

APPENDIX 2A Cory DCO: GLA Post Hearing Written Oral Submission Summary

Definition of Municipal Waste

1. Historically, UK government and local authorities have used the term ‘municipal solid waste’ to refer specifically to waste collected by or on behalf of local authorities – this includes household waste, as well as a small proportion of commercial ‘trade’ waste collected from small businesses. Contrasting this UK approach, across continental Europe the term has typically been interpreted more widely to encompass both household waste, as those commercial and industrial (C&I) wastes which are similar in character – regardless of whether this is collected by local authorities or the private sector.
2. Recognising this inconsistency, in recent years UK bodies (including Defra) have revised terminology and now explicitly report data for ‘local authority collected waste’ (LACW), the previous narrow use of ‘municipal solid waste’ being deprecated.
3. Consistent with mainland Europe, the GLA has opted to set targets and monitor targets by applying the broader, municipal definition. GLA in-house waste flow forecasting therefore primarily focusses on the management of broadly defined municipal waste streams. While the exact interpretation of the term differs across EU member states, it is defined in the EU List of Waste¹ as follows:

‘municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions’.

4. Similarly the EU landfill directive states that²

‘"municipal waste" means waste from households, as well as other waste which, because of its nature or composition, is similar to waste from household’.

Estimation of the Municipal Fraction of Commercial and Industrial Waste

5. In projecting the arisings and management of municipal waste, it is necessary to determine the component of the C&I waste stream which qualifies as similar in nature to household waste.
6. For the purposes of the London Plan, in forecasting C&I waste arisings the GLA draws on findings of Defra’s national commercial and industrial waste survey, co-funded by the London Waste and Recycling Board (LWaRB). (For further background on the survey and rationale for its use, please refer to GLA Waste Arisings report developed in support of London Plan forecasts³.)
7. While considered as the best available characterisation of London’s waste streams currently available, the Defra survey does not explicitly quantify the component of C&I waste that qualifies as municipal. In quantifying municipal waste, it is therefore necessary to estimate the proportion of individual waste streams which are considered to qualify as municipal. For details of the waste categories assessed by the Defra C&I survey, and the GLA’s assumed apportionment of municipal waste, please refer to the tabulation overleaf. Here each waste category (grouped by Substance

¹ List of Waste Referred to in Article 7 Of Directive 2008/98/EC, Commission Decision of 3 May 2000 (<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02000D0532-20150601&from=EN>).

² Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste, Official Journal L 182, 16/07/1999 P. 0001 – 0019 (<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:31999L0031&from=EN>).

³ London Plan Waste Forecasts and Apportionments, Task 1 – GLA Waste Arisings, Model Critical Friend Review, March 2017 (https://www.london.gov.uk/sites/default/files/forecasts_for_household_and_commercial_industrial_waste_report_1_-_gla_waste_arisings_model.pdf).

Oriented Classification / SOC) is taken in turn, showing the proportion considered as municipal, with the GLA's rationale expounded. It should be emphasised that the approach outlined overleaf is intended as a pragmatic best estimate, given limitations in available data. Recognising the element of judgement involved, the GLA requested a review of the approach by an Environment Agency waste data specialist, who concurred that underlying assumptions appear sensible.

Table 1 – Methodology for Estimation of the Municipal Component of Commercial and Industrial Waste

SOC group	Assumed proportion classified as municipal	Comments	SOC sub-group ⁴	Total C&I waste arising in London (Mt)	Estimated municipal component (Mt)	Estimated non-municipal component (Mt)
Animal & vegetable wastes	90%	Assumed largely produced by commerce. Indicatively 10% of food waste is assumed to be generated in bulk by food waste manufacturing, and therefore not comparable to household waste.	<ul style="list-style-type: none"> Animal waste of food preparation and products; animal faeces, urine and manure; animal & vegetal wastes. 	0.55	0.49	0.05
Chemical wastes	0%	Assumed to generally be produced in bulk by large scale industry, and therefore differ in character from household waste.	<ul style="list-style-type: none"> Spent solvents; acid, alkaline or saline wastes; used oils; spent chemical catalysts; chemical preparation wastes; chemical deposits and residues; industrial effluent sludges. 	0.31	0.00	0.31
Common sludges	0%	Considered entirely non-municipal.	<ul style="list-style-type: none"> Common sludges (excluding dredging spoils) dredging spoils. 	0.004	0.000	0.004
Discarded equipment	100%	England level data indicates that discarded equipment is largely commercial in origin. This result will be amplified in London, where commercial waste makes a proportionally greater contribution to arisings. On this basis it is assumed that discarded equipment generated may be largely comparable to that generated by households.	<ul style="list-style-type: none"> Discarded vehicles; batteries and accumulators wastes; WEEE and other discarded equipment. 	0.15	0.15	0.00
Healthcare wastes	10%	Notably healthcare wastes fall under EWC chapter 18 <i>'Wastes from Human or Animal Health Care and/or Related Research (Except Kitchen Wastes not Arising from Immediate Health Care)'</i> rather than chapter 20 <i>'Municipal Wastes (Household Waste and Similar</i>	<ul style="list-style-type: none"> Health care and biological wastes, including the following sub-sub-groups: human infectious health care wastes; animal infectious health care wastes; genetic engineering wastes; and other healthcare wastes. 	0.27	0.03	0.25

⁴ For further detail of underlying SOC sub-sub-groups, please see Survey of Industrial & Commercial Waste Generated in Wales 2012, Technical Appendices, Appendix 6, page 41 (<https://naturalresources.wales/media/1996/survey-of-industrial-an-commercial-waste-generated-in-wales-2012-technical-appendices.pdf>).

SOC group	Assumed proportion classified as municipal	Comments	SOC sub-group ⁴	Total C&I waste arising in London (Mt)	Estimated municipal component (Mt)	Estimated non-municipal component (Mt)
		<i>Commercial, Industrial and Institutional Wastes Including Separately Collected Fractions</i> '.				
Metallic wastes	80%	Assumed that this would include sum bulky metal items which would not be similar to household waste.	<ul style="list-style-type: none"> • Metallic wastes, including the following sub-sub-groups: ferrous metal waste and scrap; waste precious metal; other waste aluminium; copper waste; other metal wastes; mixed metallic packaging; other mixed metallic wastes. 	0.26	0.21	0.05
Mineral wastes	10%	Assumed to largely be produced by large scale industry, and therefore differ from household waste.	<ul style="list-style-type: none"> • Combustion wastes; • contaminated soils and polluted dredging spoils; • solidified, stabilised or vitrified wastes; • other mineral wastes; • construction and demolition wastes; • asbestos wastes; • waste of naturally occurring minerals. 	0.18	0.02	0.17
Non-metallic wastes	90%	Assumed to predominantly be packaging material (paper, plastic, glass) which would be comparable to household waste. Indicatively a 10% contribution is assumed to be generated in bulk by manufacturers, and therefore not comparable to household waste.	<ul style="list-style-type: none"> • Glass wastes; • paper and cardboard wastes; • rubber wastes; • plastic wastes; • wood wastes; • textile wastes; • waste containing PCB. 	2.8	2.6	0.28
Total				4.6	3.5	1.1

Modelling of Municipal Waste Processed via Energy from Waste

8. Given the focus on targets for management municipal waste, GLA forecasts, including projections for energy from waste requirements, focus on this waste fraction. Remaining wastes classified as non-municipal (estimated at circa 1.1 Mt on the basis of the above approach, with significant contributions from chemical wastes, healthcare wastes, and mineral wastes) will typically require specialist treatment. In modelling future waste management requirements, these waste streams are considered unsuitable for processing via typical municipal waste management facilities, including conventional mass burn incinerators.
9. This approach informs projections detailed in Tables 2 and 3 of the GLA's Written Representation, as well as capacity need forecasts included in Table 3 within the GLA Local Impact Report. For further clarity, key details of GLA forecasts are summarised overleaf, and contrasted against the Applicant's modelled case:
 - a. Green-shaded columns detail findings of the GLA's modelling, including tonnage for key years, an explanation of the GLA approach being provided for each datapoint.
 - b. Blue shaded columns set out the Applicant's alternative projections.
 - c. The final column then provides a commentary on points of divergence between GLA findings and those of the applicant.
10. For brevity, the comparison presented overleaf focusses on the comparison of two scenarios:
 - a. GLA projections assuming waste arisings forecasted in the London Environment Strategy and Draft London Plan, with municipal waste recycling increasing to 65% by 2030; and
 - b. The Applicant's Scenario 1, Draft London Plan case, as defined in 'The Project and Its Benefits Report, Document Ref. 7.2, Table 6.1, page 68.
11. GLA and Applicant scenarios assume identical waste arisings (as per the Draft London Plan), and comparable levels of recycling. Divergent conclusions are however reached on the ultimate EfW capacity gap experienced in London – for example the GLA projects a gap of just 0.09 Mt (90 thousand tonnes) by 2036, whereas the Applicant arrive at an EfW capacity gap of 0.66 Mt (662,000 tonnes). The divergence of c. 0.6 Mt (572 thousand tonnes) between these forecasts is primarily due to two key factors:
 - a. the Applicant assumption that all C&I waste is suitable for processing via EfW, regardless of waste category; and
 - b. (to a lesser extent) reduction in the mass of residual waste due to pre-treatment (which is not accounted for in the Applicants calculations).

Table 2: London’s EfW Capacity Gap – Comparison of GLA and Applicant Forecasts

	GLA		Explanatory comments on GLA approach	Cory *		Comparison comments
	2026	2036		2026	2036	
Waste arisings (Mt)	Household waste	3.3	Consistent with Draft London Plan projections.	3.3	3.5	Full agreement between GLA and the Applicant.
	C&I waste total	5.0		5.0	5.1	
	Municipal component of C&I waste	3.8	Determined as per the approach detailed above.	NA	NA	No differentiation of municipal waste component.
	Municipal waste total	7.1	Including household waste, as well as municipal C&I.	(8.3)	(8.3)	Applicant total includes all C&I waste categories, including non-municipal fractions which the GLA considers unlikely to be suitable for effective treatment at the ERF incinerator.
Recycling rates (%)	Household waste recycling rate	46%	Recycling rates as assumed in the London Environment Strategy, accounting for recycling at source, as well as contributions for residual waste treatment (including MBT and metals recovery from EfW).	51%	60%	Broad consistency in recycling assumptions when determined across both household and C&I waste.
	Municipal C&I recycling rate	69%		70%	70%	
	Combined municipal recycling rate	58%		62%	66%	
Remaining residual waste, capacity, and consequent gap (Mt)	Residual waste processable via EfW	2.6	Please note that further to accounting for recycling of materials at source, this remaining residual tonnage is corrected to account for losses occurring during pre-treatment – hence the value is reduced by a further c. 10% after accounting for recycling.	3.1	2.9	Lower projection under GLA modelling, primarily due to exclusion of non-municipal wastes (and to a lesser extent pre-treatment losses).
	Indigenous EfW capacity	2.2	Accounts for existing operational EfW capacity in London, as well as Beddington ERF (currently commissioning) and the replacement EfW facility to be developed at Edmonton by North London Waste Authority.	2.2	2.2	No significant difference between GLA and the Applicant.
	Resultant indigenous capacity gap (Applicant 'inLondon' case)	0.42	Calculated as residual waste processable via EfW, less EfW capacity in London	0.87	0.66	Discrepancy of c. 0.6 Mt in 2031, largely attributable to the Applicant assumption that all C&I waste remaining after recycling is available.
	Contracted borough exports of residual waste to EfW facilities outside London	0.39	Includes West London Waste authority commitments to Suez Severnside ERF (South Gloucs) and Lakeside ERF (Slough).	0.39	0.39	Full agreement between GLA and the Applicant.
	Resultant EfW capacity gap accounting for contracted exports (Applicant 'London+' case)	0.03		0.48	0.27	Discrepancy as per indigenous case.

* Applicant Scenario 1, Draft London Plan case. From 'The Project and Its Benefits Report, Document Ref. 7.2, Table 6.1, page 68.

12. As noted above, to provide a succinct comparison, the above table shows GLA and Applicant scenarios which consistently assume waste arisings projections included in the Draft London Plan (consistent with Table 2 of the GLA's Written Representation).
13. Please note that for completeness, the GLA's Local Impact Report (Table 3) also details EfW capacity gaps under scenarios modelled in support of the London Environment Strategy (LES):
 - a. Under the LES scenario, overall generation of municipal waste is reduced relative to draft London Plan projections, due to the assumption of more ambitious waste reduction. Specifically, in modelling the LES case, it is assumed that food waste generation is reduced by 50% by 2030, in line with the Mayor's goals. Future municipal waste arisings are therefore reduced under the LES scenario, though all other forecast assumptions remain unchanged.
 - b. With a consequent reduced quantity of residual waste to be managed, an indigenous EfW capacity surplus of -0.10 Mt (101 thousand tonnes) is projected by 2036, widening to a surplus of -0.49 Mt (491 thousand tonnes) if exports to EfW facilities outside London are accounted for. Thus, even in the event that the ERF incinerator is not developed, the LES projection indicates oversupply of EfW capacity in London.
14. Similarly, to aid interpretation, the comparison presented in Table 2 above focusses on a single Applicant scenario (specifically 'Scenario 1, Draft London Plan', being the most closely matched to GLA projections). In evaluating remaining scenarios presented by the Applicant (in 'The Project and Its Benefits Report, Document Ref. 7.2, Table 6.1, page 68), the following considerations are relevant:
 - a. Applicant Scenarios 2a, 3b and 4 are said to account for 'updated LACW' – i.e. it is claimed by the Applicant that they are adjusted to account for the latest arisings data for local authority collected waste.
 - b. Details provided by the Applicant do not allow full transparency around the basis of Scenarios 2a, 3b and 4. However it is understood that these scenarios are adjusted to include the totality of local authority collected waste (LACW). Under heading 'HH/LACW' scenario tonnages indicated by the Applicant thus detail both household waste, as well as commercial waste which is collected by local authorities.
 - c. However, it must be emphasised that local authority collected commercial waste is accounted for as part of the projected London Plan C&I waste tonnage. Subject to further clarification by the Applicant, it appears that Scenario 2a 'double counts' commercial waste collected by local authorities (i.e. it is included by the Applicant under headings 'HH/LACW' and 'C&I'). On this understanding residual waste arisings projected under Scenario 2a are overstated, such that the capacity gap determined (0.9 Mt or 900 thousand tonnes under the highest case in 2036) cannot be considered valid.
 - d. Scenarios 3b and 4 differ in that they purportedly subtract the non-household (commercially collected) LACW from the London Plan C&I waste tonnage. However, this approach has the effect of diminishing the effect of recycling targets: the household waste tonnage, to which a 50% recycling target is applied is increased, while the tonnage of C&I waste subjected to a 75% recycling target is reduced. As a result, under Scenarios 3b and 4, the LES target for 65% recycling of MSW is not achieved.
15. Please note that the commentary above focusses on EfW capacity gap scenarios put forward by the Applicant in the document 'The Project and Its Benefits Report' (Document Ref. 7.2) Table 6.1.
16. Subsequently, the Applicant has submitted the report 'Supplementary Report to the Project and its Benefits Report' (Document Ref. 7.2.1). Document 7.2.1 does not modify the Applicant's position in respect of EfW capacity gap calculations, as assessed above.

17. However, document 7.2.1, including Appendix A, provides further detail of the Applicant's position in respect of the EfW capacity gap nationally, as well as that across the combined London and South East region. The GLA believes that in both cases (nationally and for London/South East), document 7.2.1, and Appendix A specifically, significantly overstate the potential for a further EfW capacity requirement. For GLA's commentary on the Applicant's position, please refer to the GLA's Rebuttals Sheet 4 'Comments on other documents provided by Cory'. In summary however, the following considerations lead the GLA to question the Applicant's capacity gap findings:
- a. The Applicant statement that *'there is identified need for c. 2 million tonnes of residual waste treatment capacity required across the county councils of Essex, Hertfordshire, Kent, Norfolk, Surrey and Suffolk'* is in contradiction with the position put forward by these waste planning authorities in their most recent respective waste local plan documents.
 - b. By adopting different forecasting assumptions, commentators reach divergent conclusions on the extent of the future UK EfW capacity gap. However, a common finding is that where the UK is assumed to comply with CE recycling targets, the capacity gap becomes minimal, or negative (i.e. oversupply of EfW) – as for example demonstrated in research commissioned by the Chartered Institute for Waste Management⁵.
 - c. The case that a need exists for the REP to manage residual waste appears to be predicated on the assumed failure of government to meet recycling targets to which Ministers have committed. It is important to emphasise that this is a speculative position which conflicts with national policy, as well as the position of the Mayor of London.
 - d. Tolvik capacity gap projections do not appear to recognise the large number of EfW projects which have gained planning permission and are actively being pursued by developers.

⁵ CIWM Presidential Report 2018: RDF Trading in a Modern World, page 37
(<https://ciwm-journal.co.uk/downloads/Presidential-Report-2018-RDF-Trading-in-a-Modern-World.pdf>)