South London Waste Planning Authorities

South London Waste Technical Paper

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South London Waste Technical Paper

Client: South London Waste Plan Boroughs

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Executive summary

Introduction

The London boroughs of Croydon, Kingston, Merton and Sutton adopted the South London Waste Plan (SLWP) in March 2012, covering the period 2011 to 2021. The four partner boroughs have carried out this updated review of waste capacity and need in South London to support delivery of a replacement SLWP which is anticipated to be adopted by 2021-22, to cover the time period 2021-2036.

The purpose of this study is to provide an up to date evidence base, upon which the South London Waste Plan can be prepared. This waste evidence base sets out the key information and data on waste issues in South London, provides analysis and makes recommendations on the most appropriate approach to planning for each of the seven waste streams for the South London Boroughs to take forward in a new South London Waste Plan.

As waste planning authorities (WPAs), all four of the boroughs have a statutory duty to prepare a waste local plan in line with Article 28 of the Waste Framework Directive (2008). This plan must set out an analysis of the current waste management situation and sufficient information on the locational criteria for site identification and on the capacity of future disposal or major recovery installations.

The "National Planning Policy for Waste" (NPPW), published in 2015, sets out the Government's waste planning policies which all local planning authorities must have regard to when developing local waste plans. The NPPW is supplemented by the "Planning Practice Guidance" section on waste which provides further detail on how to implement the policies.

The NPPW states that waste planning authorities should have regard to their apportionments set out in the London Plan when preparing their plans and work collaboratively in groups with other waste planning authorities to provide a suitable network of facilities to deliver sustainable waste management.

Apportionment Waste Arisings Estimates and Forecasts

Household and Commercial & Industrial (C&I) wastes are the apportioned waste streams. While in the existing London Plan, the apportionment targets were broken down into these constituent elements, the draft new London Plan (Tables 9.1 and 9.2) does not provide this breakdown.

In order to calculate whether there is sufficient waste management infrastructure within the SLWP area, the draft new apportionment figures have been used, rather than estimating actual arisings. The apportionment targets for each authority have been used to calculate the targets for the intervening years i.e. between 2021 and 2041. The figures for 2016 have been taken from the existing London Plan. Table 1 shows the forecast apportioned waste over the Plan period.

Most of the boroughs within the SLWP area, have been set apportionment targets higher than their anticipated waste arisings, with the exception of Croydon, which has actually been set a lower target. Collectively the apportionment is higher than the anticipated arisings.

Table 1: Apportioned waste by forecast year (tonnes per annum)

Area	2016	2021	2026	2031	2036
Croydon	273,000	252,000	256,000	260,000	264,000
Kingston	143,000	187,000	190,000	193,000	196,000
Merton	161,000	238,000	241,750	245,500	249,250
Sutton	155,000	210,000	213,500	217,000	220,500
Total	**732,000**	**887,000**	**901,250**	**915,500**	**929,750**

Source: GLA, Draft London Plan, 2018

Arisings and Forecasts of other waste types

Construction, Demolition & Excavation Waste Arisings

Table 2 shows both the current and forecasted CD&E waste arisings. Figures for 2017 are actuals taken from the Environment Agency's Waste Data Interrogator (WDI), and this has been forecast using GLA's employment figures in the construction sector until 2036. The results figures show an increase from 508kt to 551kt by 2036.

Table 2: Forecast CD&E waste arisings for each borough and for SLWP area (tonnes per annum)

Area	Waste Source	Waste Type	2017	2021	2026	2031	2036
Croydon	C&D	Inert/C+D	282,613	292,593	294,629	300,542	304,303
		Hazardous	364	377	380	388	392
	Excavation	Inert/C+D	53,198	55,077	55,460	56,573	57,281
		Hazardous	5,458	5,651	5,690	5,804	5,877
	Total		341,634	353,698	356,158	363,307	367,853
Kingston	C&D	Inert/C+D	37,530	37,850	38,242	39,002	39,002
		Hazardous	36	37	37	38	38
	Excavation	Inert/C+D	28,037	28,276	28,569	29,137	29,137
		Hazardous	-	-	-	-	-
	Total		65,604	66,162	66,848	68,176	68,176

Area	Waste Source	Waste Type	2017	2021	2026	2031	2036
Merton	C&D	Inert/C+D	46,243	47,956	50,051	52,081	54,016
		Hazardous	19	19	20	21	22
	Excavation	Inert/C+D	27,047	28,048	29,274	30,461	31,593
		Hazardous	201	208	218	226	235
	Total		73,510	76,232	79,563	82,789	85,865
Sutton	C&D	Inert/C+D	15,478	15,638	15,834	16,214	16,576
		Hazardous	29	29	30	30	31
	Excavation	Inert/C+D	11,071	11,185	11,326	11,597	11,856
		Hazardous	576	582	589	603	617
	Total		27,154	27,434	27,778	28,445	29,080
SLWP	C&D	Inert/C+D	381,865	394,036	398,756	407,838	413,897
		Hazardous	448	463	467	477	483
	Excavation	Inert/C+D	119,353	122,586	124,628	127,768	129,867
		Hazardous	6,235	6,441	6,497	6,634	6,729
	Total		**507,901**	**523,526**	**530,348**	**542,717**	**550,975**

Source: Anthesis

Low Level Radioactive Waste

According to the Environment Agency's public register, there are ten organisation holding 13 permits to keep and use radioactive materials in the constituent authorities of the SLWP. These are mainly hospitals, universities and private companies. Any discharges from these permitted facilities to air, water (including discharges to sewer) and land are regulated and monitored under the Pollution Prevention and Control (PPC) regime. The latest dataset (2017) identified small permitted discharges to sewer with the SLWP area but no solid waste transfer, and therefore this waste places no requirement on the SLWP solid waste management infrastructure. Therefore, no forecasts are required or have been carried out on this type of waste.

Agricultural Waste

Data from WDI shows that only 383 tonnes of waste, coded as from agricultural sources (i.e. EWC 02 01) were generated within the SLWP area in 2017. Given the relatively small tonnage of this waste and the predominantly urban character of the borough, it is not considered to need specific consideration.

Hazardous Waste

Data from the Environment Agency's Hazardous WDI has been used for 2017 as the baseline year. However, these tonnages are in reality also included in the tonnages presented in the household & C&I waste (i.e. apportioned waste) and CD&E. This has been forecast using growth rates in the GLA's draft London Plan C&I waste arisings. Table 3 shows that this is expected to rise from 20.2ktpa to 21.6ktpa by 2036.

Table 3: Hazardous waste arisings in the South London area (tonnes per annum)

Area	**2017 (baseline)**	**2021**	**2026**	**2031**	**2036**
Croydon	8,514	9,008	9,008	9,008	9,193
Kingston	2,404	2,404	2,404	2,404	2,432
Merton	4,325	4,591	4,591	4,591	4,685
Sutton	4,936	5,239	5,239	5,239	5,303
Total	20,180	21,242	21,242	21,242	21,612

Source: Hazardous Waste Data Interrogator, 2017 (baseline)

Wastewater

Thames Water is responsible for wastewater and sewage sludge treatment in London and manages sewerage infrastructure as well as sewage treatment works. Wastewater quantities are expected to increase from 52.9 million m^3/yr to 55.7 million m^3/yr.

The four boroughs are served across Beddington (LB Sutton), Crossness (LB Bexley), Hogsmill (RB Kingston) and Long Reach (Dartford BC) sewage treatment works (STW). Thames Water have informed us that these all have adequate capacity to manage the incoming sewage and have all had major capacity increases during Asset Management Plan (AMP) 5 (2010 to 2015) and/or AMP6 (2015 to 2020).

Waste Capacity Assessment

Apportionment criteria

Current and future waste management capacity in the SLWP area has been established using a number of data sources, including Environment Agency "active sites" data, WDI and permitting data. For each site, its assumed operational capacity was assessed against the criteria included in the draft London Plan i.e. waste is deemed to be managed in London if:

- it is used in London for energy recovery;
- it relates to materials sorted or bulked in London facilities for reuse, reprocessing or recycling;
- it is reused, recycled or reprocessed in London; and
- it is produced as a solid recovered fuel (SRF) or a high-quality refuse-derived fuel (RDF) meeting the Defra RDF definition as a minimum[1].

Transfer stations – where material is bulked for transportation to other waste management facilities, this capacity was not included as a contribution towards the apportionment targets. However, where a degree of recycling takes place in the operation of the facility (gleaned from Environment Agency output data) this recycling capacity was included.

Exempt sites – were included where capacity met the requirements of the London Plan. A list of exemptions assumed relevant to the London Plan apportionment, and assumed capacities per site, are given in section 5.2.3 of this report.

Waste capacity gaps

The aggregated capacity for all four boroughs within the SLWP area, which counts towards meeting the apportionment, is in Table 4. It shows that capacity is due to decrease, as the Viridor Recycling & Composting Centre within LB Sutton is subject to a temporary planning permission until 2023. Overall the capacity gap will increase from 117ktpa in 2021 to 182ktpa by 2036, due to this site loss and an increasing apportionment target.

[1] Refuse derived fuel (RDF) consists of residual waste that complies with the specifications in a written contract between the producer of the RDF and a permitted end-user for the thermal treatment of the waste in an energy from waste facility or a facility undertaking co-incineration such as cement and lime kilns. The written contract must include the end-user's technical specifications relating as a minimum to the calorific value, the moisture content, the form and quantity of the RDF.

Table 4: Apportionment capacity, targets and calculated capacity gap for SLWP area (tonnes per annum)

Management option	2021	2026	2031	2036
Transfer	281,299	259,225	259,225	259,225
Recycling and Reuse	96,809	96,809	96,809	96,809
Composting, AD and Land spread	98,056	98,056	98,056	98,056
Energy from waste	275,000	275,000	275,000	275,000
Exemptions	19,080	19,080	19,080	19,080
Total	**770,244**	**748,170**	**748,170**	**748,170**
Apportionment	887,000	901,250	915,500	929,750
Capacity gap	**116,756**	**153,080**	**167,330**	**181,580**
Land requirement (ha)[2]	1.95	2.55	2.79	3.03

Source: Anthesis

Table 5 shows that the aggregated capacity gap for C&D waste increases from 148ktpa in 2021 to 168ktpa into 2036, due to anticipated increased C&D waste generation.

[2] Assuming 60,000 tonnes per hectare. See Appendix 3.

Table 5: Management capacity for C&D waste, arisings and calculated capacity gap (tonnes per annum)

Management Option	2021	2026	2031	2036
Transfer	213,146	213,146	213,146	213,146
Recycling and Reuse	32,972	32,972	32,972	32,972
Total Capacity	**246,118**	**246,118**	**246,118**	**246,118**
C&D waste arisings	394,499	399,223	408,315	414,380
Capacity gap	**148,381**	**153,105**	**162,197**	**168,262**
Land requirement (ha)[3]	2.47	2.55	2.70	2.80

Source: Anthesis

Table 6 shows that the overall capacity increases from 265ktpa to 350ktpa by 2036, meaning the estimated land requirement for additional sites increases from 4.42 to 5.83 hectares. An average throughput of waste management sites of 60,000 tonnes per hectare year has been used for this estimation, based on a data of other waste management sites (explained in more detail in Appendix 3).

Table 6: Summary of capacity gaps for SLWP (tonnes per annum)

	2021	2026	2031	2036
Target	1,281,499	1,300,473	1,323,815	1,344,130
Capacity	1,016,362	994,288	994,288	994,288
Capacity gap	**265,137**	**306,185**	**329,527**	**349,842**
Land requirement (ha)[4]	4.42	5.10	5.49	5.83

Source: Anthesis

[3] Assuming 60,000 tonnes per hectare. See Appendix 3.

[4] Assuming 60,000 tonnes per hectare. See Appendix 3.

Exports & Imports

In total for LACW and C&I (apportioned) waste streams, for 2017, the SLWP area exported 309,700 tonnes but 'received' ~620,000 tonnes of apportioned waste which wasn't identified as being generated within the four boroughs. This would suggest that the SLWP area is a net importer of waste. However, a very large proportion of the imports were non-codeable (ie. origin data not provided), and therefore some of this waste is likely to have been generated within the SLWP area boroughs themselves. There is no way of attributing this tonnage to specific WPAs. In addition, 235,000 tonnes of waste received (38% of the total) was received by transfer stations, rather than final destination waste treatment facilities.

Similarly, 238,000 tonnes of CD&E waste has been exported from the SLWP area to other WPAs. However, again although the figure for imports is higher at 393,000 tonnes, only 91,000 tonnes were attributable to specific WPAs, and the remaining origins are unknown. And 71% of the waste imported (278,300 tonnes) was received by transfer stations, rather than final destination waste treatment facilities.

For hazardous waste, as the data source is different, there is less uncertainty with regards to origins. In this case, SLWP area exported 20,200 tonnes in 2017, with 20% of this going to Kent. South London received 800 tonnes in 2017, and so is a net exporter of hazardous waste.

Sites & Areas

An assessment has been completed for each existing waste site in South London. These site profiles can be found in Appendix 4.

Opportunities to increase capacity on existing waste sites were identified in order to meet the capacity gaps. These include intensifying the throughput of existing operations and identifying vacant sites which could be redeveloped for waste uses. In addition, waste facilities in the planning pipeline were identified which, if given planning permission, would also contribute towards the shortfall in waste management capacity.

Comparison of the capacity gaps and potential new capacity

Table 7 compares the capacity gaps with the potential new capacity identified, and calculates the balance of capacity.

Table 7: Summary of waste capacity gaps in South London 2021-2036 (tonnes and hectares)

Waste stream		2021	2026	2031	2036
LACW / C&I	Capacity gap	116,756	153,080	167,330	181,580
	Potential new capacity	270,000	270,000	270,000	270,000
	Balance	+153,244	+116,920	+102,670	+88,420
C&D	Capacity gap	148,381	153,105	162,197	168,262
	Potential new capacity	218,000*	218,000*	218,000*	218,000*
	Balance	**+69,619**	**+64,895**	**+55,803**	**+49,738**

Source: Anthesis

This shows that the sites identified for intensification and development represent sufficient opportunity to meet the capacity gaps for LACW, C&I and C&D waste streams. If all potential new capacity identified in was brought forward there would be a capacity surplus for LACW, C&I and C&D waste streams which decreases over the plan period but still remains as a surplus. This means there is some flexibility in bringing this capacity forward.

The analysis therefore found there are sufficient opportunities to meet the capacity gaps for LACW, C&I (apportioned waste) and C&D waste streams in South London. As sufficient opportunities can be identified to meet South London's capacity gap, it is not necessary to identify any areas for new waste facilities.

Conclusions & Recommendations

The recommended strategy for each of the main waste streams is as follows:

LACW and C&I (apportioned waste)

- Continue to safeguard existing waste sites including the safeguarding of waste sites not currently identified on borough policies maps.
- Engage with the operators of sites which have the potential to intensify their operations, namely 777 Recycling in Sutton and Veolia for Factory Lane Waste Transfer Station in Croydon.
- Identify vacant sites suitable for new waste facilities, namely 156 Beddington Lane (subject to discussions with 777 Recycling), vacant SafetyKleen site and Therapia Lane.
- Carry out engagement under the duty to co-operate with waste planning authorities (WPAs) who receive significant amount of LACW and C&I waste exports from South London.

CD&E waste

- Continue to safeguard existing waste sites including the safeguarding of waste sites not currently identified on borough policies maps.
- Engage with the operators of sites which have the potential to intensify their operations, namely 777 Recycling in Sutton and UK and European Construction / Ranns Construction in Merton.
- Identify vacant sites suitable for new waste facilities, namely 156 Beddington Lane (subject to discussions with 777 Recycling), vacant SafetyKleen site and Therapia Lane.
- Carry out engagement under the duty to co-operate with waste planning authorities (WPAs) who receive significant amount of CD&E waste exports from South London.

Hazardous waste

- Co-operate with the London Waste Planning Forum and the wider south east on hazardous waste management and planning for new facilities.
- Carry out engagement under the duty to co-operate with waste planning authorities (WPAs) who receive significant amount of hazardous waste exports from South London.

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Abbreviations

Acronym	Definition
ABP	Animal By-Products
AD	Anaerobic Digestion
C&I	Commercial and Industrial Waste
C&D	Construction and Demolition Waste
CD&E	Construction, Demolition and Excavation Waste
Defra	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EIA	Environmental Impact Assessment
EWC	European Waste Code
HIC	Household, industrial and commercial wastes
HWDI	Hazardous Waste Data Interrogator
ILW	Intermediate Level Radioactive Waste
IVC	In-Vessel Composting
IWMF	Integrated Waste Management Facility
Ktpa	Thousands of tonnes Per Annum
LACW	Local Authority Collected Waste
LDF	Local Development Framework
LLW	Low Level Radioactive Waste
MBT	Mechanical Biological Treatment

Acronym	Definition
MHT	Mechanical Heat Treatment
MRF	Materials Recycling Facility
MSW	Municipal Solid Waste
SOC	Substance Oriented Classification
tDS	Total dissolved solids (in water)
Tpa	Tonnes Per Annum
VLLW	Very Low Level Radioactive Waste
WDI	Waste Data Interrogator
WEEE	Waste Electrical and Electronic Equipment
WPA	Waste Planning Authority

Glossary

Term	Definition
Agricultural Waste	Waste from a farm or market garden, consisting of matter such as manure, slurry and crop residues.
Anaerobic Digestion	Organic matter broken down by bacteria in the absence of air, producing a gas (methane) and liquid (digestate). The by-products can be useful, for example biogas can be used in a furnace, gas engine, turbine or gas-powered vehicles, and digestates can be re-used on farms as a fertiliser
Circular Economy	Looking beyond the current take-make-waste extractive industrial model, a circular economy aims to redefine growth, focusing on positive society-wide benefits. It entails gradually decoupling economic activity from the consumption of finite resources and designing waste out of the system. Underpinned

Term	Definition
	by a transition to renewable energy sources, the circular model builds economic, natural, and social capital. It is based on three principles: Design out waste and pollution; Keep products and materials in use; Regenerate natural systems (Ellen MacArthur Foundation)
Commercial Waste	Controlled waste arising from trade premises.
Construction, Demolition & Excavation Waste	Controlled waste arising from the construction, repair, maintenance and demolition of buildings and structures.
DEFRA – Department for Environment, Food and Rural Affairs	Defra is a UK Government department. Its mission is to enable everyone to live within our environmental means. This is most clearly exemplified by the need to tackle climate change internationally, through domestic action to reduce greenhouse gas emissions, and to secure a healthy and diverse natural environment.
Energy from Waste	The conversion of waste into a useable form of energy, often heat or electricity.
Environment Agency	A government body that aims to prevent or minimise the effects of pollution on the environment and issues permits to monitor and control activities that handle or produce waste. It also provides up-to-date information on waste management matters and deals with other matters such as water issues including flood protection advice.
Exemption	A waste exemption is a waste operation that is exempt from needing an environmental permit. Each exemption has specific limits and conditions operators need to work within.
Hazardous Landfill	Sites where hazardous waste is landfilled. This can be a dedicated site or a single cell within a non-hazardous landfill, which has been specifically designed and designated for depositing hazardous waste.

Term	Definition
Hazardous Treatment	Sites where hazardous waste is treated so that it can be landfilled.
Hazardous Waste	Waste that poses substantial or potential threats to public health or the environment (when improperly treated, stored, transported or disposed). This can be due to the quantity, concentration, or characteristics of the waste.
HIC	Household, Industrial and Commercial waste. This term is used in waste data sources. These waste streams are also known as Local Authority Collected Waste (LACW) and Commercial and Industrial (C&I) waste. The term HIC is used to describe the throughput where a facility manages both waste streams.
Household Waste	Refuse from household collection rounds, waste from street sweepings, public litter bins, bulky items collected from households and wastes which householders themselves take to household waste recovery centres and "bring sites".
Incineration	The controlled burning of waste. Energy may also be recovered in the form of heat (see Energy from Waste).
Industrial Waste	Waste from a factory or industrial process.
Inert waste	Waste not undergoing significant physical, chemical or biological changes following disposal, as it does not adversely affect other matter that it may come into contact with, and does not endanger surface or groundwater.
Inert Landfill	A landfill site that is licensed to accept inert waste for disposal.
In-Vessel Composting	A system that ensures composting takes place in an enclosed but aerobic (in the presence of oxygen) environment, with accurate temperature control and monitoring. There are many different systems, but they can be broadly categorised into six types: containers, silos, agitated bays, tunnels, rotating drums and enclosed halls.

Term	Definition
ILW - Intermediate level radioactive waste	Radioactive wastes exceeding the upper activity boundaries for LLW but which do not need heat to be taken into account in the design of storage or disposal facilities.
Local Authority Collected Waste (LACW)	Household waste and any other waste collected by a waste collection authority such as municipal parks and gardens waste, beach cleansing waste and waste resulting from the clearance of fly-tipped materials.
Landfill	The permanent disposal of waste into the ground, by the filling of man-made voids or similar features.
Landfill Directive	European Union requirements on landfill to ensure high standards for disposal and to stimulate waste minimisation.
LLW – low level radioactive waste	Lightly contaminated miscellaneous scrap, including metals, soil, building rubble, paper towels, clothing and laboratory equipment.
Materials Recycling Facility (MRF)	A facility for sorting and packing recyclable waste.
Mechanical Biological Treatment (MBT)	The treatment of residual waste using a combination of mechanical separation and biological treatment.
Non- Hazardous Landfill	A landfill which is licensed to accept non-inert (biodegradable) wastes e.g. municipal and commercial and industrial waste and other non-hazardous wastes (including inert) that meet the relevant waste acceptance criteria.
Non- Inert	Waste that is potentially biodegradable or may undergo significant physical, chemical or biological change once landfilled.
Organic Waste	Biodegradable waste from gardening and landscaping activities, as well as food preparation and catering activities. This can be composed of garden or park waste, such as grass

Term	Definition
	or flower cuttings and hedge trimmings, as well as domestic and commercial food waste.
Open Windrow Composting	A managed biological process in which biodegradable waste (such as green waste and kitchen waste) is broken down in an open-air environment (aerobic conditions) by naturally occurring micro-organisms to produce a stabilised residue.
Proximity Principle	Requires that waste should be managed as near as possible to its place of production, reducing travel impacts.
Recovery	Value can be recovered from waste by recovering materials through recycling, composting or recovery of energy.
Recycled Aggregates	Aggregates produced from recycled construction waste such as crushed concrete and planings from tarmac roads.
Recyclate	Raw material sent to, and processed in, a waste recycling plant or materials recovery facility (e.g. plastics, metals, glass, paper/card).
Recycling	The reprocessing of waste either into the same product or a different one.
Residual Waste	Waste remaining after materials for re-use, recycling and composting have been removed.
Waste Electrical and Electronic Equipment (WEEE)	Sites for the depollution, disassembly, shredding, recovery or preparation for disposal, and any other operation carried out for the recovery or disposal of Waste Electrical and Electronic Equipment.
Waste Hierarchy	A framework for securing a sustainable approach to waste management. Waste should be minimised wherever possible. If waste cannot be avoided, then it should be re-used; after this it should be prepared for recycling, value recovered by recycling or composting or waste to energy; and finally, disposal.

Term	Definition
Waste Local Plan	A statutory development plan prepared (or saved by the waste planning authority, under transitional arrangements), setting out polices in relation to waste management and related developments.
Waste Minimisation / Reduction	The most desirable way of managing waste, by avoiding the production of waste in the first place.
Waste Planning Authority (WPA)	The local authority responsible for waste development planning and control. They are unitary authorities, including London Boroughs and the City of London, National Park Authorities, and county councils in two-tier areas.
Waste Regulation Authority	The Environment Agency has responsibility for authorising waste management licenses for disposal facilities, and for monitoring sites.
Waste Transfer Station	A site to which waste is delivered for sorting or baling prior to transfer to another place for recycling, treatment or disposal.

Source: Planning Portal, SEPA, Anthesis

1 Introduction

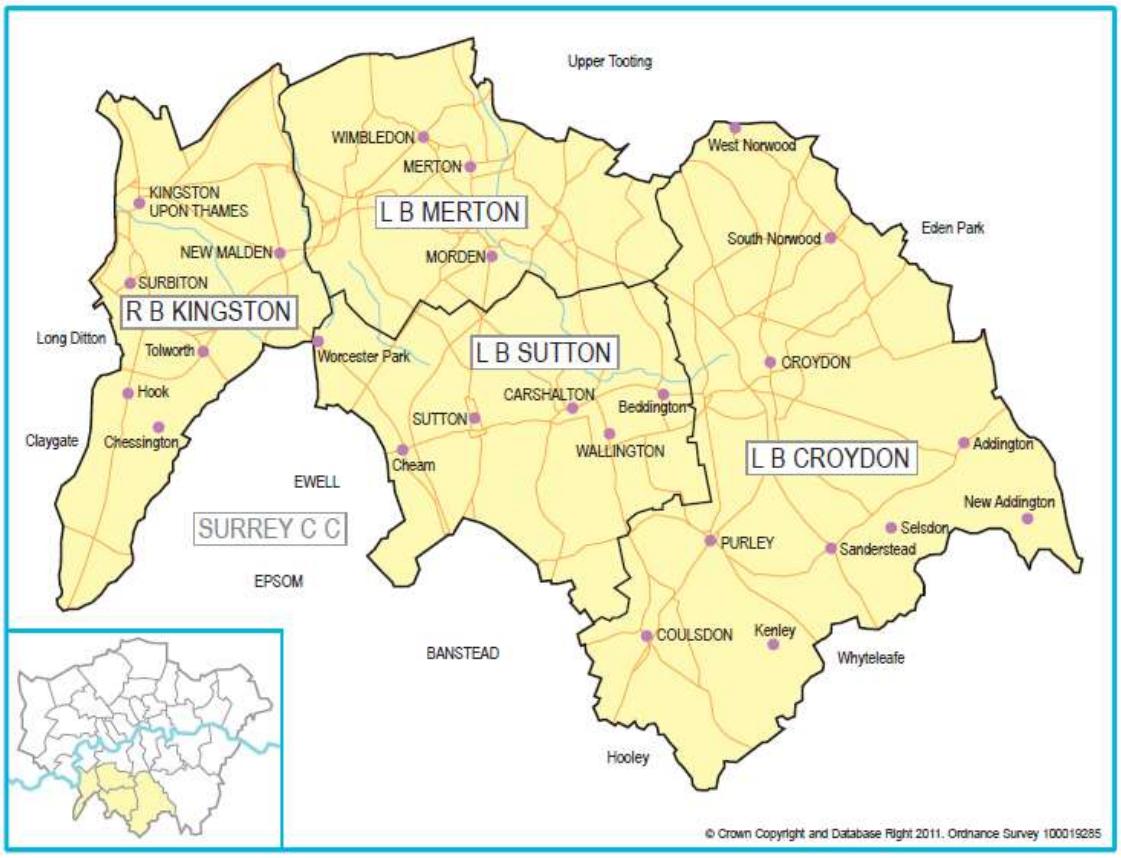
1.1 Background

1.1.1.1 The London boroughs of Croydon, Kingston, Merton and Sutton adopted the South London Waste Plan (SLWP) in March 2012, covering the period 2011 to 2021. The four partner boroughs have carried out this updated review to support delivery of a replacement SLWP which is anticipated to be adopted by 2021-22. It will cover the geographical areas (see Figure 1) of four partner boroughs of:

- London Borough of Croydon;
- London Borough of Merton;
- London Borough of Sutton; and
- Royal Borough of Kingston Upon Thames.

1.1.1.2 It will cover the time period 2021 – 2036.

Figure 1: Map of the South London Waste Plan area



1.1.1.3 The new SLWP will provide for the essential infrastructure to support housing growth in south London by:

- safeguarding existing waste treatment sites;
- identifying sites and areas suitable for new waste facilities;
- including planning policies that ensure that waste arisings in the boroughs are managed within the SLWP area and that new or redeveloped waste treatment facilities have the least impact on nearby uses and the environment.

1.1.1.4 The purpose of this study is to provide an up to date evidence base, upon which the South London Waste Plan can be prepared. This study analyses the need and existing waste capacity across the plan area and provides a borough-by- borough waste site search. This study includes a comprehensive analysis of:

- Legislation and policy relevant to waste planning;
- Current and future waste arisings in the SWLP area that contribute towards the London Plan apportionment target;
- Waste capacity across the SLWP area, including site specific analysis of existing waste sites and assessment of any potential future waste sites; and
- Other waste streams that do not contribute towards London Plan apportionment targets.

1.2 Requirements

1.2.1.1 The National Planning Policy for Waste (2014) requires all Local Planning Authorities to identify sufficient opportunities to meet the identified needs of their area for the management of seven waste streams. They have a statutory duty to prepare a waste local plan in line with Article 28 of the Waste Framework Directive (2008), aiming to drive waste management up the waste hierarchy (see paragraph 2.3.4.2).

1.2.1.2 The South London Waste Plan (SLWP) (2012) provides the planning framework for waste in South London. The SLWP period is coming to an end and it is now time to review the plan in light of new national, regional and local policies. A new SLWP must be underpinned by a robust and proportionate evidence base document which includes an assessment of existing capacity, waste management need, and suitable sites and areas to meet this need.

1.2.1.3 This waste plan evidence base sets out the key information and data on waste issues in South London, provides analysis and makes recommendations on the most appropriate options for the South London Boroughs to take forward in a draft South London Waste Plan.

1.3 Scope of this work

This study includes the following outputs:

1.3.1 Policy context

1.3.1.1 A review of all legislation and policy relevant to waste planning in England and to the preparation of a waste development plan document (DPD) and its evidence base:

- Background;
- Review of relevant legislation;
- National policy context;
- Regional policy context; and
- Local policy context.

1.3.2 Waste Arisings and Forecasts for Apportioned Waste

1.3.2.1 This section provides waste arisings and forecasts, related to waste types covered by the draft London Plan apportionment (i.e. household / local authority collected waste (LACW) and commercial and industrial (C&I) wastes), and presents information by individual borough as well as totals for the SLWP area. It includes:

- An introduction to waste arisings and forecasts;
- Assessment of LACW/household waste arisings and forecasts to 2036; and
- Assessment of C&I waste arisings and forecasts to 2036.

1.3.3 Arisings and Forecasts of Other Waste Types

1.3.3.1 This section reviews other waste streams that do not contribute towards the London Plan apportionment targets, but that are required to be planned for by planning authorities. For each waste type listed below, current waste estimates and future arisings, are presented.

- Construction, Demolition and Excavation waste (CD&E);
- Low Level Radioactive waste;
- Agricultural waste;
- Hazardous waste; and
- Wastewater.

1.3.4 Waste Capacity Assessment for Apportioned Waste

1.3.4.1 This includes an assessment of current and future waste management capacity of waste sites/facilities in each of the partner boroughs, as well as the SLWP area as a whole. It includes:

- Apportionment criteria: what counts as waste management and towards the apportionment targets;

- Existing capacity: permitted and exempt waste sites in each borough and collectively;
- Capacity gap: between apportionment targets and arisings of other waste types, compared to the management capacity in each borough and collectively;
- Likely land requirement to meet any shortfall by borough and collectively; and
- Conclusions.

1.3.5 Sites and Areas

1.3.5.1 This section identifies potential sites and areas which could help meet the capacity gaps, through either the intensification of existing operations, or through delivery of new sites.

1.3.6 Imports and Exports

1.3.6.1 This section presents an assessment of waste imports and exports to and from the SLWP area.

1.3.7 Conclusions and Recommendations

1.3.7.1 This section draws together the key conclusions from the report and makes recommendations for the SLWP boroughs to consider in their new SLWP DPD.

2 Policy Context

2.1.1.1 The waste plan evidence base for South London, and subsequent policies in the South London Waste Plan, will need to comply with EU, national, regional and local policies as follows:

2.1 Revised European Waste Framework Directive 2008 and Review of Waste Policy

2.1.1.1 Much of the impetus for meeting waste targets, such as increasing recycling and diversion of waste from landfill, comes from European Union legislation. The Government's Brexit White Paper (February 2017) confirmed that the current framework of environmental regulation set out in EU Directives will be transposed into UK law. This provides a degree of certainty in terms of policy direction for the immediate future, although monitoring will be essential after leaving the EU.

2.1.1.2 Article 28 of the Waste Framework Directive 2008 sets out the requirement for each Member State to produce a Waste Management Plan. This plan must set out an analysis of the current waste management situation and sufficient information on the locational criteria for site identification and on the capacity of future disposal or major recovery installations. These locational criteria are deferred to the Local Plans or Waste Plans of local authorities in the UK. The South London Waste Plan will form part of the UK's Waste Management Plan and will need to contain locational criteria in order to meet the requirements of the Directive. The Government's Resources and Waste Strategy (see below) commits to reviewing the Waste Management Plan for England in 2019.

2.1.1.3 A published "Review of Waste Policy and Legislation" by the EU in December 2015, has introduced a range of higher targets for recycling and the phasing out of landfilling organic and recyclable materials. This review means that facilities for the management of waste in accordance with these new targets will be required and should be planned for as part of a Local Plan or waste plan. The London Environment Strategy has similar targets, such as recycling 65% of municipal waste by 2030, and these have been incorporated into the draft new London Plan.

2.2 Localism Act 2011 and the Duty to Co-operate

2.2.1.1 The Localism Act 2011 gave the responsibility for strategic planning back to local authorities acting individually and signalled the end of planning at a regional level and with it, the requirement to produce a Regional Spatial Strategy. Section 110 of the Localism Act prescribes the "Duty to Co-operate" between local authorities in order to ensure that they work together on strategic issues such as waste planning. The duty is "to engage constructively, actively and on an on-going basis" and must

"maximise the effectiveness" of all authorities concerned with plan-making. For matters such as waste planning, it is therefore important that local authorities can show that they have worked together in exchanging information and reaching agreement on where waste management facilities will be built.

2.2.1.2 Waste is a strategic cross-boundary issue and is subject to the duty to co-operate. This waste plan evidence base includes data on information on imports and exports of waste from South London to assist the boroughs with duty to co-operate engagement.

2.3 National Policy

2.3.1 Resources and Waste Strategy

2.3.1.1 The Government's "Resources and Waste Strategy for England[5]" was published in December 2018, building on the recent "A Green Future: Our 25 Year Plan to Improve the Environment[6]" (January 2018). The overall strategy is to reduce the amount of waste produced, promote resource efficiency and move towards a circular economy.

2.3.1.2 The Resources and Waste Strategy commits to reviewing the Waste Management Plan for England, National Planning Policy for Waste and the accompanying Planning Practice Guidance in 2019 to align national policies with the Resources and Waste Strategy. The timetable for this review is not yet known but is likely to influence the development of a new South London Waste Plan.

2.3.1.3 There are a number of policy areas that could affect the amount and type of waste that local authorities have to plan for. For example, producers will pay for the disposal of their own packaging, there will be a tax on plastic packaging which does not include 30% recycled content, deposit return schemes and streamlined recycling and food waste collection services for households and businesses, and greater efficiency of energy recovery facilities.

2.3.1.4 The Resources and Waste Strategy acknowledges the deficiency in data on waste and commits to develop a new approach to collecting waste data, including a move away from weight-based targets towards impact-

[5] https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england

[6] https://www.gov.uk/government/publications/25-year-environment-plan

based targets. The timetable for this review is not yet known but could influence the development of a new South London Waste Plan.

2.3.1.5 The strategy is a 25year plan and it remains to be seen how it will impact on how waste planning authorities plan for waste. The outcomes will need to be monitored and any changes to waste production and management reflected in a future update of the South London Waste Plan.

2.3.2 Waste Management Plan for England

2.3.2.1 The Waste Management Plan for England (2013) reflects the requirements of article 28 of the Revised European Waste Framework Directive (rWFD). It sets out how much waste is generated in England and how that waste is managed. It also includes an assessment of waste infrastructure needs in the future and measures to meet the obligations of the rWFD. It states that waste planning authorities are responsible for producing waste plans to support the objectives of the Waste Management Plan for England. The Resources and Waste Strategy commits to reviewing the Waste Management Plan for England in 2019.

2.3.3 National Planning Policy Framework

2.3.3.1 A revised National Planning Policy Framework (NPPF) was published in February 2019. Changes to the plan-making section of the Planning Practice Guidance (PPG) were published in September 2018.

2.3.3.2 National planning policy for waste is dealt with separately, but the NPPF sets out policies for plan-making which will influence the development of the new South London Waste Plan. Paragraph 31 states that "the preparation and review of all policies should be underpinned by relevant and up-to-date evidence" which should be "adequate and proportionate, focused tightly on supporting and justifying the policies concerned, and take into account relevant market signals." Paragraph 35 sets out the criteria against which Local Plans will be examined. These include:

a) Positively prepared – providing a strategy which, as a minimum, seeks to meet the area's objectively assessed needs; and is informed by agreements with other authorities, so that unmet need from neighbouring areas is accommodated where it is practical to do so and is consistent with achieving sustainable development;

b) Justified – an appropriate strategy, taking into account the reasonable alternatives, and based on proportionate evidence;

c) Effective – deliverable over the plan period, and based on effective joint working on cross-boundary strategic matters that have been

dealt with rather than deferred, as evidenced by the statement of common ground; and

d) Consistent with national policy – enabling the delivery of sustainable development in accordance with the policies in this Framework.

2.3.3.3 This waste evidence base focuses on meeting these requirements, including identifying South London's objectively assessed waste management needs (positively prepared), identifying an appropriate strategy for South London's waste (justified), identifying strategic waste exports from South London (effective) and ensuring conformity with waste policies (consistent with national policy).

2.3.3.4 The main differences affecting waste in the revised NPPF and PPG is the requirement for planning authorities to produce statements of common ground to provide evidence of progress made through the duty to co-operate. Waste is a cross-border strategic issue that will need to be addressed in statements of common ground with relevant waste planning authorities. When assessing if the Local Plan is sound, the Inspector will look to statements of common ground (SCG) for evidence that cross boundary strategic matters have been "dealt with rather than deferred" (NPPF 35) and that the South London Boroughs have complied with the duty to co-operate (DtC).

2.3.4 National Planning Policy for Waste and National Planning Practice Guidance: Waste

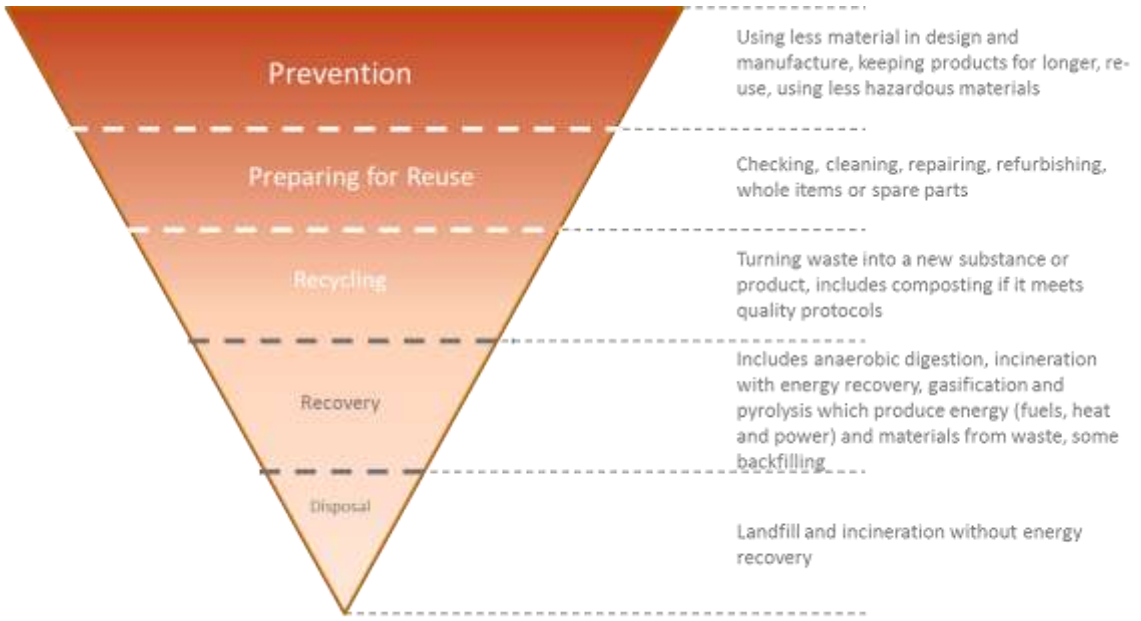
2.3.4.1 The "National Planning Policy for Waste"[7] (NPPW), published in 2015, sets out the Government's waste planning policies which all local planning authorities must have regard to when developing local waste plans. The NPPW is supplemented by the "Planning Practice Guidance"[8] section on waste which provides further detail on how to implement the policies.

2.3.4.2 The NPPW requires planning authorities to prepare Local Plans which drive waste management up the waste hierarchy (see Figure 2).

[7] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/364759/141015_National_Planning_Policy_for_Waste.pdf

[8] https://www.gov.uk/guidance/waste

Figure 2: The Waste Hierarchy



Source: Anthesis

2.3.4.3 Importantly for this waste plan evidence base, the NPPW sets out policies on data and analysis to underpin a proportionate evidence base, establishing the need for waste management facilities, and identifying suitable sites and areas to meet the need in local plans.

2.3.4.4 The NPPW states that waste planning authorities should have regard to their apportionments set out in the London Plan when preparing their plans and work collaboratively in groups with other waste planning authorities to provide a suitable network of facilities to deliver sustainable waste management.

2.3.4.5 The NPPW requires that the waste evidence base for Local Plans should include:

- existing waste management capacity;
- waste arisings from within the planning authority area, including imports and exports;
- waste management capacity gaps in total and by particular waste streams;
- forecasts of waste arisings throughout the plan period; and
- waste management capacity required to deal with forecast arisings throughput the plan period.

2.3.4.6 This waste plan evidence base includes all these elements.

2.3.4.7 The NPPW requires information on existing waste management facilities to include:

- site location details – name of site and operator, address, postcode, local authority, grid reference etc.;
- type of facility – what process or processes are occurring on the site and which waste streams they manage;
- licence/permit details – reference number, tonnage restrictions, waste type restrictions, dates of renewal, etc and status if not yet licensed and permitted;
- capacity information – licensed and permitted throughput by waste type;
- site lifetime or maximum capacity – it is important to record the expected lifetime of facilities and, where appropriate, their total remaining capacity;
- waste sources – origin of wastes managed, broken down by type and location;
- outputs from facility – recovery of material and energy, production and export of residues and the destination of these, where appropriate; and
- additional information – potential of site for increasing throughput, adding further capacity, other waste management uses, etc.

2.3.4.8 The site profiles and capacity information provided in this study includes this information.

2.3.4.9 The NPPW/G requires waste planning authorities to plan for seven waste streams. These waste streams are:

- Municipal/household;
- Commercial/industrial;
- Construction, Demolition & Excavation;
- Low Level Radioactive;
- Agricultural;
- Hazardous; and
- Wastewater.

2.3.4.10 Section 5 of this report sets out existing capacity and identifies capacity gaps for all these waste streams.

2.3.4.11 The NPPW requires Local Plans to identify sufficient opportunities to meet the identified needs of their area for the management of waste streams. The London Plan requires boroughs to allocate sufficient land and identify waste management facilities to provide capacity to manage the tonnages of waste apportioned in the Plan. The London Plan requires boroughs to provide capacity through facilitating the maximum use of existing facilities. Both the NPPW and London Plan direct new waste facilities towards industrial locations. Paragraph 4 of the NPPW under Identifying Suitable Sites and Areas makes clear that Local Plans can identify suitable

areas as well as sites for new or enhanced waste management facilities. Waste planning authorities should also identify the broad type or types of waste management facility that would be appropriately located on the allocated site or area in line with the waste hierarchy and seek opportunities to co-locate waste management facilities together with complementary activities.

2.3.4.12 The opportunities to meet the identified waste management need, including locations for new facilities, and appropriate types of facilities, is set out in the Sites and Areas chapter of this report.

2.3.4.13 The Resources and Waste Strategy commits to reviewing the NPPW and associated sections of the PPG in 2019.

2.3.5 National Planning Policy Statements

2.3.5.1 National Planning Policy Statements (NPS) comprise the Government's objectives for the development of nationally significant infrastructure in a particular sector and include any other policies or circumstances that ministers consider should be taken into account in decisions on infrastructure development. There are three relevant NPSs for waste: NPS for Renewable Energy (2011), NPS for Hazardous Waste (2013) and NPS for Waste Water (2012). There are no known plans to deliver a nationally significant facility for hazardous waste or waste water in South London.

2.4 Regional Context

2.4.1 London Environment Strategy

2.4.1.1 The Mayor's London Environment Strategy (May 2018) updates targets for waste and recycling. These updated targets will be taken forward in a new London Plan, due for publication in 2020. The Mayor's strategy for waste includes the following targets:

- No biodegradable or recyclable waste to landfill by 2026;
- 65% of 'municipal' (household and business) waste recycled by 2030, comprising:

- 50% LACW recycled by 2025; and
- 75% business recycled by 2030.

2.4.2 London Plan (March 2016)

2.4.2.1 The National Planning Practice Guidance (NPPG) on Waste states that "WPAs should have regard to the apportionments set out in the London Plan when developing their policies. The SLWP will need to be in general conformity with the London Plan".

2.4.2.2 Many of the waste targets in the current London Plan have been superseded by the London Environment Strategy. For example, recycling targets for LACW and C&I waste have been pushed back from 2020 to 2025 and 2030 respectively.

2.4.2.3 The London Plan states that London should manage as much of its waste within its boundaries as practicable, aiming to achieve waste net self-sufficiency by 2026. To meet this aim, the plan requires boroughs to allocate sufficient land and identify waste management facilities to provide capacity to manage the tonnages of waste apportioned in the plan. Land to manage borough waste apportionments should be brought forward through protecting and facilitating the maximum use of existing waste sites.

2.4.2.4 The apportionment target for the South London boroughs by 2021 is 669,000 tpa.

Table 8: Current London Plan (2016) apportionment targets for South London (tonnes per annum)

Borough	Apportionment 2021	Apportionment 2036
Croydon	199,000	247,000
Kingston	119,000	148,000
Merton	192,000	239,000
Sutton	159,000	198,000
Total	669,000	832,000

Source: GLA, Draft London Plan, 2018

2.4.2.5 The London Plan encourages boroughs to collaborate by pooling their apportionment requirements.

2.4.3 Draft London Plan (December 2017) with minor suggested changes (July 2018) and further suggested changes (March 2019)

2.4.3.1 At the time of writing, a new London Plan is being prepared with anticipated adoption in 2020. A draft London Plan was published for consultation in December 2017 and in response to comments received minor suggested changes were published in July 2018. Further suggested changes were published online ahead of the public hearing in April 2019. The timetable for preparing the new South London Waste Plan means it is most likely to be examined against policies in the new London Plan. This section therefore focuses on any potential changes to existing London Plan policies (incorporating the minor and further suggested

changes), while acknowledging they will still be subject to an examination in public before adoption.

2.4.3.2 The draft London Plan includes revised targets for waste which reflect and build on those set out in the London Environment Strategy. These include:

- the equivalent of 100% of London's waste managed within London (i.e. net self-sufficiency) by 2026 (for all waste streams except excavation waste); and
- zero biodegradable or recyclable waste to landfill by 2026;
- At least 65% recycling of municipal waste by 2030;
- 95% reuse/recycling/recovery of construction and demolition waste;
- 95% beneficial use of excavation waste.

2.4.3.3 The draft London Plan includes new apportionment targets for each borough in order to meet the net self-sufficiency target for LACW and C&I waste. The combined apportionment targets for South London are higher than those in the current London Plan. This waste plan evidence base plans on the basis of the draft apportionment targets.

Table 9: Draft New London Plan (2017) apportionment targets for South London (tonnes per annum)

Borough	Apportionment 2021	Apportionment 2041
Croydon	252,000	268,000
Kingston	187,000	199,000
Merton	238,000	253,000
Sutton	210,000	224,000
Total	887,000	944,000

Source: GLA, Draft London Plan, 2018

2.4.3.4 The draft new London Plan waste policies have been updated to align with the NPPW approach to identifying sites and/or areas to meet identified waste management need.

2.4.3.5 The definition of managed waste has been extended to include the production of solid recovered fuel (SRF), or it is high-quality refuse-derived fuel (RDF) meeting the Defra RDF definition as a minimum. This increases the amount of existing capacity which counts towards managing apportioned waste.

2.4.3.6 The further suggested changes to the London Plan make clear that boroughs are expected to identify suitable additional capacity for those waste streams not apportioned by the London Plan, where practicable.

2.4.3.7 At the time of writing, the waste section of the draft new London Plan has yet to be subject to public hearings.

2.4.4 Mayor's Supplementary Planning Guidance

2.4.4.1 The "Mayor's Sustainable Design and Construction SPG"[9] (April 2014) was produced by the previous Mayor and provides developers with best practice guidance on circular economy principles during the construction and demolition phase to reduce waste, increase recovery from demolition materials, maximise pre-fabricated elements, and ensure sufficient space for storing recyclables and residual waste ready for collection. This document is likely to be superseded on adoption of the new London Plan and the Circular Economy Statement guidance.

2.4.4.2 The "Mayor's Land for Industry and Transport SPD"[10] (Sept 2012) was produced by the previous Mayor and provides further guidance for boroughs on implementing London Plan policies, with particular emphasis on a proactive approach to accommodating new waste facilities. The guidance repeats approaches identified elsewhere in policy and focuses on delivering apportionment targets in the current London Plan, so is likely to be superseded on adoption of the new London Plan.

2.4.4.3 The "Mayor's Municipal Waste Management Strategy"[11] (Nov 2011) was produced by the previous Mayor and has largely been replaced by the London Environment Strategy (2018).

2.5 Local Policies

2.5.1 South London Waste Plan (March 2012)

2.5.1.1 The South London Waste Plan (SLWP) (March 2012) sets out the long-term vision, spatial strategy and policies for the sustainable management of waste until 2022. It identifies 27 existing permitted facilities, 11

[9] https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/Sustainable%20Design%20%26%20Construction%20SPG.pdf

[10] https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/planning-guidance-and-practice-notes/land-industry-and

[11] https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/mayors-municipal-waste-management-strategy

industrial areas suitable for new waste facilities and sets out policies for determining planning applications relating to waste facilities. The SLWP forms part of the Development Plan for each of the partner boroughs.

2.5.1.2 The SLWP plan period is coming to an end and the preparation of a new waste plan is required. Since the SLWP was adopted in 2012 many of the policy documents have been updated and there are new targets to plan for.

2.5.2 South London Waste Partnership Joint Municipal Waste Strategy (2011)

2.5.2.1 The South London Waste Partnership is the disposal authority for household waste collected by the South London Boroughs. The Partnership's Joint Municipal Waste Strategy (2011) is a statement of intent to guide the authorities in undertaking their individual waste management activities. It covers the period from 2010 to 2020. It includes a strategic goal, objectives and a number of measurable targets.

2.5.3 London Borough of Croydon

2.5.3.1 Croydon's Local Plan (February 2018) Policy SP6: Environment and Climate Change points to the South London Waste Plan as the delivery vehicle for planning for waste and commits Croydon to working with the London boroughs of Kingston-upon-Thames, Merton and Sutton to plan for waste across the South London area. Strategic Objective 9 seeks to ensure the responsible use of land and natural resources and management of waste to mitigate and adapt to climate change. Policy DM13: Refuse and Recycling requires developers to ensure that the location and design of refuse and recycling facilities are treated as an integral element of the overall design.

2.5.4 London Borough of Kingston

2.5.4.1 Kingston's Core Strategy (April 2012) Policy CS9: Waste Reduction and Management sets out strategic priorities and targets for the borough and points to the South London Waste Plan as the delivery vehicle for this. The policy commits Kingston to working with the London boroughs of Croydon, Merton and Sutton to plan for waste across the South London area. Core Strategy Objective 4 is to promote sustainable waste management within the four-borough waste partnership by preparing a Joint Waste Plan to identify suitable waste management sites to meet needs identified in the London Plan and policies to ensure high standards of development and to safeguard existing sites.

2.5.5 London Borough of Merton

2.5.5.1 Merton's Core Planning Strategy (July 2011) Policy CS17: Waste Management sets out strategic priorities and targets for the borough and

points to the South London Waste Plan as the delivery vehicle for this. The policy commits Merton to working with the London boroughs of Croydon, Kingston-upon-Thames and Sutton to plan for waste across the South London area. Strategic Policy 1 seeks to apply the waste hierarchy and exploit opportunities to utilise energy from waste.

2.5.5.2 Merton's Sites and Policies Plan (July 2014) notes that the South London Waste Plan allocates specific areas as being suitable for new waste facilities.

2.5.5.3 The emerging (Stage 2) Merton Local Plan (October 2018) includes a similar but updated strategic policy for waste as the Core Strategy (2011) which references the South London Waste Plan to deliver the strategy. The draft Environment chapter also contains waste policies. Strategic Objective 4 also takes forward the aim to apply the waste hierarchy and exploit opportunities to utilise energy from waste. Policy CC8.10: Supporting a more sustainable and resilient environment and CC8.15: Circular economic principles both include a commitment to support the principles of the circular economy.

2.5.6 London Borough of Sutton

2.5.6.1 The Sutton Local Plan (February 2018) does not have a specific policy for waste, instead defers to the South London Waste Plan in the supporting text for Policy 14: Industrial Land.

2.5.6.2 Sutton Industrial Land Phase 1 Baseline Study (May 2016) (also known as the Strategic Industrial Locations Land Survey (2015)) assesses three strategic industrial areas which are identified in Schedule 2 of the SLWP as suitable for waste uses. These are Beddington, Kimpton and Imperial Way. Imperial Way (6ha) is in fact not identified in Schedule 2 of the SLWP. Wandle Valley Trading Estate is identified in Schedule 2 of the SLWP, however this area now forms part of a site allocation in Sutton's Local Plan. It has planning permission for residential development which is currently under construction. The permission also includes a re-provision of 1,152 square metres of floor space on the 'island' part of the site.

2.5.6.3 While Sutton's Local Plan describes the three SILs as having low vacancies, the Industrial Land Study consider vacancies on all of the SILs as representing a healthy level of frictional capacity to allow business movement and churn within the market place.

3 Apportionment Waste Arisings Estimates and Forecasts

3.1 Waste Arisings Background

3.1.1.1 The first analytical stage of this study is to review the available data on waste arisings from a variety of public sources, and then use this data, along with factors which are likely to influence arisings in the future, to generate arisings estimates per waste type to 2036. Each waste type and the assumptions used to estimate future arisings are been covered in the following report chapters. This chapter (3) reports estimates for the waste types currently covered by the GLA's London Plan waste apportionment. The following chapter (4) covers the other waste types required to be addressed set out in Paragraph 13 of the PPG.

3.2 Introduction to Arisings and Forecasts

3.2.1.1 The term 'municipal waste' has historically been used in waste policy to describe all waste which is managed by or on behalf of a local authority. However, the Landfill Directive defines municipal waste as waste from households as well as other waste that, because of its nature or composition, is similar to waste from households. This includes a significant amount of waste that is generated by businesses and which is not collected by local authorities.

3.2.1.2 For planning purposes, it is important to know how much waste in total requires management. Waste management departments within local authorities have established systems for measuring the quantities of waste that they manage and this is reported to Defra through the WasteDataFlow reporting system, which has been established since 2004. Due to this established reporting mechanism, robust data is held on waste collected by local authorities.

3.2.1.3 The remainder of waste arisings, whether similar to household waste or more homogeneous, is not measured through a systematic or robust system, but in periodic surveys that have been carried out to understand the quantities arising.

3.2.1.4 To ensure consistency with the terminology used by national Government, the term 'Local Authority Collected Waste' (LACW) will be used for the waste collected by the local authorities, and the remainder of the non-hazardous waste which is collected from business will be referred to as commercial & industrial (C&I) waste. This terminology originates from Defra's response to the consultation on meeting the EU Landfill Diversion Targets in England in 2010 and ensures that LACW data is consistent with data on LACW in previous work.

3.3 Local Authority Collected Waste (LACW)

3.3.1.1 LACW waste consists of waste which comes into the possession of, or under the control of, the local authority. The LACW collected by local authorities can include household waste (residual, dry mixed recycling and food waste), street sweepings, green waste from upkeep of open spaces, and a small quantity of clinical waste[12]. Depending upon the local arrangements, LACW can include material collected by trade waste operations. The data reported in this section relates to the household waste proportion of LACW arisings, to avoid double counting of the trade waste portion, which is reported in section 3.4.

3.3.1.2 Local authorities are required to make detailed returns to Defra of the quantity of waste arisings collected from municipal sources and how the materials are subsequently managed. The accuracy of this data is therefore high.

3.4 Commercial and Industrial Waste (C&I)

3.4.1.1 Commercial and industrial (C&I) waste is waste generated from the following activities:

- Industrial Sectors

- Food, drink and tobacco manufacturing businesses
- Textiles/wood/paper/publishing businesses
- Power and utilities companies
- Chemical/non-metallic minerals manufacturing businesses
- Metal manufacturing businesses
- Machinery & equipment (other manufacturing) businesses

- Commercial Sectors

- Retail and wholesale
- Hotels and catering
- Public administration and social work
- Education
- Transport and storage
- Other services

3.4.1.2 Data for C&I waste is not reported regularly and therefore are reliant on surveys undertaken at certain times. The last survey was undertaken in

[12] Household clinical waste is not deemed hazardous unless a particular risk has been identified (based on medical diagnosis).

England in 2009, however still provides the most up-to-date information with regards to how C&I waste is managed.

3.5 Current and Future Arisings

3.5.1.1 In the existing London Plan, apportionment figures were broken down into household and C&I wastes. However, the latest figures do not provide this breakdown, just a total. In order to calculate whether there is sufficient waste management infrastructure within the SLWP area, the apportionment figures have been used, rather than estimating actual arisings.

3.5.1.2 Tables 9.1 and 9.2 in the draft London Plan provide estimates of waste arisings and apportionment figures for 2021 and 2041, for each of the boroughs. Most of the boroughs within the SLWP area, have been set apportionment targets higher than their anticipated waste arisings, with the exception of Croydon, which has actually been set a lower target. Collectively the apportionment is higher than the anticipated arisings.

Table 10: Household & C&I waste arisings and apportionment targets by borough (tonnes per annum)

	2021		2041	
	Arisings	Apportionment	Arisings	Apportionment
Croydon	305,000	252,000	327,000	268,000
Kingston	152,000	187,000	161,000	199,000
Merton	173,000	238,000	184,000	253,000
Sutton	161,000	210,000	173,000	224,000
Total	**791,000**	**887,000**	**845,000**	**944,000**

Source: GLA, Draft London Plan, 2018

3.5.1.3 The apportionment targets for each authority have been used to calculate the targets for the intervening years i.e. between 2021 and 2041. The figures for 2016 have been taken from the existing London Plan. These are presented in Table 11.

Table 11: Apportioned waste by forecast year (tonnes per annum)

	2016	2021	2026	2031	2036
Croydon	273,000	252,000	256,000	260,000	264,000
Kingston	143,000	187,000	190,000	193,000	196,000
Merton	161,000	238,000	241,750	245,500	249,250
Sutton	155,000	210,000	213,500	217,000	220,500
Total	**732,000**	**887,000**	**901,250**	**915,500**	**929,750**

Source: GLA, Draft London Plan, 2018

4 Arisings and Forecasts of other waste types

4.1 Construction, Demolition and Excavation Waste (CD&E)

4.1.1 What is this waste?

4.1.1.1 CD&E waste comprises of waste arising from the construction and demolition industries, including excavation during construction activities, and is made up of mainly inert materials such as soils, stone, concrete, brick and tile. However, there are also non-inert elements in this waste stream such as wood, metals, plastics, cardboard, and residual household-like wastes. Due to their weight, the inert elements make up the majority of the total tonnage.

4.1.1.2 As the reliability of CD&E waste data is low, apportionments for this waste stream are not set out in the London Plan. However, boroughs are still required to plan for this waste stream and identify suitable additional capacity for waste not apportioned by the London Plan, including C&D waste. Excavation waste is excluded from the London Plan net self-sufficiency target as it is difficult to recycle this waste stream and it will be difficult for London to provide sites for management or beneficial use.

4.1.1.3 The London Plan targets that London will recycle and re-use 95% of CD&E waste by 2020.

4.1.2 Current and future arisings

4.1.2.1 Establishing the current waste arisings of CD&E waste is challenging due to the lack of robust data sources for this type of waste material.

4.1.2.2 The Environment Agency's Waste Data Interrogator collates data from waste returns from individual waste sites. There are some drawbacks to this data, including potential double counting of waste streams, and the

fact that it does not cover waste treated under exemptions, or at energy from waste facilities.

4.1.2.3 However, it is the best data available, and allows CD&E to be identified as it is coded under Chapter 17 (Construction and Demolition Waste) of the European Waste Catalogue (EWC). The origin borough is also reported, and therefore it has allowed arisings to be identified for each of the constituent authorities.

4.1.2.4 The overall waste arisings have been based on a baseline year of 2017 and forecast using GLA's employment figures in the construction sector until 2036. The methodology behind the GLA's employment projections is complex and available in detail on their website[13].

4.1.2.5 In summary, these projections are presented disaggregated by sector and by borough. The sector projections are trend projections and estimate jobs in future years based on the historic productivity relationship between output and jobs, and assumed future output growth. Borough level projections combine trend projections and an assessment of employment site capacity of the individual boroughs.

4.1.2.6 The sector and borough projections have been combined to form a specific employment rate in the construction sector. A direct correlation between development and employment and waste arisings from construction has been assumed.

4.1.2.7 CD&E waste is highly influenced, particularly in London, by commercial and residential developments, including infrastructure, which means that peaks and troughs are often seen, and arisings do not necessarily follow a steady linear pattern.

[13] https://www.london.gov.uk/business-and-economy-publications/london-labour-market-projections-2017

4.1.2.8 Table 12 and Figure 3 show both the current and forecasted CD&E waste arisings. Figures for 2017 are actuals taken from WDI, and this shows an increase from 508kt to 551kt by 2036.

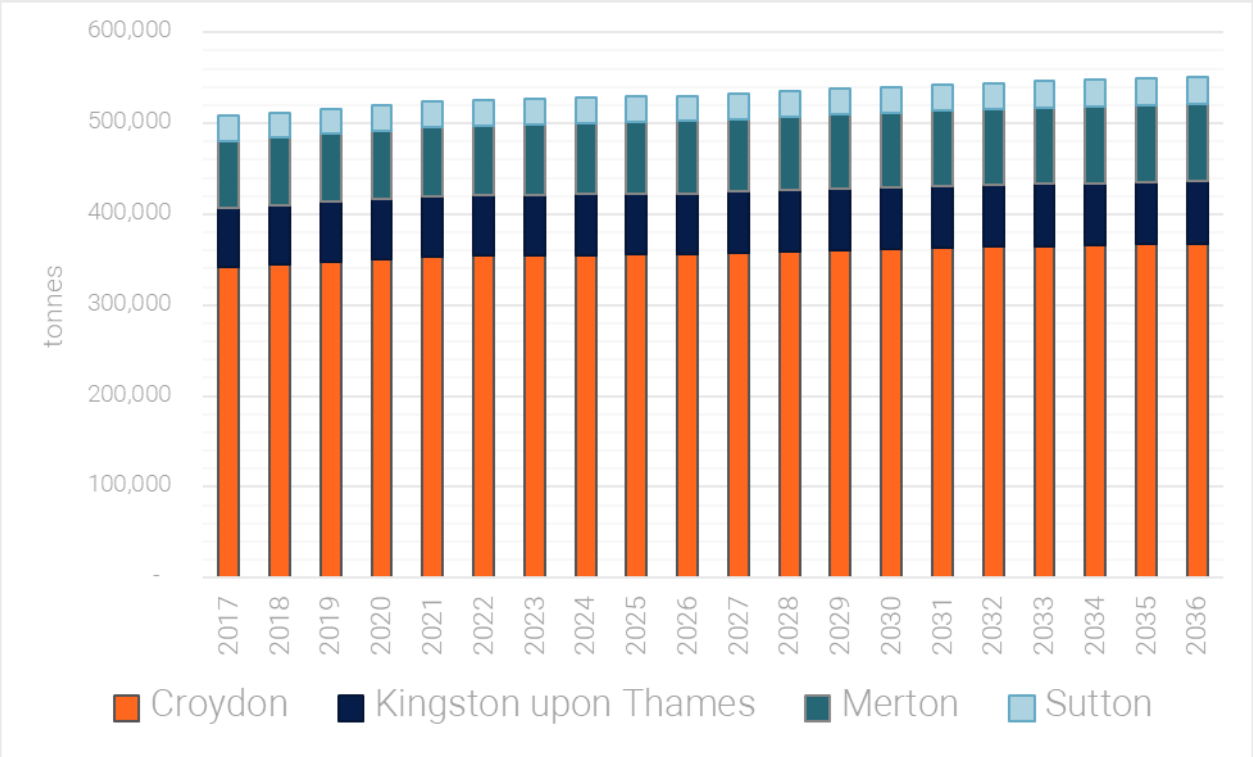
Table 12: Forecast CD&E waste arisings for each borough and for SLWP area (tonnes per annum)

			2017	2021	2026	2031	2036
Croydon	C&D	Inert/C+D	282,613	292,593	294,629	300,542	304,303
		Hazardous	364	377	380	388	392
	Excavation	Inert/C+D	53,198	55,077	55,460	56,573	57,281
		Hazardous	5,458	5,651	5,690	5,804	5,877
	Total		341,634	353,698	356,158	363,307	367,853
Kingston	C&D	Inert/C+D	37,530	37,850	38,242	39,002	39,002
		Hazardous	36	37	37	38	38
	Excavation	Inert/C+D	28,037	28,276	28,569	29,137	29,137
		Hazardous	-	-	-	-	-
	Total		65,604	66,162	66,848	68,176	68,176
Merton	C&D	Inert/C+D	46,243	47,956	50,051	52,081	54,016
		Hazardous	19	19	20	21	22
	Excavation	Inert/C+D	27,047	28,048	29,274	30,461	31,593
		Hazardous	201	208	218	226	235
	Total		73,510	76,232	79,563	82,789	85,865
Sutton	C&D	Inert/C+D	15,478	15,638	15,834	16,214	16,576
		Hazardous	29	29	30	30	31
	Excavation	Inert/C+D	11,071	11,185	11,326	11,597	11,856
		Hazardous	576	582	589	603	617
	Total		27,154	27,434	27,778	28,445	29,080
SLWP	C&D	Inert/C+D	381,865	394,036	398,756	407,838	413,897
		Hazardous	448	463	467	477	483

			2017	2021	2026	2031	2036
	Excavation	Inert/C+D	119,353	122,586	124,628	127,768	129,867
		Hazardous	6,235	6,441	6,497	6,634	6,729
	Total		507,901	523,526	530,348	542,717	550,975

Source: Anthesis

Figure 3: Actual and forecasted CD&E waste for SLWP area



4.2 Low Level Radioactive Waste

4.2.1.1 Radioactive waste is any material that is either radioactive itself or is contaminated by radioactivity and for which no further use is envisaged. Most radioactive waste is produced from nuclear power stations and the manufacture of fuel for these power stations. This is referred to as "nuclear waste." Radioactive waste is not included in the definition of hazardous waste. No such waste Is generated within the South London Waste Plan (SLWP) area

4.2.1.2 Radioactive waste also arises from nuclear research and development sites. Some also arises from Ministry of Defence sites and medical, industrial and educational establishments, such as hospitals and universities. This is sometimes referred to as "non-nuclear waste".

4.2.1.3 This waste stream is divided into four categories as follows:

1) High Level Wastes (HLW): These are highly radioactive materials that generate substantial amounts of heat. HLW is the product from reprocessing spent nuclear fuel at Sellafield in Cumbria. It arises as highly radioactive nitric acid, which is converted into glass within stainless steel containers in a process called vitrification which is carried out at Sellafield. If declared a waste, spent fuel can also be categorised as HLW.

2) Intermediate Level Wastes (ILW): These are wastes with radioactivity levels that are higher than for Low Level Waste, but which do not require heating to be taken into account in the design of management facilities. ILW is sufficiently radioactive to require shielding and containment. It arises mainly from the reprocessing of spent fuel and from operations and maintenance at nuclear sites, including fuel casing and reactor components, moderator graphite from reactor cores, and sludges from the treatment of radioactive effluents.

3) Low Level Waste (LLW): These are radioactive wastes other than that suitable for disposal with ordinary refuse. Radiation levels do not exceed 4 gigabecquerels per tonne of alpha activity, or 12 gigabecquerels per tonne of beta or gamma activity. (A Becquerel is the unit of radioactivity, representing one disintegration per second.) Unlike HLW and ILW, LLW does not normally require shielding during handling or transport. LLW consists largely of paper, plastics and scrap metal items that have been used in hospitals, research establishments and the nuclear industry. As nuclear plants are decommissioned, there will also be large volumes of this type of waste arisings in the form of soils, concrete and steel. LLW represents about 90% by volume of UK radioactive wastes but contains less than 0.0003% of the radioactivity.

4) Very Low Level Waste (VLLW): This is a sub-category of LLW, consisting of the same sorts of materials, and divided into Low Volume (“dustbin loads”) and High Volume (“bulk disposal”). Low volume VLLW can be disposed of to unspecified destinations with municipal, commercial or industrial waste. High volume VLLW can be disposed of to specified landfill sites and controlled as specified by the environmental regulators.

4.2.1.4 Categories 3 and 4 are those of interest in this study. There are no facilities within the SLWP area for the processing of such material.

4.2.1.5 Non-nuclear organisations carrying out a radioactive substances activity, need to apply to the Environment Agency for a Radioactive Substances permit, for:

- keeping or using radioactive material;
- receiving, accumulating or disposing of radioactive waste;
- keeping or using mobile radioactive apparatus.

According to the EA public register, there are 10 organisations holding 13 permits to keep and use radioactive materials in the constituent authorities of the SLWP, mainly hospitals, universities and private companies. The EA data does not identify which of these permits are currently active.

4.2.1.6 Any discharges from these permitted facilities to air, water (including discharges to sewer) and land are regulated and monitored under the Pollution Prevention and Control (PPC) regime. The latest data available for arisings of this type of waste is the Pollution Inventory Dataset from 2017. This dataset identified small permitted discharges to sewer from some of the permitted facilities within the SLWP area (which make up a small part of the wastewater volumes described in section 4.5), but no solid waste transfers, and therefore this waste places no requirement on SLWP to provide solid waste management infrastructure. Therefore, no forecasts are required or have been carried out on this type of waste.

4.3 Agricultural Waste

4.3.1.1 Since 2006, most agricultural waste has been subject to the same controls that have applied to other sectors for many years (with the exception of natural wastes including slurries and manures used as fertiliser on agricultural premises).

4.3.1.2 In the 2006 waste management regulations agricultural waste was defined as waste from premises used for agriculture within the meaning of the Agriculture Act 1947, the Agriculture (Scotland) Act 1948 or the Agriculture Act (Northern Ireland) 1949, and the Chartered Institute of Wastes Management (CIWM) refer to it as waste that has been produced on a farm in the course of 'farming'.

4.3.1.3 Similarly to CD&E and hazardous waste, WDI has been used to estimate current agricultural waste arisings (i.e. EWC 02 01). However, perhaps due to the urban nature of the boroughs, only 383 tonnes of agricultural waste was reported in 2017 (generated in Kingston). Given the relatively small tonnage of this waste, it is not considered to need specific waste management consideration.

4.4 Hazardous Waste

4.4.1.1 Hazardous wastes are categorised as those that are harmful to human health, or the environment, either immediately or over an extended period of time. They range from asbestos, chemicals, and oil through to electrical goods and certain types of healthcare waste. Quantifying the amount of hazardous waste is somewhat complicated, as not all hazardous waste is recorded in the same way. Hazardous waste requires a range of specialist facilities for treatment and disposal, and so often this waste may travel further than types of non-hazardous waste.

4.4.1.2 Estimates of hazardous waste were collated from the EA's Hazardous WDI (2017), as this source reports records from consignment notes and is considered to the most accurate data source for this waste type. Therefore, the estimates (presented in Table 13) within this section are also included in the household, C&I and CD&E estimates and should not be added to the total as this will mean they are double counted.

4.4.1.3 Hazardous waste has therefore been forecast using the growth rates shown in the GLA's Draft London Plan C&I waste arisings figures. Currently 20.2ktpa of hazardous waste is being produced, which is less than 2% of the overall waste arisings. Table 13 shows that this is expected to rise to 21.6ktpa by 2036.

Table 13: Hazardous waste arisings in the South London area (tonnes per annum)

	2017 (baseline)	2021	2026	2031	2036
Croydon	8,514	9,008	9,008	9,008	9,193
Kingston	2,404	2,404	2,404	2,404	2,432
Merton	4,325	4,591	4,591	4,591	4,685
Sutton	4,936	5,239	5,239	5,239	5,303
Total	20,180	21,242	21,242	21,242	21,612

Source: Hazardous Waste Data Interrogator, 2017 (baseline)

4.5 Wastewater

4.5.1.1 Thames Water Limited is responsible for wastewater and sewage sludge treatment in London and manages sewerage infrastructure as well as sewage treatment works. Thames Water operates across London and the Thames Valley supplying water services to 9 million customers and wastewater services to 14 million. On average, each day the company

supplies 2.6 billion litres of drinking water and removes and treats more than 4 billion litres of sewage. For its wastewater services, total assets across London include 351 sewage treatment works, 100,000 km of sewer and 4,780 pumping stations[14].

4.5.1.2 Table 14 shows the existing quantities of wastewater treated and volume of sludge produced, and projections for 2035. Wastewater quantities are expected to increase from 52.9 million m^3/yr to 55.7 million m^3/yr.

Table 14: Wastewater quantities generated by each borough now and in 2035

Borough	Current quantity of wastewater treated (m3/yr)	Current volume of sludge (Total dissolved solids - tDS/yr)	Quantity of wastewater treated by 2035 (m3/yr)	Volume of sludge by 2035 (tDS/yr)
Croydon	11,179,842	6,309	11,570,942	6,552
Kingston	10,938,459	5,429	11,378,691	5,666
Merton	9,657,944	5,685	10,240,412	6,059
Sutton	21,113,960	11,547	22,545,500	12,366
Total	**52,890,205**	**28,970**	**55,735,545**	**30,643**

Source: Thames Water

4.5.1.3 The four boroughs are served across Beddington (LB Sutton), Crossness (LB Bexley), Hogsmill (RB Kingston) and Long Reach (Dartford BC) sewage treatment works (STW). Thames Water have informed us that these all have adequate capacity to manage the incoming sewage and have all had major capacity increases during Asset Management Plan (AMP) 5 (2010 to 2015) and/or AMP6 (2015 to 2020).

[14] https://corporate.thameswater.co.uk/Media/Facts-and-figures

4.5.1.4 AMP7 will cover the period from 1st April 2020 to 31st March 2025, for which the plan will be agreed by summer 2019[15]. Some of the activities currently planned are:

- Capital maintenance;
- Hogsmill STW biodiversity enhancements;
- Crossness (STW) increased flow to full treatment capacity;
- Crossness (STW) growth capacity (to 2026);
- Hogsmill STW CHP plant replacement;
- Long Reach STW CHP replacement; and
- Long Reach STW flow to treatment capacity.

[15] https://corporate.thameswater.co.uk/About-us/our-strategies-and-plans/our-5-year-plan-for-2020-to-2025

5 Waste Capacity Assessment

5.1 Introduction

5.1.1.1 This chapter of the report addresses the waste facilities within each of the SLWP area boroughs, and determines which facilities are considered relevant to count towards to the GLA's draft London Plan apportionment figures, or those facilities which accept other waste types.

5.2 Apportionment Criteria

5.2.1.1 In assessing what available waste management capacity counts towards SLWP boroughs' apportionment targets, the assumptions reported in the draft London Plan have been used as detailed in Table 15, showing London Plan criteria and examples of facility types these could include.

Table 15: Assumptions – capacity applicable to achieving apportionment targets

London Plan Criteria	Waste Management Facilities
Used in London for energy recovery	Energy recovery facility, energy from waste facility, anaerobic digestion
Materials sorted or bulked in London facilities for reuse (including repair and re-manufacture), reprocessing or recycling	Materials Recycling Facility (MRF) or other materials sorting facility, transfer stations
Material reused, recycled or reprocessed in London	Material reprocessor, reuse facility, composting facility (permitted and exempt), anaerobic digestion facility
Produced as a solid recovered fuel (SRF) or a high-quality refuse-derived fuel (RDF) meeting the Defra RDF definition[16] as a minimum	Refuse derived fuel (RDF) or Solid Recovered Fuel (SRF) production facilities (if Renewable Obligation Order requirements are met)

[16] Refuse derived fuel (RDF) consists of residual waste that complies with the specifications in a written contract between the producer of the RDF and a permitted end-user for the thermal treatment of the waste in an energy from waste facility or a facility undertaking co-incineration such as cement and lime kilns. The written contract must include the end-user's technical specifications relating as a minimum to the calorific value, the moisture content, the form and quantity of the RDF.

5.2.2 Transfer Stations

5.2.2.1 Transfer stations operated by waste management contractors tend to bulk collected wastes before transporting to other facilities for, for instance, landfilling, energy recovery or separation for recycling. As such this capacity does not count towards the London apportionment. However, many transfer stations do practise basic separation of recyclates from input waste materials before they are bulked for onward transport, and this recycling can be counted towards the apportionment targets. To assess the level of recycling at individual transfer stations, the outputs of these facilities were examined using data from the Environment Agency's WDI dataset over the last five years (to 2017) to produce an average recycling rate. Applying this figure to the operational transfer capacity of the facility gave the recycling capacity relevant to the London apportionment targets. This approach has been agreed and discussed with the EA.

5.2.2.2 T4 exempt[17] sites (preparatory treatments, such as, baling, sorting, shredding – see notes following) tend to be small scale sorting or baling facilities of mainly recyclates, operated often at the site the waste is produced e.g. retail complexes, hospitals, rail operators, small waste operators, or are akin to small scale materials recycling facilities, and therefore for this study are considered relevant capacity to the apportionment targets.

5.2.2.3 While no specific criteria has been outlined as to what constitutes 'waste management' for C&D waste sites, the same assumptions have been used as the apportionment i.e. average recycling rate has been applied.

5.2.2.4 Also, it should be noted that many sites do not only receive household, industrial and commercial (HIC) or C&D waste. Instead they are likely to receive both. Therefore, capacities between HIC and C&D have been based on average inputs over the last five years, as reported in the EA's WDI.

5.2.3 Environmental Permitted and Exempt Sites

5.2.3.1 Environmental permits are required for activities that could pollute the air, water or land, increase flood risk or adversely affect land drainage. Permits are usually required for operations that manufacture potentially harmful substances, and for waste operations such as landfills,

[17] These are sites exempt from environmental permitting, either because of the low pollution risk of their operation.

incineration plants and sites where waste is recycled, stored, treated or disposed of. As well as operations which do present a pollution risk, and therefore need to apply for a permit, some activities can be excluded from permitting altogether (i.e. they represent no pollution risk and therefore need no permit) or exempted from permitting (i.e. represent a low pollution risk).

5.2.3.2 Using Environment Agency permitted capacity data to assess overall capacity of individual sites can be problematic. This is because permitted capacities are based on capacity bands into which permits are divided rather than the operating annual capacity of the site, and, therefore, the capacity detailed in the licence tends to be at the top end of the charging bands. Therefore, many sites give permitted capacities of 74,999 tonnes, 24,999 tonnes and 4,999 tonnes and it is likely that such figures used are over estimates of actual operational capacities.

5.2.3.3 Similarly, planning permissions do not always accurately reflect what throughput a facility can actually achieve on a practical level. This is because a planning application presents a theoretical throughput before the facility is built. Often this is the maximum capacity allowed by the Environment Agency Permit. Once the site is operational other influences can come into play over time, like locational constraints, market conditions or viability issues. The draft new London Plan says 'when assessing the throughput of a site, the maximum throughput achieved over the last five years should be used.' Therefore, additional datasets, predominantly WDI, have been used to estimate actual operational capacity using this methodology.

5.2.3.4 Exempted sites still need to register their operations with the Environment Agency but have a much lower reporting requirement than permitted sites.

5.2.3.5 Exemptions are classified under a range of 57 paragraph descriptions categorised as U (use of waste), T (treatment of waste), D (disposal of waste and S (storage of waste). Each exemption has associated with it a number of conditions which have to be met before an exemption can be issued.

5.2.3.6 For example: Waste exemption: T4 preparatory treatments, such as, baling, sorting, shredding covers activities such as baling loose paper and cardboard before transporting it to another site for recycling; baling and shredding aluminium cans and sorting different types of plastic bottles. It cannot cover the treatment of hazardous waste or the baling of waste before it is sent to landfill or incineration. Throughput limits set for T4 operations depending upon which material are handled.

5.2.3.7 A list of exemptions registered within each of the boroughs has been provided by the Environment Agency. Those exemptions relevant to this study are summarised in Table 16. Similarly to permits, exemptions are limited up to a tonnage which is not necessarily reflective of the operational capacity. Therefore, an assumed capacity (sourced from Defra guidance[18]) for each exemption type has been used to estimate the operational capacity of each of the sites operating under exemptions. This is not a standard percentage assumption but instead is based on data gathered by the Defra study with regards to the likely size of these exempt operations.

Table 16: Assumed exemptions relevant to London apportionment targets

Exemption Description	Maximum Capacity (tpa)	Assumed Capacity (tpa)
D6 disposal by incineration (wood waste)	5	5
T1 cleaning, washing, spraying or coating relevant waste	15,600	1,200
T10 sorting mixed waste	520	520
T2 recovering textiles	5,000	2,000
T11 repairing or refurbishing waste electrical and electronic equipment (WEEE)	1,000	500
T12 manually treating waste for reuse e.g. bric-a-brac, furniture, clothing	60	60
T23 aerobic composting and associated prior treatment	400	400

[18] Defra's "New Methodology to Estimate Waste Generation by the Commercial and Industrial Sector in England", 2014

Exemption Description	Maximum Capacity (tpa)	Assumed Capacity (tpa)
T25 anaerobic digestion at premises not used for agriculture and burning resulting biogas	1,000	1,000
T4 preparatory treatments, such as, baling, sorting, shredding (typical capacity given)	150,000	5,000

Source: Assumed capacities were taken from Defra's "New Methodology to Estimate Waste Generation by the Commercial and Industrial Sector in England" (2014)

5.2.3.8 Details regarding the size of these sites are not kept by the Environment Agency. It should also be noted, that these sites are unlikely to become available for other waste uses, should the existing waste activity cease, as often the main activity on these sites is not waste management which is often ancillary to the main activity.

5.2.3.9 There are also additional sites which are permitted by local authorities e.g. small-scale incinerators treating less than 3 tonnes a day. Information of this nature was sought from each of the environmental health teams, but no relevant sites were found to exist within SLWP area.

5.3 London Borough of Croydon

5.3.1 Permitted Capacity

5.3.1.1 LB Croydon has ten permitted waste sites (see Table 17). Only two of these sites are considered as waste management, and therefore can be taken in their entirety to count towards meeting capacity targets for either apportioned or C&D waste.

5.3.1.2 These are the two metal recycling sites, and together have an operational capacity of ~4,500 tpa.

5.3.1.3 The remaining eight sites are transfer stations, and as such, some of capacity has been identified as relevant to count towards either apportioned or C&D waste, based on the proportion of outputs recovered (as described in section 5.2.2).

5.3.1.4 Two of these sites are household waste amenity sites. These are facilities for the public to drop off both residual and recyclable materials, and the recyclable portion of these are relevant to the apportionment, contributing ~16,300 tpa of capacity. Along with an additional transfer station, a total of ~25,300 tpa of the 343,000 tpa of operational transfer capacity has

been counted as capacity contributing towards meeting the apportionment.

5.3.1.5 In addition, the Factory Lane waste transfer station accepts C&D waste, which is sent for recovery, and therefore ~5,200 tpa is considered to manage C&D waste. However, in total there is at least ~238,600 tpa of dedicated transfer capacity for CD&E waste, along with some additional at sites which accept both HIC and C&D wastes.

Table 17: Permitted waste sites in LB Croydon

Operator	Site Name / Address	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
Croydon Car Spares Ltd	Croydon Car Spares, 111 Aurelia Road, Croydon, Surrey, CR0 3BF	A19 : Metal Recycling Site (Vehicle Dismantler)	HIC / Hazardous	0.05	572	241	241	0
New Era Assets Limited	New Era Metals, 51 Imperial Way, Croydon, Surrey, CR0 4RR,	A19 : Metal Recycling Site (Vehicle Dismantler)	HIC / Hazardous		4,999	4,213	4,213	0
Veolia E S (U K) Limited	Fishers Farm, North Downs Road, New Addington, Croydon,	A13 : Household Waste Amenity Site	HIC	0.2	15,125	6,895	4,542	0

Operator	Site Name / Address	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
	Surrey, CR0 0LF							
Veolia E S (U K) Limited	Purley Oaks Civic Amenity Site, Brighton Road, Purely, CR8 2BG	A13 : Household Waste Amenity Site	HIC	0.22	12,535	9,099	6,684	0
Mr John Oliver Curley	Curley Skip Hire, 64 Northwood Rd, Thornton Heath	A11 : Household, Commercial & Industrial Waste T Stn	HIC / C&D	0.07	10,920	9,294	0	0
Veolia E S (U K) Limited	Factory Lane Special Waste Transfer Station, Factory Lane, Croydon, CR0 3RL	A11 : Household, Commercial & Industrial Waste T Stn	HIC / C&D	1.79	200,000	19,736	9,623	5,206

Operator	Site Name / Address	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
Mr Samuel Smith	Peartree Farm, Featherbed Lane, Addington, Croydon, CR0 9AA	A11 : Household, Commercial & Industrial Waste T Stn	HIC / C&D	0.21	37,500	59,282	0	0
Able Waste Services Limited	Able Waste Services Ltd, 43 Imperial Way, Croydon, CR0 4RR	S0803 : HCI Waste TS + treatment	C&D		74,999	46,463	0	43,268
Day Group Ltd	Day Aggregates Purley Depot, Station Yard, Approach Road, Purley, CR8 2AL	S0906: Inert and excavation WTS with treatment	C&D		249,999	179,300	0	0

Operator	Site Name / Address	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
Henry Woods Waste Management Ltd	Henry Woods Waste Management Ltd, Land Adjacent to Unit 9, Mill Lane Trading Est., Croydon, CR0 0PL	S0803 : HCI Waste TS + treatment	C&D		74,999	12,885	0	0
Total transfer capacity					676,077	342,954	20,849	48,474
Total Reuse & Recycling capacity					5,571	4,454	4,454	0
Total					681,648	347,408	25,303	48,474

5.3.2 Exempt Capacity

5.3.2.1 According to the EA, there are a number of sites which manage waste under an exemption, as opposed to requiring full permits. Table 18 presents the information regarding the relevant sites which are considered to count towards meeting the GLA apportionment target (see Appendix 1 for full details). These have been determined as described in section 5.2.3.

5.3.2.2 The total approximate waste treatment capacity operating under exemptions is 7,580 tpa. The majority of this is the preparation of dry recyclates for onward transport direct to reprocessors and recovery of scrap metal.

Table 18: Sites operating under exemptions in LB Croydon

Type of exemption	No. of sites operating under this exemption	Total capacity (tpa)
T4	1	5,000
T10	1	520
T11	4	2,000
T12	1	60
Total	**7**	**7,580**

Source: EA Register of waste exemptions

5.3.3 Capacity Gap Conclusions

5.3.3.1 Table 19 shows that taking into consideration the management capacity within LB Croydon which meets the apportionment criteria, the capacity gap will be ~219,000 tpa in 2021, which will increase to 231,000 tpa by 2036, due to increases in the apportionment target over that period.

Table 19: Apportionment capacity, targets and calculated capacity gap for LB Croydon by waste management type (tonnes per annum)

	2021	2026	2031	2036
Transfer	20,849	20,849	20,849	20,849
Recycling and Reuse	4,454	4,454	4,454	4,454
Exemptions	7,580	7,580	7,580	7,580
Total Management Capacity	32,883	32,883	32,883	32,883
Apportionment targets	252,000	256,000	260,000	264,000
Capacity gap	**219,117**	**223,117**	**227,117**	**231,117**

Source: Anthesis

5.3.3.2 Table 20 shows that the capacity gap for what is considered management of C&D waste, is ~244,500 tpa in 2021, rising to ~256,200 tpa by 2036, due to an anticipated increased in C&D waste.

Table 20: Management capacity for C&D waste, arisings and calculated capacity gap

	2021	2026	2031	2036
Transfer	48,474	48,474	48,474	48,474
C&D waste arisings	292,970	295,009	300,929	304,696
Capacity gap	**244,496**	**246,534**	**252,455**	**256,221**

Source: Anthesis

5.3.3.3 Table 21 shows that the total capacity gap is 501,800 tpa increasing to ~525,500 tpa in 2036. The estimated land requirement to meet this capacity gap is 8.76 hectares[19].

[19] Assuming 60,000 tonnes per hectare. See Appendix 3.

Table 21: Summary of capacity gaps for LB Croydon

	2021	2026	2031	2036
Target	544,970	551,009	560,929	568,696
Capacity	81,357	81,357	81,357	81,357
Capacity gap	463,613	469,651	479,572	487,338
Land requirement (ha)	7.73	7.83	7.99	8.12

Source: Anthesis

5.4 Royal Borough of Kingston-upon-Thames

5.4.1 Permitted Capacity

5.4.1.1 RB Kingston has four permitted waste sites (see Table 22), one of which is considered to be waste management of apportioned waste. This site is a WEEE recycling facility, which has an operational capacity of ~1,600 tpa.

5.4.1.2 The two others sites accepting HIC waste are transfer stations, and as such, some of its capacity has been identified as relevant to count towards either apportioned or C&D waste, based on the proportion of outputs recovered (as described in section 5.2.2).

5.4.1.3 One of these sites is a household waste amenity site. Of the outputs from this site, ~9,400 tpa of the 14,400 tpa operational capacity are recycled. Another transfer station contributes ~19,600 tpa towards the apportionment.

5.4.1.4 The Chessington Equestrian Centre has a permit to accept waste to land as a recovery operation. On average it has accepted ~44,300 tpa over the last three years (the site did not have the permit prior to 2015). However, it accepts excavation waste, rather than C&D, and therefore is not included in the capacity gap calculations for RB Kingston.

Table 22: Permitted waste sites in RB of Kingston-upon-Thames

Operator	Site Name / Address	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
Genuine Solutions Group Limited	Genuine Solutions Group Ltd., Solutions House, Unit 1 H Q3, 223 Hook Rise South, Surbiton, KT6 7LD	S0823 : WEEE treatment facility	HIC		74,999	1,630	1,630	0
Veolia E S (U K) Limited	Kingston Civic Amenity Site, Chapel Mill Road, Kingston upon Thames, KT1 3GZ	A13 : Household Waste Amenity Site	HIC		25,000	14,363	9,392	0
Viridor Waste Management Ltd	Kingston Waste Transfer Station, Chapel Mill Road, Off Villiers Road, Kingston upon Thames, KT1 3GZ	A11 : Household, Commercial & Industrial Waste T Stn	HIC	2.03	200,500	68,883	19,620	0

Operator	Site Name / Address	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
B L Penwarden Haulage & Demolition Contractors Limited	Chessington Equestrian Centre, Clayton Road, Chessington, KT9 1NN	A25 : Deposit of waste to land as a recovery operation	Inert/C&D		99,999	44,285	0	0
Total transfer capacity					225,500	83,246	29,011	0
Total Land reclamation					99,999	44,285	0	0
Total Reuse & Recycling capacity					74,999	1,630	1,630	0
Total					400,498	129,160	30,641	0

5.4.2 Exempt Capacity

5.4.2.1 According to the EA, there is only one site which manages waste under an exemption, as opposed to requiring full permits. Table 23 shows that it a T4 exemption at Kingston Hospital, which has an estimated capacity of 5,000 tpa, which is considered to count towards meeting the GLA apportionment target (see Appendix 1 for full details). These have been determined as described in section 5.2.3.

Table 23: Sites operating under exemptions in RB of Kingston-upon-Thames

Type of exemption	No. of sites operating under this exemption
T4	1

Source: EA Register of waste exemptions

5.4.3 Capacity Gap Conclusions

5.4.3.1 Table 19 shows that taking into consideration the management capacity within RB Kingston which meets the apportionment criteria, the capacity gap will be ~151,400 tpa in 2021, which will increase to ~160,400 tpa by 2036, due to increases in the apportionment target over that period.

Table 24: Apportionment capacity, targets and calculated capacity gap for RB of Kingston-upon-Thames by waste management type (tonnes per annum)

	2021	2026	2031	2036
Transfer	29,011	29,011	29,011	29,011
Recycling and Reuse	1,630	1,630	1,630	1,630
Exemptions	5,000	5,000	5,000	5,000
Total Management Capacity	35,641	35,641	35,641	35,641
Apportionment targets	187,000	190,000	193,000	196,000
Capacity gap	**151,359**	**154,359**	**157,359**	**160,359**

Source: Anthesis

5.4.3.2 Table 20 shows that the capacity gap for what is considered management of C&D waste, is ~37,900 tpa in 2021, rising to ~39,000 tpa by 2036, due to an anticipated increase in C&D waste. The capacity gap represents the whole C&D waste arisings, as there are no C&D waste management sites.

Table 25: Management capacity for C&D waste, arisings and calculated capacity gap

	2021	2026	2031	2036
Capacity	0	0	0	0
C&D waste arisings	37,887	38,279	39,040	39,040
Capacity gap	**37,887**	**38,279**	**39,040**	**39,040**

Source: Anthesis

5.4.3.3 Table 21 shows that the total capacity gap is ~189,200 tpa increasing to ~199,400 tpa in 2036. The estimated land requirement to meet this capacity gap is 3.32 hectares[20].

Table 26: Summary of capacity gaps for RB of Kingston-upon-Thames

	2021	2026	2031	2036
Target	224,887	228,279	232,040	235,040
Capacity	35,641	35,641	35,641	35,641
Capacity gap	189,246	192,638	196,399	199,399
Land requirement (ha)	3.15	3.21	3.27	3.32

Source: Anthesis

5.5 London Borough of Merton

5.5.1 Permitted Capacity

5.5.1.1 LB Merton has 17 permitted waste sites (see Table 27), three of which are considered to be waste management of apportioned waste.

[20] Assuming 60,000 tonnes per hectare. See Appendix 3.

5.5.1.2 One site is a metals recycling site which recycles 70,100 tpa. Two sites treat organic wastes (one composting, one anaerobic digestion), and between them they treat ~98,100tpa.

5.5.1.3 In addition, four transfer stations accepting HIC waste are deemed to contribute towards the apportionment. One of these is a household waste amenity site. Of the outputs from this site, ~9,900 tpa of the 14,600 tpa operational capacity are recycled.

5.5.1.4 Suez runs two transfer stations within the borough, which both accept a combination of household, C&I and C&D wastes. Benedict Wharf is the larger of the two sites, and as well as sorting and bulking materials for onward recycling, they produce an RDF on-site which goes to energy recovery. Under the Draft London Plan, this is included in the definition of waste management, and as such, can be counted towards the apportionment. Therefore 106,800 tpa of the 275,000 tpa capacity is included towards the apportionment.

5.5.1.5 However, Merton's Stage 2 Local Plan included a proposed allocation for this site as residential use, but this is subject to the acceptance of planning permission for another site to provide compensatory capacity at Beddington Lane (see section 6.3.2). This site is within LB Sutton.

5.5.1.6 Another transfer station operated by One Waste Clearance has very recently (mid-April 2019) started operating. Therefore, there is no data available regarding actual throughputs as the latest is from 2017. Discussions were had with the operator who estimates that 90% of the waste inputs are recycled. It has an operational capacity of 20,000 tpa, and so 18,000 tpa is assumed to be deemed as waste management. The split between treating apportioned waste and C&D waste was assumed to be 75%:25%.[21]

5.5.1.7 There is also a small hazardous waste transfer station within LB Merton, which has a permitted capacity of 24,999 tpa, has accepted a maximum of ~140 tonnes over the last five years.

5.5.1.8 There are nine sites which accept exclusively CD&E wastes. One recycles soil and the outputs are predominantly sent to landfill. The remaining sites are transfer stations. Together they provide ~369,900 tpa of transfer capacity for CD&E wastes. Of the proportion of the inputs which are C&D wastes and that are recovered, ~145,600 tpa of the capacity of these sites

[21] Based on the proportions of split of other similar sites across the SLWP area.

are considered to manage C&D wastes. Together with an additional 4,400 tpa from the Benedict Wharf site, the total management capacity of C&D wastes in LB Merton is ~150,100 tpa.

Table 27: Permitted waste sites in LB Merton

Operator	Site Name / Site Address	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
European Metal Recycling Limited	B Nebbett & Son, Ellis Road, Willow Lane Ind. Estate, Mitcham, CR4 4HX	A20 : Metal Recycling Site (mixed MRS's)	HIC	1.03	109,500	70,100	70,100	0
Riverside Bio Limited	Mitcham Waste Treatment Centre, 43 Willow Lane, CR4 4NA	Composting installation	HIC	0.88	100,000	51,715	51,715	0
Riverside AD Limited	Riverside AD Facility, 43 Willow Lane, CR4 4NA	Other Biological Treatment installation	HIC		999,999	46,341	46,341	0
Veolia E S (U K) Limited	Garth Road Civic Amenity Site, 63-69 Amenity Way, Garth Road,	A13 : Household Waste Amenity Site	HIC	2.05	25,000	14,594	9,866	0

Operator	Site Name / Site Address	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
	Morden, SM4 4AX							
Veolia E S (U K) Limited	Garth Road Transfer Station, 63-69 Amenity Way, Garth Road, Morden, SM4 4AX	A9 : Haz Waste Transfer Station	HIC /hazardous		22,281	18,839	15,704	0
Suez Recycling & Recovery South East Ltd	Benedict Wharf (Mitcham Transfer Station), Benedict Road, Mitcham, CR4 3BQ	A11 : Household, Commercial & Industrial Waste T Stn	HIC/ C&D	3.6	275,000	275,000	106,826	4,435
Suez Recycling And Recovery U K Ltd	Morden Transfer Station, Amenity Way, Garth Road, Morden, SM4 4AX	A11 : Household, Commercial & Industrial Waste T Stn	HIC/ C&D	0.79	74,999	39,950	0	0

Operator	Site Name / Site Address	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
One Waste Clearance	One Waste Clearance, Unit 2, Abbey Industrial Est., 24 Willow Lane, Mitcham, CR4 4NA	SR2015 No6: 75kte HCI Waste	HIC / C&D	0.1	75,000	20,000	13,453	4,547
Wandle Waste Management Limited	Unit 7, Abbey Industrial Estate, 24 Willow Lane, CR4 8NA	A9 : Haz Waste Transfer Station	Hazardous		24,999	141	0	0
U K And European Construction Limited	Unit 5, Willow Lane Industrial Estate, 39a Willow Lane, Mitcham, CR4 8NA	SR2010 No12: Treatment of waste to produce soil <75,000 tpy	C&D		75,000	804	0	0
L M D Waste Management Ltd	32 Willow Lane, Mitcham, CR4 4NA	A14 : Transfer Station taking Non-	C&D	0.06	50,000	38,738	0	33,845

Operator	Site Name / Site Address	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
		Biodegradable Wastes						
N J B Recycling Limited	77 Weir Road, Wimbledon, SW19 8UG	S0803 : HCI Waste TS + treatment	C&D		75,000	48,687	0	18,030
Penfold Thomas	B & T @ Work, Abbey Industrial Estate, Unit 5c Willow Lane, Mitcham, CR4 4NA	A11 : Household, Commercial & Industrial Waste T Stn	C&D		5,000	3,729	0	0
George Killoughery Limited	George Killoughery Limited (Mitcham), 43a Willow Lane, Mitcham, CR4 4NA	A11 : Household, Commercial & Industrial Waste T Stn	C&D		74,999	71,253	0	0

Operator	Site Name / Site Address	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
L M D Waste Management Limited	L M D Waste Management Limited, Yard 7, Wandle Way, Mitcham, CR4 4NA	S0803 : HCI Waste TS + treatment	C&D		74,999	24,444	0	20,774
Maguire Skips Ltd	Maguire Skips, Storage Lane Wandle Way, Willow Lane Industrial Estate, Mitcham, CR4 4NS	S0810 : Inert & Excavation Waste TS	C&D		74,999	58,150	0	0
Reston Waste Management Ltd	Waste Transfer And Recovery Facility, Unit 4-6, Weir Road, Wimbledon, CR4 4NB	S0803 : HCI Waste TS + treatment	C&D		74,999	71,595	0	30,131

Operator	Site Name / Site Address	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
Maguire Skips Limited	Weir Road Waste Transfer Station, 36 Weir Court, Wimbledon, SW19 8UG	S0803 : HCI Waste TS + treatment	C&D		74,999	53,313	0	42,856
Total transfer capacity					1,002,274	738,435	145,850	154,618
Total Reuse & Recycling capacity					109,500	70,100	70,100	-
Total Composting & Anaerobic Digestion (AD)					1,099,999	98,056	98,056	-
Other Treatment					75,000	804	-	-
Total					2,286,773	907,395	314,006	154,618

5.5.2 Exempt Capacity

5.5.2.1 According to the EA, there are three sites which manage waste under an exemption, as opposed to requiring full permits, two of which repair or refurbish WEEE (Table 28) and have a total anticipated capacity of 1,000 tpa, which is considered to count towards meeting the GLA apportionment target (see Appendix 1 for full details). The third site is operated by Deadman Confidential and is a T4 exemption, assumed to be of 5,000 tpa These have been determined as described in section 5.2.3.

Table 28: Sites operating under exemptions in LB Merton

Type of exemption	No. of sites operating under this exemption	Total capacity (tpa)
T4	1	5,000
T11	2	1,000

Source: EA Register of waste exemptions

5.5.3 Capacity Gap Conclusions

5.5.3.1 Table 29 shows that taking into consideration the management capacity within LB Merton which meets the apportionment criteria, there will be more capacity than required to meet the apportionment targets, up until 2036. The surplus decreases from ~82,000 tpa to ~70,800 tpa due to increasing apportionment target over the period.

5.5.3.2 However, if Benedict Wharf is lost to housing, and the replacement capacity is to be sited in LB Sutton and therefore would increase Merton's capacity gap (see Section 6).

Table 29: Apportionment capacity, targets and calculated capacity gap for LB Merton by waste management type (tonnes per annum)

	2021	2026	2031	2036
Transfer	145,850	145,850	145,850	145,850
Recycling and Reuse	70,100	70,100	70,100	70,100
Composting and AD	98,056	98,056	98,056	98,056
Exemptions	6,000	6,000	6,000	6,000
Total Management Capacity	320,006	320,006	320,006	320,006
Apportionment targets	238,000	241,750	245,500	249,250
Capacity gap	**-82,006**	**-78,256**	**-74,506**	**-70,756**

Source: Anthesis

5.5.3.3 Table 30 shows that there is also a surplus in capacity gap for management of C&D waste. A surplus of ~106,600 tpa is expected to decrease to ~100,600 tpa due to an anticipated increase in C&D waste. However, Benedict Wharf does also accept a small quantity of C&D waste, and therefore the potential loss of this site will also mean a small reduction in the surplus. However, LB Merton is still expected to maintain a surplus of waste management sites for C&D waste despite the loss of Benedict Wharf.

Table 30: Management capacity for C&D waste, arisings and calculated capacity gap

	2021	2026	2031	2036
Capacity	154,618	154,618	154,618	154,618
C&D waste arisings	47,975	50,071	52,102	54,037
Capacity gap	**-106,643**	**-104,547**	**-102,517**	**-100,581**

Source: Anthesis

5.5.3.4 Table 31 shows that there is a total surplus capacity of ~188,600 tpa decreasing to ~171,300 tpa in 2036.

Table 31: Summary of capacity gaps for LB Merton

	2021	2026	2031	2036
Target	285,975	291,821	297,602	303,287
Capacity	474,624	474,624	474,624	474,624
Capacity gap	-188,649	-182,802	-177,022	-171,337
Land requirement (ha) [22]	-3.14	-3.05	-2.95	-2.86

Source: Anthesis

5.6 London Borough of Sutton

5.6.1 Permitted Capacities

5.6.1.1 LB Sutton has twelve permitted waste sites (see Table 32). The Beddington Farmlands Landfill site receives ~308,700 tpa, of household, C&I and CD&E wastes each year. Although landfill is a final destination for waste, it does not meet the GLA's London Plan apportionment criteria. Therefore, it has not been counted towards the apportionment. The site has planning permission until 2023, after which is expected to close and the land will be incorporated into the Wandle Valley Regional Park.

5.6.1.2 The Beddington Farmlands Energy Recovery Facility (ERF) is due to become fully operational imminently, and will accept 200,000 tpa of residual waste from the SLWP, allowing for the treatment of an additional 75,000 tpa of commercial waste. The intended capacity of the facility is therefore 275,000 tpa, however it has been permitted up to 302,500 tpa, to allow for a drop in the calorific value of the waste. If there is a calorific value drop (due to a change in composition), in order to maintain the energy output of the facility, the maximum throughput is allowed to go up to 302,500 tpa. However, as the intended capacity is 275,000 tpa, this has been taken as the value contributing to the apportionment.

5.6.1.3 Viridor Recycling & Composting Centre is permitted as a transfer station, and input/output data is not definitive in enabling the capacity between the transfer and composting operations to be split. Therefore, only a relatively small proportion of this site has been determined as meeting apportionment criteria, based on the proportion of outputs going for

[22] Assuming 60,000 tonnes per hectare. See Appendix 3.

recycling. This site is also subject to temporary planning permissions, which is due to expire in 2023, and so this site has not been included in the longer-term capacity calculations.

5.6.1.4 The 777 Recycling Centre operates as a material recovery facility and accepts various types of wastes including separately collected materials, as well as mixed waste streams from household, C&I and C&D sources. The existing capacity of the site is 56,900 tpa and has been split between treating apportioned waste and C&D waste. This site has also been identified has having the opportunity for expansion, with the potential to treat up to 250,000 tpa (see Section 6).

5.6.1.5 In addition, five transfer stations accepting HIC waste are deemed to contribute towards the apportionment. One of these is a household waste amenity site. Of the outputs from this site, ~8,600 tpa of the 14,800 tpa operational capacity are recycled.

5.6.1.6 For two of these sites, no data was available from WDI as they've started operating relatively recently. Discussions with the operators have indicated that both sites on average recycle 90% of their inputs. The split between treating apportioned waste and C&D waste was assumed to be 75%:25%.[23]

5.6.1.7 There are three additional sites, which have not been included in waste management capacity calculations. One site accepts and processes water containing non-hazardous soils and stones to enable the recovery and re-use of those materials. The King Concrete site operates purely as a transfer facility for C&D materials.

5.6.1.8 There is also a clinical waste transfer station, which has accepted a maximum of ~9,600 tpa over the last five years.

5.6.1.9 In addition to these existing sites, there is a transfer station with planning permission to become operational by 2021. This site will be operated by TGM (previously Deadman Confidential) and will bulk and bale predominantly paper, but some plastics, for onward reprocessing. Therefore, the whole site capacity of 15,000 tpa is considered to count towards the apportionment.

[23] Based on the proportions of split of other similar sites across the SLWP area.

Table 32: Permitted waste sites in LB Sutton

Operator	Site Name	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
Viridor Waste Management Limited	Beddington Farmlands Landfill Site, 105 Beddington Lane, CR0 4TD	L04 : Non Hazardous Landfill	HIC/ C&D		990,000	308,661	0	0
Viridor Waste Management Limited	Beddington Farmlands Energy Recovery Facility (ERF), 105 Beddington Lane, CR0 4TD	Energy from Waste	HIC	97.2	302,500	275,000	275,000	0
Viridor Waste (Thames) Ltd	Viridor Recycling & Composting Centre, 105	A11 : Household, Commercial & Industrial Waste T Stn	HIC	5.02	240,000	103,751	22,074	0

Operator	Site Name	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
	Beddington Lane, CR0 4TD							
777 Recycling Centre Ltd	777 Recycling Centre Ltd, 158 Beddington Lane, CR0 4TE	A15 : Material Recycling Treatment Facility	HIC/ C&D	0.97	372,600	56,912	20,625	32,972
Veolia E S Cleanaway (U K) Ltd	Croydon Transfer Station, Lane/premises at Endeavour Way, Beddington Farm Road, CR0 4XB	S0803 : HCI Waste TS + treatment	HIC	0.74	75,000	27,799	21,113	0
Veolia E S (U K) Limited	Kimpton Park Way H R R C,	A13 : Household Waste Amenity Site	HIC	0.44	24,999	14,799	8,640	0

Operator	Site Name	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
	Kimpton Road, SM3 9QP							
TGM (previously Deadman Confidential)	112 Beddington Lane, CR0 4TD	Transfer	HIC	1.7	Not known	15,000	15,000	0
Raven Waste Paper Company Ltd	Raven Recycling, Unit 8-9 Endeavour Way, Beddington Farm Road, CR0 4TR	S0803 : HCI Waste TS + treatment	HIC/ C&D		74,999	15,224	5,310	5,506
Hinton Skips	Hinton Skips UK Ltd, Rear or 112 Beddington Lane, CR0 4TD	S1506 No6: 75kte HCI Waste TS + treatment	HIC / C&D	0.6	74,999	8,000	5,381	1,819

Operator	Site Name	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
Premier Skip Hire	Premier Skip Hire, 12 Sandiford Road, Kimpton Industrial Estate, SM3 9RD	S0803 No3: 75kte HCI Waste TS + treatment	HIC / C&D	0.1	75,000	12,000	8,072	2,728
Hydro Cleansing Limited	H C L House, Beddington Farm Road, CR0 4XB	A16 : Physical Treatment Facility	HIC/ C&D		100,000	13,912	0	0
King Concrete Limited	124 Beddington Lane, CR0 4YZ	S1506: 75kte HCI Waste TS + Treatment	C&D		74,999	1,060	0	0
Cannon Hygiene Limited	Mitcham Site, Beddington Lane Industrial Estate, Unit 4	S0824 : Clinical Waste Transfer Station	Hazardous		75,000	9,601	0	0

Operator	Site Name	Permit type	Input waste types	Site area (ha)	Permitted capacity (tpa)	Operational capacity (tpa)	Capacity applicable to apportionment	Capacity applicable for C&D waste
	Beddington Lane, CR0 4TG							
Total transfer capacity					714,996	2017,234	85,589	10,053
Total Reuse & Recycling capacity					372,600	56,912	20,625	32,972
Other Treatment					100,000	13,912	0	0
Non-hazardous Landfill					990,000	308,661	0	0
Energy from Waste					302,500	275,000	275,000	0
Total					2,480,096	861,719	381,214	43,026

5.6.2 Pipeline Capacity

5.6.2.1 In addition to these existing sites, Suez has a live planning application in with LB Sutton for a new facility at Beddington Lane, which would include the following waste processing operations:

- Refuse Derived Fuel (RDF) preparation operations (240,000tpa);
- Recyclable bulking operations (25,000tpa);
- Wood bulking and transfer operations (40,000tpa); and
- Waste segregation and transfer operations (45,000tpa).

5.6.2.2 Confirmation has been received from Suez that all capacity meets the criteria for 'managed waste' and can be counted towards apportioned waste capacity, with the exception of 45,000 'waste segregation and transfer operations' which is fed into other parts of the process. The RDF and wood product will not be used in another South London facility so there is no risk of double-counting capacity.

5.6.2.3 New Yard Services have a live planning application in for Brook House, 5 Kimpton Road, Sutton, SM3 9QL. The application is for the demolition of existing office and industrial warehouse to form a new waste recycling centre and office block. The application states that the facility will recycle up to 52,000 tonnes of CD&E waste per annum but given the site is 0.2 ha, it has been assumed this may realistically be lower at around 20,000 tpa, so this more conservative figure has been used. The application is currently pending consideration with a decision due by 5th June 2019.

5.6.2.4 How these two sites may contribute to both apportionment and CD&E waste management capacity is considered in Section 6.

5.6.3 Exempt Capacity

5.6.3.1 According to the EA, there is only one site which manages waste under a T11 exemption (see Table 33) and have a total anticipated capacity of 500 tpa, which is considered to count towards meeting the GLA apportionment target (see Appendix 1 for full details). These have been determined as described in section 5.2.3.

Table 33: Sites operating under exemptions in LB Sutton

Type of exemption	No. of sites operating under this exemption	Total capacity (tpa)
T11	1	500

Source: EA Register of waste exemptions

5.6.4 Capacity Gap Conclusions

5.6.4.1 Table 34 shows that taking into consideration the management capacity within LB Sutton which meets the apportionment criteria there will more capacity than required to meet the apportionment targets, up until 2036. The surplus decreases from ~171,700 tpa to ~139,100 tpa due to increasing apportionment target, and the assumed loss of the Viridor Recycling and Composting Centre.

5.6.4.2 However, with the additional potential capacity, the surplus could be as much as ~509,800 tpa by 2036.

Table 34: Apportionment capacity, targets and calculated capacity gap for LB Sutton by waste management type (tonnes per annum)

	2021	2026	2031	2036
Transfer	85,589	63,515	63,515	63,515
Recycling and Reuse	20,625	20,625	20,625	20,625
Energy from Waste	275,000	275,000	275,000	275,000
Exemptions	500	500	500	500
Total Management Capacity	381,714	359,641	359,641	359,641
Apportionment targets	210,000	213,500	217,000	220,500
Capacity gap	**-171,714**	**-146,141**	**-142,641**	**-139,141**

Source: Anthesis

5.6.4.3 Table 35 shows that there is also a surplus in capacity gap for management of C&D waste. A small surplus of ~27,400 tpa is expected to decrease to ~26,400 tpa due to an anticipated increase in C&D waste.

Table 35: Management capacity for C&D waste, arisings and calculated capacity gap

	2021	2026	2031	2036
Capacity	43,026	43,026	43,026	43,026
C&D waste arisings	15,667	15,864	16,244	16,607
Capacity gap	**-27,358**	**-27,162**	**-26,781**	**-26,418**

Source: Anthesis

5.6.4.4 Table 36 shows that there is a total surplus capacity of ~199,100 tpa decreasing to ~165,600 tpa in 2036.

Table 36: Summary of capacity gaps for LB Sutton

	2021	2026	2031	2036
Target	225,667	229,364	233,244	237,107
Capacity	424,740	402,666	402,666	402,666
Capacity gap	**-199,073**	**-173,302**	**-169,422**	**-165,559**
Land requirement (ha) [24]	-3.32	-2.89	-2.82	-2.76

Source: Anthesis

5.7 South London Summary

5.7.1.1 The SLWP authorities have agreed to pool their apportionment targets and as such, a summary of total capacity against the aggregated apportionment targets and C&D waste arisings has been presented in Table 37.

5.7.1.2 It shows that based on the existing sites, the capacity gap will increase from ~116,800 tpa in 2021 to ~181,600 tpa, resulting in a land requirement of between 1.95 and 3.03 hectares.

[24] Assuming 60,000 tonnes per hectare. See Appendix 3.

Table 37: Apportionment capacity, targets and calculated capacity gap for SLWP (tonnes per annum)

	2021	2026	2031	2036
Transfer	281,299	259,225	259,225	259,225
Recycling and Reuse	96,809	96,809	96,809	96,809
Composting, AD and Land spread	98,056	98,056	98,056	98,056
Energy from waste	275,000	275,000	275,000	275,000
Exemptions	19,080	19,080	19,080	19,080
Total	**770,244**	**748,170**	**748,170**	**748,170**
Apportionment	887,000	901,250	915,500	929,750
Capacity gap	116,756	153,080	167,330	181,580
Land requirement (ha)[25]	1.95	2.55	2.79	3.03

Source: Anthesis

5.7.1.3 The aggregated C&D capacity gap increases from ~148,400 tpa in 2021 to 168,300 tpa by 2036, requiring 2.80 additional hectares of land (see Table 38).

[25] Assuming 60,000 tonnes per hectare.

Table 38: Management capacity for C&D waste, arisings and calculated capacity gap (tonnes per annum)

	2021	2026	2031	2036
Transfer	213,146	213,146	213,146	213,146
Recycling and Reuse	32,972	32,972	32,972	32,972
Total Capacity	**246,118**	**246,118**	**246,118**	**246,118**
C&D waste arisings	394,499	399,223	408,315	414,380
Capacity gap	**148,381**	**153,105**	**162,197**	**168,262**
Land requirement (ha) [26]	2.47	2.55	2.70	2.80

Source: Anthesis

5.7.1.4 Table 39 shows that the overall waste management capacity gap for the SLWP authorities will be ~265,100 tpa by 2021, increasing to 349,800 tpa by 2036. The total additional land requirement is estimated to be 4.42 hectares, increasing to 5.83 hectares by 2036.

Table 39: Summary of capacity gaps for SLWP (tonnes per annum)

	2021	2026	2031	2036
Target	1,281,499	1,300,473	1,323,815	1,344,130
Capacity	1,016,362	994,288	994,288	994,288
Capacity gap	**265,137**	**306,185**	**329,527**	**349,842**
Land requirement (ha) [27]	4.42	5.10	5.49	5.83

Source: Anthesis

[26] Assuming 60,000 tonnes per hectare.

[27] Assuming 60,000 tonnes per hectare. See Appendix 3.

6 Sites and Areas

6.1.1.1 An assessment has been completed for each existing waste site in South London. These site profiles can be found in Appendix 4.

6.1.1.2 The waste management need (capacity gap) for South London 2021 - 2036 is summarised in Table 40 below.

Table 40: Summary of waste capacity gaps in South London 2021-2036 (tonnes and hectares)[28]

Waste stream	Capacity gap	2021	2026	2031	2036
LACW / C&I	Tonnes of waste	116,756	153,080	167,330	181,580
	Land required (ha)	1.95	2.55	2.79	3.03
C&D	Tonnes of waste	148,381	153,105	162,197	168,262
	Land required (ha)	2.47	2.55	2.70	2.80
Total	Tonnes of waste	265,137	306,185	329,527	349,842
	Land required (ha)	4.42	5.10	5.49	5.83

Source: Anthesis

6.1.1.3 The table shows that by 2036 there will be a total waste management capacity shortfall of just under 350,000 tonnes per annum, comprising around 182,000 tonnes per annum for LACW and C&I waste streams (apportioned waste) and 168,000 for C&D waste streams.

6.1.1.4 The NPPW requires Local Plans to identify sufficient opportunities to meet the identified needs of their area for the management of waste streams. The London Plan requires boroughs to allocate sufficient land and identify waste management facilities to provide capacity to manage the tonnages of waste apportioned in the Plan. The London Plan requires boroughs to provide capacity through facilitating the maximum use of existing facilities. Both the NPPW and London Plan direct new waste facilities towards industrial locations.

6.1.1.5 With this in mind, the following sequential approach to identifying capacity and land to meet South London's waste needs was developed:

[28] Not including Suez facility or other facilities in the planning pipeline.

1) Opportunities for intensification of existing waste sites;
2) Deliverable individual sites, including pipeline facilities and any identified through a call for sites;
3) Areas identified in Schedule 2 of the SLWP; and
4) Other industrial land.

6.1.1.6 Locations suitable for waste use under each of these categories are set out below.

6.2 Opportunities for intensification of existing waste sites

There are five sites in South London that are considered to have potential for intensification. These are assessed below.

6.2.1 777 Recycling Centre, 154a Beddington Lane, Sutton, CR0 4TE

6.2.1.1 This site has a current maximum recent throughput of just under 57,000 tonnes per annum, but the operator states they could manage 250,000 tonnes of waste per annum if it were financially viable. Therefore intensification of throughput of around 190,000 tonnes per annum at this facility is possible, although some intervention may be necessary to make this financially viable for the operator. The owner of this site also owns the adjacent site at 156 Beddington Lane (see section 6.3.6). He is interested in releasing 156 Beddington Lane from its safeguarded waste use and can provide compensatory capacity at 154a Beddington Lane.

6.2.2 UK and European Construction / Ranns Construction

6.2.2.1 The current planning status of this site is unclear. The exact size of the site is not known, but it is estimated to be approximately 0.5ha. It has a maximum recent throughput of 804tpa which is well below its potential as a waste management site. There is an opportunity to intensify operations and increase throughput on the site to around 18,000tpa based on a throughput of 60,000 tonnes per hectare.

6.2.3 Factory Lane Special Waste Transfer Station

6.2.3.1 This site is owner occupied by Croydon Borough Council and is in use as a household recycling and reuse centre and waste transfer station operated by Veolia. The site is 1.79ha and lies within a wider industrial area with access from Factory Lane. The SLWP notes that together with Garth Road Civic Amenity Site and Villiers Road, the South London Waste Partnership offered this site to potential operators as part of their ongoing work to procure a contract to treat the partner boroughs' residual municipal waste. The SLWP notes that there is potential for one or more of these transfer stations to be developed during the plan period, however

it has not been possible to contact Veolia to confirm any plans for the site. While HRRCs have a low throughput per hectare, the site is large and there may be an opportunity to co-locate other waste uses on the site. It is understood that when Purley Oaks HRRC is redeveloped as a gypsy and traveller site, compensatory capacity will be relocated to this site. However, there are a number of site constraints including flood risk and therefore it is not possible to draw a conclusion at this stage about how much additional capacity the site could achieve to 2036.

6.2.4 Viridor Recycling and Composting Centre, 105 Beddington Lane, Sutton, CR0 4TD

6.2.4.1 This site is within the Beddington Waste Management Facility along with Viridor's ERF and landfill site. The facility has temporary permission until 2022 as part of a contract with the South London Waste Partnership. The current waste operator (Viridor) has a licence for the site until 2023. Its proximity to the Viridor ERF makes this site potentially suitable for a complementary facility. However, the site is designated as Metropolitan Open Land, Metropolitan Green Chain, and the section 106 agreement for the site means the site will become part of the Wandle Valley Regional Park by 2023. This site is therefore not considered suitable for intensification.

6.2.5 Deadman Confidential, 35 Willow Lane, Merton, CR4 4NA

6.2.5.1 This is an exempt site within the Willow Lane SIL which sorts and bales paper for recycling. There is no throughput data for the facility. The most recent planning application (08/P2523) was for a metals recycling site stated that the throughput would be 1,500 tonnes per week which is 78,000 tonnes per annum. It is not clear when the current paper baling operation started. There could be an opportunity to intensify throughput on the site with agreement from the operator, but this would need intervention from the London Borough of Merton. The site is in Flood Zone 2 which could affect the type and amount of throughput on the site.

6.2.6 Summary

6.2.6.1 Of the five existing facilities assessed for the potential for intensification of operations, 777 Recycling and UK and European Construction / Ranns Construction have a good prospect of delivering additional waste management capacity in the short term. This could be in the regional of 190,000 and 18,000 tonnes per annum respectively, For 777 Recycling this uplift would probably on the provision that the safeguarded waste site at 156 Beddington Lane is released for other uses. The Deadman Confidential site is under-performing in capacity terms but would need

greater intervention from the Boroughs to intensify operations and the deliverability of this is as yet unknown.

6.3 Deliverable individual sites

6.3.1.1 Four sites safeguarded for waste uses through the SLWP are now vacant. As these are already safeguarded for waste use, it is recommended that these are put forward to meet South London's capacity gap.

6.3.2 Safeguarded waste site 17: Country Waste Recycling Ltd, 79-85 Beddington Lane, Sutton (2.5ha)

6.3.2.1 This site is the subject of an application by Suez (DM2018/01865) for an integrated Resource Recovery Facility with an overall processing capacity of up to 350,000tpa. The facility would provide compensatory capacity for the existing Suez operations at Benedict Wharf in Mitcham. The proposed facility would handle mainly commercial and industrial waste and the primary activity would be the preparation of a refuse derived fuel (RDF).

6.3.2.2 The current Suez transfer facility in Benedict Wharf, Mitcham has a maximum throughput of 275,000 tonnes per annum, of which around 105,000tpa contributes toward "managing" apportioned waste as defined in the London Plan (see Table 27). Merton's Stage 2 Local Plan (October 2018) included a proposed allocation for Benedict Wharf site (Site Mi1) as follows:

6.3.2.3 "Residential with some non-residential uses that are commensurate with a residential setting (for example small workshops, community uses etc.) and deliverable."

6.3.2.4 "Reallocation is dependent on there being no loss of waste management capacity within the South London Waste Plan area. The council will only support reallocation where the waste management capacity and function is moved within the South London Waste Plan area."

6.3.2.5 The proposed new facility at Beddington Lane would include four main waste process operations, comprising:

- Refuse Derived Fuel (RDF) preparation operations (240,000tpa);
- Recyclable bulking operations (25,000tpa);
- Wood bulking and transfer operations (40,000tpa); and
- Waste segregation and transfer operations (45,000tpa).

6.3.2.6 Confirmation has been received from Suez that all capacity meets the criteria for 'managed waste' and can be counted towards apportioned waste capacity with the exception of 45,000 tonnes per annum of 'waste segregation and transfer operations' which is fed into other parts of the

process. The RDF and wood product will not be used in another South London facility so there is no risk of double-counting capacity.

6.3.2.7 Off-setting the loss of around 105,000tpa from the closure of the Suez facility at Benedict Wharf in Mitcham, means that if the facility is given permission there could be a maximum net increase of capacity for apportioned waste of around 200,000 tonnes per annum for South London.

6.3.3 Brook House 5 Kimpton Road Sutton SM3 9QL

6.3.3.1 This site is the subject of an application by New Yard Services (DM2019/00399) for the demolition of existing office & industrial warehouse to form a new waste recycling centre and office block B2/B8 at 5 Kimpton Road, Sutton. The site is 0.2ha. The application states that the facility will recycle up to 52,000 tonnes of CD&E waste per annum, but realistically this is likely to be lower at around 20,000. The application is currently pending consideration with a decision due by 5th June 2019.

6.3.4 Safeguarded waste site 100: European Metal Recycling, Therapia Lane, Sutton (1.04)

6.3.4.1 This site has been vacant for a number of years. It lies within the Beddington industrial estate and is safeguarded for waste uses through the South London Waste Plan and in Sutton's Policies Map. This site was assessed in Sutton's Strategic Housing and Economic Land Availability Assessment (SHELAA) in December 2016 and found to be deliverable for industrial use, however this was not progressed any further due to the safeguarding for waste use. However, there is no mention of the existing waste use safeguarding in the assessment, nor the requirement to provide compensatory capacity if the site is developed for other uses.

6.3.4.2 It is recommended that safeguarding for waste use for this site is maintained, in line with London Plan policy, and that it is allocated in the revised SLWP as a site suitable for waste uses. Depending on the type of facility brought forward, this site could provide a capacity of around 60,000 tonnes (based on the equivalent of 60,000 tonnes of throughput per hectare).

6.3.5 SafetyKleen site, Coulsden, Unit 6b, Redlands, Coulsdon, Surrey, CR5 2HT

6.3.5.1 Safety Kleen still own this 0.3ha site but are no longer using it as a waste facility. It is a safeguarded waste site and it estimated that the site has the potential to achieve a throughput of around 17,000 tonnes per annum.

6.3.6 156 Beddington Lane, 156 Beddington Lane, Croydon, Surrey, CR0 4TE

6.3.6.1 This is a vacant site safeguarded for waste uses with a five year permission for temporary B8 uses. The owner of this site also owns the adjacent site 777 Recycling at 154a Beddington Lane. He is interested in releasing this site from waste uses and providing compensatory capacity at 154a Beddington Lane (see section 6.1 above). As there is no recent waste operation on this site, compensatory capacity should be assumed to be 54,000 tonnes per annum based on a potential throughput of 60,000 tonnes per hectare.

6.3.6.2 Of the four deliverable individual sites assessed for the potential for new waste facilities, three of these could deliver additional waste management capacity in the short term. This could be in the regional of 277,000 tonnes per annum. 156 Beddington Lane has a five year temporary permission for other uses and so is unlikely to be redeveloped before February 2023 when the permission expires. In addition, the owner would like to release the site permanently for other uses and provide compensatory capacity at the neighbouring 777 Recycling site.

6.3.7 Individual sites identified through Local Plan 'Call for Sites' exercise

6.3.7.1 Croydon 'Call for Sites' took place in spring 2012 and again in spring 2014 as part of the Croydon Local Plan development process. The "Call for Sites" was when the Council asked developers, landowners and other interested parties to send in sites that they wished to see developed or safeguarded to be assessed by the Council. No industrial or waste sites were submitted or proposed.

6.3.7.2 Kingston launched a call for sites in autumn 2017 – January 2018 as part of the preparation for the Local Plan. The invitation was extended to all individuals, developers, landowners, agents and other interested parties to submit details of sites within the borough that may be available for redevelopment over the lifetime of the plan. No industrial or waste sites were submitted or proposed.

6.3.7.3 Merton undertook a call for sites exercise took place as part of their Local Plan Stage 1 Public Consultation in Oct 2017- Jan 2018. No new waste sites or industrial sites were submitted as part of the Call for Sites.

6.3.7.4 Sutton carried out a 'Call for Sites' exercise between January and March 2015 to identify sites within the borough that may have potential for development over the plan period. As part of the Call for Sites, the Council invited landowners, agents or potential developers, to put forward sites for consideration which might have potential for contributing towards Sutton's future needs for housing, employment, retail, education, health, and other uses between 2016-17 and 2031-32.

6.3.7.5 Sites were submitted through the call for sites for industry/employment use, including:

- Land at Jessops Way, Beddington;
- Land west of Beddington Lane / Coomber Way roundabout Beddington; and
- Land west of Beddington Lane.

6.3.7.6 None of these sites were considered developable after assessment.

6.3.7.7 No individual sites were submitted to any of the South London Boroughs for waste uses during the most recent call for sites exercise.

6.3.8 Summary of sites to meet capacity gaps

6.3.8.1 Table 41 summarises the opportunities identified by stage 1) and 2) set out above to identify sites to meet the capacity gaps for South London over the plan period. The new capacity at 777 Recycling has been assumed to continue the current split between HIC and CD&E management. Brackets denote potential new capacity if 156 Beddington Lane is safeguarded as a waste site but 777 Recycling is not intensified as these two options are linked (see section 6.2.1).

Table 41: Opportunities to identify land to meet capacity gaps for SLWP area over the plan period (000 tonnes)

Opportunity		Type of waste	Location	Potential new capacity (ktpa)			
				2021	2026	2031	2036
Intensify existing site		HIC	Factory Lane Special Waste Transfer Station	Not known			
Intensify existing site		C&D	UK And European Construction / Ranns	18	18	18	18
Either / Or	Intensify existing site	HIC C&D Total	777 Recycling Centre	70 120 190	70 120 190	70 120 190	70 120 190
	(New facility)	(Any)	(156 Beddington Lane)	(0)	(54)	(54)	(54)
New facility		HIC	Suez, 79-85 Beddington Lane	200	200	200	200

Opportunity	Type of waste	Location	Potential new capacity (ktpa)			
			2021	2026	2031	2036
New facility	Any	SafetyKleen site	17	17	17	17
New facility	Any	Therapia Lane, Sutton	60	60	60	60
New facility	C&D	Brook House 5 Kimpton Road	20	20	20	20
Total			505 (315)	505 (369)	505 (369)	505 (369)

Source: Anthesis

6.3.8.2 Table 42 below compares this potential new capacity with the capacity gap identified in Table 37 above.

Table 42: Capacity gap & potential new capacity

	Waste	2021	2026	2031	2036
Capacity gap	HIC	116,756	153,080	167,330	181,580
Potential new capacity	HIC	270,000	270,000	270,000	270,000
Capacity gap	C&D	148,381	153,105	162,197	168,262
Potential new capacity	C&D	158,000	158,000	158,000	158,000
Potential new capacity	Any*	77.000	77.000	77.000	77.000

* Does not include 156 Beddington Lane as the increase at 777 Recycling is greater and reflected in the HIC figure

Source: Anthesis

6.3.8.3 Table 42 shows that intensification of existing facilities and developing vacant safeguarded waste sites for new facilities provides sufficient opportunities to meet the identified capacity gap for apportioned (HIC) waste in South London to 2036. This would be through intensifying the operation at 777 Recycling and granting permission for the proposed Suez facility at 79-85 Beddington Lane which could contribute.270,000 tonnes of capacity per annum.

6.3.8.4 Intensification of existing facilities and developing vacant safeguarded waste sites for new facilities could also provide sufficient opportunities to meet the capacity gap for C&D waste. This would be achieved through granting permission for the CD&E recycling centre at 5 Kimpton Road, intensifying the operation at 777 Recycling and UK And European Construction / Ranns, and developing the vacant site at Therapia Lane for C&D recycling. This could contribute a total of 218,000 tonnes of capacity per annum. The non-operational SafetyKleen site could also potentially contribute towards C&D management, although this site is less suitable for C&D waste management.

6.3.8.5 As sufficient opportunities can be identified to meet South London's capacity gap, it is not necessary to identify any areas for new waste facilities. Whether to remove Schedule 2 Areas from each policies map will be a consideration for the South London Boroughs as they prepare a new SLWP.

6.3.8.6 In addition, there have been a number of changes to the Schedule 2 Areas identified in the SLWP as suitable for new waste facilities. Section 6.3 sets out these changes.

6.4 Areas identified in Schedule 2 of the SLWP

6.4.1.1 The SLWP identifies Industrial Areas with Sites Suitable for Waste Facilities in Policy WP4. These are shown in the table below.

Table 43: Scheduled 2 of the existing SLWP

Site Name	Borough
Croydon Purley Oaks Highways Depot	Croydon
Purley Way, Lysander Road and Imperial Way Industrial Area	Croydon Sutton
Factory Lane Industrial Estate	Croydon
Croydon Factory Lane (South Side)	Croydon
Chessington Industrial Area	Kingston
Durnsford Road Industrial Area	Merton

Site Name	Borough
Garth Road Industrial Area	Merton
Willow Lane Industrial Area	Merton
Beddington Industrial Area (parts of)	Sutton
Kimpton Industrial Estate, Land north of Minden Road	Sutton
The Wandle Valley Trading Estate (part of)	Sutton

6.4.1.2 Since the publication of the SLWP in 2012 a number of changes have taken place to the locations identified in Schedule 2 as suitable for waste facilities:

- Factory Lane Industrial Estate: 3.33ha of land within this area has been designated for redevelopment (Proposal Sites 430 and 946). Therefore the area suitable for waste facilities will reduce in size.
- Purley Oaks Highways Depot has been allocated as a Gypsy and Traveller site. Therefore, it is no longer suitable for new waste facilities.
- Durnsford Road Industrial Area has had office buildings converted to residential accommodation under Prior Approval (Vantage House, Weir Road). The Area is now subject to an Article 4 direction which has removed the permitted development rights., however the residential accommodation already within the Area will affect the suitability of the south of the area for new waste uses. Durnsford Road industrial estate was identified in the Cross Rail 2 consultation in 2015 as the "proposed site for stabling, depot, shaft and tunnelling works", however Cross Rail 2 works are likely to begin beyond the plan period for the new SLWP.
- Garth Road Industrial Area has had office buildings converted to residential accommodation under Prior Approval (Enterprise House). The Area is now subject to an Article 4 direction which has removed the permitted development rights., however the residential accommodation already within the Area will affect the suitability of parts of the Area for waste uses.
- Willow Lane Industrial Area has had office buildings converted to residential accommodation under Prior Approval (Connect House). The Area is now subject to an Article 4 direction which has

removed the permitted development rights, however the residential accommodation already in the middle of the Area will affect the suitability of parts of the Area for waste uses. Willow Lane is a Business Improvement District and is currently subject to a BID vote.

- Wandle Valley Trading Estate has been redeveloped for other uses and it is an is an integral part of the Wandle Valley Trail. Therefore, it is no longer suitable for new waste facilities.
- Kimpton Industrial Estate, Land north of Minden Road has been redeveloped for other uses. Therefore, it is no longer suitable for new waste facilities.

7 Exports & Imports

7.1 Introduction

7.1.1.1 Waste is a strategic cross-boundary issue and is subject to the duty to co-operate. The Duty to Co-operate came into effect in November 2011 through the Localism Act. The duty to co-operate requires the South London Boroughs to "to engage, constructively, actively and on an on-going basis" with prescribed public bodies29 in the preparation of development plan documents "so far as relating to a strategic matter". The National Planning Policy Framework (NPPF) includes making "specific provision for … waste management"30 as one of the strategic priority areas. Meeting the requirements of the duty to co-operate is a key part of the plan making process.

7.1.1.2 The London Plan policy is for London as a whole to plan for net self-sufficiency. Net self-sufficiency means managing the equivalent of your waste arisings (including apportionment targets) while recognising that some imports and exports will continue. This is because where waste is actually treated is dependent on market forces and contracts, rather than solely where facilities are located. Net self-sufficiency does not mean South London will deal solely with its own waste because different types

[29] Prescribed in Regulation 4. of the Town and Country Planning (Local Planning) (England) Regulations

[30] National Planning Policy Framework (2019) paragraph 20

of waste require different forms of management and facilities often serve a wider than local catchment area in order to be viable.

7.1.1.3 Therefore there is recognition that waste moves across authority boundaries and the duty to cooperate is a mechanism for WPAs to engage with each other on waste movements between their areas to establish if there are any planning reasons why these exports and imports cannot continue. Engagement with recipients of South London's waste exports should take place throughout the plan making process and this will need to be demonstrated to the satisfaction of the Inspector when the new SLWP is submitted for examination. The following sections present data that can be used during Duty to Cooperate engagement.

7.1.1.4 It should be noted that destinations of waste changes regularly and therefore the list of authorities for engagement should be reviewed regularly through annual monitoring reports. Data from the last five years has been presented in this report.

7.1.1.5 For the duty to co-operate it is important to establish the destination of 'significant' movements of waste exports from South London. South London's waste exports which leave London are mostly received in the wider south east (WSE) region. It is therefore appropriate to use the wider south east (WSE) thresholds to indicate 'significant' waste movements. These thresholds were agreed at the South East Waste Planning Advisory Group (SEWPAG) meeting of 10th April 2014 and the East of England Waste Technical Advisory Board (EoEWTAB) meeting of meeting of 3rd April 2014. The thresholds are:

- 2,500 tpa non-hazardous waste (LACW and C&I)
- 5,000 tpa inert waste (CD&E)
- 100 tpa hazardous waste

7.2 Exports from SLWP boroughs

7.2.1 Apportioned Waste

7.2.1.1 In 2017, approximately 310,000 tonnes of apportioned waste was exported from the SLWP area. Table 44 shows the destination WPAs receiving greater than 2,500 tonnes per year of household and C&I waste. These authorities received 96% of the exports of apportioned waste in 2017. This threshold is consistent with those used by other authorities in London and the wider south east.

7.2.1.2 Slough WPA received the greatest quantity of waste in 2017, with the majority going to the Lakeside EfW facility. In fact, this facility received

over a third of the SLWP area's exports of apportioned waste in 2017. It has represented a significant proportion of the exports over the last five years, as demonstrated in Table 44. In 2017, approximately 50% of this was LACW, which will now be going to the Beddington ERF.

Table 44: Destinations of SLWP borough's apportioned waste

Recipient WPA	Site	Type of facility	2013	2014	2015	2016	2017
Slough WPA	Colnbrook Landfill Restoration Site	Land Reclamation	-	-	10,720	7,278	794
	Lakeside EfW Facility	Energy Recovery	58,979	19,344	66,824	97,642	107,952
	Other sites	-	30	56	321	274	564
Surrey WPA	Other sites	-	602	824	731	471	2,311
	Redhill Landfill (NEQ) EPR/BU8126IY	Landfill	1,746	1,230	499	34,613	40,520
	West London AD Facility	Composting, AD and Land spread	-	17,158	17,335	-	20,961
Buckinghamshire WPA	Gerrards Cross Landfill	Landfill	762	17,100	14,774	23,193	30,413
	Other sites	-	-	0	-	2	2
	Springfield Farm Landfill	Landfill	-	-	-	-	4,938
Bexley WPA	Crayfords Materials Recycling Facility	Recycling and Reuse	-	7,855	31,980	30,293	20,873
	Other sites	-	-	-	29	-	-
Havering WPA	Other sites	-	29	2	66	102	97
	Rainham M R F	Recycling and Reuse	4,415	4,603	9,037	14,910	18,047
Southwark WPA	Southwark Integrated Waste Management Facility	Other Treatment	4,041	3,945	4,164	8,167	8,350
Hampshire WPA	Budds Farm Wastewater Treatment Works And Sludge Treatment Centre	Composting, AD and Land spread	-	-	-	-	2,559
	Other sites	-	594	242	447	396	587
	Sims Group U K Limited	Recycling and Reuse	-	600	5,725	8,279	3,878
West Sussex WPA	Olus Biomass	Other Treatment	17	246	543	482	5,158
	Other sites	-	295	212	74	1,497	767

Recipient WPA	Site	Type of facility	2013	2014	2015	2016	2017
	Sweeptech Recycling Park	Other Treatment	-	-	-	755	2,638
Lewisham WPA	Hinkcroft Transport Ltd	Transfer	-	-	5,629	-	-
	SELCHP Energy Recovery Facility	Energy Recovery	1,629	1,116	462	203	1,038
	Other sites	-	-	-	-	-	2,046
Solihull WPA	Meriden Quarry	Other Treatment	-	-	288	4,849	6,869
Kent WPA	Other sites	-	1,751	951	178	156	5,596
Bristol City WPA	Other sites	-	1,022	1,494	1,048	0	131
	Units A, B & C Estuary Park	Recycling and Reuse	-	-	-	-	3,571
	Avonmouth Drum Incinerator	Energy Recovery	54	16	-	-	-
Thurrock WPA	Fort Road Biomass Processing Plant	Other Treatment	-	-	-	-	3,365
	Tilbury Green Power	Energy Recovery	-	-	-	-	2,312
	Other sites	-	821	84	71	148	114
Totals			**76,785**	**77,077**	**170,945**	**233,709**	**296,452**

Source: Waste Data Interrogator and ORATS database, EA, 2017

7.2.2 Construction, Demolition & Excavation waste

7.2.2.1 In 2017, 238,000 tonnes of CD&E waste generated within the SLWP area was exported to other WPAs. Table 45 shows the destination WPAs receiving greater than 5,000 tonnes per year of inert/C&D waste. These authorities represent 92% of the exported inert / C&D waste (for 2017). This threshold is consistent with those used by other authorities in London and the wider south east.

7.2.2.2 Surrey WPA receives the greatest proportion of the exported waste (~41% of all exports). A third of the waste received by Surrey goes to Redhill Landfill. This facility has received a fairly consistent high quantity of waste for the last five years (ranging from 58,000 in 2013 to 31,000 in 2017).

7.2.2.3 The single facility receiving the most waste is the Willows Materials Recycling Facility in Wandsworth WPA, for recycling and/or reuse, which received 40,000 tonnes in 2017.

Table 45: Destinations of SLWP borough's inert/C&D waste

Recipient WPA	Site	Type of facility	2013	2014	2015	2016	2017
Surrey WPA	Redhill Landfill (NEQ) EPR/BU8126IY	Landfill	58,430	40,173	47,976	39,739	30,960
	Addlestone Quarry	Landfill	-	-	2,810	23,800	11,322
	D & E Roberts, Kingston Rd, Kt22	Transfer	7,601	7,009	6,144	4,452	4,571
	Stanwell 111 Aggregate Recycling Facility	Other Treatment	6,162	4,467	5,100	1,080	8,820
	Ellerton Yard	Other Treatment	-	-	-	7,921	15,680
	Egap Recycling Centre	Transfer	-	2,867	3,376	3,401	4,214
	Land At Cranleigh Brick & Tile Co Ltd	Land Reclamation	-	-	-	-	11,253
	Lomond Equestrian Centre	Land Reclamation	-	-	-	-	6,428
	Other sites	-	35,047	43,447	64,985	15,710	3,752
Greenwich WPA	Other sites	-	-	-	-	-	6,178
	Victoria Deep Water Terminal	Other Treatment	41,452	41,110	39,757	45,391	20,932
Wandsworth WPA	The Willows Materials Recycling Facility	Recycling and Reuse	15,137	16,803	18,121	25,888	40,105
West Sussex WPA	Other sites	-	32,001	49,297	9,646	9,557	1,842
Milton Keynes WPA	BLETCHLEY LANDFILL SITE	Landfill	346	568	25,655	23,685	12,557
Brighton and Hove WPA	Other sites	-	-	-	-	-	134
	West Hove Golf Club	Land Reclamation	-	-	4,125	37,620	3,344
Havering WPA	Other sites	-	4	-	2	3,425	2,550
	Rainham Landfill EPR/EP3136GK	Landfill	-	-	4,382	10,800	2,350
Buckinghamshire WPA	Calvert Landfill Site	Landfill	-	-	-	-	7,460
	Gerrards Cross Landfill	Landfill	-	330	2,649	108	5,133
	Other sites	-	889	266	-	7	21
Kent WPA	Borough Green Landfill	Landfill	-	2,898	10,136	5,076	3,744

Recipient WPA	Site	Type of facility	2013	2014	2015	2016	2017
	Other sites	-	1,601	753	9,577	429	763
Oxfordshire WPA	Other sites	-	-	6	-	-	-
	SUTTON COURTENAY LANDFILL EPR/BV7001IK	Landfill	77	202	243	2,436	3,856
	Sutton Courtenay Landfill - Phase 3	Landfill	-	-	-	-	5,921
Slough WPA	Horton Brook Quarry	Landfill	-	375	-	150	4,875
	Other sites	-	816	654	640	1,288	800
Total			**199,563**	**211,224**	**255,324**	**261,963**	**219,564**

Source: Waste Data Interrogator and ORATS database, EA, 2017

7.2.3 Hazardous Waste

7.2.3.1 In 2017, 20,200 tonnes of hazardous waste was exported from the SLWP area. Table 46 shows the destinations of WPAs receiving greater than 100 tonnes per year of hazardous waste. These authorities receive over 86% (for 2017) of the total hazardous waste arisings generated within the SLWP area. This threshold is consistent with those used by other authorities in London and the wider south east.

7.2.3.2 Kent WPA receives the greatest quantity of hazardous waste from the SLWP area, at 4,000 tonnes, and 20% of overall exports of this type of waste. Hazardous Waste Data Interrogator does not report specific facilities receiving waste, but instead by general waste fate, so it not possible to draw out specific facilities of significance in this analysis. However, given the specialist nature of these facilities, the WPA in which they are located are usually able to identify the key facilities through this information, for the duty to cooperate process.

7.2.3.3 The data shows that hazardous waste tends to travel further than other types of wastes, due to the specialist nature and requirements for specialist treatment. It also shows that there are few specific facilities being utilised; rather that waste is being dispersed fairly disparately.

Table 46: Destinations of SLWP borough's hazardous waste

Recipient WPA	Waste fate	Type of waste	2013	2014	2015	2016	2017
Kent	Incineration without energy recovery	Healthcare	465	338	262	436	194
	Landfill	C&D Waste and Asbestos	1,259	1,002	1,214	473	115
	Recovery	Oil and Oil/Water Mixtures	24	92	106	321	349
	Recovery	Municipal and Similar Commercial Wastes	919	712	938	2,159	1,576
	Recovery	Healthcare	-	31	25	539	380
	Transfer	Oil and Oil/Water Mixtures	17	34	271	327	293
	Transfer	Healthcare	182	124	26	136	96
	Treatment	Oil and Oil/Water Mixtures	1,368	991	1,094	1,060	688
	Other	Other	1,060	759	238	519	303
East London Boroughs	Treatment	Oil and Oil/Water Mixtures	238	107	212	130	82
	Recovery	C&D Waste and Asbestos	1,329	436	938	197	1,168
	Other	Other	376	174	203	416	350
Surrey	Landfill	C&D Waste and Asbestos	405	1,136	1,020	843	959
	Treatment	Oil and Oil/Water Mixtures	166	278	171	120	72
	Treatment	C&D Waste and Asbestos	1,302	1,377	1,102	3	1,446
	Other	Other	67	60	102	80	136
Cambs & Peterborough	Landfill	C&D Waste and Asbestos	789	655	81	748	630
	Recovery	C&D Waste and Asbestos	-	-	-	-	194
	Other	Other	396	952	123	145	93
Hammersmith and Fulham	Recovery	Municipal and Similar Commercial Wastes	-	-	-	195	669
Hammersmith and Fulham	Transfer	Municipal and Similar Commercial Wastes	166	614	713	651	195
	Other	Other	0	2	1	0	1

Recipient WPA	Waste fate	Type of waste	2013	2014	2015	2016	2017
Medway	Transfer	Oil and Oil/Water Mixtures	351	285	232	627	703
	Treatment	Healthcare	177	373	314	214	19
	Other	Other	523	531	379	112	97
Windsor and Maidenhead	Transfer	Healthcare	14	19	35	98	152
	Treatment	Healthcare	5	5	141	554	638
	Other	Other	-	-	0	0	0
Telford and Wrekin	Recovery	Municipal and Similar Commercial Wastes	-	-	-	460	751
Derbyshire	Other	Other	1,118	618	824	994	699
Walsall	Other	Other	222	316	336	395	602
East Sussex	Recovery	Municipal and Similar Commercial Wastes	6	8	11	56	473
	Other	Other	5	1	1	6	46
Hertfordshire	Transfer	Oil and Oil/Water Mixtures	167	170	195	97	63
	Treatment	Oil and Oil/Water Mixtures	127	104	115	142	211
	Other	Other	188	118	156	194	218
Nottinghamshire	Recovery	Oil and Oil/Water Mixtures	282	1,167	227	267	323
	Other	Other	111	122	121	112	148
Greenwich	Transfer	Oil and Oil/Water Mixtures	216	259	286	362	343
	Other	Other	216	70	95	70	70
West London Boroughs	Combustion without energy recovery	Healthcare	0	0	0	-	364
	Recovery	Oil and Oil/Water Mixtures	123	71	29	185	158
	Other	Other	290	220	179	187	166
Essex	Transfer	C&D Waste and Asbestos	40	226	243	243	254
	Other	Other	104	200	191	82	49

Recipient WPA	Waste fate	Type of waste	2013	2014	2015	2016	2017
Cheshire West and Chester	Other	Other	157	337	457	336	200
Leicestershire	Other	Other	7	11	33	198	188
Wakefield	Other	Other	249	196	184	100	172
Hampshire	Other	Other	209	433	110	119	153
Bexley	Combustion without energy recovery	Healthcare	203	271	172	138	70
	Other	Other	135	245	126	108	57
Oxfordshire	Other	Other	78	216	159	127	112
Sefton	Other	Other	101	119	191	99	111
Wirral	Combustion without energy recovery	MFSU Paints, Varnish, Adhesive and Inks	-	-	51	0	0
	Other	Other	-	1	254	184	108
Wiltshire	Landfill	C&D Waste and Asbestos	365	655	77	126	76
	Other	Other	70	2	5	3	2
Rotherham	Other	Other	207	192	291	252	54
Sheffield	Other	Other	134	37	18	220	41
Northamptonshire	Landfill	C&D Waste and Asbestos	4	3	236	300	-
	Transfer	C&D Waste and Asbestos	15	684	116	3,056	1
	Other	Other	29	121	104	10	14
Total			16,775	18,281	15,534	20,333	17,898

Source: Hazardous Waste Data Interrogator and ORATS database, EA, 2017

7.3 Imports to SLWP boroughs

7.3.1 Apportioned Waste (LACW and C&I)

7.3.1.1 In 2017, the SLWP area received ~620,000 tonnes of apportioned waste which wasn't identified as being generated within the four boroughs (see Table 47). However only 69,500 tonnes of this was directly attributable to specific WPAs, with the remainder being 'non-codeable', and attributed to wider regions such as London, South East or South London.

7.3.1.2 The most utilised site is the Beddington Farmlands landfill, which is only operational until 2023. Benedict Wharf (Mitcham Transfer Station) is also heavily used, having received 197,000 tonnes in 2017. However this site is up for potential reallocation for residential use, subject to the acceptance of planning permission for another site to provide compensatory capacity at Beddington Lane (see section 6.3.2).

7.3.1.3 Surrey and Kent WPAs both import approximately 30,000 tonnes per year into the SLWP area, and are therefore the most significant users of SLWP waste facilities external to the four boroughs.

Table 47: LACW and C&I (Apportioned) waste received by SLWP boroughs

Origin WPA	Site	Type of facility	2013	2014	2015	2016	2017
Surrey	Mitcham Transfer Station	Transfer	75,046	48,411	69,438	35,740	21,817
	B Nebbett & Son Limited	Recycling and Reuse	38,400	21,100	-	-	-
	Sam Smith, Peartree Fm, Addington, Cr0	Transfer	5,877	31,405	7,050	610	7,420
	H C L House	Other Treatment	-	-	-	4,444	1,413
	Other sites	-	12,703	3,252	396	146	183
Kent	Sam Smith, Peartree Fm, Addington, Cr0	Transfer	-	-	-	11,050	17,040
	Mitcham Transfer Station	Transfer	-	-	2,245	10,208	8,690
	Mitcham Waste Treatment Centre EPR/JB3737WE	Composting, AD and Land spread	-	-	-	-	2,604
	Other sites	-	2,516	3,033	3,171	1,171	1,295
Essex	Other sites	-	3,700	3,586	3,394	91	98
East Sussex	Mitcham Transfer Station	Transfer	-	-	1,265	631	7,629
	Other sites	-	-	-	-	0	7
West Sussex	Other sites	-	3,830	3,011	735	101	1,338

Origin WPA	Site	Type of facility	2013	2014	2015	2016	2017
WPA not codeable (London)	Mitcham Transfer Station	Transfer	195,722	212,587	137,959	135,173	158,718
	Riverside Bio Limited	Composting, AD and Land spread	12,071	34,109	34,541	21,042	-
	Riverside AD Facility EPR/AB3307LK	Composting, AD and Land spread	-	-	7,360	44,585	46,341
	Mitcham Waste Treatment Centre EPR/JB3737WE	Composting, AD and Land spread	-	-	-	21,179	40,790
	Morden Transfer Station	Transfer	-	300	10,632	14,965	5,009
	Croydon Transfer Station	Transfer	5,979	-	-	2,447	3,035
	H C L House	Other Treatment	-	-	-	1,541	3,132
	Other sites	-	6,450	-	-	472	658
WPA Not Codeable (Not Codeable)	Other sites	-	27,058	-	-	-	-
WPA not codeable (South East)	Beddington Farmlands Landfill Site	Landfill	192,177	217,709	233,097	216,757	229,455
	B Nebbett & Son Limited	Recycling and Reuse	-	-	9,383	56,433	56,857
	64 Northwood Rd, Thornton Heath, Cr7	Transfer	528	2,496	1,735	1,864	675

Origin WPA	Site	Type of facility	2013	2014	2015	2016	2017
	Other sites	-	4,858	26,885	23,760	13,042	-
	B Nebbett & Son Limited	Recycling and Reuse	24,600	36,950	-	-	-
	Raven Recycling	Transfer	565	1,363	1,688	3,276	5,197
	Other sites	-	31,569	7,312	596	528	25
Total			**643,647**	**653,507**	**548,444**	**597,496**	**619,427**

Source: Waste Data Interrogator, EA, 2017

7.3.2 Construction, Demolition & Excavation Waste

7.3.2.1 In 2017, the SLWP area received 393,000 tonnes of CD&E waste which wasn't identified as being generated within the four boroughs. However, as Table 48 shows, 302,000 tonnes of this was not directly attributable to specific WPAs, with only 91,000 tonnes being attributed.

7.3.2.2 Surrey WPA is the most significant authority utilising facilities within the SLWP area, with 43,000 tonnes in 2017. A significant proportion (44% in 2017) of this was sent to the Chessington Equestrian Centre for land reclamation. This is not a permanent waste site.

7.3.2.3 Reston Waste Management (Waste Transfer and Recovery Facility) has been consistently used by Wandsworth, Kensington & Chelsea, Hammersmith & Fulham, City of Westminster and Lambeth WPAs over the last five years. In 2017 it received 31,700 tonnes of imported waste from these WPAs.

7.3.2.4 Other significant facilities receiving waste were Beddington Farmlands Landfill (79,200 tonnes), Maguire Skips Wandle Way (58,200 tonnes) and Maguire Skips Weir Road (53,300 tonnes), although the originating WPAs were all non-codeable.

Table 48: Inert / C&D waste received by SLWP boroughs

Origin WPA	Site	Type of facility	2013	2014	2015	2016	2017
Surrey	Chessington Equestrian Centre	Land Reclamation	-	11,628	44,285	14,450	18,989
	Henry Woods Waste Management Ltd	Transfer	12,885	15,183	11,658	8,150	9,815
	L M D Waste Management Limited	Transfer	-	-	1,364	1,619	9,914
	Other sites	-	30,514	37,582	9,392	2,611	4,384
City of London	77 Weir Road	Transfer	-	13,681	48,687	40,625	13,309
	Other sites	-	652	818	924	1,079	843
Wandsworth	Other sites	-	-	-	-	128	34
	Waste Transfer And Recovery Facility	Transfer	10,742	10,187	5,136	6,577	10,526
Kensington & Chelsea	Waste Transfer And Recovery Facility	Transfer	6,656	6,822	6,462	6,855	11,551
Hammersmith & Fulham	Waste Transfer And Recovery Facility	Transfer	7,726	7,925	6,401	4,221	2,780
City of Westminster	Waste Transfer And Recovery Facility	Transfer	3,060	5,911	7,925	4,730	3,860
Lambeth	Other sites	-	-	-	-	-	310
	Waste Transfer And Recovery Facility	Transfer	987	4,984	7,760	5,493	3,020
Bromley	Other sites	-	18,007	40	50	246	1,454
Hackney	Other sites	-	7,703	-	-	-	-
WPA not codeable (London)	32 Willow Lane	Transfer	-	-	-	2,018	6,786
	Able Waste Services Ltd	Transfer	-	289	5,280	13,310	4,565
	Day Group Ltd	Transfer	57,611	160,198	145,380	55,810	-
	L M D Waste Management Limited	Transfer	-	-	749	1,945	5,612
	Mitcham Transfer Station	Transfer	29,714	23,743	10,056	7,306	7,427
	Morden Transfer Station	Transfer	-	7,203	19,708	24,985	34,807
	Other sites	-	4,445	10,000	105	3,089	1,343
WPA not codeable (South East)	Beddington Farmlands Landfill Site	Landfill	81,745	110,425	69,040	80,917	79,206

Origin WPA	Site	Type of facility	2013	2014	2015	2016	2017
	Other sites	-	34,659	3,808	3,792	12,417	2,698
WPA not codeable (South London)	George Killoughery Limited (Mitcham)	Transfer	71,244	37,318	7,767	33,360	32,845
	Maguire Skips	Transfer	17,330	25,369	16,624	29,718	58,150
	Other sites	-	29,927	22,044	32,220	9,029	5,018
	Raven Recycling	Transfer	455	3,298	3,051	6,325	10,027
	Weir Road Waste Transfer Station	Transfer	-	31,770	49,221	45,415	53,313
Total			**426,061**	**550,226**	**513,035**	**422,428**	**392,589**

Source: Waste Data Interrogator, EA, 2017

7.3.3 Hazardous Waste

7.3.3.1 In 2017, the SLWP area received over 800 tonnes of hazardous waste not originating from within the four boroughs. Around two thirds of this was sent from locations in Surrey WPA. (see Table 49).

7.3.3.2 Although not directly attributable to any specific waste sites within the area, the vast majority (97% in 2017) is going to transfer stations.

Table 49: Hazardous waste received by SLWP boroughs

Origin WPA	Waste fate	Type of waste	2013	2014	2015	2016	2017
Surrey	Transfer	Healthcare	-	-	-	190	254
	Transfer	C&D Waste and Asbestos	0	95	34	129	130
	Transfer	Not Otherwise Specified	10	23	28	80	77
	Transfer	Oil and Oil/Water Mixtures	10	15	42	47	47
	Transfer	MFSU Paints, Varnish, Adhesive and Inks	18	17	42	46	9
	Transfer	Packaging, Cloths, Filter Materials	36	20	28	27	17
	Transfer	Other	20	21	6	2	4
	Recovery	Other	20	3	-	-	-
	Rejected	Other	-	-	-	-	20
Bracknell Forest	Transfer	Solvents	84	128	84	61	67
	Transfer	Oil and Oil/Water Mixtures	28	2	29	54	32
	Transfer	Other	0	3	26	10	14
Kent	Transfer	Packaging, Cloths, Filter Materials	46	30	25	28	29
	Transfer	Not Otherwise Specified	17	11	28	42	37
	Transfer	Oil and Oil/Water Mixtures	30	20	10	26	26
	Transfer	Other	68	28	26	37	29
	Rejected	Other	-	-	-	-	5
Hampshire	Transfer	Packaging, Cloths, Filter Materials	13	31	29	17	13
	Transfer	Other	53	69	61	29	24
	Recovery	Other	0	27	-	-	0
Total			455	543	499	825	835

Source: Hazardous Waste Data Interrogator, EA, 2017

7.4 Summary

7.4.1.1 In total for LACW and C&I (apportioned) waste streams, for 2017, the SLWP area exported 309,700 tonnes but 'received' ~620,000 tonnes of apportioned waste which wasn't identified as being generated within the four boroughs. This would suggest that the SLWP area is a net importer of waste. However, a very large proportion of the imports were non-codeable, and therefore some of this waste is likely to have been generated within the SLWP area boroughs themselves. There is no way of attributing this tonnage to specific WPAs. In addition, 235,000 tonnes of waste received (38% of the total) was received by transfer stations, rather than final destination waste treatment facilities.

7.4.1.2 Similarly, 238,000 tonnes of CD&E waste has been exported from the SLWP area to other WPAs. However, again although the figure for imports is higher at 393,000 tonnes, only 91,000 tonnes were attributable to specific WPAs, and the remaining origins are unknown. And 71% of the waste imported (278,300 tonnes) was received by transfer stations, rather than final destination waste treatment facilities.

7.4.1.3 For hazardous waste, as the data source is different, there is less uncertainty with regards to origins. In this case, SLWP area exported 20,200 tonnes in 2017, with 20% of this going to Kent. South London received 800 tonnes in 2017, and so is a net exporter of hazardous waste.

8 Conclusions and recommendations

8.1 Comparison of the capacity gaps and potential new capacity

8.1.1.1 Section 6 of this report summarises the capacity gap for South London 2021 - 2036 and proposes the intensification of existing sites and development of vacant and non-operational sites to meet the capacity gap. Table 50 compares the capacity gaps identified in Section 5 with the potential new capacity identified in Section 6, and calculates the balance of capacity.

8.1.1.2 The figures are based on the assumption that 777 Recycling Centre at 154a Beddington Lane maximises its throughput for HIC waste and that 156 Beddington Lane is released for other uses. It also uses the assumption that Therapia Lane, UK And European Construction / Ranns and the non-operational SatefyKleen site contribute towards CD&E capacity rather than HIC.

Table 50: Summary of waste capacity gaps in South London 2021-2036 (tonnes and hectares)

Waste stream		2021	2026	2031	2036
LACW / C&I	Capacity gap	116,756	153,080	167,330	181,580
	Potential new capacity	270,000	270,000	270,000	270,000
	Balance	+153,244	+116,920	+102,670	+88,420
C&D	Capacity gap	148,381	153,105	162,197	168,262
	Potential new capacity	218,000*	218,000*	218,000*	218,000*
	Balance	**+69,619**	**+64,895**	**+55,803**	**+49,738**

* This figure includes intensification of sites already managing CD&E waste, granting permission for the CD&E recycling centre at 5 Kimpton Road, and developing the site at Therapia Lane for CD&E recycling.

Source: Anthesis

8.1.1.3 Table 50 shows that the sites identified for intensification and development in Section 6 represent sufficient opportunity to meet the capacity gaps for LACW, C&I and C&D waste streams. If all potential new capacity identified in section 6 was brought forward there would be a capacity surplus for LACW, C&I and C&D waste streams which decreases

over the plan period but still remains as a surplus. This means there is some flexibility in bringing this capacity forward.

8.2 Policy recommendations

8.2.1.1 The recommended strategy for each waste stream is set out below.

8.2.2 LACW and C&I (apportioned waste)

8.2.2.1 Continue to safeguard existing waste sites including the safeguarding of waste sites not currently identified on borough policies maps.

8.2.2.2 Engage with the operators of sites which have the potential to intensify their operations, namely 777 Recycling in Sutton and Veolia for Factory Lane Waste Transfer Station in Croydon.

8.2.2.3 Identify vacant sites suitable for new waste facilities, namely 156 Beddington Lane (subject to discussions with 777 Recycling), vacant SafetyKleen site and Therapia Lane.

8.2.2.4 The South London Boroughs will need to carry out engagement under the duty to co-operate with waste planning authorities (WPAs) who receive significant amount of LACW and C&I waste exports from South London. These WPAs are identified in Section 7 of this report. For LACW and C&I waste "significant" is generally considered to be over 2,500 tonnes.

8.2.3 CD&E waste

8.2.3.1 Continue to safeguard existing waste sites including the safeguarding of waste sites not currently identified on borough policies maps.

8.2.3.2 Engage with the operators of sites which have the potential to intensify their operations, namely 777 Recycling in Sutton and UK and European Construction / Ranns Construction in Merton.

8.2.3.3 Identify vacant sites suitable for new waste facilities, namely 156 Beddington Lane (subject to discussions with 777 Recycling), vacant SafetyKleen site and Therapia Lane.

8.2.3.4 The South London Boroughs will need to carry out engagement under the duty to co-operate with waste planning authorities (WPAs) who receive significant amount of CD&E waste exports from South London. These WPAs are identified in Section 7 of this report. For CD&E waste "significant" is generally considered to be over 5,000 tonnes.

8.2.4 Hazardous waste

8.2.4.1 Hazardous waste is a subset of the other main waste streams and therefore is included in the modelling for LACW, C&I and CD&E. Planning for hazardous waste facilities can only really be done at a regional and

inter-regional level and the South London Boroughs will need to co-operate with the London Waste Planning Forum and the wider south east on this issue.

8.2.4.2 The South London Boroughs will need to carry out engagement under the duty to co-operate with waste planning authorities (WPAs) who receive significant amount of hazardous waste exports from South London. These WPAs are identified in Section 7 of this report. For hazardous waste "significant" is generally considered to be over 100 tonnes.

8.2.5 Low Level Radioactive Waste

8.2.5.1 This waste places no requirement on the SLWP solid waste management infrastructure and it is not necessary to provide additional facilities for this waste stream.

8.2.6 Agricultural waste

8.2.6.1 Only a very small amount of agricultural waste is generated in South London and it is not considered necessary to provide additional facilities for this waste stream.

8.2.7 Waste water

8.2.7.1 Thames Water have informed us that these all have adequate capacity to manage the incoming sewage and there is no need to plan for any new facilities.