East London Joint Waste Plan

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

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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 the updated hazardous waste baseline was 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 2022 presented in the Regulation 18 Consultation draft of this report were estimated using the HWI. The resulting data are reproduced in Table 1 below.

Table 1: Hazardous Waste arisings from East London in 2022
Source: BPP Consulting 2024 [3] Table 2

Borough	Tonnes	%
Barking & Dagenham	11,763	20%
Havering	11,847	20%
Newham	31,502	55%
Redbridge	2,633	5%
Total	**57,745**	

2.2 Table 2 below shows hazardous waste arisings from East London in 2023 derived from the same source:

Table 2: Hazardous Waste arisings from East London in 2023
Source: HWI 2023 (Environment Agency)

Borough	Tonnes	%
Barking & Dagenham	22,317[4]	29%
Havering	10,381	14%
Newham	41,106[5]	53%
Redbridge	2,762	4%
Total	**76,566**	

2.3 Table 2 shows a total of c76,500 tonnes of hazardous waste was produced in East London in 2023. Hence reported hazardous waste arisings have increased by c19,000 tonnes when compared with 2022 arising of c57,500 tonnes.

2.4 Tables 1 and 2 also shows that the distribution of waste arisings across the East London Boroughs has changed from 2022 to 2023 with a greater proportion arising in LB Barking & Dagenham and a lesser proportion arising in LB Havering. To understand if there has been a change in the composition of hazardous waste arisings, the principal arisings of hazardous waste by source in East London for 2022 and 2023 are presented in Table 3.

[3] *East London Joint Waste Plan Hazardous Waste Baseline and Forecast to 2041* Consultation Draft v2.0 25.07.2024 BPP Consulting (2024).

[4] Significant increase from 2022 value. This was found to be due to an increase in fluff light fraction classed as hazardous as discussed in para 2.7

[5] An increase from 2022 value due to an increase in hazardous soils and stones by c6,500 tonnes and other construction materials by c5,000 tonnes. .

Table 3: Principal Hazardous Waste Arisings in East London 2022 vs 2023
Source: HWI 2022 & 2023 (italicised values are adjusted)

Hazardous Waste Type/Source	2022	2023	Difference
C, D & E Waste	25,936	38,464	+12,528
Vehicle Maintenance inc End of Life Vehicle (ELV) components	8,480	*3,480*[6]	*-5,000*
Waste Electrical and Electronic Equipment (WEEE)	5,635	5,640	+5
Solid wastes from gas treatment	3,435	2,445	-990
Infectious Clinical Waste	3,117	3,463	+346
Oil/Water Separator Waste	1,873	2,384	+511
Sludges	1,198	1,104	-94
Wastes containing other dangerous substances	1,057	<500	-883
Liquid waste	609	686	+77
Packaging, Absorbents, Wiping Cloths	569	1,193	+624
Fly ash	<500	513	+446
Fluff light fraction[7]	0	6,753	+6,753
Total	**54,915**	**71,189**	**16,274**

2.5 Table 3 shows that the three principal waste streams arose from construction activity, vehicle maintenance and WEEE in both years. Fluff light fraction became a significant additional waste in 2023 (see text below). Observations are as follows:

i) Hazardous C, D & E waste arisings have increased by c16,500 tonnes from 2022 levels. This was primarily due to an increase in 2023 of hazardous soils and stones of c8,500 tonnes and hazardous mixed C+D wastes by c5,000 tonnes compared to 2022 levels[8]. This is believed to arise from an increase in construction on historically contaminated sites in 2023. Given it is not possible to predict when such sites will be redeveloped each year, it is suggested to use the average of hazardous C, D & E waste arisings between 2022 and 2023 of c32,000 tonnes as a starting point to forecast from.

ii) All the fluff light fraction (c10,000 tonnes) from the source site (HKS Dagenham) was reported as non-hazardous in 2022. In 2023 this has reduced to c2,500 tonnes of this waste type, with c6,500 tonnes now classed as hazardous. It appears there was a switch part way through 2023. Given this fluff arises from the fragmentising of ELVs and other metal items such as domestic appliances, the input value for ELVs to the site of c5,000 tonnes from London (uncodeable) in 2023 has been deducted from the total vehicle maintenance/ELV value above, to avoid double counting essentially the same waste.

iii) There has been virtually no change in WEEE arisings and the remaining eight waste streams show less variation between 2022 and 2023.

[6] Adjusted value as per text above.

[7] This waste type is a mirror entry in the EWC and hence may be classed as either hazardous or non-hazardous.

[8] These values total more than the difference shown in Table 3 because there were also decreases in some C, D & E waste types in 2023.

3. Forecasting Hazardous Waste

3.1 The 2013 National Policy Statement for Hazardous Waste[9] 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[10].

3.3 Given the variability between principal arisings of hazardous waste between 2022 and 2023, 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 held constant to 2031 before applying a minus -1.38% growth per annum (applied in the previous 2022 update) to the mean hazardous C, D & E waste arisings of c32,000 tonnes as discussed in para 2.5 (i). This is because 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.
- Vehicle maintenance waste (including End of Life Vehicle (ELV) components) are generally classified as hazardous due to the presence of oil which is used in internal combustion engines but less so in electric motors. Hence it can be expected to fall with the transition to electric vehicles. However, some of the current conventional vehicle stock will remain in use beyond 2035 but 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 2022 and 2023.
- Fluff light fraction held constant over the Plan period.
- The remaining other wastes have been held constant given that little variability in arisings has been observed historically.

3.4 The growth forecasts based on these assumptions are presented in Table 4.

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

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

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

Hazardous Waste Type/Source	Plan Milestone Year				
	2023	2026	2031	2036	2041
Construction, Demolition & Excavation	32,200	32,200	32,200	30,045	28,034
Vehicle Maintenance inc ELV	3,480	3,480	3,480	3,480	3,480
WEEE	5,640	5,640	5,640	5,640	5,640
Subtotal	*41,320*	*41,320*	*41,320*	*39,165*	*37,154*
Other wastes[11]	35,246	35,246	35,246	35,246	35,246
Total Projected Arisings	**76,566**	**76,566**	**76,566**	**74,411**	**72,400**

3.5 Table 4 shows that applying the forecast assumptions results in a fall in the quantity of hazardous waste arisings in East London from the 2023 baseline arisings value of c76,500 tonnes to c72,500 tonnes in 2041.

[11] 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 and 2023 is set out in Table 5 below using the fate categorisation in the HWI.

Table 5: East London Hazardous Waste Management Routes 2022 & 2023
Source: HWI 2023

Year	Recycling	Recovery[12]	Landfill	Transfer
2022	10%	64%	16%	8%
2023	13%	68%	4%	16%

4.2 Table 6 shows that of the total hazardous waste managed in 2022 and 2023:

- between 10% and 13% was recycled (rising);
- between 64% and 68% was recovered (rising);
- between 4% and 16% was landfilled (falling); and
- between 8% and 16% was transferred on for an undetermined final fate (rising).

The destinations of hazardous waste arising in East London outside East London has been assessed in the strategic waste flows report[13].

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

[13] *East London Strategically Significant Cross Boundary Waste Movements* PCR v2.0 26.07.2024 BPP Consulting (2024).