

East London Joint Waste Plan

Construction, Demolition & Excavation Waste Arising in East London to 2041

Report: Reg 19 Consultation Draft

Version: 2.1

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Project: East London Joint Waste Plan

Report: Construction, Demolition & Excavation Waste Arising in East London

to 2041

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Document Control

| Version | Change | Effect |
|---------|--|---|
| | Tonnages coded under 17 05 08, (track ballast) and 19 12 09 (minerals such as sand), reallocated to construction & demolition rather than excavation waste, as composed of hard material suited to recycling. This was offset by 20 02 02 (soils and stones from municipal sources) being reallocated to the excavation waste category. | The amount/proportion of waste classed as C&D waste in Tables 2-5 has changed relative to excavation waste. |
| | The forecasting section moved to follow management route profiling section for clarity. | None |
| 2.1 | Values in Tables for unattributed waste reworked to exclude tonnages of waste classed under EWC Chapter 01 (mining waste), 08 (sludges containing ceramics), 15 (glass packaging), and 16 (glass from industrial processes) and EWC code 19 12 05 (glass from treatment of waste) included in the WDI category inert/C+D but not considered to be true C, D & E waste. Furthermore, values in Table 8 exclude waste managed at sites classed as processing and storage as these are double counted. In addition, a double count was identified in Table 16, this has now been corrected. | The assessed overall baseline arising value has fallen by c1,035,500 tonnes. |
| | Conclusion about London Plan targets added | Clarity on Plan Area performance |
| | Baseline update to use best avilable data, i.e. 2023 plus taking the mean value of London uncodeable C, D & E waste between 2022 and 2023. | The assessed overall baseline arising value has increased to c2,203,500 tonnes. |



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1. Purpose

- 1.1 The report updates the forecast of Construction, Demolition and Excavation (C, D & E) 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 Sources

1.3 The principal data source used to generate this C, D & E waste baseline update is listed below:

Waste Data Interrogator

1.4 Operators of all sites subject to Environmental Permits relating to the management of waste in England are required to submit returns to the Environment Agency (EA). These returns set out the quantities, types and origin of waste received and, where applicable, destination and fate of waste removed across a calendar year. These returns are collated by the EA and reported in a national dataset known as the Waste Data Interrogator (WDI). The WDI is released approximately nine months after the end of the calendar year to which the data relates. The WDI (version 2 released January 2023) for the calendar year 2022, was the most current version available at the time of producing this assessment.

Advice on Data

- 1.5 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)¹. 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
 - 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

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¹ available at https://www.gov.uk/guidance/waste



- 1.6 The nPPG includes a section entitled "Using data to monitor and forecast waste needs", which articulates the following principles should waste planning authorities 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

- 1.7 In order to respect the need to avoid "spurious accuracy", the following approach has been taken:
 - 1. Any actual tonnage data accessed has been used in the computations.
 - 2. Where data has been subject to computation, this is 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.

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2. Methodology

2.1 C, D & E waste arising in East London in 2022 presented in the Regulation 18 Consultation draft of this report are reproduced in Table 1 below.

Table 1: C, D & E Waste Arisings in 2022 Source: BPP Consulting 2024² Table 2

| Category | Туре | Tonnes | % | | | |
|------------|-------------|---------|-----|--|--|--|
| | Inert | 209,928 | 22% | | | |
| C&D | Non-inert | 180,492 | 19% | | | |
| | Hazardous | 341 | <1% | | | |
| | Inert | 545,815 | 57% | | | |
| Excavation | Non-inert | 15,630 | 2% | | | |
| | Hazardous | 11,535 | 1% | | | |
| Total C, | D & E waste | 963,741 | | | | |

2.2 Table 2 shows C, D & E waste arisings from East London in 2023 applying the same method.

Table 2: C, D & E Waste arisings from East London in 2023

Source: WDI 2023 (Environment Agency)

| Category | Туре | Tonnes | % |
|------------|-------------|---------|-----|
| | Inert | 170,691 | 19% |
| C&D | Non-inert | 114,336 | 13% |
| | Hazardous | 1,242 | 0% |
| | Inert | 590,153 | 67% |
| Excavation | Non-inert | 0 | 0% |
| | Hazardous | 12 | <1% |
| Total C, | D & E waste | 876,464 | |

- 2.3 Table 2 shows a total of c876,500 tonnes of C, D & E waste was produced in East London in 2023. Hence reported C, D & E waste arisings attributed to East London have decreased by c87,500 tonnes when compared with the 2022 arisings value of c963,500 tonnes.
- 2.4 As hazardous arisings are addressed in a separate report³, the hazardous component of each waste type has been excluded from the management profile and forecasts sections. This results in the arising value for non-hazardous C, D & E waste⁴ from East London of c875,000 tonnes in 2023.

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² Evidence Base for the East London Joint Waste Plan for the East London Boroughs of Barking & Dagenham, Havering, Newham, and Redbridge. Anthesis Final Report (2022).



3. Profiling the Existing C, D & E Waste Management Methods

3.1 The management routes for non-hazardous C, D & E waste arisings attributed to the East London boroughs in 2023 is set out in Table 3 below.

Table 3: Non-hazardous C, D & E Waste attributed to East London Waste Management Profile 2023

| Category | Waste Type | Recycling | Recovery | Landfill | Transfer | Mobile Plant | Subtotals |
|------------|--------------|-----------|----------|----------------------|----------|-----------------|-----------|
| | Inert | 166,529 | 0 | 347 | 3,815 | 0 | 170,691 |
| C&D | Non-inert | 71,810 | 18,238 | 65 | 24,252 | 0 | 114,366 |
| | Subtotal C&D | 238,339 | 18,238 | 412 | 28,067 | 0 | 285,057 |
| Excavation | Inert | 204,977 | 0 | 237,303 ⁵ | 133,551 | 14,322 | 590,153 |

3.2 As the London Plan targets for management of this waste stream are set by waste type, the management profile shown in Table 3 has been converted into percentages using the 2023 subtotal arisings values of c285,000 tonnes and c590,000 tonnes respectively as shown in Table 4.

Table 4: Non-hazardous C, D & E Waste attributed to East London Waste Management Profile 2023⁶

| Category | Waste Type | Recycling | Recovery | Landfill | Transfer | Mobile Plant |
|------------|--------------|-----------|------------------|----------|----------|-----------------|
| | Inert | 58% | 0% | <1% | 1% | 0% |
| C&D | Non-inert | 25% | 6% | <1% | 9% | 0% |
| | Subtotal C&D | 84% | 6% | <1% | 10% | 0% |
| Excavation | Inert | 35% | 40% ⁸ | 0% | 23% | 2% |

- 3.3 The management profile for non-hazardous C&D waste is as set out below:
 - 84% was managed through recycling facilities;
 - 6% was recovered (either through incineration or recovery to land);
 - <1% was managed at permitted landfills (possibly for use in restoration or operational needs);
 - 10% was managed at intermediate sites (transferred) prior to going on to its final fate; and
 - none was managed via mobile plant (normally for recycling or reuse).

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³ East London Hazardous Waste Forecasts to 2041 Update 2022 BPP Consulting (2024).

⁴ The term "non-hazardous C, D & E waste" encompasses all C, D & E waste that isn't hazardous i.e. that which is inert plus that which is non-inert but not hazardous.

⁵ As this tonnage is inert, and void at non-hazardous landfill will be conserved and hence inert input minimised, it is assumed to be used for restoration or operational purposes and therefore classed as recovery. For this reason it is counted within the recovery % in the profile in Table 4.

⁶ Total of subtotal values may exceed 100% due to rounding of individual values.

⁷ Does not include residues from processing of mixed skip waste (EWC 17 09 04) classed under EWC code 19 12 12 that may be landfilled as inactive waste under the Landfill Tax regime but would not be classed as inert under environmental permitting.

⁸ Including tonnage sent to landfill as per footnote 5 above.



- 3.4 The management profile for non-hazardous excavation waste is as set out below:
 - 35% was managed through recycling facilities;
 - 40% was recovered (through recovery to land and use in non-inert landfill);
 - none was disposed at permitted landfills (all non-inert);
 - 23% was managed at intermediate sites (transferred) prior to going on to its final fate; and
 - 2% was managed via mobile plant (normally for recovery or reuse).
- 3.5 This compares with the following targets set in the London Plan for C, D & E waste generated in London in *Policy SI 7 Reducing waste and supporting the circular economy*:
 - meet or exceed the targets for each of the following waste and material streams:
 - o construction and demolition 95 per cent reuse/recycling/recovery within London on balance i.e. net self sufficiency.
 - o excavation 95 per cent beneficial use overall and 100% of inert excavation beneficial used. 9

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⁹ London Plan Footnote 164.

4. Forecasting C, D & E Waste

4.1 In order to discern any trends in C, D & E waste arisings and to establish whether the 2023 baseline is a robust to forecast from, the 2023 values is compared with historical values for non-hazardous C, D & E waste arisings from East London. These are displayed in Tables 5 below.

Table 5: Non-hazardous C, D & E Waste arisings from East London 2019-2023

Source: WDI (Environment Agency)

| | Waste Type | 2019 | 2020 | 2021 | 2022 | 2023 | Mean Value |
|------------------------------------|-----------------|-----------|-----------|---------|---------|---------|------------|
| C&D | Inert | 158,326 | 214,840 | 133,779 | 209,928 | 170,691 | 177,513 |
| Cab | Non-inert | 165,461 | 177,822 | 194,754 | 180,492 | 115,334 | 166,773 |
| Excavation | Inert | 885,248 | 961,347 | 541,805 | 545,815 | 590,153 | 704,874 |
| Excavation | Non-inert | 25,765 | 9,974 | 0 | 15,630 | 0 | 10,274 |
| Total Non-Hazardous C, D & E waste | | 1,234,800 | 1,363,982 | 870,337 | 951,865 | 876,178 | 1,059,432 |
| | Growth Rate p.a | | 10.46% | -36.19% | 9.37% | -7.95% | -6.08% |

- 4.2 Table 5 shows that non-hazardous C, D & E waste arisings fluctuated over the 5-year period. Arisings increased in 2020 before decreasing to below 2019 levels in 2021 and experiencing a smaller increase in 2022 followed by another decrease in 2023. Although the principal impact of the Covid-19 pandemic was during 2020, arisings increased by +10.46% in 2020. Overall the growth trend was negative at c6%..
- 4.3 Given the high variability of arisings over the 5-year period, it is suggested to take an average (mean) of the arisings of each waste type as a baseline to project forward to the end of the Plan period. This is presented in Table 6 below.

Table 6: 2019-2023 Mean Non-hazardous C, D & E Waste arisings in East London by type Source: Table 5

| Category | Waste Type | Tonnes | Totals | |
|----------------------|------------|---------|---------|--|
| C&D | Inert | 177,513 | 244 205 | |
| Cab | Non-inert | 166,773 | 344,285 | |
| Excavation | Inert | 704,874 | 715,147 | |
| Excavation | Non-inert | 10,274 | | |
| Total C, D & E waste | | 1,0 | 059,432 | |

- 4.4 Table 6 shows that applying an average (mean) to the C, D & E waste arisings over the period 2019 to 2023 produces an arising value of c1.1M tonnes for use as a baseline to forecast from.
- 4.5 The nPPG states when looking to forecast C, D & E waste:
 - "Waste planning authorities should start from the basis that net arisings of construction and demolition waste will remain constant over time as there is likely to be a reduced evidence base on which forward projections can be based for construction and demolition wastes."
- 4.6 Hence the starting point for any assessment is that there will be no growth in arisings over the Plan period. This would simply project forward the values shown in Table 6 for the Plan period (to 2041).

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4.7 In addition, as a sensitivity the Greater London Authority (GLA) employment projections in the construction sector were used to generate an upper range forecast. This produced the forecast shown in Table 7 below.

Table 7: Forecast Non-hazardous C, D & E waste arisings for East London based on average C, D & E waste arisings 2019-2023 applying growth rate based on GLA sector employment projections¹⁰

| | | 2023 (values from Table 6) | 2026 | 2031 | 2036 | 2041 |
|----------------------|------------------|----------------------------------|-----------|-----------|-----------|-----------|
| C&D | Inert | 177,513 | 185,414 | 197,613 | 203,715 | 210,005 |
| Cab | Non-inert | 166,772 | 174,196 | 185,657 | 191,389 | 197,299 |
| Excavation | Inert | 704,874 | 736,249 | 784,690 | 808,919 | 833,896 |
| LACAVALIOII | Non-inert | 10,274 | 10,731 | 11,437 | 11,790 | 12,154 |
| Total C, D & E waste | | 1,059,433 | 1,106,590 | 1,179,397 | 1,215,814 | 1,253,355 |
| Grow | Growth Rate p.a. | | 4.45% | 6.58% | 3.09% | 3.09% |

- 4.8 Table 7 shows that C, D & E waste arisings could increase by c194,000 tonnes by 2041 if waste arisings were to grow at the same rate as forecast construction sector employment. However, it is considered that this is unlikely to be the case due to various factors driving down per unit waste reduction in construction. This includes:
 - The need to separate plasterboard offcuts from other waste types going to landfill;
 - the increased segregation of materials at source to reduce disposal costs;
 - the move to modular offsite fabrication reducing waste generation on each construction siteparticularly when operating in space constrained sites such as those in urban areas like London; and,
 - a sector initiative to drive towards Zero Avoidable Waste in Construction¹¹ to meet the Government's Resources and Waste Strategy (2018) stated ambition 'to eliminate avoidable waste of all kinds by 2050' in England, plus the residual waste reduction target adopted into law by *The Environmental Targets (Residual Waste)* (England) Regulations 2023 which includes waste from the construction sector.¹²
- 4.9 Therefore, the sensitivity forecast is considered to be worst-case, and not a reliable basis to plan future provision on.

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¹⁰ The GLA Employment projections run from 2026 to 2036. The growth rate in 2036 has been extrapolated to 2041.

¹¹ The Routemap for Zero Avoidable Waste in Construction https://www.constructionleadershipcouncil.co.uk/wp-content/uploads/2021/07/ZAW-Interactive-Routemap FINAL.pdf

¹² https://www.legislation.gov.uk/en/uksi/2023/92/made

5. Accounting for waste reported in WDI for London as a whole

- 5.1 Data quality of the WDI relies on operators of permitted sites to report inputs down to origin Waste Planning Authority (WPA) level. A number of sites do not report inputs to that level, preferring to report at regional level only i.e. to London only. This means that there is a potential for an underestimation of the tonnage of waste arising in East London that is not attributed down to or below regional level.
- 5.2 The WDI 2023 reports nearly 14.7 million tonnes of waste from London that is not attributed down to WPA level below London. This is an increase of c1,939,000 tonnes from the 2022 value of c7,206,500 tonnes which included over 4 million tonnes misattributed to ELWA, which the Environment Agency confirmed should be counted as waste arising in London not attributed down to WPA level¹³. It appears that this misattribution has been rectified in the WDI 2023 with no entry for ELWA and all London attributed waste has been coded as such. The total tonnages are set out by type in Table 8 below:

Table 8: Totals of waste not attributed below London received at permitted site in England

Source: WDI 2022 + 2023

| | Hazardous | Hhold/Ind/Com | C, D & E ¹⁴ | Grand Total |
|-------------|-----------|---------------|------------------------|-------------|
| Tonnes 2022 | 195,615 | 5,397,807 | 7,206,270 | 12,799,692 |
| Tonnes 2023 | 149,720 | 5,313,197 | 9,274,013 | 14,736,930 |
| Mean value | 172,668 | 5,355,502 | 8,240,142 | 13,768,311 |

- 5.3 Given the substantial tonnage of waste to be attributed, an assessment has been undertaken to establish if an amount might reasonably be considered to arise from East London itself. Given HIC waste is subject to London Plan apportionments, and hazardous waste is also reported through the Environment Agency Hazardous Waste Interrogator, the focus of this exercise is on accounting for the C, D & E waste not attributed below London taking the mean value of c8,240,000 tonnes across 2022 and 2023.
- 5.4 One approach taken to reattribute these wastes is to consider the tonnages accepted at sites within each WPA, on the presumption that C, D & E waste will not travel far. However, given the compact nature of London (the inner city in particular) and WPAs that have few if any suitable waste management sites available, it is not considered appropriate to apply this approach in this case.
- 5.5 Given that the GLA data on employment in the construction sector has been used as a proxy for construction activity within the East London Boroughs for the purposes of forecasting arisings in the past, this dataset has been referenced to establish a proxy for allocating the arisings between Boroughs across London. Table 9 sets out the employment values for 2021, the most recent estimate, with the Boroughs grouped according to the waste planning areas that exist.

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¹³ Email from Dr Matthew Caple 15th April 2024.

¹⁴ Excluding EWC Chapter 01, 08, 15, and 16 and EWC code 19 12 05 included in the WDI definition of inert/C+D but not true C, D & E waste. Tonnages of these wastes have been reassigned to Hhold/Ind/Com.

Table 9: Construction Sector Employment Values *Source GLA Labour Data Statistics*

| Borough | Employment n | Percentage | Waste Plan Area |
|---------------------------|--------------|------------|-------------------|
| City of London | 7,000 | 3.7% | |
| Westminster | 14,000 | 7.5% | Control London |
| Tower Hamlets | 5,000 | 2.7% | Central London |
| | Sub Total | 13.9% | |
| Barking and Dagenham | 4,000 | 2.1% | |
| Havering | 8,000 | 4.3% | |
| Newham | 8,000 | 4.3% | ELWP |
| Redbridge | 6,000 | 3.2% | |
| | Sub Total | 13.9% | |
| Barnet | 8,000 | 4.3% | |
| Camden | 9,000 | 4.8% | |
| Enfield | 8,000 | 4.3% | |
| Hackney | 4,000 | 2.1% | NII W/D |
| Haringey | 3,500 | 1.9% | NLWP |
| Islington | 5,000 | 2.7% | |
| Waltham Forest | 4,500 | 2.4% | |
| | Sub Total | 22.4% | |
| Bexley | 6,000 | 3.2% | |
| Bromley | 7,000 | 3.7% | |
| Greenwich | 4,500 | 2.4% | SE London |
| Southwark | 4,000 | 2.1% | |
| | Sub Total | 11.5% | |
| Croydon | 7,000 | 3.7% | |
| Kingston upon Thames | 3,000 | 1.6% | |
| Merton | 4,500 | 2.4% | SLWP |
| Sutton | 6,000 | 3.2% | |
| | Sub Total | 10.9% | |
| Brent | 7,000 | 3.7% | |
| Ealing | 7,000 | 3.7% | |
| Harrow | 6,000 | 3.2% | |
| Hillingdon | 7,000 | 3.7% | WLWP |
| Hounslow | 4,500 | 2.4% | |
| Richmond upon Thames | 2,500 | 1.3% | |
| | Sub Total | 18.2% | |
| Hammersmith and Fulham | 2,500 | 1.3% | |
| Kensington and Chelsea | 2,250 | 1.2% | |
| Lambeth | 5,000 | 2.7% | Western Riverside |
| Lewisham | 3,000 | 1.6% | |
| Wandsworth | 4,500 | 2.4% | |
| | Sub Total | 9.2% | |
| Grand Total | 187,250 | 100.0% | |

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5.6 Applying the above percentages to the mean unattributed C, D & E waste total gives the tonnages of C, D & E waste displayed in Table 10 below.

Table 10: Non inert C, D & E waste not attributed below London region, allocated across London sub-regions using Construction Sector Employment data as proxy

Source: Table 8 & Table 9

| London Sub-region | Tonnes |
|-------------------|-----------|
| Central London | 1,144,158 |
| East London | 1,144,158 |
| North London | 1,848,256 |
| South East London | 946,131 |
| South London | 902,125 |
| West London | 1,496,207 |
| Western Riverside | 759,105 |
| Total | 8,240,142 |

5.7 Hence to ensure that the tonnage of waste not attributed below London is planned for i.e. not orphaned, it is proposed to add a further 1.1 million tonnes to the total considered for management from East London as a sensitivity.

Composition of Reattributed C, D & E waste from East London

5.8 In order to estimate the composition of unattributed C, D & E waste reattributed to East London, and hence its suitability for particular management methods, the tonnages reported under C, D & E waste attributed to London in 2023 as a whole have been allocated according to type between the C&D and excavation waste categories (using source WDI data), the values obtained were then converted into percentages as shown in Table 11 below.

Table 11: Allocation of Non-Hazardous C, D & E Waste from Waste attributed to London only Source: WDI 2023

| Category | Туре | Percentage (rounded) |
|------------|-----------|-------------------------|
| C&D | Inert | 15% |
| Cab | Non-inert | 25% |
| Excavation | Inert | 61% |
| | Non-inert | <1% |

5.9 The percentages shown in Table 11 were then applied to the tonnage of reattributed non-hazardous C, D & E waste from East London (1,144,158 tonnes) to generate the waste type profile shown in Table 12 below.

Table 12: Estimated Composition of Reattributed Non-hazardous C, D & E waste from East London

| Category | Type | Tonnes |
|------------|-----------|-----------|
| C&D | Inert | 167,982 |
| Cab | Non-inert | 282,734 |
| Excavation | Inert | 693,079 |
| | Non-inert | 363 |
| | Total | 1,144,158 |

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5.10 The reattributed waste by waste type from East London shown in Table 12 has been added to the mean non-hazardous C, D & E waste baseline from East London shown in Table 6 to produce a sensitivity baseline shown in Table 13 below.

Table 13: Non-hazardous C, D & E Waste Baseline arisings in East London including reattributed waste from London as whole

Source: Table 6 plus Table 12

| Category | Туре | Tonn | ies |
|----------------------|-----------|-----------|-----------|
| C&D | Inert | 345,495 | 705 000 |
| Cab | Non-inert | 449,507 | 795,002 |
| Excavation | Inert | 1,397,953 | 1 400 F00 |
| Excavation | Non-inert | 1,408,589 | |
| Total C, D & E waste | | 2,203, | 591 |

- 5.11 Table 13 shows that by adding the mean reattributed C, D & E waste to East London (Table 12) to the mean non-hazardous C, D & E waste arisings over the period 2019 to 2023 (Table 6) produces an arising value of c2.2M tonnes as a sensitivity baseline to forecast from.
- 5.12 Applying the sector employment growth rates, the forecast shown in Table 14 is arrived at.

Table 14: Forecast Non-hazardous C, D & E waste arisings for East London based on average Non-hazardous C, D & E waste arisings 2019-2023 plus reattributed Non-hazardous C, D & E waste from London applying growth rate based on GLA sector employment projections

Source: Table 13 plus GLA sector employment projections ¹⁵ Table 7

| | | 2023 (values from Table 13) | 2026 | 2031 | 2036 | 2041 ¹⁶ |
|----------------------|-----------|--------------------------------------|-----------|-----------|-----------|--------------------|
| C&D | Inert | 345,495 | 366,138 | 390,227 | 402,276 | 414,697 |
| Cab | Non-inert | 449,507 | 476,364 | 507,706 | 523,383 | 539,543 |
| Excavation | Inert | 1,397,953 | 1,481,478 | 1,578,950 | 1,627,703 | 1,677,963 |
| Excavation | Non-inert | 10,637 | 11,272 | 12,014 | 12,385 | 12,767 |
| Total C, D & E waste | | 2,203,591 | 2,335,252 | 2,488,896 | 2,565,747 | 2,644,970 |
| Growth Rate p.a. | | | 4.45% | 6.58% | 3.09% | 3.09% |

5.13 Table 14 shows that non-hazardous C, D & E waste arisings could increase from 2.2M tonnes in 2023 to just over 2.6 million tonnes at 2041 if the upper range worst case growth scenario is used as a sensitivity. However, as explained above the growth rate is considered to be unreliable and therefore a static forecast using the adjusted baseline arising value of 2.2 Mtpa has been adopted, as per nPPG advice.

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¹⁵ Evidence Base for the East London Joint Waste Plan for the East London Boroughs of Barking & Dagenham, Havering, Newham, and Redbridge. Anthesis Final Report (2022).

¹⁶ Extrapolating growth rate in 2036 through to 2041.



Profiling the Reattributed C, D & E waste from East London

5.14 In order to estimate the management profile of C, D & E waste reattributed to East London, the tonnages reported under C, D & E waste not attributed below London in 2023 as a whole have been interrogated to arrive at the management profile shown in Table 15.

Table 15: Non-hazardous Inert/ C+D Waste from Waste from London as a whole by Waste Management Profile 2023 (% of total arisings)

| Category | Waste Type | Recycling | Recovery | Landfill | Transfer | Mobile Plant |
|------------|------------|-----------|-------------------|----------|----------|-----------------|
| C&D | Inert | 12% | <1% | <1% | 2% | 0% |
| Cab | Non-inert | 12% | <1 | <1% | 13% | 0% |
| Excavation | Inert | 15% | 29% ¹⁷ | 0% | 16% | <1% |
| Excavation | Non-inert | <1% | 0% | <1% | 0% | 0% |

5.15 Applying the proportions shown in Table 15 to the mean tonnage of non-hazardous C, D & E waste from London reattributed to East London (1,144,158tonnes) gives the management profile by tonnage shown in Table 16 below.

Table 16: Waste Management Profile of reattributed Non-hazardous C, D & E waste from London as a whole (tonnes)

Source: Table 15 + Table 12

| Category | Waste Type | Recycling | Recovery | Landfill | Transfer | Mobile Plant |
|------------|------------|-----------|----------|----------|----------|-----------------|
| C&D | Inert | 138,942 | 2,166 | 1,949 | 25,459 | 0 |
| Cab | Non-inert | 132,909 | 22 | 1,436 | 148,368 | 0 |
| Excavation | Inert | 176,033 | 328,726 | 0 | 186,834 | 953 |
| LACAVATION | Non-inert | 90 | 0 | 273 | 0 | 0 |

5.16 To establish a final management profile of total non-hazardous C, D & E waste arising in East London in 2023 (directly attributed to East London in WDI 2023 and reattributed London C, D & E waste), the values in Table 16 have been combined with the tonnages attributed directly to East London in 2023 (shown in Table 3) to produce the tonnages shown in Table 17.

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 $^{^{17}}$ Includes tonnage to landfill as per footnote 8.

Table 17: Waste Management Profile of East London Waste including reattributed Waste from London as a whole (tonnes)

Source: Table 3 + Table 16

| Category | Waste Type | Recycling | Recovery | Landfill | Transfer | Mobile Plant | Total ¹⁸ |
|------------|------------|-----------|----------|----------|----------|-----------------|---------------------|
| | Inert | 305,471 | 2,166 | 2,295 | 29,274 | 0 | 339,207 |
| C&D | Non-inert | 204,719 | 18,260 | 1,501 | 172,620 | 0 | 397,100 |
| | Subtotal | 510,190 | 20,426 | 3,797 | 201,894 | 0 | 736,307 |
| | Inert | 381,010 | 566,030 | 0 | 320,384 | 15,275 | 1,282,699 |
| Excavation | Non-inert | 90 | 0 | 273 | 0 | 0 | 363 |
| | Subtotal | 381,100 | 566,030 | 273 | 320,384 | 15,275 | 1,283,062 |
| | | | | • | | Total | 2,019,369 |

5.17 This produces the management profile by proportion shown in Table 18 below.

Table 18: Non-hazardous C, D & E Waste attributed to East London plus reattributed Non-hazardous C, D & E Waste from London Combined Waste Management Profile 2023 (% of waste category subtotals)

| Category | Waste Type | Recycling | Recovery | Landfill | Transfer | Mobile Plant |
|------------|------------|-----------|----------|-------------------|----------|-----------------|
| | Inert | 41% | 1% | <1% | 4% | 0% |
| C&D | Non-inert | 28% | 2% | <1% ¹⁹ | 23% | 0% |
| | Subtotal | 69% | 3% | 1% | 27% | 0% |
| | Inert | 30% | 44% | 0% | 25% | 1% |
| Excavation | Non-inert | <1% | 0% | <1% | 0% | 0% |
| | Subtotal | 30% | 44% | <1% | 25% | 1% |

- 5.18 To summarise the management profile for non-hazardous C& D waste is as set out below:
 - 69% was managed at recycling facilities;
 - 3% was recovered (either through incineration or recovery to land);
 - 1% was disposed at permitted landfills;
 - 27% was managed at intermediate sites and transferred on for recovery or disposal; and
 - 0% was managed via mobile plant (normally for recycling or reuse).
- 5.19 The management profile for non-hazardous excavation waste is as set out below:
 - 30% was managed at recycling facilities;
 - 44% was recovered (either through incineration or recovery to land and use in restoration/backfilling on permitted landfills);
 - <1% was managed at permitted landfills;
 - 25% was managed at intermediate sites and transferred on for recovery or disposal); and
 - 1% was managed via mobile plant (normally for recycling or reuse).

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¹⁸ Totals do not correspond to the values shown in Table 13 as that is derived using a mean value across 3-years.

¹⁹ Does not include residues from processing of mixed skip waste classed under EWC code 19 12 12 that may be landfilled as inactive waste under the Landfill Tax regime but would not be classed as inert under environmental permitting.



- 5.20 This compares with the following targets set in the London Plan for C, D & E waste generated in London in *Policy SI 7 Reducing waste and supporting the circular economy*:
 - meet or exceed the targets for each of the following waste and material streams:
 - o construction and demolition 95 per cent reuse/recycling/recovery
 - excavation 95 per cent beneficial use overall and 100% of inert excavation beneficially used.²⁰
- 5.21 When the different categories of management method are assigned by activity, performance against the London Plan targets as shown in Table 19 is indicated.

Table 19: Non-hazardous C, D & E Waste attributed to East London plus reattributed Non-hazardous C, D & E Waste from London as whole Combined Waste Management Profile 2022

| Category | Activity | Recycling | Recovery | Landfill | Transfer | Mobile Plant | Total |
|---------------------|-------------------------------------|-----------|-------------------|-------------------|----------|-----------------|-------|
| C&D | Recovery inc recycling 69% 3% - 27% | 27% | 0% | >99% | | | |
| | Other | - | - | <1% ²¹ | | - | <27% |
| Inert Excavation | Recovery inc recycling | 30% | 44% ²² | 0% | 25% | 1% | >99% |
| Excavation | Other | - | = | - | | - | <30% |
| All Excavation | Recovery inc recycling | 30% | 44% | 0% | 25% | 1% | >99% |
| | Other | - | - | <1% | | 0% | <25% |

- 5.22 To summarise the management profile for non-hazardous C& D waste managed at permitted facilities reporting through the WDI is as set out below:
 - At least 72% was managed through recycling or recovery;
 - With less than 1% disposed at permitted landfills; and
 - 27% transferred on for recovery or disposal.

It should be noted that waste going for reuse may not be managed through permitted sites, plus a substantial amount of the fraction of C&D waste that constitutes hardcore may be managed on the site of production and converted into recycled aggregate either used on site or sold offsite²³. Hence the recycled value should be taken to be a minimum 'at least' value.

- 5.23 The management profile for non-hazardous excavation waste is as set out below:
 - At least 74% was managed through recycling or recovery (inc mobile plant);
 - With <1% disposed at permitted landfills; and
 - 25% transferred on for recovery or disposal. Given that disposal would only be to landfill, and backfilling of mineral workings and other uses would be classed as recovery, it is considered highly unlikely that the inert fraction of this stream would actually end up being disposed of.

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²⁰ London Plan Footnote 164.

²¹ Does not include residues from processing of mixed skip waste classed under EWC code 19 12 12 that may be landfilled as inactive waste under the Landfill Tax regime, but would not be classed as inert under environmental permitting.

²² Taken to be used for restoration or operational purposes which is classed as recovery.

²³ Data provided by the National Federation of Demolition Contractors.