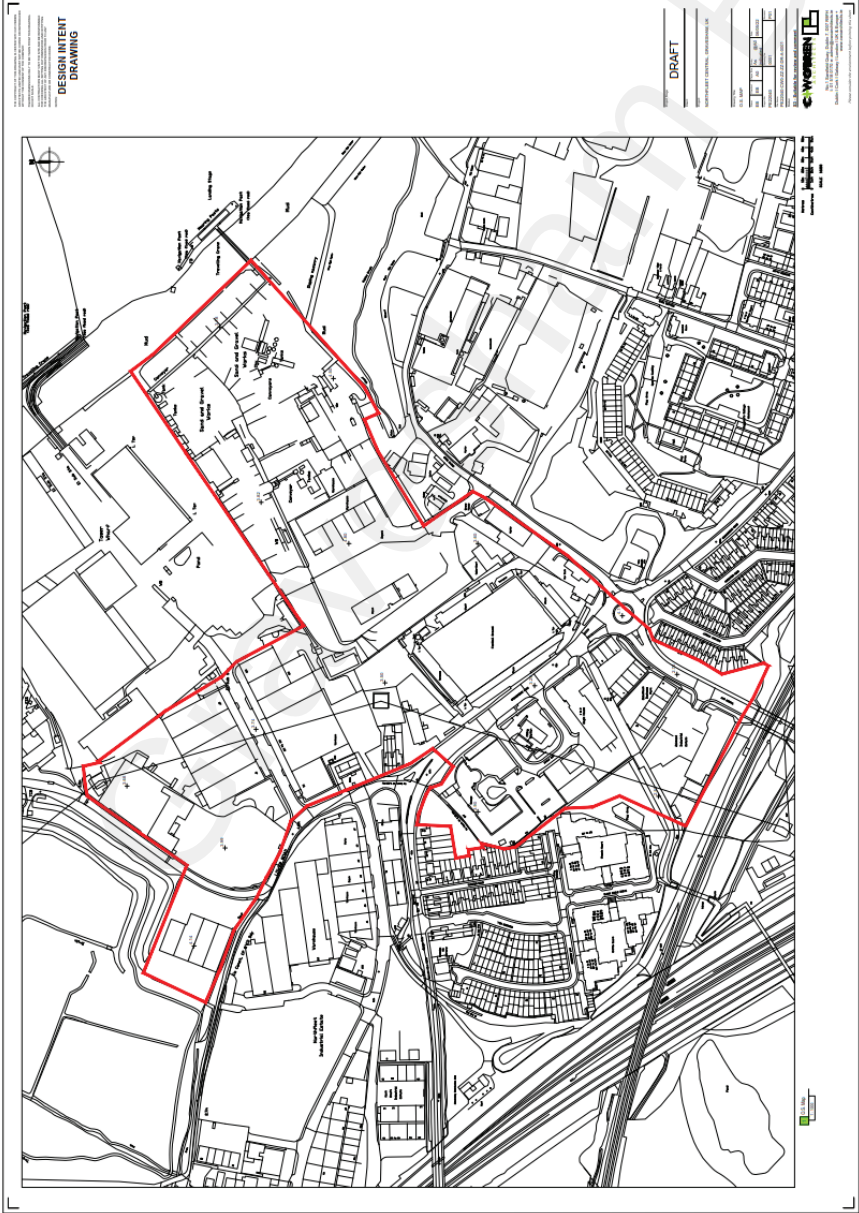


9	Community	300
	Total	700
	F&B – Café	400
	F&B – Restaurant	400
10	Local Services	200
	Total	1,000
	F&B – Café	650
	F&B – Restaurant	650
11	Local Services	200
	Medical Space	500
	Total	2,000
	F&B – Café	650
12	F&B – Restaurant	650
	Community	300
	Total	1,600
	F&B – Café	500
13	F&B - Restaurant	500
	Sports	300
	Creche	300
	Total	1,600
14	Community	400
	Medical Space	500
	Retail	2,200
	Creche	300
15	Community	400
	Total	700
	Sports	300
	Community	300
16	Total	600
	Local Services	200
	Medical Space	500
	Total	700
Overall Total		94,000
Area schedule taken from 220916_Northfleet Harbourside- Area and Use Schedule_Per Plot Areas.xlsx		

4.4 Figure 3 shows the red line boundary for the Proposed Development.



Figure 3 Red Line Boundary



Please note that this Figure is not drawn to scale.

5. Methodology

Residential

5.1 GBC doesn't provide information on the methodology that should be used whilst estimating the waste and recycling arisings and the storage requirements from the residential apartments. Therefore, the methodology provided in British Standard Institute (BSI), Waste Management in Buildings - Code of practice (BS 5906:2005) has been used. Table 4 provides the methodology used for estimating the waste and recycling material arising from the residential apartments of the Proposed Development.

Table 4 Methodology for Residential Apartments

Unit Type	Methodology	Split Ratio ¹
Studio/1 Bed	100 L per Week + 7L of Food Waste per Unit	Mixed Dry Recyclable (MDR) : Residual 75 : 25
2 Bed	170 L per Week + 14L of Food Waste per Unit	
3 Bed	240 L per Week + 21L of Food Waste per Unit	

Commercial

5.2 GBC doesn't provide information on the methodology that should be used whilst estimating the waste and recycling arisings and the storage requirements from the commercial land uses. Therefore, the methodology provided in BS 5906:2005 has been used. The land uses for which no guidance is provided in BS 5906:2005, a bespoke methodology has been used. This bespoke methodology has been developed using KaNect's experience of working on developments of similar nature and extent. Table 5 provides the methodology used for estimating the waste and recycling material arising from the commercial land uses of the Proposed Development.

Table 5 Methodology for Commercial Land Uses

Commercial Unit	Source	Description	Split Ratio
Retail	BS 5906:2005	10 L per m ² of Sales Floor Area i.e., 2/3 of the GEA.	MDR: Residual 75 : 25
Restaurants	BS 5906:2005	75 L per cover. Where 1 cover = 1/3 of the GEA (m ²)	MDR: Food: Residual 50: 30 : 20
Café	BS 5906:2005	5 L per m ² of GEA.	MDR: Food: Residual 50: 30 : 20
Office	BS 5906:2005	50 L per employee. Where 1 employee covers 10 m ² of GEA	MDR : Residual 75 : 25
Stadium	Bespoke KaNect	2 L per seat	MDR: Food: Residual 56: 4 : 40
Hotel	BS 5906:2005	250 L per Room	MDR : Residual 75 : 25
Community Spaces, Local Services, and Sports	BS 5906:2005	5 L per m ² of GEA.	MDR : Residual 75 : 25
Medical Space	Bespoke KaNect	360 L per GP. Where 1 GP = 1/130 m ² of GEA + 70 L of hazardous waste per GP	MDR : Residual 75 : 25

¹ The split ratio used is in line with the targets and aspirations of the Waste Strategy for England (2018)

6. Management Strategy

Waste and Recycling Arisings

Residential

6.1 Based on the methodology provided in Table 4 , the estimated weekly waste and recycling material arising from the residential apartments of the Proposed Development are provided in Table 6.

Table 6 Weekly Waste and Recycling Arisings – Residential Apartments

Plot	Type of Units	Quantity	MDR (Litres/Week)	Food (Litres/Week)	Residual (Litres/Week)	Total (Litres/Week)
5	Studio	9	675	63	225	963
	1 Bed	105	7,875	735	2,625	11,235
	2 Bed	84	10,710	1,176	3,570	15,456
	3 Bed	12	2,160	252	720	3,132
	Total	210	21,420	2,226	7,140	30,786
6	Studio	2	150	14	50	214
	1 Bed	23	1,725	161	575	2,461
	2 Bed	17	2,167.5	238	722.5	3,128
	3 Bed	3	540	63	180	783
	Total	45	4,582.5	476	1,527.5	6,586
7	Studio	4	300	28	100	428
	1 Bed	45	3,375	315	1,125	4,815
	2 Bed	36	4,590	504	1,530	6,624
	3 Bed	5	900	105	300	1,305
	Total	90	9,165	952	3,055	13,172
8	Studio	6	450	42	150	642
	1 Bed	64	4,800	448	1,600	6,848
	2 Bed	49	6,247.5	686	2,082.5	9,016
	3 Bed	8	1,440	168	480	2,088
	Total	127	12,937.5	1,344	4,312.5	18,594
9	Studio	8	600	56	200	856
	1 Bed	91	6,825	637	2,275	9,737
	2 Bed	73	9,307.5	1,022	3,102.5	13,432
	3 Bed	11	1,980	231	660	2,871
	Total	183	18,712.5	1,946	6,237.5	26,896
10	Studio	11	825	77	275	1,177
	1 Bed	127	9,525	889	3,175	13,589
	2 Bed	100	12,750	1,400	4,250	18,400
	3 Bed	15	2,700	315	900	3,915
	Total	253	25,800	2,681	8,600	37,081
11	Studio	10	750	70	250	1,070
	1 Bed	109	8,175	763	2,725	11,663
	2 Bed	86	10,965	1,204	3,655	15,824



12	3 Bed	13	2,340	273	780	3,393
	Total	218	22,230	2,310	7,410	31,950
	Studio	33	2,475	231	825	3,531
	1 Bed	371	27,825	2,597	9,275	39,697
	2 Bed	292	37,230	4,088	12,410	53,728
13	3 Bed	44	7,920	924	2,640	11,484
	Total	740	75,450	7,840	25,150	108,440
	Studio	10	750	70	250	1,070
	1 Bed	113	8,475	791	2,825	12,091
	2 Bed	90	11,475	1,260	3,825	16,560
14	3 Bed	13	2,340	273	780	3,393
	Total	226	23,040	2,394	7,680	33,114
	Studio	11	825	77	275	1,177
	1 Bed	123	9,225	861	3,075	13,161
	2 Bed	97	12,367.5	1,358	4,122.5	17,848
15	3 Bed	14	2,520	294	840	3,654
	Total	245	24,937.5	2,590	8,312.5	35,840
	Studio	3	225	21	75	321
	1 Bed	30	2,250	210	750	3,210
	2 Bed	23	2,932.5	322	977.5	4,232
16	3 Bed	4	720	84	240	1,044
	Total	60	6,127.5	637	2,042.5	8,807
	Studio	8	600	56	200	856
	1 Bed	84	6,300	588	2,100	8,988
	2 Bed	65	8,287.5	910	2,762.5	11,960
17	3 Bed	10	1,800	210	600	2,610
	Total	167	16,987.5	1,764	5,662.5	24,414
	Studio	14	1,050	98	350	1,498
	1 Bed	155	11,625	1,085	3,875	16,585
	2 Bed	122	15,555	1,708	5,185	22,448
18	3 Bed	18	3,240	378	1,080	4,698
	Total	309	31,470	3,269	10,490	45,229
	Studio	11	825	77	275	1,177
	1 Bed	126	9,450	882	3,150	13,482
	2 Bed	100	12,750	1,400	4,250	18,400
19	3 Bed	15	2,700	315	900	3,915
	Total	252	25,725	2,674	8,575	36,974
	Studio	17	1,275	119	425	1,819
	1 Bed	188	14,100	1,316	4,700	20,116
	2 Bed	148	18,870	2,072	6,290	27,232
Overall Total	3 Bed	22	3,960	462	1,320	5,742
	Total	375	38,205	3,969	12,735	54,909
	Studio	3,500	356,790	37,072	118,930	512,792
	Area schedule taken from 220916_Northfleet Harbourside- Area and Use Schedule_Per Plot Areas.xlsx					



Commercial

6.2 Based on the methodology provided in Table 5 , the estimated weekly waste and recycling material arising from the residential apartments of the Proposed Development are provided in Table 7.

Table 7 Weekly Waste and Recycling Arisings - Commercial Land uses

Plot	Land Use	GEA (m²)	Working Capacity	MDR (L/W)	Food (L/W)	Residual (L/W)	Hazardous (L/W)	Total (L/W)
1	F&B – Café	750	750 m²	1,875	1,125	750		3,750
	F&B - Restaurant	750	250 covers	9,375	5,625	3,750		18,750
	Retail	4,800	3,200 m² SFA	24,000		8,000		32,000
	Stadium	15,000	8,000 seats	8,960	640	6,400		16,000
	Total	21,300		44,210	7,390	18,900		70,500
2	Retail	15,500	10,333 m² SFA	77,497.5		25,832.5		103,330
	F&B – Café	500	500 m²	1,250	750	500		2,500
	F&B - Restaurant	500	167 covers	6,262.5	3,757.5	2,505		12,525
	Office	1,000	100 employees	3,750		1,250		5,000
	Community Space	1,800	1,800 m²	6,750		2,250		9,000
3	Total	19,300		95,510	4,507.5	32,337.5		132,355
	F&B – Café	500	500 m²	1,250	750	500		2,500
	F&B - Restaurant	500	167 covers	6,262.5	3,757.5	2,505		12,525
	Office	17,000	1,700 employees	63,750		21,250		85,000
	Total	18,000		71,262.5	4,507.5	24,255		100,025
4	F&B – Café	200	200 m²	500	300	200		1,000
	F&B - Restaurant	200	67 covers	2,512.5	1,507.5	1,005		5,025
	Local Services	200	200 m²	750		250		1,000
	Hotel	20,000	350 rooms	65,625		21,875		87,500
	Total	20,600		69,387.5	1,807.5	23,330		94,525
5	Local Services	300	300 m²	1,125		375		1,500
	Creche	300	300 m²	1,125		375		1,500
	Community	250	250 m²	937.5		312.5		1,250
	Total	850		3,187.5		1,062.5		4,250
	F&B – Café	200	200 m²	500	300	200		1,000
6	F&B - Restaurant	200	67 covers	2,512.5	1,507.5	1,005		5,025
	Sports	300	300 m²	1,125		375		1,500
	Creche	300	300 m²	1,125		375		1,500
	Total	1,000		5,262.5	1,807.5	1,955		9,025



7	F&B – Café	200	200 m²	500	300	200	1,000
	F&B - Restaurant	200	67 covers	2,512.5	1,507.5	1,005	5,025
	Sports	300	300 m²	1,125		375	1,500
	Community	250	250 m²	937.5		312.5	1,250
	Total	950		5,075	1,807.5	1,892.5	8,775
8	F&B – Café	200	200 m²	500	300	200	1,000
	F&B – Restaurant	200	67 covers	2,512.5	1,507.5	1,005	5,025
	Community	300	300 m²	1,125		375	1,500
	Total	700		4,137.5	1,807.5	1,580	7,525
	F&B – Café	400	400 m²	1,000	600	400	2,000
9	F&B – Restaurant	400	134 covers	5,025	3,015	2,010	10,050
	Local Services	200	200 m²	750		250	1,000
	Total	1,000		6,775	3,615	2,660	13,050
	F&B – Café	650	650 m²	1,625	975	650	3,250
	F&B – Restaurant	650	217 covers	8,137.5	4,882.5	3,255	16,275
10	Local Services	200	200 m²	750		250	1,000
	Medical Space	500	4 GP	1,080		360	1,720
	Total	2,000		11,592.5	5,857.5	4,515	22,245
	F&B – Café	650	650 m²	1,625	975	650	3,250
	F&B – Restaurant	650	217 Covers	8,137.5	4,882.5	3,255	16,275
11	Community	300	300 m²	1,125		375	1,500
	Total	1,600		10,887.5	5,857.5	4,280	21,025
	F&B – Café	500	500 m²	1,250	750	500	2,500
	F&B - Restaurant	500	167 covers	6,262.5	3,757.5	2,505	12,525
	Sports	300	300 m²	1,125		375	1,500
12	Creche	300	300 m²	1,125		375	1,500
	Total	1,600		9,762.5	4,507.5	3,755	18,025
	Community	400	400 m²	1,500		500	2,000
	Medical Space	500	4 GP	1,080		360	1,720
	Retail	2,200	1,467 m² SFA	11,002.5		3,667.5	14,670
13	Creche	300	300 m²	1,125		375	1,500
	Community	400	400 m²	1,500		500	2,000
	Total	700		2,625		875	3,500
	Sports	300	300 m²	1,125		375	1,500
	Community	300	300 m²	1,125		375	1,500
14	Total	600		2,250		750	3,000
	Local Services	200	200 m²	750		250	1,000



	Medical Space	500	4 GP	1,080	360	280	1,720
	Total	700		1,830	610	280	2,720
Overall Total		94,000		357,337.5	43,472.5	127,285	528,935

Area schedule taken from 220916_Northfleet Harbourside- Area and Use Schedule_Per Plot Areas.xlsx

F&B has been assumed as 50% café and 50% restaurants.

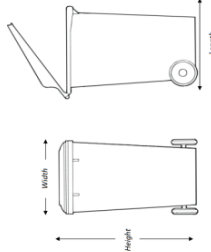
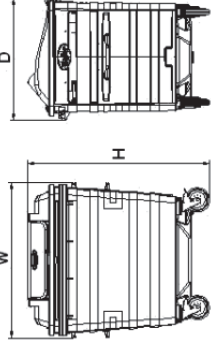
The waste generated from the Stadium is based on the assumption that there will be one event per week at full capacity.

6.3 In addition to the weekly waste arisings from the creche provided in Table 7, these areas will also generate quantities of sanitary waste (i.e., nappies).

Storage Containers

6.4 Table 8 provides the example dimensions of storage containers ('bins') that are proposed to be used. Please note that bin dimensions may vary between different manufacturers, therefore, these dimensions provided should be used as reference only.

Table 8 Standard Bin Dimensions

Bin	Dimensions	Land Uses and Type of Waste the Bins are Used for
	Capacity (L): 240	For Food Waste from Residential and Commercial Uses
	Height (mm): 1,100*	
	Length (mm): 740*	
	Width (mm): 580*	
	Height (mm): 1,360*	
	Length (mm): 764*	
	Width (mm): 1,371*	
	Capacity (L): 1,100	For MDR & Residual Waste from Residential and Commercial Uses
	Height (mm): 1,410*	
	Length (mm): 1,000*	
	Width (mm): 1,265*	

*Bin dimensions might vary between manufacturers

Waste and Recycling Storage Requirements and Management Strategy

Residential

6.5 Based on the weekly residential waste and recycling arisings as provided in Table 6 the subsequent storage requirements are provided in Table 9.

Table 9 Residential – Weekly Waste and Recycling Storage Requirements

Plot	MDR	Food	Residual	Total
5	20 x 1,100 L	10 x 240 L	7 x 1,100 L	27 x 1,100 L 10 x 240 L
6	5 x 1,100 L	2 x 240 L	2 x 1,100 L	7 x 1,100 L 2 x 240 L
7	9 x 1,100 L	4 x 240 L	3 x 1,100 L	12 x 1,100 L 4 x 240 L
8	12 x 1,100 L	6 x 240 L	4 x 1,100 L	16 x 1,100 L 6 x 240 L
9	17 x 1,100 L	9 x 240 L	6 x 1,100 L	23 x 1,100 L 9 x 240 L
10	24 x 1,100 L	12 x 240 L	8 x 1,100 L	32 x 1,100 L 12 x 240 L
11	21 x 1,100 L	10 x 240 L	7 x 1,100 L	28 x 1,100 L 10 x 240 L
12	69 x 1,100 L	33 x 240 L	23 x 1,100 L	92 x 1,100 L 33 x 240 L
13	21 x 1,100 L	10 x 240 L	7 x 1,100 L	28 x 1,100 L

		23 × 1,100 L	11 × 240 L	8 × 1,100 L	10 × 240 L
14					31 × 1,100 L 11 × 240 L
15		6 × 1,100 L	3 × 240 L	2 × 1,100 L	8 × 1,100 L 3 × 240 L
16		16 × 1,100 L	8 × 240 L	6 × 1,100 L	22 × 1,100 L 8 × 240 L
17		29 × 1,100 L	14 × 240 L	10 × 1,100 L	39 × 1,100 L 14 × 240 L
18		24 × 1,100 L	12 × 240 L	8 × 1,100 L	32 × 1,100 L 12 × 240 L
19		35 × 1,100 L	17 × 240 L	12 × 1,100 L	47 × 1,100 L 17 × 240 L
Overall Total		331 × 1,100 L	161 × 240 L	113 × 1,100 L	444 × 1,100 L 161 × 240 L

6.6 At the time of writing this Strategy, detailed information of the Proposed Development including the internal layouts is not available, however, it is envisioned that each residential Plot will have its separate bin store, which will be within 30 m distance to each residential apartment of that Plot. These bin stores will provide space to hold bins for MDR, Food and Residual waste streams on a weekly collection frequency.

6.7 These bin stores will be located within 10 m distance to the RCV stopping point, allowing the council waste operatives to directly access these and transfer them to the RCV for emptying.

6.8 Once emptied, the council's waste collection operatives will return these empty bins back to the bin stores.

6.9 Considering that this is an Outline Planning Application, it is envisioned that other innovative solutions will be further explored. One of the options, is the use of an Automated Waste Collection System (AWCS), which will remove the necessity for several waste storage areas, extensive internal management team involvement and will reduce the number of servicing trips occurring within the Proposed Development.

6.10 The AWCs system uses pneumatic pipe networks to move waste from ground-level deposit points to a single collection station elsewhere within the Proposed Development. This system greatly reduces the waste storage infrastructure to be distributed across large-scale sites.

Bulky Waste

6.11 It is envisioned for each residential plot; a separate bulky waste store will be provided. There is no guidance provided by GBC on the spatial requirements of these storage areas. However, considering the best practices (as followed by several local authorities in England), it is anticipated that 10 m² space will be provided for 75 units.

6.12 The locations and the spatial requirements will be further evaluated as the design evolves.

Unique Waste

6.13 There is likely to be a small component of the overall waste arisings from the Proposed Development that will comprise other waste streams, such as waste electrical and electronic equipment (WEEE), printer and toner cartridges and fluorescent light tubes. Building



maintenance will also give rise to materials such as paints and waste lubricating oils that will require separate storage in dedicated sealed containers.

6.14 This type of waste is termed “unique” as it will not be produced on a regular basis and therefore its management will be on special arrangement with a registered waste handler for the specific waste that is produced. Hazardous waste is required to be kept separate from general and bulky waste. There will be space provided for this within the bin store for these types of waste. In addition, battery bins will be provided in different location of the schools. Separate arrangements will be made by the building management team for the safe disposal of these waste streams, as covered by the Hazardous Waste (Amendment) Regulations 2016 and WEEE Regulations 2015. All waste management will have to comply with Environmental Protection Act 1990 and The Waste (England and Wales) (Amendment) Regulations 2014.

Commercial

6.15 Based on the weekly residential waste and recycling arisings as provided in Table 7 the subsequent storage requirements are provided in Table 10.

Table 10 Commercial - Weekly Waste and Recycling Storage Requirements

Plot	MDR	Food	Residual	Hazardous	Total
1	41 × 1,100 L	31 × 240 L	18 × 1,100 L		59 × 1,100 L 31 × 240 L
2	87 × 1,100 L	19 × 240 L	30 × 1,100 L		117 × 1,100 L 19 × 240 L
3	65 × 1,100 L	19 × 240 L	23 × 1,100 L		88 × 1,100 L 19 × 240 L
4	64 × 1,100 L	8 × 240 L	22 × 1,100 L		86 × 1,100 L 8 × 240 L
5	3 × 1,100 L		1 × 1,100 L		4 × 1,100 L
6	5 × 1,100 L	8 × 240 L	2 × 1,100 L		7 × 1,100 L 8 × 240 L
7	5 × 1,100 L	8 × 240 L	2 × 1,100 L		7 × 1,100 L 8 × 240 L
8	4 × 1,100 L	8 × 240 L	2 × 1,100 L		6 × 1,100 L 8 × 240 L
9	7 × 1,100 L	16 × 240 L	3 × 1,100 L		10 × 1,100 L 16 × 240 L
10	11 × 1,100 L	25 × 240 L	5 × 1,100 L	1 × 360 L	16 × 1,100 L 25 × 240 L 1 × 360 L
11	10 × 1,100 L	25 × 240 L	4 × 1,100 L		14 × 1,100 L 25 × 240 L
12	9 × 1,100 L	19 × 240 L	4 × 1,100 L		13 × 1,100 L 19 × 240 L
13	2 × 1,100 L		1 × 1,100 L		3 × 1,100 L
14	1 × 1,100 L		1 × 1,100 L	1 × 360 L	2 × 1,100 L 1 × 360 L
16	11 × 1,100 L		4 × 1,100 L		15 × 1,100 L
17	3 × 1,100 L		1 × 1,100 L		4 × 1,100 L
18	3 × 1,100 L		1 × 1,100 L		4 × 1,100 L



19	2 × 1,100 L		1 × 1,100 L	1 × 360 L	3 × 1,100 L 1 × 360 L
Overall Total	333 × 1,100 L	186 × 240 L	125 × 1,100 L	3 × 360 L	458 × 1,100 L 186 × 240 L 3 × 360 L

- 6.16 For the commercial land uses, it is envisioned that bin stores will be provided either combined or separate for different land uses. These bin stores will be designed based on a weekly collection frequency. A private waste collection contractor will be commissioned to collect the waste and recycling material from these different commercial units.
- 6.17 Due to the outline nature of the Planning Application, not all information relating to the commercial spaces such as land uses and the locations of the bin stores are knowns. It is envisioned that once the design evolves this Strategy will be detailed to include all information.
- 6.18 It is also envisioned that in addition to management solutions i.e., more frequent collections, innovative technologies such as compactors and AWCS will be further explored for the commercial land uses.

7. Waste and Recycling Storage and Collection Provision

- 7.1 In accordance with BS EN 840, as set out in BS 5906:2005, all waste containers within the Proposed Development will be stored under cover in a specially designed waste storage room, which will be built to the same general standard for commercial premises. The walls and roofs of this store will be formed of non-combustible, robust, secure and impervious material, and have a fire resistance of one hour when tested in accordance with BS 476-21 - Fire tests on building materials and structures: Part 21 (Ref. 23), whilst the door of the store will be made of steel, and will have a fire resistance of 30 minutes when tested in accordance with BS 476-22 - Fire tests on building materials and structure: Part 22 (Ref. 24).
- 7.2 Further to these requirements, the Proposed Development will also comply with the guidance set out in BS 5906:2005 and Part H6 as provided below:

Location

- Buildings will have an off-street collection area at ground level.
- Waste storage facilities will not block any utility service points;
- Bins pose a hazard for pedestrians, especially blind or partially sighted people and those who use wheelchairs or pushchairs. Bins will not be left unsecured or positioned on the public footway.
- Built bin storage area doors will not open over the public footway or road. Particular considerations would apply to listed buildings or buildings in a conservation area.
- Waste storage areas will not obstruct sight lines for pedestrians, drivers, and cyclists

Convenience

- Residents will not carry waste more than 30 metres from their individual units to the bin storage areas.
- Waste collection crews and caretakers will not:
- Carry waste sacks more than 15 metres,
- Carry bins or move wheeled bins (up to 360 litres) more than 10 metres,
- Manually navigate flights or steps or steep slopes or marked changes in level,
- Move larger wheeled bin more than 10 metres, or
- Cross a main, dual road or cycle pathway in order to deposit or transfer waste.

Screening or covering

- The waste and recycling containers housed will be big enough to fit as many containers as are necessary to facilitate collection and will be high enough for lids to open and close where lidded containers are installed. Internal housing layouts will allow all containers to be accessed by users.
- Bins will be fitted with close fitting lids to prevent vermin access.
- Internal built storage areas will conform to BS 5906:2005.

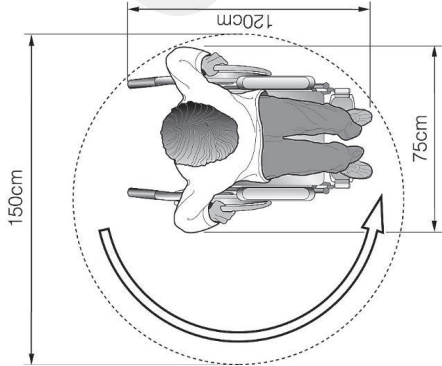
Signage

- Waste and recycling storage areas will be marked, and signs should be provided in the bin stores.
- There are a number of industry standard colours that are accepted for different categories of waste and recycling. These will not to be used when the bin doesn't hold the specific waste and recycling category.
- Users will be made aware of the fire risk from waste and recycling storage. This will be done using signage and displaying the danger when waste and recycling materials are stored carelessly.
- All roads will be clearly marked and controlled to prevent unauthorised parking

Accessibility

- Waste and recycling storage areas will be located in a position that provides easy and safe access for both waste and recycling producers and collectors. In addition, this will also provide an ease of use for older persons, persons short of stature and people with disabilities.
- Internal and external facilities for buildings will be designed for older persons and persons with disabilities as set out by the Disability and Discrimination Act (DDA), as specified in BS 8300:2001 (Ref. 25).
- Waste and recycling storage areas will provide a clear turning circle with a minimum diameter of 1,500 mm for wheelchair users, as specified in Part M of the Building Regulations (Ref. 26) and shown in Figure 4.

Figure 4 Example Wheelchair Turning Circle



Access paths and roads

- All doors and pathways will be 200 mm wider than any bins that are required to pass through or over them.
- Routes from bin storage areas to collection points will be as straight as possible with no kerbs or steps. Gradients will be no greater than 1:12 and surfaces should be smooth and sound, concrete rather than flexible. Dropped kerbs will be installed as necessary.
- There will be no steps and projections at the entrance of a bin store.
- The bin store will be external to the building or capable of being isolated from the main building. This will ensure access to the main building will not be used through the bin store.
- Roads will have a minimum width of 5 m.

Vehicle Access

- Adequate waste and recycling storage arrangements will be made so that waste and recycling does not need to be placed on the public highway other than immediately before it is due to be collected.
- Roads will be arranged so that collecting vehicles can continue mainly in a forward direction.
- Vehicles will not be reversing.
- Vehicles operating in service areas will enter and leave in a forward-facing direction.

Materials and finishing

- The walls and roofs of the bin store will be formed of non-combustible robust and secure materials with a smooth finish suitable of washing down. The door of the bin store will be made of steel.

Safety and anti-social behaviour

- Location of the bin store will be considered to minimise environmental impacts and nuisance from anti-social behaviour.
- The door of the bin store will be capable of being opened from the inside as well as the outside for reasons of safety.



- Unightly bins can damage the visual amenity and contribute to increased level of anti-social nuisance such as odour and litter. Therefore, bins are planned carefully and will not be stored in a publicly accessible area.

Fire safety

- Stored waste and recycling material will be identified as a potential hazard in any fire risk assessment.
- Internal bin stores will be constructed within a fire compartment structure which is designed to contain a fire.
- Suitably sized manual fire extinguishers will be deployed. For larger risks, a dedicated automatic fire sprinkler or water mist system will be considered.
- The walls and roofs of the bin store will have a fire resistance of one hour when tested in accordance with BS 476-21. The door of the bin store will be made of steel or have a fire resistance of 30 minutes when tested in accordance with BS 476-22.

Ventilation and Lighting

- Bin stores will be lit to be safe for facilities management team and collection operatives to use and service during darkness hours.
- Permanent ventilators will be provided giving a total ventilation area of not less than 0.2 m². Passive ventilators will be fly and vermin proof and will be located near to the ceiling and floor of the bin store as possible but away from windows and dwellings.
- Electrical lighting will consist of sealed bulkhead fittings with houses related to IP65 in BS EN 60529:1992 (Ref. 27) for the purpose of cleaning down with hoses and inevitable splashing.
- Luminaires will be low energy light fittings or low energy lamp bulbs, controlled by a proximity detection or time delay button to prevent lights being left on.

Maintenance

- Arrangements will be made for the cleaning of the bin store with water. A hose union tap should be provided in agreement with the local water authority and the Environment Agency.
- The floor of the bin store will have a suitable fall towards the drainage point. Gullies will be positioned not to be in the track of container wheels and should incorporate a trap which maintains a seal, even during prolonged periods of disuse

Landscaping Waste

- 7.3 The landscaping contractor will be responsible for removing the landscaping waste from the Proposed Development where and when generated.



8. Waste Disposal

- 8.1 Due to the outline nature of the Planning Application, the end destination of waste is unknown. However, to evaluate and assess the impacts of the waste and recycling material arising from the operational phase of the Proposed Development, information on the available landfill capacity within the region been provided in Table 11.

Table 11 Regional Inert and Non- Hazardous Landfill Capacity

Type	Year	Void Capacity
Inert	2020	10,068,082 m³
Non-Hazardous		5,112,397 m³
Total		15,190,479 m³

- 8.2 It should be noted that at least 75% of the total operational waste is considered to be MDR/recycling waste, that will be sent to household waste recycling facilities (for residential apartments) and other recycling centres (for commercial land uses). Therefore, to assess the impacts of the operational waste on the existing landfill void capacity, residual/general waste arising from the Proposed Development has focused. However, it should be noted that not all residual waste will be sent to landfill, and this type of waste might be used to feed the energy to waste facilities (EfW) i.e., Allington Waste to Energy Plant.
- 8.3 By comparing the total residual waste arising i.e., 31,344 m³ per annum to the available regional landfill capacity i.e., 15,190,479 m³ (equals to approximately 0.2%) it can be noted that the impacts of this type of waste will be **negligible**. In addition, the management measures proposed within this Strategy will also act as further mitigation to any residual effects (if any) from the Proposed Development.
- 8.4 To further understand the impacts of the waste arisings on the local infrastructure, the total residual waste arisings i.e., 31, 344 m³ per annum is compared to the available capacity of the local waste management infrastructure that is detailed in Table 12.

Table 12 Available Landfill Capacity in Kent

Facility Name	Local Authority	Site Type	Void Capacity
Manor Farm Barn Landfill And Recovery Operation	Medway	Inert Landfill	641,623 m³
Hermitage Quarry Inert Landfill	Tonbridge and Malling	Inert Landfill	181,718 m³
Arnolds Lodge Landfill	Tonbridge and Malling	Inert Landfill	4,400 m³
Borough green inert landfill (Platt)	Tonbridge and Malling	Inert Landfill	744,000 m³
Allens Bank, Lydd	Shepway	Inert Landfill	709,000 m³
Borough Green Landfill	Tonbridge and Malling	Inert Landfill	1,670,157 m³
Chalk Lake Landfill	Medway	Inert Landfill	400,000 m³
Alpha Lake	Medway	Inert Landfill	1,000,000 m³
Shefford Landfill Site	Canterbury	Non Hazardous Landfill With SNRHW cell	1,792,505 m³
Total			7,143,403 m³

- 8.5 By comparing the total residual waste arisings i.e., 31,344 m³ per annum to the available local landfill capacity i.e., 7,143,403 m³ (equals to approximately 0.44%) it can be noted that the impacts of this type of waste will be **negligible**.

9. Conclusion

- 9.1 In keeping with national, regional (KCC) and local (GBC) policy, this Strategy demonstrates how the Proposed Development will continue to promote sustainable waste and recycling management methods.
- 9.2 In following the Waste Hierarchy, the Proposed Development will promote resource efficiency to help reduce potential environmental impacts as a result. This Strategy has firstly looked to prevent waste, reuse resources where possible and recycle materials, minimising the generation of waste.
- 9.3 The Proposed Development includes sufficient space to enable best practice recycling methods and flexibility in the future. This Strategy shows how the Proposed Development has segregated and provided space for Recycling, Food and Residual streams.
- 9.4 Alongside striving towards local policy objectives, this Strategy can help achieve wider district goals such as reaching recycling targets (65% of municipal waste) alongside providing adequate, flexible, and easily accessible bin store to support recyclables and Food waste.
- 9.5 Considering the waste management infrastructure available capacity within the region and locally in Kent; it can be noted that the impacts of the waste arising from the Proposed Development will be **negligible**.

10. References

- Ref. 1 British Standards Institute (BSI), (2005); BS 5906:2005, Waste Management in Buildings – Code of Practice
- Ref. 2 Her Majesty Statutory Office (HMSO), (2011); The Waste (England and Wales) Regulations (as amended)
- Ref. 3 Department for Communities and Local Governments (DCLG), (2013); Building Regulations – Approved Document H: Drainage and Waste Disposal (Incorporating 2010, 2013, and 2015 amendments)
- Ref. 4 HMSO, (2011); The Animal By-Products (Enforcement) Regulations 2011.
- Ref. 5 HMSO, (2015); Clean Neighbourhoods and Environment Act 2015.
- Ref. 6 HMSO, (1989); Control of Pollution Act 1989.
- Ref. 7 HMSO, (2012); The Controlled Waste (England and Wales) Regulations 2012.
- Ref. 8 HMSO, (1995); Environment Act 1995.
- Ref. 9 HMSO, (1990); Environmental Protection Act 1990.
- Ref. 10 HMSO, (1996); The Landfill Tax Regulations 1996.
- Ref. 11 HMSO, (2005); The List of Wastes (England) Regulations 2005.
- Ref. 12 HMSO, (2017); The Pollution Prevention and Control (Fees) (Miscellaneous Amendments) Regulations.
- Ref. 13 HMSO, (2007); The Producer Responsibility Obligations (Packaging Waste) Regulations 2007.
- Ref. 14 HMSO, (2005); The Hazardous Waste Regulations 2005 (as amended)
- Ref. 15 HMSO, (2009); The Waste Batteries and Accumulators Regulations 2009.
- Ref. 16 HMSO, (2013); The Waste Electrical and Electronic Equipment (WEEE) (as amended)

- Ref. 17 HMSO, (2021); The Environmental Act
- Ref. 18 HMSO, (2018); A Green Future: Our 25 Year Strategy to Improve the Environment.
- Ref. 19 HMSO, (2018); Our Waste, Our Resources: A Strategy for England.
- Ref. 20 Kent, (2019-2021); Joint Municipal Waste Strategy
- Ref. 21 Kent, (2020); Minerals and Waste Local Plan 2013-30
- Ref. 22 Gravesham, (2014); Local Plan Core Strategy.
- Ref. 23 BSI, (1987); BS 476-21, Fire tests on building materials and structures: Part 21.
- Ref. 24 BSI, (1987); BS 476-22, Fire tests on building materials and structures: Part 22.
- Ref. 25 BSI, (2009); BS 8300:2001 – Design of buildings and their approaches to meet the needs of disabled people.
- Ref. 26 DCLG, (2010); Building Regulations – Approved Document M – Access to and use of buildings (2015) (Amendment 2016).
- Ref. 27 BSI, (1992); BS EN 60529:1992, Specification for degrees of protection provided by enclosures (IP code)