East London Joint Waste Plan

Baseline & Forecast for Hazardous Waste Arising in East London to 2041

Report: Consultation Draft

Version: 2.0

Issued: July 2024

BPP Consulting Document Control

Project: East London Joint Waste Plan

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Version Description: Consultation Draft

Version No: v2.0

Date: 25.07.2024

Version No.	Version Description	Author	Date	Reviewed	Date
1.0	Draft for Client review	Ella Mills (Data Analyst)	09.07.2024	Alan Potter/Ian Blake (Partner)	10.07.24
2.0	Consultation Draft	Alan Potter (Partner)	25.07.2024	Alan Potter (Partner)	25.07.24

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1. Purpose

1.1 The report updates the forecast of hazardous waste estimated to be produced in East London during the period of the East London Joint Waste Plan (ELJWP) and forms part of the evidence base of the Plan.

1.2 For the purpose of this exercise East London is taken to comprise the following London Boroughs:

- Barking & Dagenham;
- Havering;
- Newham; and
- Redbridge

(hereinafter referred to as "the East London Boroughs").

Principal Data Source

1.3 The principal data source used to generate this hazardous waste baseline update is the Environment Agency Hazardous Waste Interrogator (HWI).

1.4 Legislation requires that the relevant waste regulation authority[1] be notified when hazardous waste is moved. The notification takes the form of a consignment note that details the quantities and destination of the waste. This means that the following movements of hazardous waste are recorded and reported to the relevant regulatory body:

- From producer sites directly to disposal/treatment facilities;
- from producer sites to transfer facilities for bulking up and onward management; and,
- from treatment facilities to final disposal sites.

1.5 This data is then aggregated by the Environment Agency and made available in the HWI that is published on an annual basis with a delay of approximately nine months.

Advice on Data

1.6 The principal source of advice with respect to the use of data to inform production of a plan evidence base is the national Planning Practice Guidance (nPPG)[2]. This states that:

"*Assessing waste management needs for Local Plan making is likely to involve:*

- *understanding waste arisings from within the planning authority area, including imports and exports*
- *identifying the waste management capacity gaps in total and by particular waste streams*
- *forecasting the waste arisings both at the end of the period that is being planned for and interim dates*
- *assessing the waste management capacity required to deal with forecast arisings at the interim dates and end of the plan period."*

Paragraph: 022 Reference ID: 28-022-20141016

[1] For England this is the Environment Agency.

[2] available at https://www.gov.uk/guidance/waste

1.7 The nPPG includes a section entitled "Using data to monitor and forecast waste needs", which articulates the following principles for waste planning authorities to adopt when using data to plan for waste management:

- *Make clear assumptions on how data were handled, as well as their impact (including on forecasting)*
- *Provide data to an appropriate level of significance, based on their explicit assumptions. In practice, data quoted to more than 2 or 3 significant figures will not be helpful and spurious accuracy stemming from precise figures should be avoided*
- *Plan for a range of each type of waste rather than a specific single figure."*

Paragraph: 036 Reference ID: 28-036-20141016 Revision date: 16 10 2014

Data Presentation

1.8 In order to respect the need to avoid "spurious accuracy", the following approach has been taken:

1. Where actual tonnage data has been accessed, this has been used in the computations.
2. Where data has been subject to computation, this has been included to 3 significant figures.
3. Where percentages have been used to generate data, the percentages are presented as whole numbers, however the computations actually use the full value. This means that values presented may not always precisely correspond to the values computed when applying the percentage value presented in this report.
4. Final values discussed in the text are rounded to the nearest 500.

2. Methodology

2.1 Hazardous waste arisings in East London in 2019 were estimated using the HWI. The resulting data are reproduced in Table 1 below.

Table 1: Hazardous Waste arisings from East London in 2019
Source: Anthesis 2022[3] Table 6

Borough	Tonnes
Barking & Dagenham	23,677
Havering	10,760
Newham	21,174
Redbridge	1,415
Total	**57,026**

2.2 Table 2 below shows updated hazardous waste arisings from East London in 2022 derived by applying the same method:

Table 2: Hazardous Waste arisings from East London in 2022
Source: HWI 2022 (Environment Agency)

Borough	Tonnes
Barking & Dagenham	11,763[4]
Havering	11,847
Newham	31,502[5]
Redbridge	2,633
Total	**57,745**

2.3 Table 2 shows a total of c57,500 tonnes of hazardous waste was produced in East London in 2022. This suggests that hazardous waste arisings have remained relatively constant since 2019 arisings with an increase of only c500 tonnes compared with Anthesis 2019 arising of c57,000 tonnes.

2.4 However, Tables 1 and 2 shows that the distribution of waste arisings from the East London Boroughs has changed from 2019 to 2022. To understand if there has been a change in the composition of hazardous waste arisings, the principal arisings of hazardous waste in East London for 2019 and 2022 are presented in Table 3 below.

[3] *Evidence Base for the East London Joint Waste Plan for the East London Boroughs of Barking & Dagenham, Havering, Newham, and Redbridge*. Final Report (2022).

[4] Significant drop from 2019 value. This was found to be due to a reduction in hazardous soils and stones by c10,000 tonnes. This may be a result of a reduction in construction activity on historically contaminated sites in Barking & Dagenham and therefore less hazardous soils and stones produced.

[5] An increase from 2019 value due to an increase in hazardous soils and stones by c3,500 tonnes and other construction materials by c4,500 tonnes. This may be a result of an increase in construction activity on historically contaminated sites in Newham.

Table 3: Principal Hazardous Waste Component Arisings in East London 2019 vs 2022
Source: HWI

Hazardous Waste Type/Source	2019	2022	Difference
C, D & E Waste	27,053	25,936	-1,117
Vehicle Maintenance inc End of Life Vehicle (ELV) components	8,690	8,480	-210
Waste Electrical and Electronic Equipment (WEEE)	6,447	5,635	-812
Fly ash	3,572	<500	-3,572
Solid wastes from gas treatment	1,749	3,435	+1,686
Infectious Clinical Waste	1,244	3,117	+1,873
Oil/Water Separator Waste	2,727	1,873	-854
Sludges	1,446	1,198	-248
Wastes containing other dangerous substances	<500	1,057	+1,057
Liquid waste	718	609	-109
Packaging, Absorbents, Wiping Cloths	1,270	569	-702
Total	**54,915**	**51,908**	

2.5 Table 3 shows that the largest three principal waste streams arise from hazardous C, D & E waste, vehicle maintenance and WEEE. Hazardous C, D & E waste arisings have declined by c1,000 tonnes from 2019 levels. Vehicle maintenance and WEEE have also both decreased but only by a small quantity. It appears that the decrease in fly ash (19 01 13) and the increase in solid wastes from gas treatment (19 01 07) may be due to a change in recording practice as when comparing 2021 levels of fly ash with 2022 levels of solid wastes from gas treatment, there has been virtually no change in quantity of this waste. Apart from infectious clinical waste that has increased by c2,000 tonnes and wastes containing other dangerous substances that has increased by c1,000 tonnes, the remaining four waste streams show less variation from 2019 to 2022.

3. Forecasting Hazardous Waste

3.1 The 2013 National Policy Statement for Hazardous Waste[6] remains the most current review of hazardous waste arisings in England. It states that arisings of hazardous waste are expected to increase for the following reasons:

- Continuing consumer demand for consumer durables containing hazardous materials.
- Increasing use of producer responsibility schemes, such as those provided for WEEE which require the separate collection of WEEE resulting in more hazardous items being removed from the mixed municipal waste stream, being collected separately as hazardous waste.
- Changes to the list of hazardous properties in the revised Waste Framework Directive and changes to the European Waste List, leading to increases in the amount of waste classed as 'hazardous'. There are still uses in which components that become hazardous waste may be unavoidable for the foreseeable future. For example, the use of oil in internal combustion engines.

3.2 It should also be noted that the identification of persistent organic pollutant (POPs) bearing materials such as furniture may also lead to an increase in reported hazardous arisings. See for example, the Environment Agency's guidance on furniture that might contain POPs being unsuitable for landfilling[7].

3.3 When estimating growth, the approach taken by Anthesis was to apply the growth rates used in the modelling for the Greater London Authorities (GLA) London Plan Commercial and Industrial (C&I) waste arisings figures. This produced: A static growth for the first part of the Plan period to 2026; +0.03% increase to 2031; and +1.63% increase to 2036.

3.4 Given the variability between principal arisings of hazardous waste between 2019 and 2022, and the National Policy Statement for Hazardous Waste advice that hazardous waste is expected to increase in the short-term but can be expected to stabilise over time, the following growth forecasts are proposed for various hazardous waste streams:

- Hazardous C, D & E waste can be expected to fall as over time historical land contamination (source of contaminated soils) is remediated and legacy asbestos present in the building stock is removed. Therefore, a minus -1.38% growth per annum has been applied up to 2031 before being held constant to 2041.
- Although vehicle maintenance waste (including End of Life Vehicle (ELV) components) can be expected to fall with the transition to electric vehicles, some of the current conventional vehicle stock will remain in use beyond 2035 and the gradual shift can be expected to depress any growth in arisings in this sector. Therefore, this waste stream has been held constant over the Plan period.
- WEEE held constant over the Plan period given little change between 2019 and 2022.

[6] National Policy Statement for Hazardous Waste: A framework document for planning decisions on nationally significant hazardous waste infrastructure Defra June 2013

[7] Environment Agency on GOV.UK website: Identify and dispose of waste containing persistent organic pollutants March 2015

3.5 The remaining other wastes have been held constant given that little variability in arisings has been observed historically. The growth forecasts based on these assumptions are presented in Table 4.

Table 4: Forecast Hazardous Waste Arisings in East London
Source: Baseline Arisings discussion above

Hazardous Waste Type/Source	Plan Milestone Year				
	2022	2026	2031	2036	2041
Construction, Demolition & Excavation	25,936	24,538	22,895	22,895	22,895
Vehicle Maintenance inc ELV	8,480	8,480	8,480	8,480	8,480
WEEE	5,635	5,635	5,635	5,635	5,635
Subtotal	40,051	38,653	37,010	37,010	37,010
Other wastes[8]	17,694	17,694	17,694	17,694	17,694
Total Projected Arisings	**57,745**	**56,346**	**54,704**	**54,704**	**54,704**

3.6 Table 4 shows that applying the forecast assumptions results in a fall in the quantity of hazardous waste arisings in East London from the 2022 baseline arisings value of c57,500 tonnes to c54,500 tonnes in 2041.

[8] Including those arising at less than 100 tonnes per annum.

4. Profiling the Existing Hazardous Waste Management Methods

4.1 The management routes for East London's hazardous waste arisings in 2022 is set out in Table 5 below using the fate categorisation in the HWI.

Table 5: East London Hazardous Waste Management Routes 2022
Source: HWI 2022

Recycling	Recovery[9]	EfW without recovery	Landfill	Transfer
10%	64%	2%	16%	8%

4.2 Table 6 shows that of the total hazardous waste managed in 2022:

- 10% was recycled;
- 64% was recovered;
- 2% was incinerated without energy recovery;
- 16% was landfilled; and
- 8% was transferred on for an undetermined final fate.

4.3 The destinations of hazardous waste arising in East London outside East London has been assessed in the strategic waste flows report. Appendix 1 identifies site specific information and principal wastes received related to the host WPA that can be referenced when contacting host WPAs under the Duty to Cooperate. Note that the Waste Data Interrogator (WDI) has been used to produce the table in Appendix 1 given the HWI does not report site specific details and therefore the data in Table 3 may not align with that shown in Appendix 1.

[9] Includes transfer for onward recovery. Recovery captures recycling and energy recovery amongst other activities.

Appendix 1: WPAs receiving over 100 tonnes of hazardous waste from East London in 2022 and the permitted site it is managed at (where known)

Source: WDI 2022. In rank order of deposit Planning Region (largest to smallest)

Planning Region	WPA	Principal Waste Description	Input (tonnes)	Site Name
South East	Medway	ELV depollution residues	1,438	Kingsnorth Oil TP
		Infectious waste	487	Rochester Clinical Waste Treatment Facility
	Kent	WEEE	1,250	Sweeep Kuusakoski Gas Road, Sittingbourne
		ELVs	112	Ace Car Breakers
	West Sussex	Hazardous components	440	Oaks Yard Main Road, Nutbourne
Yorks & Humber	Leeds	Solid wastes from gas treatment	3,214	Aggregates Manufacturing Facility (Leeds)
	Kingston Upon Hull City	Waste Fuels	248	Ann Watson Street Site
West Midlands	Staffordshire	ELV depollution residues	1,650	Watling St Business Park
	Sandwell	Hazardous soils and stones	1,221	Edwin Richards Quarry - Soil Treatment Centre
	Walsall	ELV depollution residues	295	Rose Hill, Willenhall
North West	Manchester	ELV depollution residues	270	Portable Battery Recycling Ltd
			230	Unit 1, Caldey Road
	Tameside		337	Manchester Fuel Services Site
	Liverpool	WEEE	217	Bankfield House
East of England	Hertfordshire	Oily water from oil/ water separators	278	Redbournbury Treatment Plant
	Suffolk	solid wastes from gas treatment	237	Brandon Aggregate Manufacturing Facility
London	LB Bexley	ELV depollution residues	210	9 Optima Park