## GREATER LONDON AUTHORITY

## Deadline 3 - Sheet 4: GLA commentary on other documents prepared by the Applicant for Deadline 2

ltem	Issue / action	GLA/TFL response
3.1 Revised draft Dev	elopment Cons	ent Order
Requirement 13 - CTMP	Comments on proposed wording.	The following new part (2) appears to encompass management of impacts identified in the ES:  "The construction traffic management plan(s) submitted pursuant to sub-paragraph (1) must be accompanied by a statement explaining how the likely construction traffic impacts identified in the environmental statement are addressed through the measures contained in the construction traffic management plan(s)".  The GLA would wish to be assured that impacts identified include all impacts identified during the course of the Examination and not just those in the submitted ES. This includes construction traffic impacts included within the GLA / TfL Written Representations, including impacts on bus services. It also should specifically include impacts associated with the construction of the Electrical Connection, which were not fully assessed in the submitted ES, as noted in GLA's Written Representations.  The revised Part 3 (previously Part 2) requires  "The construction traffic management plan(s) must be implemented as approved by the relevant planning authority in consultation with the relevant highway authority and, for roads within the London Borough of Bexley, Transport for London".  The proposed consultation with Transport for London is welcomed.

Item	Issue / action	GLA/TFL response
Requirement 14 - Limit on HGV numbers (operational phase)	Comments on proposed wording.	The proposed DCO requirement 14 goes someway to meeting the GLA's and TfL's requirements for at least 75% waste transport by river. However, the cap needs to include jetty outage road transport (The Applicant's revised DCO requirement excludes this) and exclude RRRF unused capacity under its 90-vehicle cap. The Applicant verbally confirmed at the DCO hearing on 6 June 2019 that the cap would be split, which is welcomed by GLA/TfL.
		The Applicant is proposing a 90-vehicle cap which, according to the Transport Assessment submitted, is roughly 28% of the ERFs maximum waste demand. This means that on average days where the plant operates below capacity the percentage of waste coming in by road would be even higher. As discussed at the hearing, this is not acceptable to the GLA/TfL. It is considered that given the site's location and access to existing facilities the Applicant should aim for a cap as ambitious or more than the older RRRF, in line with draft London Plan Policy T2 'Healthy Streets' which aims to reduce vehicle dominance on London's streets, current London Plan Policy 6.14 'Freight', current London Plan Policy 5.17 'Waste Capacity', and current London Plan Policy 7.24 'Blue Ribbon Network' which aim to increase freight by river.
		Though it is accepted by the GLA/TfL that the relationship between number of vehicles and amount of waste moved is not completely linear, the applicant has provided an estimate of the number of daily vehicles required for the ERF in a 100% by road scenario: 321 per day, which includes waste deliveries, and movements associated with by products and consumables if the ERF operates at its maximum capacity, which the applicant has stated during the hearing is unlikely to occur and is well above the nominal throughput assessed in the nominal scenario for the ES. The GLA and TfL would want a cap of 80 vehicles delivering waste, which would be approximately 25% of the ERF's maximum waste throughput. This would therefore already have contingency built in for varying sizes of loads in the nominal scenario.
		To ensure that the applicant does not simply use larger size HGV vehicles to transport a higher proportion of the waste to the site or use a lot of small vehicles which would not be subject to the cap; TfL would also like to see a provision in the requirement to limit the volume of waste delivered by road set at 200,000 tonnes per annum (t/pa), which is approximately 25% of the ERF's

Item	Issue / action	GLA/TFL response
		maximum waste throughput and approximately 30% of the ERF's nominal scenario waste throughput (655,000 t/pa) therefore still allowing for some contingency.  If the applicant feels that this cap cannot be achieved, then more assessment should be provided showing that all efforts have been made to use the river for transporting waste.  In addition, GLA and TfL would wish to see the proposed requirement 14 (6) extended to include for consultation with TfL regarding the reporting of traffic movements. GLA and TfL would also wish to see part 6 of Requirement 14 extended to include for a remediation plan to be provided to the local planning authority in consultation with TfL in the event that the annual report shows that the provisions of requirement 14 (in its entirety) have been breached. Currently the requirement as drafted does not provide for the Applicant to take any steps to prevent the breach recurring. The steps that may be required in a remediation plan may include such measures as real time reporting of traffic movements to ensure that any breach of Requirement 14 can be remedied as it occurs.
Requirement 18 - Employment and skills plan	Comments on proposed wording.	The proposed requirement is welcomed in principle as support for local employment and skills training is an important consideration for the Mayor (as set out in the Mayor's Employment and Skills Strategy and in the London Plan and draft London Plan).  The content of the proposed employment and skills plan is not described, and the GLA would wish to see further details provided, including commitment to equal opportunities, training (including apprenticeships) and the London Living Wage.
Requirement 11 – Code of construction practice	Issues previously raised not addressed in the proposed revised draft DCO	The DCO should include additional measures requiring that emissions from machinery used during construction should conform with the London NRMM Low Emission Zone (as requested in the GLA/TFL LIR).

Item	Issue / action	GLA/TFL response
Requirement 15 - operational worker travel plan	Amendment required	TfL would expect that the operational worker travel plans are approved by the relevant planning authority in consultation with Transport for London.  Furthermore, as set out in the GLA/TfL LIR, TfL consider that the wording of the Requirement should be amended to commit the Applicant to setting out specific sustainable transport mode share targets, which should be approved by the relevant planning authority and TfL, and to add a requirement to implement additional travel planning measures to be implemented if these targets are not met.
Requirement 20 – Combined Head and Power	Issues previously raised not addressed in the proposed revised draft DCO	The work undertaken by the Applicant in the Supplementary CHP report (Document 5.4.1) is inadequate in comparison with other DCO applications, such as the NLWA DCO, and in comparison with the recent study work carried out by the London Borough of Bexley for a heat off-take from the RRRF EfW plant. The Applicant's methodology was limited to a desk-top approach using the national heat map to identify potential heat demand and judgement to screen what heat loads may not be feasible to connect. In contrast, the work carried out by the NLWA and Bexley that included stakeholder engagement to confirm their developments plans and interest in connecting to the heat network as well as the formation of a steering group to help further inform the direction of the study work. The GLA regards this as insufficient considering the importance that CHP has in the environmental performance of this project. The Applicant should be required to carry out CHP work to a similar standard of the RRRF CHP review work and that the scope is agreed with the Steering Group.  The CHP review should be carried out under the guidance and agreement of a Steering Group. This could potentially be an evolution of the Partnership Board established for the RRRF district heating study. It should be comprised of key stakeholders such as the Applicant, LB Bexley, the GLA, potential heat suppliers (RRRF and Thames Water) and key heat customers.

Item	Issue / action	GLA/TFL response
		The CHP review should be completed by the date of final commissioning rather than 12 months after the date of final commissioning. Prolonging the review is likely to lose heat customers to other heat supply solutions.  The GLA considers that "five years" should be replaced with "two years unless agreed otherwise with the Steering Group". This refers to the time period for submitting a revised CHP review. The GLA's view is that five years is too long, during which time it is very likely that new heat loads could be lost to alternative heat supply arrangements. Study work of this nature takes around 6 months to
		complete, and therefore it is not considered onerous or unreasonable for reviews to be submitted every 24 months.
Additional requirements required	Jetty and Pier outage	As set out in the LIR, GLA and TfL would wish to see a requirement for the jetty and pier to be used exclusively for tugs and barges transporting waste, residual materials following incineration, and consumables necessary for the operation for the proposed REP and existing RRRF, and for no other purpose. The GLA's concern is that there may be insufficient capacity for delivery of waste by river and removal of ash by river if it is used for other purposes.
	Delivery of anaerobic digestion, battery storage and solar PV	As set out in the LIR, the GLA wishes to see a commitment that the proposed Anaerobic Digestion facility, Battery Storage unit and solar PV panels will be delivered within an agreed timeframe.

Item	Issue / action	GLA/TFL response
	Pre-treatment of waste	As set out in the LIR, the GLA considers that only truly residual waste should be treated at the ERF, in order for it to accord with the waste hierarchy, and other national and local policy. The use of offsite pre-treatment should be required, and management and monitoring arrangements put in place to ensure that ERF feedstock has been pre-treated to recover all materials for recycling before delivery to the ERF. A requirement with regard to the types of waste to be treated at the facility was included in the DCO (2017) for North London Heat and Power Generating Station, and a similar requirement should be imposed in respect of this DCO.
		The Applicant stated in its response to the ExA Written Question Q1.0.15 that the Environment Agency (EA) has a "duty of care" to ensure that the waste hierarchy is suitably implemented. On that basis, it was contended that in granting the Environmental Permit (EP) for the ERF, the EA would only permit it to process wastes which are suitable for processing in the ERF, i.e. "they are representative of residual waste, and will have undergone a level of pre-treatment, through either off-site processing or source-segregation, to ensure that the wastes permitted to be processed are 'residual' and not suitable for recycling".
		The GLA does not agree that the EP process is a suitable mechanism for ensuring that only residual waste would be treated in the ERF and has consulted with the EA in this regard. The EA has confirmed that its regulation of incoming waste is primarily aimed at environmental controls of the waste stream and to avoid waste movements being 'lost' in transit, ie. to avoid illegal tipping. The EA through the EP will not give detailed consideration to the content of residual Municipal Solid Waste (MSW) and whether it contains any recyclable material. See Agenda item 3.2 in the GLA's Post Hearing Written Submission of Oral Case and the Appendix 2b attachment confirming the role and purpose of an EA permit. This concludes that the purpose of the permit is not to interrogate the waste to ensure it does not contain that could be reused or recycled.
		It should be noted that if a local authority provides a recycling collection service, then all the residual waste collected from that authority is deemed to have undergone 'pre-treatment', whether or not individual households take part fully in segregating their waste. The EWC code that is assigned to the waste therefore does not ensure any particular level of pre-treatment. Furthermore, the Applicant has not presented evidence committing to inspection and recovery of materials that

ltem	Issue / action	GLA/TFL response
		could easily be recycled prior to waste treated in the proposed ERF recyclable waste. The ExA can have no certainty that the ERF will use pre-treated waste, and on that basis, it would not conform with the waste hierarchy.
	Air emissions to meet draft BREF limits.	As set out in the LIR, air emissions should be limited to the amounts assessed in the ES, i.e. the draft BREF limits.  Emissions limits imposed by the environmental permit are in units of mg/m³ of pollutant in the expelled air, these were translated into grams per second for the purposes of assessment. This translation relies on knowing the rate of expelled air from the stack.  Thus, if the amount of expelled air is increased beyond the design parameters assumed in the DCO the total amount of pollution emitted, and the consequent impact on health, could increase beyond what is assumed in the DCO process even when the plant is operating in accordance with the environmental permit.  In order to prevent this the DCO should require either a limit on the total throughput of the plant or a limit on the rate of pollutant release (i.e. grams per second) consistent with the modelled parameters.
	Delivery of waste and ash to be zero carbon	As set out in the LIR (para 10.20), all transport used for deliveries of waste and export of ash within London should be zero carbon. It is acknowledged that the Applicant is unlikely to be operating road deliveries itself, but a requirement is envisaged that would place the Applicant under an obligation to monitor and enforce arrangements for delivery of feedstock from its suppliers. This would ensure alignment with the Mayor's low and zero emission policies set out in his London Environment Strategy and Transport Strategy.

Item	Issue / action	GLA/TFL response
	Compensation for disruption to bus services	As set out in the GLA's LIR, at paragraph 10.20, it is expected that the construction of the REP would require some changes to bus services and potential delays. This is likely to impact on TfL's revenue and operating costs. Therefore, TfL would wish to see a commitment to compensation for of any costs associated with such disruption by the Applicant.
	Use of AD gas for grid or vehicles	The GLA objects to the utilisation of the Anaerobic Digestion gas in a site gas engine CHP plant on grounds of high NOx emissions compared with other approaches. Furthermore, gas engine CHP is an inefficient use of energy due to losses in conversion and is at the bottom of the energy hierarchy in the draft New London Plan.
		The Applicant should be obliged to quantify the potential for gas use in on-site vehicles relative to total gas production, as this is said to be an option. Assuming that on-site vehicles would not use all the gas produced. The Applicant should also be obliged to commit to a plan for investigating options for offsite use, in a similar way to CHP opportunities need to be investigated.
		Connection of the Anaerobic Digestion facility to the gas grid or use to power vehicles should be a requirement of the DCO (as proposed in the Application at paragraph 5.4.6 of Planning Statement).

## **5.4.1 CHP Supplementary Report**

Item	Issue / action	GLA/TFL response
Demonstrable Steps	Amendment required	The GLA notes the additional material provided by the Applicant. However, the GLA considers that the Supplementary Report does not adequately respond to the issues raised in its Written Representation at sections 3.19 to 3.24, which state that the Applicant's claim that the REP would double the heat supply available to a RRRF-based heat network and would add resilience and avoid the need for gas-fired boilers.  The GLA considers the principle of one ERF backing-up the other to increase the resilience of the heat supply system would lead to the inefficient operation of the standby plant, and that the reliability of the heat supply would fall short of what is accepted as good district heating practice. The GLA consider that the purported synergies are overstated and, as a result, so are the project benefits.
Heat demand analysis	Amendment required	The GLA considers that there remain issues which the Applicant needs to address with regards to their heat mapping and screening methodology. These are set out above in section Requirement 20 – Combined Heat and Power.
CIF and its relevance to NPS policy for low carbon energy	Amendment required	Setting the CIF is the Mayor's approach for effectively implementing the Energy NPS and National Planning Policy for Waste. Given that the existing RRRF facility could meet the foreseeable heat demand, the GLA considers that that the proposed ERF would operate in power only mode falling well short of the CIF level, and be a carbon producer, and not be in compliance with the NPS En-1 or En-3.
		The uncertainty associated with the claimed energy efficiency rate of the ERF has still not been clarified. The GLA maintains that the Applicant is over-claiming the efficiency of the ERF and does not accept that it could meet the CIF in power only mode. It remains unclear why the Applicant considers use of the net calorific value to measure the energy content of the waste is justified. A justification is provided in the Applicant's 8.02.08 Carbon Assessment by reference to the use of

Item	Issue / action	GLA/TFL response
		this value in the GLA's Ready Reckoner tool, but without addressing the separate concerns as to the validity of this approach in the case where energy from water vapour is being recovered (as were raised in the analysis of the CIF performance in GLA WR3). As such, this remain key concerns arising from the previous analysis prepared by the Applicant.
		2. 1 Demonstrable Steps
		The Applicant in its revised CHP Report commits to making the ERF 'heat ready' and to its existing partnership to the Bexley District Hearing Partnership Board linked to the RRRF plant. This is considered the bare minimum. The GLA would expect the Applicant to take all demonstrable steps as taken by SELCHP and NLWA (Edmonton) incinerator operators and those set out in para 9.8.13 of the draft LP as a minimum. Without such commitments it is highly unlikely that the ERF will ever operate in CHP mode meeting the CIF and effectively comply with national policy supporting transition to a low carbon future, including support for renewable and low carbon energy and associated infrastructure.
		Eunomia prepared a report for the GLA, (10 June 19), which compares the carbon emissions of the REP in power-only mode against government forecasts for grid carbon intensity and determine the carbon impact of the REP electricity displacing grid electricity. The report is attached as Appendix 3 of the Post Hearing Written Submission of Oral Case.
		The report concludes that for the REP to achieve the same carbon intensity as grid electricity, which has a higher carbon intensity than either renewables or nuclear, will require considerably more effort in terms of securing heat off-take agreements than is currently proposed by the Applicant.

**7.2.1 Supplementary Report to the Project and its Benefits Report** (New document for Deadline 2) – available <u>here</u>

ltem	Issue / action	GLA/TFL response
Role of the RWS in the SoS decision making for the DCO application	Amendment required / clarification sought - TBC	With regard to paragraph, for the reasons set out in its WR, the GLA considers that the adverse impact of the proposed development outweighs the benefits. In the GLA's view, the proposed development does not conform with the waste hierarchy. The Applicant has not provided any additional information in this report which has caused the GLA to alter that view.  The Applicant's case (set out at paragraph 2.1.6) regarding the integral nature of the various elements of the REP (see also Applicant's response to First Written Questions 1.0.3) does not provide sufficient justification as to the extent to which the various elements are inter-dependent. The GLA acknowledges that the various technologies would use the same electrical connection
		infrastructure, and that the anaerobic digestion and solar PV elements of the renewable credentials of the project, but these elements could be constructed independently and are not in any way dependent on the provision of the ERF.  Section 2.2 (NPS EN-1) This provides an update on total energy generation capacity based on the Committee on Climate Change Report 2018 (CCC 2018 Report) and notes lack of progress on nuclear energy.
		Section 2.3 (NPS EN-3) This restates the need case for waste management capacity to divert London's waste from landfill and also to provide capacity for Essex, Hertfordshire, Kent, Norfolk, Surrey and Suffolk.
		In particular, at paragraph 2.3.7, it is suggested that areas surrounding London have a requirement for additional EfW capacity, with the following assertion made:
		"Indeed, as is also demonstrated in the LWSA (7.2, APP-103), it is evident that the REP alone will not be sufficient to meet the needs of London and nearby administrative areas. Within their respective development plan documents 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".

Item	Issue / action	GLA/TFL response
		While the Applicant does not reference the source documents upon which this analysis is based, the GLA's review of published documents indicates that local development plan findings put forward by the Applicant are inaccurate in a number of cases:
		<ul> <li>Hertfordshire – In the referenced document (Appendix A to the Applicant's London Waste Strategy Assessment) the Applicant indicates a 250 ktpa capacity gap for local authority collected waste (LACW), and over 350 ktpa for commercial and industrial (C&amp;I) waste. The most recent position put forward by Hertfordshire¹ indicates a combined residual waste capacity gap of 99 ktpa as a low case, or 210 ktpa under a high case.</li> <li>Essex – A capacity gap of zero is indicated for commercial and industrial waste. In contrast research published by Essex County Council indicates a capacity surplus of 1.4 Mt for recovery of C&amp;I waste².</li> <li>Kent – Despite inclusion in the above quote, indicating circa 2 Mt need, the Applicant does not make reference to capacity gap data for Kent specifically. However it is notable that in the document 'Early Partial Review of the Kent Minerals and Waste Local Plan 2013-30'³, Kent County Council project a recovery capacity surplus of -274 ktpa by 2031.</li> <li>Suffolk – The Applicant indicates capacity gaps of circa 210 ktpa for LACW, and circa 390 ktpa for C&amp;I waste. The Suffolk Minerals &amp; Waste Local Plan, Suffolk Waste Study (April 2018, currently subject to Examination in Public)⁴ compares residual waste arisings to capacity within the County, concluding that '(t)here is therefore sufficient non-hazardous waste treatment capacity for the forecast arisings'.</li> </ul>

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 $<sup>^1\</sup> https://www.hertfordshire.gov.uk/media-library/documents/about-the-council/consultations/waste-local-plan/5.\%20draft\%20waste\%20capacity\%20gap\%20report.pdf$ 

 $<sup>^2\</sup> https://www.essex.gov.uk/Environment\%20 Planning/Minerals-Waste-Planning-Team/Planning-Policy/Documents/Non-Hazardous\_WasteCapacityGapUpdate\_May2018.pdf$ 

<sup>&</sup>lt;sup>3</sup> https://democracy.kent.gov.uk/mgConvert2PDF.aspx?ID=88119

<sup>&</sup>lt;sup>4</sup> https://www.suffolk.gov.uk/assets/planning-waste-and-environment/Minerals-and-Waste-Policy/2018-04-05-Suffolk-Waste-Study-Update.pdf

Item	Issue / action	GLA/TFL response
		Taken together, these findings indicate that the Applicant's assertion of an "identified need" is unsustainable and should be given little weight in this Examination. Indeed, of the six waste planning authorities referenced, three (Essex, Kent and Suffolk) appear to be anticipating no additional capacity requirement, or a net capacity surplus.
		Section 2.4 Resources and Waste Strategy (RWS)
		Section 2.4 provides an update on the RWS. It states at paragraph 2.4.2 that "the RWS is considered to be an important and relevant matter for the Secretary of State to have regard to in his decision making". Given that the Applicant adopts this position, it is important to emphasise that achievement of the RWS target for 65% recycling diminishes the requirement for future energy from waste capacity, undermining the case for the ERF (please note that this point is explored further below).
		Sections 3.5 – 3.16 RWS Evidence Annex
		Section 3.5 of the 'Supplementary Report to the Project and its Benefits Report' concerns the RWS Evidence Annex. The Applicant, in its response to the GLA's Relevant Representations (paragraph 2.5.12, document 8.02.03), seeks to dismiss the GLA's reference to the RWS Evidence Annex, and in particular the Defra statement that "additional residual waste energy capacity would not necessarily be needed". The GLA believes that the evidence base put forward by the Applicant to justify this dismissal is misleading (in this regard please refer to the discussion included below in relation to Appendix A to the 7.2.1 Supplementary Report).
		<b>Section 3.6 - Environmental permit and air quality.</b> The GLA is not a statutory consultee for the purposes of environmental permitting so the statement in paragraph 3.6.18 does not apply to the GLA.
		The GLA notes the proposal to incorporate SCR as specific abatement technology for NOx emissions. This is welcome but as noted elsewhere the GLA is not assured that emissions limits lower than assumed for the DCO ES will in the end be secured by the permit, or that the permit is

Item	Issue / action	GLA/TFL response
		capable in the long term of ensuring that emissions do not grow beyond those modelled for the DCO application if the plant throughput increases.
		The GLA notes also that the use of SCR cannot be directly secured by the permit (see article 15 (2) of the Industrial Emissions Directive).
		Appendix A to the 7.2.1 Supplementary Report to the Project and its Benefits Report
		Appendix A to the 7.2.1 Supplementary Report to the Project and its Benefits Report is a new assessment prepared by Tolvik for The Applicant which concludes that "the development [of] at least 5.0Mt and potentially up to 8.2Mt of additional EfW capacity would more realistically reflect future requirements and therefore would be consistent with the strategy". The GLA disagrees with this conclusion for the reasons set out below.
		Paragraphs 2.1-2.6 of Appendix A
		These paragraphs deal specifically with the GLA's Relevant Representations. Tolvik seeks to show how England's Resources and Waste Strategy (RWS) confirms the role of EfW within the waste hierarchy, whilst asserting that "Tolvik has therefore been unable to identify any references in the main text of the WRS 2018 which supports the GLA's assertion that, as a result of the development of EfW capacity, REP would be inconsistent with the WRS 2018".
		This summary ignores the following clear statement, made by Defra within the Evidence Base to the RWS:
		"According to our internal analysis, shown below (Figure 9), significant additional residual waste energy recovery capacity such as incineration or advanced conversion technologies – above that already operating or planned to 2020 – would not necessarily be needed to meet an ambition of no

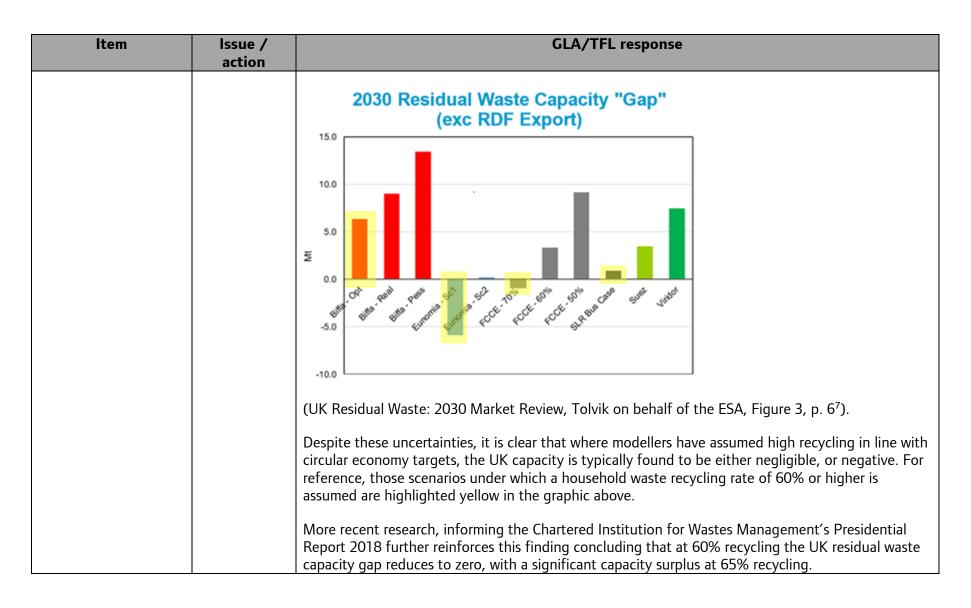
Item	Issue / action	GLA/TFL response
		more than 10% Municipal Solid Waste (MSW) to landfill by 2035, if a 65% MSW recycling rate is achieved by that same year". <sup>5</sup>
		The key point here is what recycling level is adopted in any assessment of this kind. The GLA considers that the following headline core facts are material:
		- the ambition stated in Government's RWS is to achieve 65% recycling for MSW by 2035;
		- this is in compliance with the EU Circular Economy Package, which requires a staged increase in recycling, culminating at 65% by 2035);
		- in many respects the evidence base for how the UK achieves the desired recycling target and where the UK is now is irrelevant. The Government is aiming for this target, as are Europe in accordance with the Circular Economy Package, and therefore it is appropriate and sensible for the GLA to plan to meet this target. EfW is a therefore a secondary subordinate consideration to meeting the higher level recycling targets;
		- the amount of landfill now is also irrelevant as this does not dictate the need and demand for EfW into the future;
		- the RWS quote cited in para 2.5 <sup>6</sup> of Tolvik's comments in fact supports recycling over EfW. It notes that EfW is one of the most expensive ways to treat waste, and concludes that EfW should be minimised in favour of minimisation, re-use and recycling.

<sup>&</sup>lt;sup>5</sup> \*With MSW residual arisings predicted to fall to 20-21Mt per annum by 2035 under a 65% recycling rate - (Our Waste, Our Resources: A Strategy for England, Evidence Annex, page 78.)

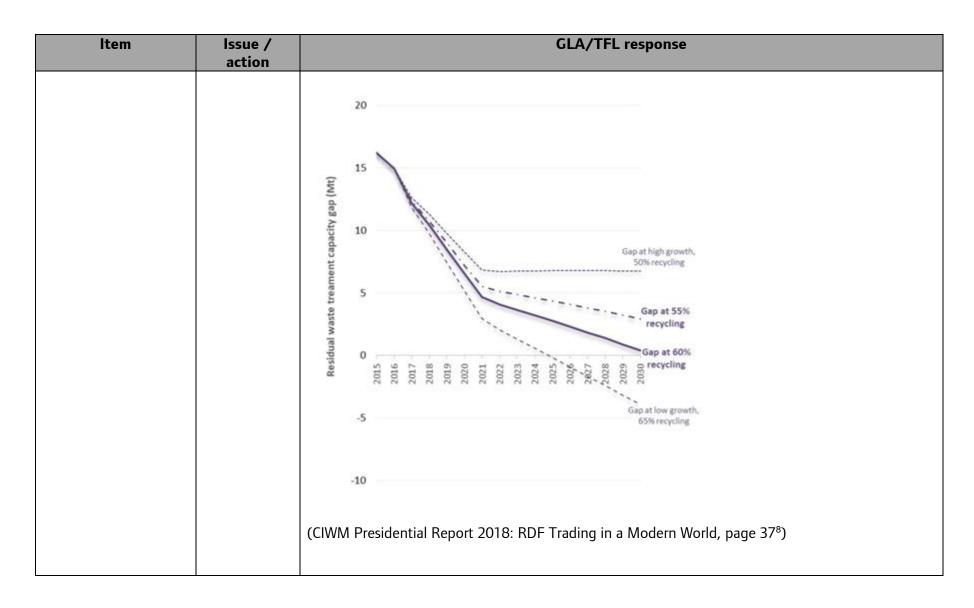
<sup>&</sup>lt;sup>6</sup> Paragraph 2.5 states "On page 137 there is a further reference to energy recovery which once again is a restatement of the waste hierarchy:

Item	lssue / action	GLA/TFL response
		Paragraphs 3.1-3.5 of Appendix A  At Para 3.4, Tolvik's summary of Defra analysis underpinning the above statement indicates that EfW capacity considered by Tolvik is limited to that which is operational, or under construction. In reality, a large number of further EfW planning permissions exist, and are progressing through the process of securing funding, and commencing construction. Allowing for this additional planned capacity in modelling would increase the projected capacity gap excess further. The Applicant is asked to present evidence of the ERFs they expect to be built from a full list of ERFs seeking planning permission so that the GLA and the Examining Authority can take a view.
		Ultimately, projections for the UK EfW capacity gap are contingent on a range of assumptions (including levels of growth, recycling, and delivery of new capacity). These assumptions can be flexible, and there is no clear agreed position. This is demonstrated by the review of the UK residual waste market undertaken by Tolvik for the Environmental Services Association:

<sup>&</sup>quot;Residual waste is the mixed material that is typically incinerated for energy recovery or landfilled. Much of the products and materials contained in this waste could have been prevented, reused or recycled. This is inefficient not only because materials that hold value are being lost, but also incineration and landfill are the most expensive ways to treat waste".



<sup>7</sup> http://www.esauk.org/application/files/6015/3589/6453/UK\_Residual\_Waste\_Capacity\_Gap\_Analysis.pdf



<sup>8</sup> https://ciwm-journal.co.uk/downloads/Presidential-Report-2018-RDF-Trading-in-a-Modern-World.pdf

Item	Issue / action	GLA/TFL response
		Paragraphs 3.6-3.10 of Appendix A
		It is asserted at paragraph 3.10 that the RWS "fails to demonstrate that the actions set out in the WRS 2018 would deliver the "goal" of 65% recycling". Government has committed to achieving circular economy targets and is consulting on a range of measures to increase recycling. These include (but are not limited to) universal provision of food waste collection services, free collection of garden waste, and specification of a core set of recyclables to which must be collected by local authorities and waste operators.
		The case that a need exists for the REP to manage residual waste appears to be predicated on the assumed failure of the 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 and European policy, as well as the position of the Mayor of London.
		Paragraphs 3.11 - 3.16 of Appendix A
		Future Exports (paragraphs 3.11 - 3.16) presents a case for diverting waste from landfill to recovery (EfW) based on the UK as a whole. This is not directly relevant to London and South East.
		Section 4
		Section 4 of Appendix A responds to GLA representations on the earlier Tolvik study, and again asserts that 65% recycling is "not considered credible". As noted above, this conclusion is difficult to support given the clear commitment made by Government to achieve this target, accompanied by proposed large scale changes to UK waste management systems (including for example universal food waste collection, free garden waste collection, and minimum requirements for recycling service provision).
		Paragraphs 4.1-4.12 of Appendix A

Item	lssue / action	GLA/TFL response
		Again, these paragraphs discuss the gap forecasts for the UK as a whole. Tolvik argues there is a national need which may be the case under certain scenarios, but extremely unlikely under a CE economy scenario of 65% recycling. The GLA would submit that London (like all other regions) should plan to meet its own needs, ie, 65% recycling and <10% landfill reliance and therefore <35% recovery by 2035, but that there should be no requirement for London to take any more burden for the wider UK that is necessary even if required under a non-CE scenario.
		At paragraph 4.11, Tolvik claims that, under a 65% recycling assumption "at least 3.0 Mt (0.5Mt additional EfW capacity plus 0.5Mt adjustment for 2035 target date) and, allowing for exports" could be needed in the UK. The GLA does not consider this figure to be particularly accurate: the forecasted gap accounts only for those EfW projects which are operational, in construction or for which "construction is imminent". In reality, a large additional pipeline of EfW projects with planning permission secured exists, many of are close to securing funding and commencing development.
		Moreover, it should be emphasised that the UK capacity gap projection put forward by Tolvik is contingent on its assumptions, and conflicts with forecasts put forward by other commentators, including Defra and CIWM.
		With regard to the likelihood of local authorities meeting 45-55% plus recycling rates, the GLA draws the ExA's attention to the following facts:
		- the top 4 London boroughs are currently achieving household recycling rates of 50% plus (Bexley and Ealing) and 45% plus (Bromley and Kingston upon Thames)
		<ul> <li>15 of the 19 WCAs which have private contractors are due to renew their contracts prior to 2025 and therefore (as with Ealing) service requirements are likely to see a step change in recycling performance (as best practice gets adopted), that will enable WCAs to be in general conformity with the municipal waste provisions in the LES and comply with forthcoming Government policy set out in the RWS.</li> </ul>

Item	lssue / action	GLA/TFL response
		<ul> <li>the average household recycling rate now for outer London LA's is currently ~40% (and inner London 25%)</li> <li>Over 15 years it is likely that most collections contracts will be renewed at least twice (possibly more) and therefore it is entirely possible to see a step change in recycling performance upwards under the current regulatory environment. With significant additional policy intervention this is likely to push recycling levels even further towards national and EU policy goals of 65% by 2035.</li> </ul>
Assumptions regarding incineration potential of municipal waste		In the report 'The Project and Its Benefits Report, Document Ref. 7.2' the Applicant provides scenario projections for the future energy from waste capacity gap which will exist in London.  The GLA and Applicant's 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. The GLA projects a gap of just 0.09 Mt (90 thousand tonnes) by 2036, whereas the Applicant projects 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:  • the Applicant's assumption that all C&I waste is suitable for processing via EfW, regardless of waste category; and  • (to a lesser extent) reduction in the mass of residual waste due to pre-treatment (which is not accounted for in the Applicant's calculations).

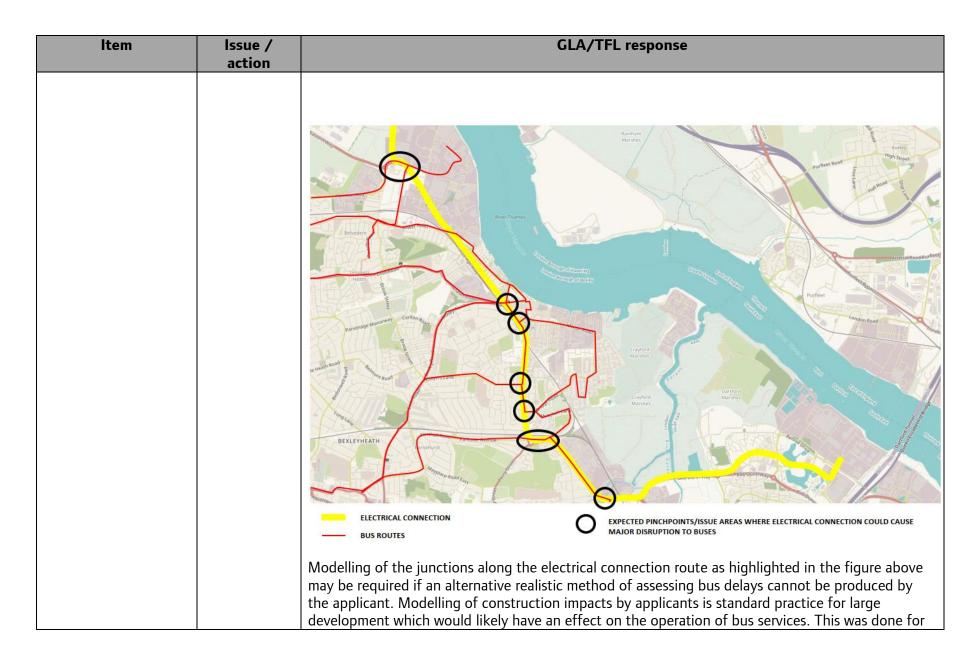
Item	Issue / action	GLA/TFL response
		The GLA has therefore prepared a briefing note that responds to the underlying assumptions of the forecasts put forward by the Applicant in the Project and its Benefits Report (please refer to Appendix 2a to the GLA's Post Hearing Written Oral Summary Submission).
		The evidence base included by the GLA in Appendix 2a includes a systematic comparison between the GLA energy from waste capacity gap forecast, and that put forward by the Applicant. This comparison quantitatively demonstrates how the above factors lead the Applicant to overestimate the energy from waste capacity gap which will exist in 2036 by c. 0.6 Mt.
		Appendix 2a also notes other misleading aspects of capacity gap projections provided by the Applicant, including apparent double counting of commercial waste volumes collected by local authorities (in one instance), as well as non-compliance with GLA recycling targets.
8.02.08 Carbon Assess	sment	
Purpose is comparison of the ERF (only) with sending waste to landfill	Amendments required / insufficient information	The GLA would contend that emission saving comparisons with landfill is irrelevant in the context of the relevant NPSs, which are concerned with the provision of energy infrastructure, promoting the transition to a low carbon economy, mitigating climate change and contributing towards renewable targets.
		Furthermore, the GLA would submit that a comparison of the proposed ERF with landfill is a spurious comparison. Based on the assumption that the Mayor of London's recycling targets are met i.e. by 2030, and that outside of London the government's recycling targets of 65% recycling by 2035 is achieved (all residual MSW already being processed via existing and planned EfW in accordance with projections), the baseline for comparison of carbon emissions would not be landfill, as zero landfill (of combustible materials) would have been achieved by these dates. The GLA view, as set out in its

Item	Issue / action	GLA/TFL response
		written representations, is that once 65% recycling is achieved the ERF would replace recycling rather than landfill, and that this would have a negative effect on carbon (since the carbon benefits of recycling are substantially greater than any benefit that can be attributed to EfW).
		Notwithstanding the above submission, the GLA considers that the emission savings as compared with landfill appear very high. The GLA has not been able to validate where the Applicant has got their landfill emission factors from. The emission factors used in developing the GLA's Emissions Performance Standard and Carbon Intensity Floor were taken from the Government's MELMOD model. The Carbon Assessment discusses MELMod and GasSim, which are both models that can be used to model methane emissions. There are emissions factors outlined in the Golders report. The GLA assumes that the Applicant has used these in its analysis directly, but the actual values and methodology are not clearly stated.
		The Applicant in Section 1.0 appears to consider that CCGT should be determined as the marginal source of electricity, and not apply the Government's (BEIS) long term marginal source projections. The most recent data by BEIS indicates that the long-run marginal is expected to decline from 0.357 kg CO2 per kWh in 2010 (at which point the figure is consistent with the assumption that the marginal is gas CCGT) to 0.030 CO2 per kWh in 2046. BEIS - Business, Energy and Industrial Strategy. Applying the Government's marginal source projections, the ERF would continue to perform significantly worse in carbon terms by displacing considerably cleaner and renewable sources of energy generation.
		Furthermore, ERFs do not operate like gas CCGT facilities, which can be switched on and off according to demand for power from the grid. The ERF will need to continue to treat waste even if there is less demand for the electricity. If the electricity generated from combusting the waste is not exported to the grid (because of the lack of demand for the power, for example), this would worsen the overall carbon performance, as the waste would still need to be treated.
		The Applicant makes reference to the approach used by UKWIN in its carbon assessment used the 2021 long run marginal, which is stated as 0.258 kg CO2e / kWh, with this value being used in a sensitivity analysis. This value has been derived from the above dataset by BEIS, using the most recent set of values published in 2018. Arguably the UKWIN approach is highly conservative. Even if the facility is operational in 2021, it will continue to operate for around another 25 years from this

Item	Issue / action	GLA/TFL response
		point. The average marginal figure from 2021 to 2046 is 0.108 kg CO2e per kWh. This suggests the benefit from electricity generation that arises from the ERF should be in the order of 56,000 tonnes CO2e rather than 182,498 as stated in the Carbon Assessment. This would suggest the net annual carbon impact of the facility (based on the design waste scenario) is in the order of 173,000 tonnes CO2e, rather than 30,112 tonnes CO2e as stated.
Inputs into calculations	Amendments required / insufficient information	The Applicant's comparison of carbon emissions arising from transport of waste to landfill compared with ERF is noted. However, the GLA would submit that the assumptions regarding transport to the ERF is speculative as currently there is no indication where the waste would be sourced from, despite the new commitment proposed by the Applicant at the DCO Hearing to delivery of all waste by river, other than 90 road deliveries per day. Given the lack of need in London and the South East region demonstrated in the GLA's response above to the Applicant's document 7.2.1, feedstock for the ERF may have to travel long distances by road before being transferred to the river.  Note: Eunomia were asked by the GLA (10 June 19) to compare the carbon emissions of the REP in power-only mode with government forecasts for grid carbon intensity and determine the carbon impact of the REP electricity displacing grid electricity. GLA commentary on the results of this exercise is set out in the GLA's comments on document 7.2.1. Supplementary Report to the Project and its Benefits Report.
Appendix L to B.1 of I	ES - Revised Οι	ıtline CTMP
Construction traffic management, incl. workforce parking and workforce Travel Plan to be agreed with LBB and TfL	Additional wording to be added to secure a full assessment of traffic	In the revised version of the CTMP submitted by the Applicant at Deadline 2, the applicant commits to a reduction in car parking of 50%, leaving 275 car parking spaces for construction workers. Furthermore, the applicant has committed to a 07:00 to 19:00 workday on a single shift, which would mean that workers would arrive between 06:00-07:00 and depart after 19:00, which essentially puts these trips out of the peak hours. This is welcomed by TfL.

ltem	Issue / action	GLA/TFL response
	impacts on bus	Section 2 of Requirement 13, which covers Construction Traffic Management Plans states:
	operations.	"The construction traffic management plan(s) submitted pursuant to sub-paragraph (1) must be accompanied by a statement explaining how the likely construction traffic impacts identified in the environmental statement are addressed through the measures contained in the construction traffic management plan(s)."
		This would not cover effects on buses, as the full bus impacts in terms of delays were not identified in the environmental statement. ES Transport Chapter paragraph 6.9.67 states:
		"The severance effect to these bus services would vary from Minor adverse, where short lane closures and alternate way traffic signals are used, to potentially Major adverse if temporary road closures are required where no suitable alternative routeing is available for the affected bus services. The details of these impacts are not known currently and would be detailed as part of the CTMP, secured through the DCO."
		The GLA/TfL consider that the full construction impacts would not be detailed as part of the CTMP as currently submitted. Paragraph 2.4.11 of the Outline Construction Traffic Management Plan submitted at Deadline 2 by the applicant states that:
		"An appraisal would be included within each CTMP of the anticipated disruption to bus services during that stage of the works. This would be developed in consultation with the bus service operator and should include such matters as:
		proposals for the method of traffic management;
		a judgement of the disruption to those services;      details of the disruptions of the disruptions of the disruption of the disrupti
		<ul> <li>details of any proposed diversions or suspensions to</li> <li>bus stop suspensions or temporary relocations; and</li> </ul>
		<ul> <li>bus stop suspensions of temporary relocations, and</li> <li>the programme for those impacts; and</li> </ul>
		• the monitoring and review processes to be used."

ltem	Issue / action	GLA/TFL response
		This does not go into detail about what this appraisal would be and to what level of detail this would go. The paragraph refers to "a judgement of the disruption to those services" being included in the statement, but does not commit to an assessment which will show the likely delays to bus services.
		The GLA/TfL would want a statement to be included in the CTMP to state that the likely disruption to bus services would be assessed to quantify the likely delays to bus routes and to show the level of mitigation required through bus frequency increases and diversions to minimise this impact.
		Modelling of the junctions along the electrical connection route as highlighted in the figure below may be required if an alternative realistic method of assessing bus delays cannot be produced by the applicant. Modelling of construction impacts by applicants is standard practice for large development which would likely have an effect on the operation of bus services. This was done for several other developments including the Old Street roundabout development. Micro-simulation modelling of the whole network shall not be required, as TfL Network Performance have indicated that due to the rolling nature of the works along the network, this would not be suitable.
New measures re Electrical Connection	Additional commitment to assessment of bus delays to be proposed by the Applicant.	In Technical Notes submitted at Deadline 2, the Applicant recognises the likely impact of the Electrical Connection construction on the operation of Erith Roundabout. To mitigate this, the Applicant proposes specific routing/construction around Erith roundabout to reduce impact of construction. For example; the applicant commits to avoiding the use of the northbound arm of the Erith Roundabout for Electrical Connection construction, however they may still need to close the eastern arm, which could cause delays at the junction due to displaced traffic onto the other arms, which would cause delays to road users, including buses. Quantifying of the time delay by the Applicant would allow TfL to consider the extent of required diversions for buses or increased frequencies to mitigate these delays. Furthermore, TfL consider that the impact of the Electrical Connection construction will not only impact on Erith Roundabout and the James Watt Way junction, but is likely to affect all main junctions along its route if arm/road closures are required, which the Applicant has not ruled out at this time. These junctions are shown in the figure below:

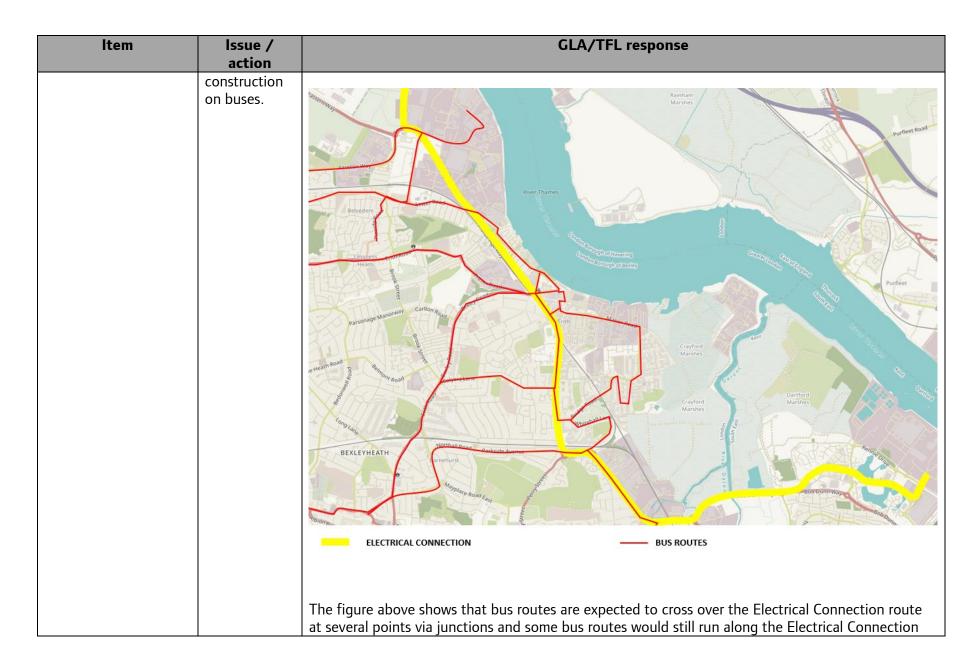


Item	Issue / action	GLA/TFL response			
		several other developments including the Old Street roundabout development. Micro-simulation modelling of the whole network shall not be required, as TfL Network Performance have indicated that due to the rolling nature of the works along the network, this would not be suitable.			
8.02.06 Environmental Permit and Air Quality Note					
Interactions between EP and DCO application: Processing capacity and waste types (source segregated only)	Additional requirement/insufficient information	The GLA acknowledges that the EA is the competent authority for permitting and regulating waste treatment facilities, and the need to avoid duplication of controls. However, the GLA wishes to ensure, as a matter of principle, that the assumptions on which the EIA has been undertaken would not be eroded in any way during the course of the permitting process and, most importantly, any future amendments to the EP. The GLA wishes to bring to the ExA's attention that the EA, in determining applications for EP and amendments to EPs, is not required to consider compliance with development plan policy. The GLA would therefore wish to see key assumptions that form the basis of the ES, including amendments submitted during Examination, form binding commitments by way of requirements and / or Section 106.  In particular, the GLA has identified in its Commentary on the Applicant's Revised Draft DCO that it would wish to see requirements with regards to:  1. ensuring that emissions are regulated in accordance with the assumptions made in the ES, specifically the proposed new BREF levels; and  2. waste received at the ERF will be subject to pre-treatment to ensure that it does not include material that could be recycled.  The Environment Agency has confirmed to the GLA that it would not through the EP give detailed consideration to the content of residual Municipal Solid Waste (MSW) and whether it contains any recyclable material. See Agenda item 3.2 in the GLA's Post Hearing Written Oral Submission Summary and the Appendix 2b attachment confirming the role and purpose of an EA permit.			

Item	Issue / action	GLA/TFL response
Interactions between EP and DCO application: AQ	Additional requirement	The Applicant's note explains the process undertaken by the applicant in applying for the permit and clarifies that the emissions limits to be imposed and other technical details will not be confirmed until the permit is granted.  The GLA agrees that the EA is the competent authority for permitting and regulating waste treatment facilities, and agree that there is a need to avoid duplication of controls.  However, it is important to ensure that the assumptions on which the EIA has been undertaken would not be eroded in any way during the course of the permitting process and, most importantly, any future amendments to the EP. Without adequate controls in the DCO, the GLA considers that this is a real risk.  The EA, in determining applications for EP and amendments to EPs, is not required to consider compliance with development plan policy. The GLA would therefore wish to see key assumptions that form the basis of the ES, including amendments submitted during Examination, form binding commitments by way of requirements and / or Section 106 agreements.  In particular, the assumptions regarding adoption of the proposed BREF standard and the Applicant's recently introduced commitment to use SCR should therefore form DCO commitments and should not be left to the EP process. In any event the Permit is not allowed to secure the use of any specific equipment, such as SCR, for emissions control.

## 8.02.05 Clarifications and Corrections Report

Item	Issue / action	GLA/TFL response		
Section 3.1: Terrestrial Biodiversity	More information needed	There is little information as to how this process will operate and the GLA is concerned as to the implications for biodiversity as matters currently stand. The GLA supports the biodiversity and habitat concerns raised by London Borough of Bexley and Friends of Crossness Nature Reserve. The GLA may consider making further representations on the implications for biodiversity.		
Section 3.2.2: Epping Forest SAC		We note Natural England's agreed statement of common ground, indicating that they have no outstanding concerns about nitrate deposition on sensitive sites.		
Section 4:		We note the updated tables in section 4 of the note, which appear to be primarily intended to allow for more recent monitoring data to be incorporated into the baseline.  The overall trend is for the baseline to be slightly higher, although there are also some small improvements at some locations. Most of the variation is within the range expected for year-on-year pollution measurements and does not affect the outcome of the assessment.		
8.02.07 Electrical Connection Progress Report				
Connection route now selected	Additional assessment to determine quantifiable impacts of the Electrical Connection	The Applicant has set out the selected Electrical Connection route, which mostly follows the Strategic Road Network between the REP site and the Littlebrook Power Station. This route is expected to have a lesser impact on buses than the alternative route shown at the time of the submission of the application, however several bus routes will still be affected by the construction activities. This is set out visually in the figure below:		



Item	Issue / action	GLA/TFL response			
		route. The impact of construction on these routes should be fully assessed by the applicant so that TFL and bus operating companies are able to propose mitigation based on the likely level of delay to the bus routes.			
6.1 Revised ES - Chapter 7: Air Quality, including: - figure 7.5 Nickle Contour - appendix C.2 Stack Modelling					
Amended numbers and other corrections throughout	More information needed	Changes are largely as noted in the Clarifications and corrections report and do not affect the overall outcome of the assessment.  However, a small number of the changes, such as those to table in the stack modelling report, elate to modelling inputs. As the changes could have a significant effect on the modelling outputs the Applicant should provide evidence that the correct figure was used in the actual modelling (and, therefore, that the typo was only in the original ES.)			