Riverside Energy Park

Applicant's response to Greater London Authority Deadline 3 Submission

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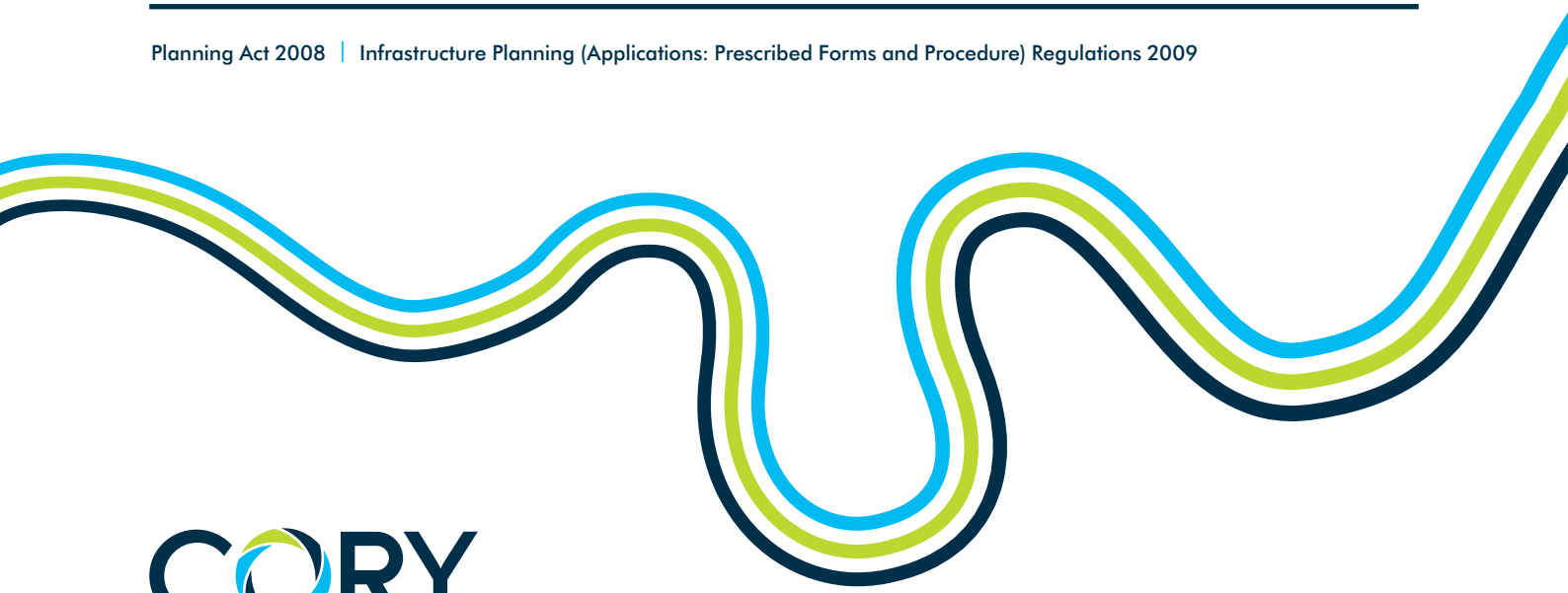

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1 Introduction

1.1 Purpose of Document

1.1.1 This document provides a response to the documentation submitted by the Greater London Authority (GLA) at Deadline 3. This includes a response to the following documents:

- Post Hearing Written Submission of Oral Case and Reponses to Further Information Requested by the Examining Authority:
  - Projections of Volume of Waste Available (see **Section 2**)
  - The Waste Hierarchy (see **Section 3**)
  - Combined Heat & Power (see **Section 4**)
  - Carbon Intensity Floor (see **Section 5**)
  - Air Quality (see **Section 6**)
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- Appendix 2A: GLA Post Hearing Written Oral Submission Summary – Waste Definitions (See **Appendix A**)
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- GLA Sheet 4: GLA Commentary on other documents prepared by the Applicant for Deadline 2 (See **Appendix F**)

2 Projections of Volumes of Waste Available

2.1 Introduction

2.1.1 This section responds to Paragraphs 7 to 13 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**, which presents the GLA's position in relation to Agenda item 3.1, projections of volume of waste available for incineration.

2.1.2 The Applicant's detailed rebuttal is made in response to the GLA's Appendix 2A (presented in **Appendix A** to this document), but also in response to the GLA's Sheet 4 (presented in **Appendix F** to this document).

2.1.3 In short, the Applicant and the GLA disagree on the volume of residual waste available for incineration. At paragraph 8 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**, the GLA suggests that the main reason for this divergence is '*the differing assumptions as to the amount of waste deemed suitable for management* …'. This is not a complete explanation.

2.1.4 It is not readily possible for the Applicant to determine the source of the divergence between the GLA's and the Applicant's forecast of residual wastes. Not least, the GLA has failed to provide a complete set of its modelling[1]. This is exacerbated by the GLA's changing position in its submissions to this Examination. One such example of this is the GLA's reference to draft London Plan arisings in years 2031 and 2036 (with a resultant total of 8.4 and 8.5 million tonnes respectively) in Table 2 of its Written Representation (GLA/4509/WR). However, Table 2 of its Appendix 2a, the GLA makes reference to years 2026 and 2036.

2.1.5 Furthermore, the figures in the GLA's submissions simply do not add up. For example, in Table 2 of its Appendix 2a, the GLA suggests that at 2026, there is a municipal waste total of 7.1 million tonnes, which increases to 7.3 million tonnes by 2036. These totals, even using the GLA's own data and assumptions are not correct.

- The draft London Plan forecasts 3,287,000 tonnes of household waste and 5,012,000 tonnes of C&I waste. 80% of that C&I waste would be 4.0 million tonnes. The GLA's total municipal waste for 2026 should be 7.3 million tonnes.

- The draft London Plan forecasts 3,345,000 tonnes of household waste and 5,097,000 tonnes of C&I waste. 80% of that C&I waste would be 4.1 million tonnes. The GLA's total municipal waste for 2026 should be 7.6 million tonnes.

[1] Despite requests made in our meeting of 11 September 2019 and the follow up email exchange on 17 September 2019, and the ExA's request made at the ISH held on 5 June 2019.

2.1.6 The GLA's miscalculations lose 200,000 tonnes of residual wastes at 2026 and nearly 300,000 tonnes in 2036. This is clearly one of the reasons for the discrepancy between the GLA and the Applicant.

2.1.7 In addition, the difference in the projections of residual waste requiring diversion from landfill is the result of an unreasonable approach pursued by the GLA that relies on the following factors (the brackets cross-refer to where each point is addressed in more detail within the Applicant's submissions):

- Forecasting for household waste only, rather than all Local Authority Collected Waste ('LACW'), such that projections are out of date from 2016/17 (forecasting c.600,000 tonnes less than was actually reported for that year) and which have not been updated by the GLA (**Appendix A, Section A.3**, from paragraph A.315);
- Commercial and industrial ('C&I') waste survey data that is now ten years out of date and which is being relied upon to reflect London's business and business waste in a future ten years (**Appendix A, Section A.2**); and
- The application of additional unjustified assumptions beyond policy targets, including the arbitrary general assumption that only 80% of the C&I wastes arising would be suitable for combustion and that there would be an additional 10% reduction through mass loss (a wholly new arbitrary general assumption only introduced in the GLA's Submissions made at Deadline 3) (**Appendix A, Sections A.2** and **A.3** (from paragraph A.3.7)).

2.1.8 The Applicant does not believe that the GLA is applying its own policy in an appropriate or reasonable manner; the GLA's approach essentially seeks to drive down the forecast level of need for residual waste treatment using a spurious level of detail and ever additional, unjustified, arbitrary set of assumptions. Such an approach fails to allow for any flexibility in terms of delivering the infrastructure required within London to achieve policy priorities of sustainability, resilience and net-self sufficiency in both energy supply and waste management.

2.1.9 In contrast, the Applicant, very simply, uses the GLA's data (with locally reported updates[2]) and applies the policy priorities of the adopted and draft London Plans and the London Environment Strategy.

2.1.10 The Applicant's assessment, set out in the **London Waste Strategy Assessment, Annex A of The Project and Its Benefits Report (7.2, APP-103) (the 'LWSA')** wholly incorporates both:

- the Mayor's aim to reduce waste arisings by 5% over time to 2031; and
- the policy priority to achieve 65% municipal waste recycling by 2030.[3]

[2] GLA data taken from draft New London Plan and local updates taken from Defra's Waste Data Flow (Government database where Local Authorities have to record all waste managed).

2.1.11 Existing operational EfW capacity (the amount of which (c.2.2 million tonnes operating within London) is agreed between the Applicant and the GLA (see Table 2 of Appendix 2a Cory DCO: GLA Post Hearing Written Oral Submission Summary)) is then subtracted from the residual wastes remaining after it is assumed that waste arisings will reduce over time and that 65% recycling will be achieved in line with draft London Plan targets.

2.1.12 Therefore, even when the waste reduction and recycling policy priorities set out in the draft London Plan are met in full, the Applicant's assessment consistently demonstrates that the remaining level of need for residual waste treatment capacity is c.900,000 tonnes per annum in London. This is before any consideration is given to the South East and surrounding areas.

2.1.13 This is presented in **Figure 1,** which presents the draft London Plan Scenario 3b of the **LWSA** (presented in detail from **Paragraph 4.3.5** of the **LWSA (7.2, APP-103)**).

[3] Policy 5.16/B/c& d, adopted London Plan. Policy SI7/A/4a, draft London Plan. Objective 7.2, London Environment Strategy, split as 50% LACW (policy 7.2.1) and 75% C&I waste (policy 7.2.2).

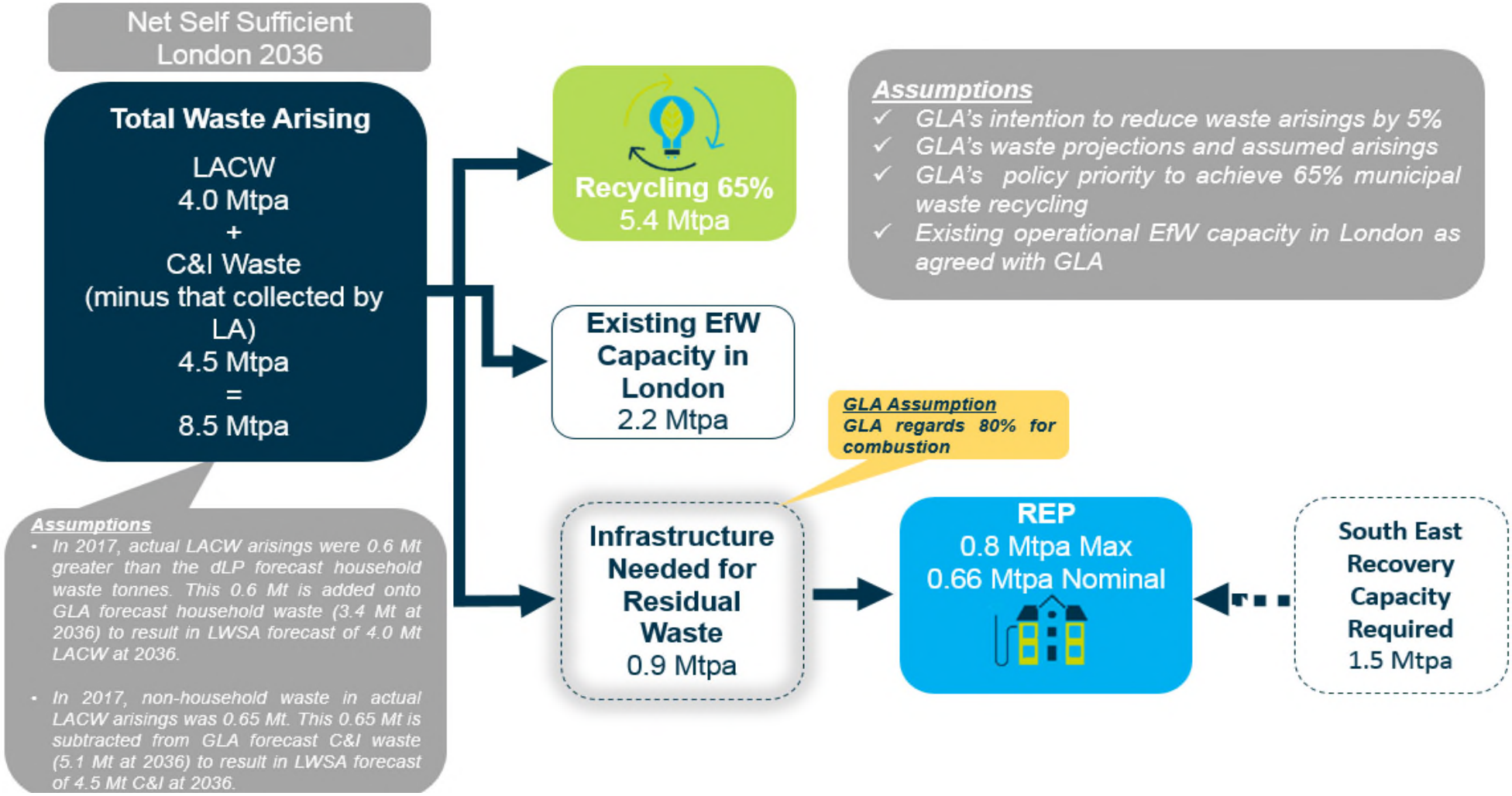

Figure 1: Policy Compliant Scenario

2.1.14 Within Scenario 3b, the household waste arisings that are forecast within the draft London Plan have been updated to reflect the actual, total, LACW arisings of 2017. No other change is made to the amount of LACW forecast to be generated within London through the plan period. The baseline assumption by the GLA that wastes will reduce by 5% over time to 2031 remains. As illustrated in **Figure 1** above, the forecasts are simply updated to reflect recently confirmed actual arisings of all wastes collected by local authorities, whether generated domestically (household waste) or not (non-household waste). The LACW forecast to be generated in 2036 is just over 4 million tonnes (see **Table 4.5**, **row a** of the **LWSA (7.2, APP-103)).**

2.1.15 The draft London Plan also provides forecast arisings for C&I wastes and again, these GLA projections incorporate a 5% assumed reduction over time to 2031. Within Scenario 3b, the C&I waste arising forecasts within the draft London Plan have been reduced, to subtract the tonnage of C&I wastes collected by local authorities that are now anticipated to be recorded within the LACW forecasts (648,000 tonnes). Within **Table 4.5** of the **LWSA (7.2, APP-103)** this is abbreviated to 'C&I –nHH', of which just under 4.5 million tonnes are forecast to be generated in 2036 (see **Table 4.5**, **row b** of the **LWSA (7.2, APP-103)**).

2.1.16 Consequently, total municipal waste arisings forecast to be generated in London are just under 8.5 million tonnes in 2036 (see **Table 4.5**, **row c** of the **LWSA (7.2, APP-103)**). This is presented in the blue column within **Figure 1**. As a result of the Applicant updating household waste to actual LACW and consequently subtracting non-household waste from the C&I arisings, the total municipal waste arisings forecast to be generated in London presented by the Applicant in Scenario 3b are 54,000 less than as forecast within the draft London Plan.

2.1.17 Scenario 3b then assumes that 65% of municipal waste will be recycled (from 2031, in accordance with LES targets[4]. Achieving this level of recycling treats just under 5.4 million tonnes in 2036 (see **Table 4.5**, **row h** of the **LWSA (7.2, APP-103)**), leaving just over 3 million tonnes (see **Table 4.5**, **row m** of the **LWSA (7.2, APP-103)**) of residual wastes in 2036. This is presented in **Figure 1**.

2.1.18 Subtracting the 2.2 million tonnes of existing operational EfW capacity in London leaves c. 900,000 tonnes of residual wastes that should be diverted from landfill in 2036.

2.1.19 Scenario 3b of the **LWSA (7.2, APP-103)** also considers the effect on available waste if the GLA assumption that 80% recycling is reached for C&I waste. In this outcome, there remains 665,300 tonnes of residual wastes that should be diverted from landfill in 2036.

[4] Policy 5.16/B/c& d, adopted London Plan. Policy SI7/A/4a, draft London Plan. Objective 7.2, London Environment Strategy, split as 50% LACW (policy 7.2.1) and 75% C&I waste (policy 7.2.2).

2.1.20 The Applicant's assessment shows that incorporating the assumptions that waste generation will reduce over time and that waste recycling will increase (substantially) over time, there remains a clear need for REP in London even before consideration is given to the South East.

2.1.21 Further, REP includes the Anaerobic Digestion facility which will contribute to the waste treatment infrastructure required sustainably to manage separately collected food and garden wastes, another policy priority of the GLA.

2.1.22 The **LWSA (7.2, APP-103)** considers a number of different waste arisings scenarios, which all apply the policy priorities of the Mayor and consistently demonstrate a remaining level of need for new residual waste treatment capacity of c. 900,000 tonnes.

2.1.23 This outcome is focussed on just those wastes generated within London. At Paragraph 13 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**, the GLA seeks to refute the Applicant's reference to an additional need for 2 million tonnes of residual waste treatment capacity beyond London. This is addressed in the **Applicant's Responses to Written Representations (8.02.14, REP3-022) (at Paragraphs 2.1.155** to **157** and the associated **Appendix B)** which recognises that the Applicant's source data has been refreshed since the **LWSA** was prepared. In short, the Applicant considers that there remains at least 1.5 million tonnes of residual wastes in nearby local authorities outside of London that should be moved up the waste hierarchy and diverted from landfill. Whilst REP is being promoted to take waste from within London, there is no justification for it to be limited to the capital, especially given its location and the river logistics network that can support it. As such, the ERF component of REP will be a suitable and reliable alternative to help treat London and the South East's waste which remains after recycling.

2.1.24 The conclusions reached by Essex County Council (Rivenhall Airfield, paragraph 13 of the GLA's submission) on the determination of the application before it are not relevant to the consideration of REP, a wholly different project, site and policy context. There is no credible evidence that REP will disadvantage the waste hierarchy (as addressed in more detail in **Section 3** of this response).

2.1.25 At paragraph 10, the GLA criticises work completed by Tolvik Consulting Ltd, the Government's adviser in its preparation of the Resources and Waste Strategy. The Applicant's response is provided in full in response to the GLA's Sheet 4 (see **Appendix F** to this report, from section 4.2). In short, as is explained at paragraph 1.5 of **Appendix A to the Supplementary Report to the Project and its Benefits Report (7.2.1),** the Tolvik report appended to that report is not a new assessment, it has simply been prepared to:

- Respond to the GLA's Relevant Representation; and

- Consider how the Resources and Waste Strategy impacts upon Tolvik's report titled 'Residual Waste in London and the South East: Where is it going to go?'

2.1.26 The key findings of 'Residual Waste in London and the South East: Where is it going to go?' are presented on page 23 of that document, and include that by 2025 there could be a cumulative shortfall of 5 to 9 million tonnes; which aligns with the range presented in **Appendix A to the Supplementary Report to the Project and its Benefits Report (7.2.1).**

2.1.27 Reference is appropriately made to documents that consider the national level of need in order to put the REP DCO Application into context, there is no further reliance made on them by either the **LWSA** or the **PBR (7.2, APP-103).**

2.1.28 The **LWSA (7.2, APP-103)** fundamentally assumes that the Mayor's policy priorities of achieving the Circular Economy will be delivered. It is a positive assessment demonstrating that even when future reductions in waste generated and increases in waste recycling are achieved, there remains a demonstrable, and demonstrated, need for REP. REP is just one element of the infrastructure needed in London and will work alongside increased recycling. Furthermore, the GLA is therefore incorrect to assert that REP is predicated on failing to meet policy objectives for waste reduction and increased recycling.

2.1.29 This is a positive outcome. It means that the residual wastes that are remaining can be diverted from landfill to recover a renewable/low carbon energy, enabling London to become self-sufficient with a reliable and diverse energy supply.

3 The Waste Hierarchy

3.1 The Waste Hierarchy

3.1.1 The **London Waste Strategy Assessment (Annex A** to **The Project and its Benefits Report (7.2, APP-103))** ('the **LWSA**') incorporates the following assumptions relating to future waste generation and management:

- It will be in line with the GLA's London Plan forecasts (which incorporate a 5% reduction in waste arisings until 2031);
- Recycling will meet the 65% target set in the draft London Plan and London Environment Strategy (increasing from the ~ 45% currently being achieved); and
- It will be managed within London to achieve the policy priority of London being 'net self-sufficient'.

3.1.2 New infrastructure will be required to achieve these aims, namely at least 1.4 million tonnes of new recycling capacity (London Environment Strategy, page 325) and at least c. 900,000 tonnes of new residual waste treatment capacity in London, before the needs of the South East are considered (see **Table 6.1** of the **LWSA (7.2, APP-103),** and **Paragraphs 2.1.155 to 157** and **Appendix B** of the **Applicant's responses to Written Representations (8.02.14, REP3-022)**.

3.1.3 The **LWSA (7.2, APP-103)** demonstrates that delivering the waste hierarchy in London (reducing waste arisings over time and achieving 65% recycling) there remains a need for new energy recovery capacity to divert remaining wastes from landfill. The new recovery capacity proposed at REP will complement the Circular Economy, working alongside recycling activities in London in line with the waste hierarchy as illustrated in **Figure 2.**

3.1.4 Contrary to the statement made at Paragraph 17 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**, the Applicant is not a waste collector. It is one of the UK's leading resource management, recycling and energy recovery companies, but the Applicant does not collect waste from waste producers. Waste is delivered to the Applicant's waste transfer/recycling facilities and RRRF by the waste producers themselves.

3.1.5 Waste is brought to it, under contract, by other companies that may either collect directly from the producer or handle waste that has been collected by another entity.

3.1.6 Regulation 12(1) of the Waste (England and Wales) Regulations 2011 (as amended) ('the 2011 Regulations') requires that:

"*An establishment or undertaking which imports, produces, collects, transports, recovers or disposes of waste, or which as a dealer or broker has control of waste must, on the transfer of waste, take all such measures available to it as are reasonable in the circumstances to apply the following waste hierarchy as a priority order—*

(a) prevention;

(b) preparing for re-use;

(c) recycling;

(d) other recovery (for example energy recovery); and

(e) disposal."

3.1.7 Regulations 2 and 3 of the 2011 Regulations allow for a departure from this priority order so as to achieve the best overall environmental outcome, taking into account matters such as: the general environmental protection principles of precaution and sustainability; technical feasibility and economic viability; protection of resources; the overall environmental, human health, economic and social impacts. The 2011 Regulations recognise that some materials that could, theoretically, be recycled, practicably cannot be so.

3.1.8 **Figure 2** demonstrates the role of Riverside Energy Park (REP) in the waste hierarchy and how it is just one element of the overall infrastructure network needed in London to ensure that waste is managed appropriately.

3.1.9 Anyone who produces, imports, keeps, stores, transports, treats or disposes of waste must take all reasonable steps to ensure that the waste is managed appropriately and in line with the waste hierarchy. This duty of care is imposed under section 34 of the Environmental Protection Act 1990 and also applies to anyone who acts as a broker and has control of waste. **Figure 2** is a summary of the 'Waste Duty of Care: A Code of Practice' as prepared by Defra in 2018 and presents the range of responsibilities spread across a number of agencies (including individuals, organisations, local authorities and companies) to ensure waste is managed appropriately.

3.1.10 A separate duty of care applies to householders, although this is limited to taking all reasonable measures available to them to ensure their waste is transferred only to an authorised person.

3.1.11 In England, the regulator for the duty of care is the Environment Agency.

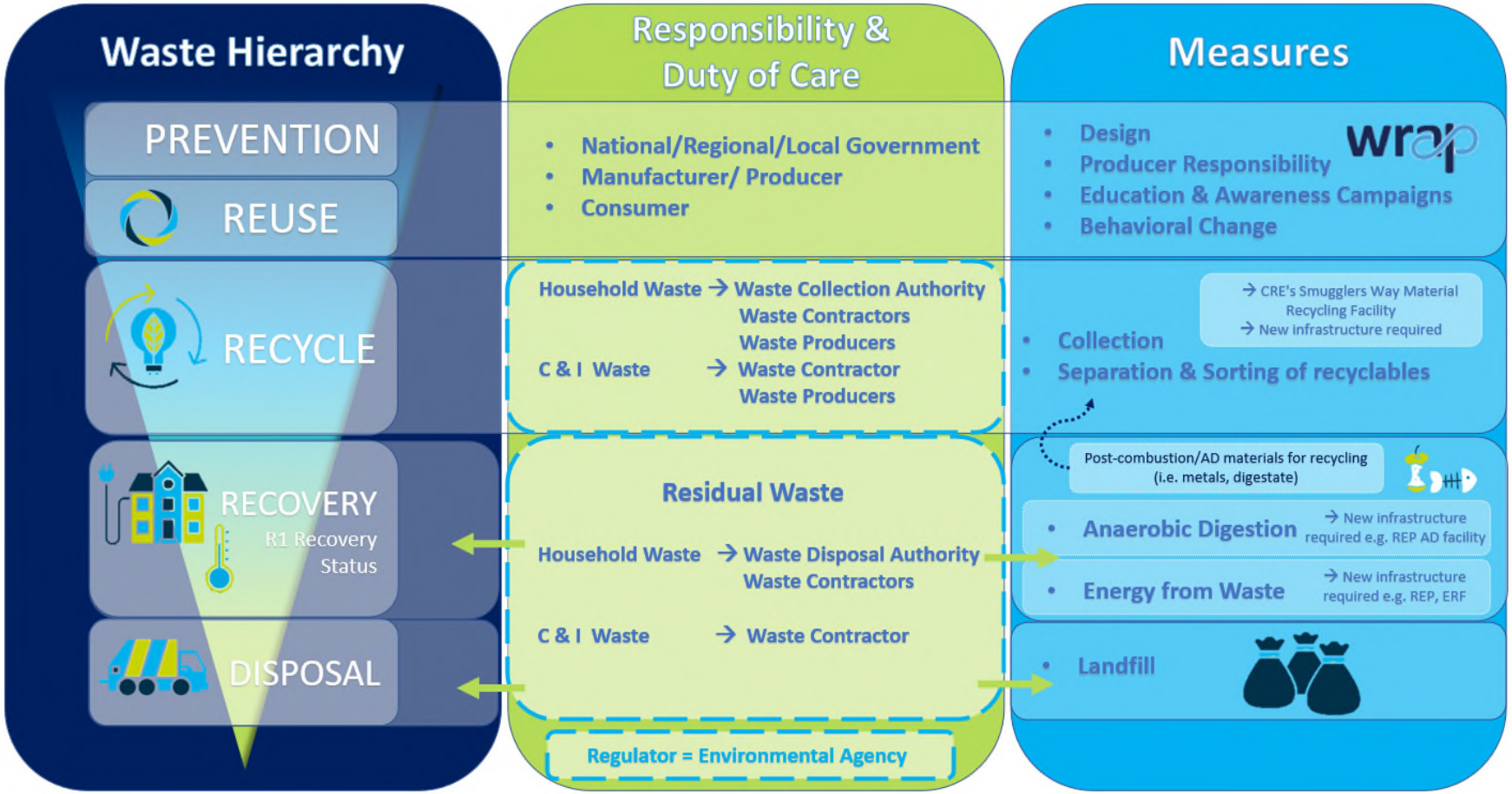

Figure 2: How REP contributes to the Waste Hierarchy

3.1.12 It is the waste producers/ waste collection authorities / waste collection or handling contractors that are responsible for specifying and implementing the recycling that occurs prior to residual waste being collected and subsequently treated. They are required by law to take all such measures as are reasonable in the circumstances to apply the waste hierarchy to prevent waste, and to apply the hierarchy as a priority order. A declaration must be made on the relevant Duty of Care Waste Transfer Note confirming that the duty has been complied with.

3.1.13 Within England, the Environment Agency is the regulator of this duty and will apply sanctions to those who do not deliver it. Consequently, the Applicant is right to rely on the law, the regulator and the market (it is recognised that application of the waste hierarchy delivers cost benefits) to ensure the waste hierarchy is practicably applied prior to the residual waste being delivered to REP.

3.1.14 In addition, those delivering waste to REP are also bound by the Applicant's own duty of care, achieved through its contract requirements, to comply with the waste hierarchy. The Applicant, as the operator of the Waste Transfer Stations, is also subject to the duty of care provisions, including to implement the waste hierarchy.

3.1.15 The Proposed Development does not incorporate a pre-treatment facility and there is no policy or legislative requirement to do so. The ERF at REP will only be able to accept, by virtue of its Environmental Permit, waste that is classified as *'residual'* waste. When the residual waste is received at the ERF, the Applicant has a duty of care to manage it appropriately. This is done through: appropriate contracts with those who are delivering the waste; and on-site spot-checks to ensure that only waste that complies with the Environmental Permit is received. The ERF will only receive wastes from waste collectors/handlers that are known to the Applicant and have contracted to comply with the Applicant's duty of care requirements. The Applicant's duty of care procedures include spot checks of waste received at their facilities; appropriate sanctions would be imposed on any contractor that did not deliver the right type of waste, i.e. those that are specified in the Environmental Permit.

3.1.16 The ERF will only be able to accept residual waste by virtue of its Environmental Permit. As explained during the Issue Specific Hearing on Environmental Matters (5th June 2019), the Environmental Permit explicitly states the specific European Waste Catalogue codes that can be accepted at the ERF and requires that waste shall only be accepted if:

(a) it is of a type and quantity listed in the relevant schedule (Schedule 2, Table S2.2); and

(b) it conforms to the description in the documentation supplied by the producer or holder; and

(c) if having been separately collected for recycling, it is subsequently unsuitable for recovery by recycling.

3.1.17 REP is just one element of the new waste management infrastructure required within London; it is at the end of the line receiving those residual wastes that remain after the waste producer, and collector/handler has complied with its own duties.

3.1.18 The Anaerobic Digestion facility will receive food and green wastes specifically source segregated by waste producers; it cannot manage any other type of waste and function properly. London Borough of Bexley (LBB) already provides a separate kerbside collection service for garden and food wastes (fortnightly and weekly respectively) such that the REP Anaerobic Digestion facility can provide an in-Borough solution for those source segregated wastes.

3.1.19 The ERF will be limited, appropriately and effectively, in the type of waste that it can receive by the Environmental Permit, which is regulated by the Environment Agency. As set out in the **Environmental Permit and Air Quality Note (8.02.06, REP2-057),** an application for the Environmental Permit has been submitted and validated by the Environment Agency. Consultation has been undertaken on that application, and '*no significant concerns*' have been raised by any of the statutory consultees (see **Paragraph 2.5.2** of the **Environmental Permit and Air Quality Note (8.02.06, REP-057)**).

3.1.20 The Environment Agency is the competent authority, regulating the *operation* of the ERF; this includes the type of waste the Proposed Development can receive. Complementing this role, in this DCO application the Secretary of State is the competent authority in relation to the planning consent. The Secretary of State regulates the *principle* of the Proposed Development, determining whether the proposed land use is appropriate when considered against policy priorities, in this case the waste hierarchy.

3.1.21 That the ERF is at the right scale and the right technology type and will not disadvantage the waste hierarchy is demonstrated through the **LWSA (7.2, APP-103)**, as summarised at **Section 2** above. The new recovery capacity proposed at REP will complement the Circular Economy, working alongside recycling activities in London to divert residual wastes from landfill. This network of waste management facilities is what delivers the waste hierarchy. In addition, the APCR (air pollution control residue, the fine powder that remains following the cleaning of the gases from energy recovery facilities) is likely to be recycled, through the same or a similar process to that which has been developed by Carbon8. Specifically using APCR from energy recovery facilities, such as the REP ERF, Carbon8 Aggregates produces carbon negative materials for the construction sector.

3.1.22 There is a well-established, well-understood, and well-regulated legal and policy framework operating complementary to the planning system that

ensures the waste hierarchy is delivered. The Environment Agency is the competent authority to regulate this system and has the appropriate resources to do so.

3.1.23 As set out in the **Environmental Permit and Air Quality Note (8.02.06, REP2-057)**, at paragraph 5.2.8, it is not for the planning system to '*duplicate relevant pollution control and other environmental regulatory regimes. Accordingly, given it is the [Environment Agency] that will monitor the operational waste side of the ERF and the Anaerobic Digestion facility, it should be the* [Environmental Permit] *that imposes any restrictions on waste type and quantity*.'

3.1.24 However, the Applicant notes the GLA's concern on this matter. Whilst the Applicant maintains that such a requirement is not necessary or supported by policy, the Applicant is willing to consider the inclusion of a requirement in the dDCO to be submitted at Deadline 5 to ensure the waste hierarchy is followed.

3.1.25 REP is just one element of the infrastructure required within London to deliver sustainable waste management. It is demonstrated through the **LWSA (Annex A to the Projects and its Benefits Report (7.2, APP-103))** to be of an appropriate type and scale to work alongside waste reduction and recycling delivered by others to achieve the Mayor's targets, enabling London to be net self-sufficient and avoiding sending its residual wastes to landfill.

3.2 Waste Transfer Station

3.2.1 **Paragraphs 2.1.171** to **2.1.175** of the **Applicant's Response to the GLA's Written Representation (8.02.14, REP3-022)** sets out the Applicant's rational for its assumptions relating to the transfer of waste.

3.2.2 The Applicant can confirm that in the 100% by road scenario, the Applicant makes reasonable worst-case assumptions and considers the transfer of waste to REP from the riparian Waste Transfer Stations at Smugglers Way, Cringle Dock, Walbrook Wharf, Northumberland Wharf and the Port of Tilbury. This scope of assessment was agreed with LBB as Highway Authority and TfL as set out in **Table 6.6** of **Chapter 6 Transport** of the **ES (6.1, REP2-017).**

3.2.3 The riparian Waste Transfer Stations listed above have existing planning and Environmental Permit consents, with sufficient capacity to accept the waste required by REP. The Applicant can confirm these consents do not have any limits placed on them regarding total daily vehicle movements. These consents have in turn already considered the environmental and traffic impacts associated with the delivery of waste material to these facilities irrespective of the destination of that material. In a world without REP, there is nothing stopping these Waste Transfer Stations from filling that spare permitted capacity and sending it to another facility. It is not appropriate or necessary for the Applicant to assess waste travelling from its source to the already consented Waste Transfer Station. Instead, the Applicant's duty

under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 is to make likely assumptions on how the waste is to travel to the REP site, as the Applicant has done, as explained above.

3.2.4 The GLA, both at the Issue Specific Hearing on Environmental Matters, and in Paragraph 21 of **GLA's Post Hearing Written Submission of Oral Case (REP3-038),** claim that the Applicant is in breach of its Environmental Permit at Cringle Dock Waste Transfer Station (WTS). The Applicant strongly disputes this allegation. Through this assertion the GLA, who has no statutory responsibility in this regard, has highlighted their lack of understanding of both how Environmental Permits are applied and on the Environmental Permits themselves. **Appendix G** provides confirmation from the Environment Agency that there has not been a breach to the Environmental Permit for Cringle Dock WTS. In fact, the email confirms that when the EA last assessed the site on 10th June 2019, there were no major compliance issues and the site was assessed and rated as Band A. -the most compliant rating.

3.2.5 The Cringle Dock WTS Environmental Permit provides conditions on the maximum tonnage for *specific waste types* that can be received or handled at the facility on a daily basis. The licenced tonnage is not 300,000 tonnes as asserted by the GLA in **Paragraph 21** of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038).**

3.2.6 The daily consented throughput of all permitted waste types is outlined in the table below. The Applicant agrees that in the year 2017 Cringle Dock WTS received 308,077. However, this was not all general putrescible waste.

Table 3.1: Waste Types and Volumes Permitted at Cringle Dock WTS

Waste Category	Maximum Daily Tonnage (t/d)	Maximum Tonnes (tpa) (annualised)
Inert Waste	145	52,780
General Non-Putrescible Waste	200	72,800
General Putrescible Waste	850	309,400
Difficult Waste	4.9	1,820

4 Combined Heat and Power

4.1 Introduction

4.1.1 This section responds to Paragraphs 24 to 33 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038),** which presents the GLA's position in relation to Agenda item 3.4, the potential contribution of CHP.

4.1.2 The GLA presents that the CHP case for REP is undermined for the following reasons:

a. The GLA does not consider there to be sufficient heat demand to warrant heat supply from both REP and RRRF.

b. The GLA considers that the economic case for a district heating network is unattractive.

c. The GLA believes that the Applicant's approach to heat demand assessment is not sufficiently robust.

d. The GLA considers that the Applicant is not going far enough in its commitment to bring forward a district heating network.

e. Although not strictly related to CHP benefit, the GLA also raises concerns around the flexibility of REP and which generating assets it would displace, and resulting carbon performance.

4.1.3 The Applicant's heat demand investigation and economic assessment, presented in its **Combined Heat and Power Assessment (5.4, APP-035)** and **further clarified in its Combined Heat and Power Supplementary Report (5.4.1, REP2-012),** are underpinned by and support the requirements of the national, regional and local policy position[5] in relation to the provision and/or opportunity for CHP. Assessments are carried out in accordance with applicable Government and Environment Agency guidance and toolsets. The Applicant therefore considers that the assessments are robust. The conclusions of the analysis indicate that there is sufficient heat demand in the region to warrant heat supply from both REP and RRRF.

4.2 Heat Network Priority Area

4.2.1 The Mayor of London has identified Heat Network Priority Areas across London. These areas identify where in London the heat density is sufficient for heat networks to provide a competitive solution for supplying heat to buildings and consumers. Given the REP site is located in a Heat Network Priority Area and the catchment area for heat from REP includes two opportunity areas

[5] The policy position is set out in full in Section 3 of the Combined Heat and Power Assessment (5.4, APP-035) and Sections 1.4 and 3.1 of the Combined Heat and Power Supplementary Report (5.4.1, REP2-012).

(Thamesmead and Abbey Wood OA and Bexley Riverside OA), the Applicant considers that the REP site is a prime site for low carbon generation that has the likely potential to provide heat to consumers via a heat network, which the Mayor of London deems to provide a competitive solution. In addition, the Adopted and Draft London Plan(s) and LBB's Sustainable Design and Construction SPD require new developments to connect to a heat network if it is feasible and investigate the incorporation of renewable energy technologies. As such, there exist strong policy drivers which would require new developments to accept heat.

4.2.2 The Applicant considers that both residential heat demand (specifically the Thamesmead Waterfront development[6]) and industrial and commercial heat demand at Burt's Wharf are grossly under represented within Ramboll's Phase 2 feasibility study '*Thamesmead & Belvedere Heat Network Feasibility Study: Work Package 2*'. The Applicant has responded to Paragraph 31 of GLA's Post Hearing Written Submission of Oral Case (**REP3-038**) in Annex C Section 4 of this document. In summary, Ramboll reports a total demand for Thamesmead developments, including refurbished tower blocks, at approximately 23 GWh per year. This is significantly below what could realistically be expected for a development comprising 11,500 homes and associated commercial space, based on best practice benchmarks and industry experience.

4.2.3 The GLA asserts that Ramboll's Phase 2 feasibility study '*Thamesmead & Belvedere Heat Network Feasibility Study: Work Package 2*' undermines the case for REP being operated as a CHP facility. However, Ramboll states at paragraph 5 of Section 7, that "*If a more aggressive build-out scenarios are considered for both the Core Scheme and additional sites further afield, in both Bexley and Greenwich, it is likely that a further heat source(s) beyond the existing Cory plant [RRRF] would be required to meet total heat demands.*" As set out in the preceding paragraph, the Applicant considers that the core scheme proposed by Ramboll omits a significant volume of publicly announced and existing development which, if adequately accounted for, would warrant heat supply from both REP and RRRF. Given the Mayor's desire to tackle London's housing crises and the Mayor's own assessment conceding that build out rates need to rapidly increase, the Applicant is surprised that the GLA does not recognise this independent conclusion that heat sources beyond RRRF are likely to be required.

4.2.4 Ramboll's Phase 2 feasibility study also recognises that the provision of supplementary heat generation and storage is required to meet year-round demand which is proposed to comprise a mix of centralised and distributed plant. In paragraph 2 of section 7 of Ramboll's Phase 2 feasibility study, Ramboll reports back-up requirements as a necessity. The benefits of connecting both REP and RRRF to a network would offer the optimum case in terms of low carbon heat year round by reducing and/or eliminating the need

[6] http://www.thamesmead-waterfront.co.uk/information.html

for conventional back-up boilers, in addition to displacing air quality impacts in close proximity to residential areas.

4.2.5 Ramboll's Phase 2 feasibility study also concludes that a heat network served by RRRF would offer carbon savings over the counterfactual cases of new air source heat pump plant or gas-fired CHP led communal heating schemes. Key finding 5 states "*The utilising of heat generated from the Cory plant, at the point of full Core Scheme buildout, could deliver an overall CO2 saving of 3,970 tonnes/annum against a counterfactual case of new Air-Source Heat Pump plant, adhering to projected new London Plan requirements, or 14,900 tonnes/annum against a case of gas-fired CHP led communal heating schemes.*" Due to its more efficient nature, carbon performance would increase further if heat were supplied from REP.

4.2.6 In summary, the GLA therefore appears to be cherry picking elements of Ramboll's feasibility study and contriving arguments, without adequate context, to arrive at a misconceived position.

4.3 Demonstrable Steps

4.3.1 The Applicant has put in place a number of demonstrable steps to realise heat export from REP, as set out in the **Combined Heat and Power Supplementary Report (5.4.1, REP2-012).** In summary:

a. REP is being developed as fully CHP-Enabled from the outset by virtue of installing the necessary on-site heat export infrastructure as part of the proposed construction programme. This approach means that REP would be capable of exporting heat from the commencement of operations and demonstrates clear commitment from the Applicant by exceeding the Environment Agency best available technique (BAT) requirement and going beyond the requirements at section 4.6 of NPS EN-1.

b. The Applicant is making significant steps, at its own cost, in establishing and maintaining momentum in the heat network development process via the Bexley District Heating Partnership Board, and its positive contribution has been recognised by stakeholders. The Applicant has engaged directly with the LBB, GLA and their advisors, and this represents a committed approach relative to comparable projects at the pre-consent stage.

c. The Applicant is fully engaged in supporting Ramboll, who has been engaged to evaluate the techno-economic feasibility of establishing a borough wide district heating network on behalf of the LBB.

4.3.2 The Applicant notes that Draft London Plan policy SI8 section 9.8.13 highlights specific demonstrable steps required under part D3, including commitments to deliver infrastructure to achieve high energy efficiency by way of "*investment in the development of a heat distribution network to the site boundary, or technology modifications that improve plant efficiency*" and "*the establishment of a working group to progress the agreed steps and monitor*

and report performance to the consenting authority", both of which the Applicant is actively delivering.

4.3.3 Every effort is being made to recover energy with the highest levels of energy efficiency and, based on a design developed in collaboration with a highly reputable and industry leading technology and construction contractor, REP would be the most efficient Energy Recovery Facility in the UK. While the Applicant is making every effort in bringing forward heat export opportunities, all relevant policy tests can be achieved without the inclusion of CHP. REP would offer carbon savings under any operational configuration and the GLA's Carbon Intensity Floor (CIF) threshold can be met in power only mode. This is discussed further in **Section 5** of this document.

4.3.4 Regarding the economic viability of a district heating network, clearly there remains some uncertainty around project costs and financing at this stage. This is typical given that the Proposed Development is yet to secure consent and reach financial close. High capital costs have been a barrier to deployment of district heating networks historically, so it is positive to note Ramboll's economic projections on an unsubsidised basis, which the GLA accept are only marginally below commercial hurdle rates for investment. It is also promising to note Ramboll's key finding 6 which states "*If a more aggressive build-out scenarios were considered for the Core Scheme and additional sites further afield in Bexley and particularly Greenwich, where build-out is closely linked to potential new transport links, further improvement would be seen to* ***the*** *[corrected] network commercial case.*" This position is in direct conflict with the GLA's assertion that a network served by REP would present a worse economic case compared to RRRF.

4.3.5 The Applicant has identified a source of funding via the Heat Network Investment Project (HNIP), Government's principal mechanism for bringing forward heat networks and associated carbon benefits in support of the 2050 pathway. £320m of Government support is available to projects over the next three years, with the aim of leveraging around £1bn of capital investment in the sector. Indeed, Ramboll states in its report that the most likely source for capital funding, in support of all or part of the proposed district heating network, is the Government's HNIP and recommends that this source of funding should be considered in more detail.

4.3.6 Contrary to GLA's assertion in paragraph 25 of **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**, the role and likelihood of public sector involvement has been investigated, and discussed in some detail with the GLA and its advisors in a meeting held on 01 February 2019, where heat export was an explicit agenda item (amongst other matters). The Applicant also met with LBB and its technical advisor Ramboll in a meeting held on 20 February 2019 to discuss the results of Ramboll's Phase 1 feasibility study, and technical and commercial assumptions relating to heat export from RRRF and REP. The Applicant also met with LBB and its technical advisor Ramboll to discuss district heating network project structuring on 26 April 2019. In addition, both public sector bodies and the Applicant attended District Heating

Partnership Boards meetings on 09 January 2019 and 14 May 2019, with a specific ambition to progress heat network development.

4.3.7 The Applicant would like to reemphasise the support shown by Peabody in its letter dated 17 April 2019, specifically noting that "*Peabody support Cory's ongoing support and commitment to the collective goal of developing a heat network in Thamesmead and Belvedere to serve the local area which will utilise heat from RRRF and REP*". It is reasonable that the letter does not single out REP in any other respect, since the content of the letter is specifically intended to express Peabody's support, as a housing developer, for low carbon and renewable heat which would be available from both REP and RRRF, and support the delivery of sustainable housing by Peabody. On the basis that Peabody has not raised any objections to the Proposed Development and that it explicitly expresses support for the district heating network which would result, it can be concluded that Peabody is in support of REP.

4.3.8 The Applicant has focused on delivery of heat to new housing developments as part of the Thamesmead regeneration programme, which would not only achieve carbon savings but also offer associated benefits of minimising heat losses, supporting economic growth and regeneration and providing social benefits. Supplying heat and power from RRRF and/or REP to the consented data centre development would also present an opportunity to offset fossil fuel consumption with low carbon and renewable energy. While it is true that the coefficient of performance varies between thermal and mechanical compression chillers (which could be used for satisfying data centre cooling loads), based on the conclusions of our carbon assessment for REP **(8.02.08, REP2-059)**, it follows that energy import to the data centre development would represent a benefit over energy import from grid. The Applicant therefore disputes the GLA's assertion, in **Paragraph 28** of its submission, that import of energy from REP/RRRF would represent a very carbon-inefficient use of energy.

4.3.9 REP would not be an inflexible electricity generating plant as asserted by the GLA. ERFs are entirely dispatchable and it is relatively straightforward to ramp the thermal input of such facilities up and down within the operational envelope, over relatively short timeframes. Surplus bunker and silo storage facilities are provided for incoming residual waste and for incinerator bottom ash and residues, which, in combination with the Applicant's control of transfer loading station and lighterage operations, means that the waste management provision offered by REP would be highly flexible. In combination with the electricity storage and distribution service offered by the battery storage facility, REP would support the deployment of intermittent renewable generation assets more widely on the grid.

4.3.10 Overarching EU Directives implemented though GB's energy market actively manage the grid such that renewable sources are prioritised. For REP to displace other flexible renewable electricity, such as wind generated electricity (as asserted by the GLA) would require a fundamental change to the

established energy market and commercial drivers. In addition, given the proportionally small contribution of electricity generated from ERFs to the grid, coincident shutdown of major centralised baseload energy generators including the nuclear fleet, in combination with the loss of alternative waste management sites, would be required before capacity needs would force this circumstance to arise.

4.4 Carbon Intensity

4.4.1 The GLA refers to the Eunomia report and states that this shows that REP would have a higher carbon intensity than the marginal generation it would replace. The Applicant has responded to this in **Appendix B**. Importantly, Eunomia has not allowed for the benefit of landfill displacement. REP, like any ERF, is not just a power station; it also diverts waste from landfill. The Applicant has shown in **Appendix B** that, when this benefit is taken into account, the carbon intensity of REP is lower than the marginal generation factor which Eunomia prefers for every year until 2050.

4.4.2 The GLA suggests that REP would not displace landfill if the government's targets for recycling are met and that therefore this benefit should not be taken into account. This implies that if REP is displacing landfill, then the GLA would agree that the benefit of landfill displacement should be taken into account. The Applicant has explained in **Section 2** of this document why REP would divert waste from landfill, even when applying the Government's latest recycling targets, which means that the approach in the carbon assessment is correct.

5 Carbon Intensity Floor

5.1 Introduction

5.1.1 This section responds to paragraphs 34 to 45 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038),** which presents the GLA's position in relation to Agenda item 3.3, carbon assessment and the carbon intensity floor (CIF).

5.1.2 The GLA does not accept that REP would meet the required Carbon Intensity Floor. The GLA has three primary reasons for this position.

a. The GLA does not accept that the ERF could operate at an efficiency of 34.1%.

b. The GLA asserts that the ERF would be a carbon producer in power-only mode.

c. The use of net calorific value is not justified.

5.1.3 The Applicant responds to each of these points in turn below.

5.2 The Efficiency of REP

5.2.1 The efficiency of the ERF would be 34.25%. For the avoidance of doubt, this is the efficiency based on generated power (known as the gross efficiency) and the net calorific value. The Applicant has also stated (in paragraph 15.6 of the Oral Summary of the Issue Specific Hearing on Environmental Matters) that the net efficiency of the ERF (that is, the efficiency based on exported power and the net calorific value) would be 31.25%. When comparing REP with other ERFs, it is important that the comparison is done on a consistent basis, which the GLA has failed to do.

5.2.2 At the ISH on Environmental Matters on 5 June 2019, the Applicant mentioned the efficiency of the Ferrybridge FM2 plant. The net efficiency of this plant in the DCO carbon assessment was 29.8%, which can be compared with the REP net efficiency of 31.25%. The GLA implies that the net efficiency of FM2 (which it states is 29%) should be compared with the gross efficiency of REP, which is misleading. In reality, the improvement in performance proposed at REP, when compared to FM2 on a consistent basis, is entirely plausible when accounting for technological advancements over the period since development consent was granted for FM2 in 2015, and the emphasis the Applicant has placed on procuring a facility with high levels of efficiency.

5.2.3 The GLA compares REP with "*comparable, operational EfW plant, which typically achieve efficiencies of 25%.*" The Applicant believes that this is a net efficiency, as this was stated by the GLA in the ISH on Environmental Matters, but the GLA does not state this and implies that it should be compared with the gross efficiency of REP.

5.2.4 More importantly, while it is true that most operational plants in the UK and Europe operate around this efficiency level, not all of them do. The data reported in the draft Waste Incineration BREF shows a number of plants operating at a gross efficiency, based on net calorific value, of 32-33%, so REP would only be around 1% more efficient than these plants. This data was collected in 2015 and so would not include the newest plants which incorporate further technological advancements.

5.2.5 As set out in **Paragraph 1.1.9** of the **Applicant's responses to Written Representations (8.02.1, REP3-022),** the technical provisions which enable this level of efficiency to be achieved include:

- high live steam conditions made possible by the use of Inconel clad boiler passes and superheaters;
- multi-pass out steam turbine providing optimised steam pressures for condensate pre-heating, district heating, feedwater deaeration and combustion air (primary and secondary) pre-heating;
- flue gas recirculation;
- commitment to procure high efficiency steam turbine from market leading supplier;
- flash steam recovery from blow down vessel; and
- heat recovery from the flue gases after the flue gas treatment plant.

5.2.6 The Applicant acknowledges that REP would be more efficient than other operating plants. However, the difference between REP and other efficient plants is much less than the GLA is implying, and the Applicant can confirm that this improved efficiency is achievable.

5.3 Carbon Performance

5.3.1 The Applicant rejects the GLA's assertion that REP would be a carbon producer. The reasons for this are set out in the **Carbon Assessment (8.02.08, REP2-059)** and the Applicant has responded to Eunomia's detailed points in **Appendix B**.

5.4 Calorific Value

5.4.1 Finally, the GLA continues to dispute the use of net calorific value. The Applicant considers that this is a red herring. In order to assess the carbon benefits of REP, two key quantities are needed. The first is the power generated by the plant. This can be calculated by multiplying the energy content of the waste by the efficiency of the plant. This calculation will only work if the energy content of the waste and the efficiency of the plant are expressed on the same basis. It doesn't matter whether net or gross calorific value is used, so long as the same basis is used for both quantities. The

second key quantity is the carbon content in the waste. This is not affected by the use of net or gross calorific value.

5.4.2 The GLA has stated that the use of net calorific value is justified in the Carbon Assessment with reference to the Ready Reckoner tool. This is not correct; the **Carbon Assessment (8.02.08, REP2-059)** does not refer to the Ready Reckoner tool at all. The Applicant did justify the use of the efficiency based on net calorific value when calculating the CIF by reference to the Ready Reckoner and previous CIF assessments using net calorific value which have been accepted by the GLA. This is, again, simply a question of consistency in calculations. The energy content of the waste in the Ready Reckoner is expressed in net calorific value, as confirmed by the GLA and Eunomia. The CIF calculation needs to include the electricity generated by an ERF and this is calculated in the Ready Reckoner by multiplying the energy content of the waste by the electrical efficiency of the ERF. Since the energy content is expressed in net calorific value, the efficiency must also be expressed in net calorific value as otherwise the calculation will not work.

5.4.3 The GLA states that it "*would expect the Applicant to take all demonstrable steps as set out in paragraph 9.8.13 of the draft LP as a minimum*". The Applicant notes that paragraph 9.8.13 says that the four bullet points are "*examples of the demonstrable steps required*" and so would suggest that the GLA is going beyond the requirements of its own draft LP. Paragraph 5.85B of the current London Plan, which is the equivalent of paragraph 9.8.13 in the draft LP, also refers to examples of demonstrable steps, which implies that the specific examples given are not mandatory. The Applicant has noted above (**Section 4.3**) that REP complies with some of the examples in any event.

5.4.4 The GLA suggests that the savings from landfill displacement are too high, although does not suggest any other figures, and states that "The source of the Applicant's landfill emission factors cannot be verified by the GLA, and the ExA should require further detail to be provided." The Applicant is surprised by this assertion as the source of all assumptions is clearly stated in the **Carbon Assessment (8.02.08, REP2-059)**, mainly in **Paragraphs 3.2.2 and 3.2.3,** and the source documents were provided as appendices to the Carbon Assessment.

6 Air Quality

6.1 Introduction

6.1.1 This section responds to Paragraphs 46 to 66 of the GLA's Post Hearing Written Submission of Oral Case (**REP3-038**), which presents the GLA's position in relation to Agenda item 4, issues relating to air quality.

6.1.2 The Applicant's detailed rebuttal is made in response to the GLA's Sheet 1 (presented in **Appendix C** to this document), to the GLA's Sheet 2 (presented in **Appendix D** to this document) and the GLA's Sheet 4 (presented in **Appendix F** to this document).

6.2 Selection and assessment of sensitive receptors

6.2.1 The Applicant disagrees with the GLAs assertion that a full assessment of the impacts of emissions has not been undertaken for the reasons set out in **Paragraph 2.1.184** of the **Applicant's Responses to Written Representations (8.02.14, REP3-022)**. In essence, the assessment of significance takes into account more than simply the numbers of properties impacted although the extent of the impacts are shown in the contour plots that accompany the application; predicted concentrations are shown geographically and therefore the number of properties affected can be judged by the information provided with the application. The assessment of the significance of effects also takes into account that the development does not create an exceedance of an objective or limit value where none was exceeded before or increase the size of an exceedance area; worst case assumptions have been made regarding operational emissions and the size of the building footprint, and no exceedances of objectives or limit values are predicted as a result of the development.

6.3 Environmental Permit emissions limits

6.3.1 The Applicant disagrees with the GLAs assertion that it is not clear what emission limit would be applied by the Environment Agency through the permit regarding NO_x emissions. The Environmental Permit application has been made on the basis of NO_x emissions of 75mg/Nm^3 and the Applicant has committed to meeting this limit. Accompanying the permit application is an Environmental Impact Assessment report which assesses the impact on the environment of emissions at this limit.

6.3.2 In determining the Environmental Permit application, the Environment Agency will judge whether or not the emissions correspond to Best Available Techniques (BAT) as defined in relevant BAT Reference Documents (BREF). The GLA acknowledge that an emission value of 75mg/Nm^3 is within the range defined by the latest draft BREF note and that this is likely to be adopted before REP comes into operation. As such, the emission limit proposed by the Applicant corresponds to BAT. Notwithstanding other issues,

a permit will be granted as long as the emission complies with BAT and the resulting environmental impact is acceptable. In the event that the environmental impact is unacceptable i.e. (an environmental quality standard is breached), then the Environment Agency would require emissions to be reduced, possibly lower than the BAT range.

6.3.3 As a regulator, the Environment Agency is charged with reducing the environmental impact of the industry that it regulates. It would therefore be perverse for the Environment Agency to grant an operator a higher emission limit than they have applied for, and higher than the operator has committed to meeting. This would mean that the Environment Agency would be allowing a higher level of environmental impact than would otherwise occur.

6.3.4 The GLA state that it is reasonable to take the figure used in the DCO application as a reasonable worst case. This, of course, is the level that has been used in the air quality assessment and for which it has been demonstrated that there are no significant effects.

6.4 Environmental permit throughput or size limit

6.4.1 The volumetric flow rate used within the modelling represents the maximum mechanical throughput of the ERF. Therefore, it assumes that the ERF is processing the maximum quantity of waste which it is designed for, which will result in the maximum volumetric flowrate of flue gas from the installation.

6.5 Opportunity areas, residential development and air quality

6.5.1 The GLA make reference to the Riverside Opportunity Area Planning Framework (OAPF) and makes reference to Figures 1 and 2 of Appendix 4 of their submission. It is stated in paragraph 58 that residential development is primarily located to the south of the A13 in Havering and on Barking Riverside in Barking and Dagenham. For Barking Riverside the statement is correct; but in the London Borough of Havering, the area of residential development shown in yellow is to the north of the A13 and to the north of the railway line. This can be seen by the location of Beam Park; Figure 2 to the north of the railway line and the shape of the residential development area shown in yellow. The area to the south of the railway line is designated as a Strategic Industrial Location.

6.5.2 Referring to **Figures 7.5** to **7.7** of the **ES** (**6.2, REP3-008** and **6.2, APP-056,** respectively), it is clear that the only part of the OAPF area that lies within the plotted contours is that to the north of the railway line in the London Borough of Havering. In this regard, the easternmost area of Beam Park is outside of the lowest concentration contour plotted on each figure. As shown by **Figure 7.3.1** of the **ES (6.2, APP-056)** and the shape of the contours in **Figures 7.5** to **7.7** of the **ES (6.2, REP3-008** and **6.2, APP-056,** respectively), the chosen receptor locations are representative of the impacts on development that would occur in the London Borough of Havering OAPF. This is further

supported by the **Applicant's Response to the Local Impact Report by London Borough of Havering (8.02.18, REP3-026**), as discussed below.

6.5.3 **Figure 1a** of the **Applicant's Response to the Local Impact Report by London Borough of Havering (8.02.18, REP3-026**) shows annual mean arsenic concentrations. A concentration above 0.000165µg/m^3 would correspond to a large change in accordance with **Table 7.20** of the **ES (6.1, REP2-019)** and a minor adverse impact in accordance with Table 7.21. The predicted concentration lies within the strategic industrial land and therefore all impacts would be classed as Negligible in accordance with **Table 7.21** of the **ES (6.1, REP2-019)**.

6.5.4 **Figure 1b** of the **Applicant's Response to the Local Impact Report by London Borough of Havering (8.02.18, REP3-026**) shows annual mean nickel concentrations. A concentration above 0.011µg/m^3 would correspond to a large change in accordance with **Table 7.20** of the **ES (6.1, REP2-019)** and a minor adverse impact in accordance with **Table 7.21**. There are existing residential receptors within this contour along with the proposed mixed-use area. Predicted concentrations within the proposed mixed-use area would be similar to those at the existing receptor locations and no more than minor adverse in accordance with **Table 7.21 of the ES (6.1, REP2-019)**.

6.5.5 **Figure 1c** of the **Applicant's Response to the Local Impact Report by London Borough of Havering (8.02.18, REP3-026**) shows annual mean nitrogen dioxide concentrations. A concentration above 0.6µg/m^3 would correspond to a medium change in accordance with **Table 7.20** of the **ES (6.1, REP2-019)** and a minor adverse impact in accordance with **Table 7.21** (when total NO_2 concentrations are above 30.2µg/m^3). There are no existing or proposed residential receptor locations with this predicted concentration and therefore all impacts would be classed as Negligible in accordance with **Table 7.21** of the **ES (6.1, REP2-019)**.

6.5.6 In terms of Beam Park and Dover's Court and the potential for high rise development elsewhere, the Applicant disagrees with the GLA's assertion that these could be compromised by emissions from REP. As set out in **Paragraph 6.5.2** above, all areas of Beam Park are outside of the 0.4µg/m^3 annual mean NO_2 contour, being approximately 0.2µg/m^3 or less. The impact within Beam Park is less than at Receptor 18. In **Paragraph 2.1.196** of **the Applicant's Responses to Written Representations (8.02.14, REP3-022)**, the rate of increase in annual mean NO_2 concentrations with height at Receptor 18 was shown to be 0.001µg/m^3 for 4 storeys which would equate to 0.004µg/m^3 for 16 storeys. This is an imperceptible change. Within Beam Park, the increase would be lower.

6.5.7 Figure 2 of the GLA response contains a number of other potential locations for high density development and tall buildings (in red). These areas are well outside of the areas shown in **Figures 1a, b** and **c** of the **Applicant's Response to the Local Impact Report by London Borough of Havering**

(8.02.18, REP3-026), discussed above for ground level concentrations, and well outside areas where concentrations at higher levels will be potentially significant.

6.5.8 Nevertheless, additional modelling has been undertaken at a range of different elevations as described in the following paragraphs.

6.5.9 The following areas of proposed residential development within the London Riverside Opportunity Area were identified as potentially including 'tall buildings':

- R1 - Beam Park (550650, 182772);
- R2 - Chequers Corner/Dagenham Dock Station (549075, 183017);
- R3 - Barking Riverside (547930,182232);
- R4 - Barking Town Centre (544502, 184209);
- R5 - River Roding (543842, 183699).

6.5.10 The receptor locations are shown on **Figure 7.15.**

6.5.11 In order to present a robust worst-case situation, receptors were located in each area (at the closest point to REP) at elevations from 0m to 75m at 15m intervals (i.e. 0m, 15m, 30m, 45m, 60m, 75m).

6.5.12 This maximum height of 75m corresponds to the consented 23-storey Vicarage Field development in Barking Town Centre and the maximum for Barking Riverside of 76m. A vast majority of these areas will not approach these heights and the findings are considered broadly applicable to the likely variation in concentration at elevation for other receptor locations at a comparable distance from REP.

6.5.13 In addition, a receptor was located at Dovers Corner (R6, 551713, 182377) at ground level and a height of 15m corresponding to approximately 5 storeys (Receptor 6).

6.5.14 The predicted impact (process contribution (PC)) of the following pollutants was modelled:

- nitrogen dioxide (NO_2) annual average and 99.79%ile of hourly averages;
- arsenic (As) annual average; and
- nickel (Ni) annual average.

6.5.15 The results are presented in **Table 6.1** overleaf.

Table 6.1: The predicted impact from nitrogen dioxide, arsenic annual average and nickel annual average

Receptor	NO_2 Annual Average		NO_2 1-hour average (99.79%ile)		Arsenic annual average		Nickel annual average	
	PC (µg/m³)	PC as % of EAL	PC (µg/m³)	PC as % of EAL	PC (µg/m³)	PC as % of EAL	PC (µg/m³)	PC as % of EAL
R1_GL	0.33	0.82%	3.04	1.52%	9.8E-05	3.26%	8.62E-04	4.31%
R1_5th	0.33	0.83%	3.05	1.53%	9.8E-05	3.28%	8.67E-04	4.33%
R1_10th	0.34	0.84%	3.07	1.53%	1.0E-04	3.33%	8.79E-04	4.40%
R1_15th	0.34	0.86%	3.13	1.57%	1.0E-04	3.40%	8.99E-04	4.49%
R1_20th	0.35	0.88%	3.61	1.80%	1.1E-04	3.50%	9.25E-04	4.62%
R1_25th	0.36	0.91%	4.66	2.33%	1.1E-04	3.62%	9.55E-04	4.77%
R2_GL	0.12	0.30%	2.97	1.48%	3.6E-05	1.21%	3.19E-04	1.59%
R2_5th	0.12	0.31%	2.96	1.48%	3.6E-05	1.21%	3.21E-04	1.60%
R2_10th	0.12	0.31%	2.98	1.49%	3.7E-05	1.23%	3.25E-04	1.63%
R2_15th	0.13	0.32%	3.18	1.59%	3.8E-05	1.26%	3.33E-04	1.66%
R2_20th	0.13	0.33%	3.41	1.70%	3.9E-05	1.30%	3.43E-04	1.71%

Receptor	NO_2 Annual Average		NO_2 1-hour average (99.79%ile)		Arsenic annual average		Nickel annual average	
	PC (µg/m³)	PC as % of EAL	PC (µg/m³)	PC as % of EAL	PC (µg/m³)	PC as % of EAL	PC (µg/m³)	PC as % of EAL
R2_25th	0.14	0.34%	3.69	1.84%	4.0E-05	1.34%	3.54E-04	1.77%
R3_GL	0.13	0.32%	3.25	1.63%	3.8E-05	1.27%	3.36E-04	1.68%
R3_5th	0.13	0.32%	3.29	1.65%	3.8E-05	1.28%	3.38E-04	1.69%
R3_10th	0.13	0.33%	3.29	1.64%	3.9E-05	1.30%	3.42E-04	1.71%
R3_15th	0.13	0.33%	3.27	1.63%	4.0E-05	1.32%	3.49E-04	1.75%
R3_20th	0.14	0.34%	3.26	1.63%	4.1E-05	1.36%	3.59E-04	1.80%
R3_25th	0.14	0.35%	3.63	1.81%	4.2E-05	1.41%	3.72E-04	1.86%
R4_GL	0.04	0.10%	1.43	0.71%	1.2E-05	0.40%	1.06E-04	0.53%
R4_5th	0.04	0.10%	1.43	0.72%	1.2E-05	0.40%	1.06E-04	0.53%
R4_10th	0.04	0.10%	1.44	0.72%	1.2E-05	0.40%	1.06E-04	0.53%
R4_15th	0.04	0.10%	1.44	0.72%	1.2E-05	0.40%	1.07E-04	0.53%

Receptor	NO_2 Annual Average		NO_2 1-hour average (99.79%ile)		Arsenic annual average		Nickel annual average	
	PC (µg/m³)	PC as % of EAL	PC (µg/m³)	PC as % of EAL	PC (µg/m³)	PC as % of EAL	PC (µg/m³)	PC as % of EAL
R4_20th	0.04	0.10%	1.54	0.77%	1.2E-05	0.41%	1.07E-04	0.54%
R4_25th	0.04	0.10%	1.62	0.81%	1.2E-05	0.41%	1.08E-04	0.54%
R5_GL	0.04	0.11%	1.30	0.65%	1.3E-05	0.42%	1.11E-04	0.56%
R5_5th	0.04	0.11%	1.29	0.65%	1.3E-05	0.42%	1.12E-04	0.56%
R5_10th	0.04	0.11%	1.29	0.64%	1.3E-05	0.43%	1.12E-04	0.56%
R5_15th	0.04	0.11%	1.32	0.66%	1.3E-05	0.43%	1.13E-04	0.57%
R5_20th	0.04	0.11%	1.36	0.68%	1.3E-05	0.43%	1.14E-04	0.57%
R5_25th	0.04	0.11%	1.50	0.75%	1.3E-05	0.44%	1.15E-04	0.58%
R6_GL	0.50	1.26%	2.51	1.26%	1.5E-04	4.99%	1.32E-03	6.59%
R6_5th	0.51	1.26%	2.52	1.26%	1.5E-04	5.01%	1.32E-03	6.62%

6.5.16 For receptors R1 to R6 (Beam Park and the Opportunity Areas), the maximum predicted concentrations occur at R1 within Beam Park. The difference in annual mean NO_2 concentrations between ground level and 25th floor is only 10% at R1, with all changes being small in accordance with **Table 7.20** of the **ES (6.1, REP2-019)**. Baseline concentrations at R1 would be similar to those modelled at R15 of the ES (**Table 7.29, (6.1, REP2-019)**) at ground level, reducing at higher elevations. The impacts would therefore all be described as negligible at R1 in accordance with **Table 7.21** of the **ES (6.1, REP2-019)**. The changes in annual mean NO_2 concentrations at R2-R5 are all imperceptible and therefore the impacts are negligible in accordance with **Table 7.21** of the **ES (6.1, REP2-019**) and therefore not significant.

6.5.17 The changes in 1-hour average NO_2 concentrations at R1-R5 are all described as Negligible in accordance with **Table 7.22** of the **ES (6.1, REP2-019)**.

6.5.18 The difference in annual average arsenic concentrations between ground level and 25th floor is only 10% at R1, with all changes being medium in accordance with **Table 7.20** of the **ES (6.1, REP2-019)**. Baseline concentrations would be similar to those modelled at R15 of the ES (**Table 7.29, (6.1, REP2-019)**) at ground level, reducing at higher elevations. The impacts would therefore all be described as Negligible at R1 in accordance with **Table 7.21** of the **ES (6.1, REP2-019)**. The changes in annual mean arsenic concentrations are small at R2 and R3 and imperceptible at R4 and R5. The impacts would therefore be described as Negligible, assuming a similar level of baseline concentrations as the rest of the study area, and therefore not significant.

6.5.19 The difference in annual average nickel concentrations between ground level and 25th floor is only 10% at R1, with all changes being medium in accordance with **Table 7.20** of the **ES (6.1, REP2-019)**. Baseline concentrations would be similar to those modelled at R15 of the ES (**Table 7.29, (6.1, REP2-019)**) at ground level, reducing at higher elevations. The impacts would therefore all be described as Negligible at R1 in accordance with **Table 7.21** of the **ES (6.1, REP2-019)**. The changes in annual mean nickel concentrations are medium at R2 and R3 and small at R4 and R5. The impacts would therefore be described as Negligible, assuming a similar level of baseline concentrations as the rest of the study area, and therefore not significant.

6.5.20 For R6 at Dovers Corner predicted concentrations are effectively the same at ground floor and 5th floor levels. For annual mean NO_2 concentrations the changes are small in accordance with **Table 7.20** of the **ES (6.1, REP2-019).** Baseline concentrations at R6 would be similar to those modelled at R18 of the ES (**Table 7.29, (6.1, REP2-019))** at ground level, reducing at higher elevations. The impacts would therefore all be described as Negligible at R6 in accordance with **Table 7.21** of the **ES (6.1, REP2-019)** and therefore not significant.

6.5.21 The changes in 1-hour average NO_2 concentrations at R6 are all described as Negligible in accordance with **Table 7.22** of the **ES (6.1, REP2-019)**.

6.5.22 The changes in annual average arsenic concentrations at R6 are medium in accordance with **Table 7.20** of the **ES (6.1, REP2-019)**. Baseline concentrations would be similar to those modelled at R18 of the ES (**Table 7.29, (6.1, REP2-019)**) at ground level, reducing at higher elevations. The impacts would therefore be described as Negligible at R6 in accordance with **Table 7.21** of the **ES (6.1, REP2-019)** and therefore not significant.

6.5.23 The changes in annual average nickel concentrations at R6 are large in accordance with **Table 7.20** of the **ES (6.1, REP2-019)**. Baseline concentrations would be similar to those modelled at R18 of the ES (**Table 7.29, (6.1, REP2-019)**) at ground level, reducing at higher elevations. The impacts would therefore be described as minor at R6 in accordance with **Table 7.21** of the **ES (6.1, REP2-019)** as the total concentration is well below 75% of the assessment level. The effects are therefore not significant.

7 Transport

7.1 Responding to "Use of Road and River Transport for Delivery of Waste" and points relating to Requirement 14 'Heavy commercial vehicle movements delivering waste'

7.1.1 At **Requirement 14** of the **dDCO (3.1, Rev2, REP3-003)** the Applicant has proposed a revision to the caps on Heavy Commercial Vehicle (HCV) movements transporting waste material to the ERF and Anaerobic Digestion facility at REP. The proposal to allow the use at REP of residual movements from those permitted by Conditions 27 and 28 of the RRRF consent has been removed.

7.1.2 The daily cap of 90 HCVs in and 90 HCVs out (90 two-way vehicle movements i.e. 180 HCV movements) during normal operation is proposed to cover the movement of waste material for both the ERF and the Anaerobic Digestion facility. It does not include the movement of ancillary materials and plant for REP. The daily cap of 300 HCVs in and 300 HCVs out (300 two-way vehicle movements i.e. 600 HCV movements) during a jetty outage operation is proposed to cover the movement of waste material for both the ERF and the Anaerobic Digestion facility. It does not include the movement of ancillary materials and plant for REP or the movement of IBA by road during that period.

7.1.3 The level of the cap is appropriate reflecting the assessment of likely HCV requirements to serve the operation of REP during those periods. **Chapter 6 Transport** of the **ES (6.1, Rev1, REP2-017)** has assessed the 100% by road and 25% by road scenarios for ERF waste material movement and the 100% by road Anaerobic Digestion facility waste material movement. The assessed vehicle flows are set out at **Plates 6.1** to **6.3** in **Chapter 6 Transport** of the **ES (6.1, Rev1, REP2-017)**.

7.1.4 **Plates 6.2** and **6.3**, together, set out a cumulative assessment of 25% by road ERF waste material plus 100% by road Anaerobic Digestion facility waste material by road scenario. That assessment anticipated that approximately 96 HCVs per day would be required for the material import. In rounded figures, the scenario considered 79 HCVs importing waste to the ERF and 17 HCVs importing waste to the Anaerobic Digestion facility. The proposed cap of 90 HCVs per day is therefore below that assessed and marginally less than the quantum considered necessary to achieve the cumulative ERF and Anaerobic Digestion facility 25% nominal by road scenario. The GLA recognises "*that the relationship between number of vehicles and amount of waste moved is not completely linear" (*Paragraph 68 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**) and *"considers that a cap of 80 vehicles delivering waste……is reasonable"* for the ERF operation alone (Paragraph 69 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**). On that basis, since the Anaerobic Digestion facility operates at 17 HCVs per day, as assessed in **Chapter 6 Transport** of the **ES**

(6.1, Rev1, REP2-017), the residual within a 90 HCVs per day cap (as proposed at Requirement 14) would be 73 HCVs per day. That quantum would be used to import waste to the ERF and is 7 HCVs per day below the suggested 80 HCV cap proposed by the GLA for the ERF. The proposed amendment at Deadline 3 to Requirement 14, where the proposed cap of 90 HCVs per day in and 90 HCVs per day out for waste material to both the ERF and the Anaerobic Digestion facility should, therefore, be consented as proposed, allowing the Applicant to manage the ERF and Anaerobic Digestion facility within the 90 HCV capped allocation.

7.1.5 **Plates 6.1** and **6.3**, together, set out that under a cumulative assessment of 100% by road ERF waste material plus 100% by road Anaerobic Digestion facility waste material scenario, it is anticipated that approximately 332 HCVs per day would be required for the material import. The proposed cap of 300 HCVs per day in and 300 HCVs per day out is therefore below that assessed and marginally less than the quantum considered necessary to achieve the 100% by road operation. The cap on HCV movements should be consented as proposed.

7.1.6 At Deadline 3 the Applicant has submitted evidence, titled **Temporary Jetty Outage Review (Simultaneous Operations - Riverside Resource Recovery Facility and Riverside Energy Park) (8.02.31, REP3-036)**, which analyses the likely effects of the cumulative full capacity operation of RRRF and REP under a possible jetty outage scenario. That evidence shows that the cumulative effects are not judged to change the assessment of effects on the transport network for the criteria as assessed for the 100% by road reasonable worst case scenario assessed within **Chapter 6 Transport** of the **ES (6.1, Rev1, REP2-017)**. The resultant impacts would continue to be judged as Not Significant.

7.1.7 The assessments as submitted to the Examination are robust and no further assessments are required or proposed.

7.1.8 The GLA has referred, at Paragraph 67 of the **Post Hearing Written Submission of Oral Case (REP3-038)**, to the policy position in the London Plan policies 6.14 "Freight"; 7.24 "Blue Ribbon", 7.26 "Increasing the use of the Blue Ribbon network for freight transport" and 5.17 "Waste Capacity" and the draft London Plan policy T2 "Healthy Streets" which collectively encourage the use of riparian freight facilities and the reduction of freight vehicle movements on London's streets. At Paragraph 95 of the **Post Hearing Written Submission of Oral Case (REP3-038),** the GLA refers to NPS-EN1 and the requirement to secure sustainable patterns of transport, with a preference for transport by water. The optimal use of REP (and RRRF) would wholly align with those policy aspirations. The London Plan aspiration is, however, to reduce the dominance of vehicles and not the weight of freight transported. On that basis there is no policy justification for the GLA requiring a cap on the tonnage of material transported by road to REP and the cap on the number of HCVs per day proposed by the Applicant is appropriate and in line with policy.

7.1.9 At Page 5 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)** *"Additional requirements required"* the GLA contradicts the Mayor's aspiration to optimise the use of wharves and jetties, set out at London Plan Policy 7.26 "Increasing the use of the Blue Ribbon network for freight transport" and Policy 6.14 "Freight". The GLA proposes an additional requirement to govern that the REP/RRRF jetty use is restricted to the movement of waste only, potentially hampering its use for other complementary uses in the future, albeit such use is not currently planned. The complementary use could include further freight movements from road to river at REP, helping to achieve the aspiration to reduce congestion (London Plan Policy 6.14 "Freight"); reduce the dominance of traffic on London's streets (Draft London Plan Policy T2 "Healthy Street"); and protecting the opportunities to use wharves (Draft London Plan Policy SI15 "Water transport").

7.1.10 At Paragraph 70 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)** the GLA raises concerns that the Applicant would seek to use a fleet of "many small vehicles which would not be subject to the proposed cap" to transport waste to REP. The caps on vehicle movements at **Requirement 14** of the **dDCO (3.1, Rev2, REP3-003)** refer to Heavy Commercial Vehicles (HCVs) as defined by section 138 of the Road Traffic Regulation Act 1984. That defines an HCV as a vehicle of more than 7.5t gross vehicle weight (GVW). Using vehicle of a lesser GVW would be entirely impractical with vehicle payloads then being a few tonnes per vehicle. A very small refuse collection vehicle (with two axles; 6cu.m. capacity and associated lifting equipment) would be greater than 7.5t GVW and as such would be classified as an HCV, and would therefore be included within the capped HCV movements. Those vehicles would have a payload of approximately 2-3 tonnes, depending on the density of the waste being carried. A large refuse collection vehicle at 26t GVW with a load capacity of around 20-22 cu.m. could carry in the region of 6-8 tonnes of waste, depending on the density of the material. The markets and contracts to be served by the Applicant would not operate fleets of vehicles below 7.5t GVW and therefore REP would not operate with small vehicles below the classification of an HCV.

7.1.11 The GLA further states at paragraph 70 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)** that a Requirement should be added to the DCO restricting the volume of waste transported by road. **Requirement 14** of the **dDCO (3.1, Rev2, REP3-003)** proposes a cap on the number of vehicles transporting waste to REP during normal operations and under a jetty outage scenario. As set out at **Paragraph 7.1.8,** above, the policy basis within London is focused on reducing the dominance and number of vehicle movements on London's Streets and not focused on the tonnage or volume of material moved. There is no policy justification for the GLA requiring a cap on the tonnage of material transported by road to REP and the cap on the number of HCVs per day proposed by the Applicant is appropriate, in line with policy and addresses the impact that is sought to be controlled. **Requirement 14** of the **dDCO (3.1, Rev2, REP3-003)** proposed within the DCO is therefore sufficient to control the number of vehicles.

7.1.12 At Paragraph 74 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**, the GLA proposes the inclusion of "*a sound mechanism to monitor compliance*" with the HCV movement caps within the **Requirement 14** of the **dDCO (3.1, Rev2, REP3-003)**. **Sub-paragraph (4)** of **Requirement 14** as submitted at Deadline 3 in the **dDCO (3.1, Rev2, REP3-003)** includes for data on HCV activity at REP to be provided regularly to the relevant planning authority and on a maximum of four times per year, on request. Breaches of that Requirement could then be enforced if necessary. The Applicant considers that the current drafting of Requirement 14 as submitted at Deadline 3 meets the GLA's stated objectives.

7.1.13 The Applicant does not propose to include a new Requirement specifying the level of maintenance for the jetty or a contingency plan to restore marine operations. The Applicant has a commercial imperative to retain the safe and effective operation of the marine facilities including the barge and tug fleet. There has not been a major jetty outage during the operation of RRRF to date and the likelihood of this continuing to be the case is extremely high. However, provision has been made to address the unlikely scenario of a jetty outage occurring in order to ensure the continued operation of the facility. The Applicant does not concur with the GLA's proposal as set out at Paragraph 98 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**.

7.2 Responding to "Car Parking"

7.2.1 The Applicant has provided an outline Workforce Travel Plan at **Section 9.7** to the **outline CTMP Appendix L** to **Appendix B.1** of the **ES (6.3, REP 3010)**. It outlines an indication of the types of measures which would be employed to achieve the targets of the Travel Plan. Until a contractor is appointed and their programme for construction defined, it is not practicable to define the targets and measures. **Requirement 13** of the **dDCO (3.1, Rev2, REP3-003)** secures the preparation, approval and implementation of the CTMP which would include the workforce travel plan. That requirement includes for TfL to be a consultee to the CTMP at which time a system of monitoring and management during the construction of the associated works can be agreed.

7.3 Responding to "Delays to road users during construction of the Electrical Connections" and points relating to Requirement 13 'Construction Traffic Management Plan'

7.3.1 The GLA requires that a method of understanding the effects on the operation of local bus services is agreed with the Applicant. At Paragraph 86 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**, it is stated that "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*".

7.3.2 The Applicant continues to engage with TfL and Arriva London buses to seek ways to minimise the effects on local bus service operations during the

construction of the Electrical Connection and to establish an appropriate and proportional method by which to anticipate the magnitude of those effects. That temporary traffic management mitigation and construction management processes would reflect the emerging information surrounding the alignment of the Electrical Connection, further to advice from the preferred Electrical Connection contractor. Matters being considered are the estimated timescales for construction at key road crossings and along the bus service corridors; locations where the cable route could run remote from the main bus routes; and points along the Electrical Connection where the route would have a lesser impact on traffic flow by following the carriageway with a lower traffic volume (typically the southbound carriageway).

7.3.3 The Applicant agrees with the anticipated points of interface between the Electrical Connection and local bus services, within the London Borough of Bexley, as set out at Appendix 4, Figure 3 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**. The Applicant is also collaborating with and discussing with LBB, TfL and Arriva London buses the engineering challenges which have informed the selection of the route – such as underground structures and existing Statutory Undertakers' equipment. Those challenges will influence the alignment of the Electrical Connection, within the order limits, and the broader considerations required when determining the most suitable corridor for this element of the Nationally Significant Infrastructure Project.

7.3.4 The emerging detail and methodology will be captured within an update to the **Outline CTMP (6.3, REP 3010)** and submitted to the Examining Authority in due course. The Applicant does not consider that it is necessary to amend the wording of **Requirement 13**, as submitted at Deadline 3 within the **dDCO (3.1, Rev2, REP3-003)**.

7.3.5 **Requirement 13** has been amended to include for the coverage of the pre-commencement construction phases of the authorised development as set out at **Schedule 1** of the **dDCO (3.1, Rev2, REP3-003)**.

7.4 Responding to Low Emissions Restrictions

7.4.1 At Point 2.0.4 of the **GLA's Commentary on Applicant's response to ExA's first Written Questions (REP3-043)**, the GLA expects "*all vehicles to comply with Euro VI emissions standards*" irrespective of the implementation of new Low Emission Zone standards.

7.4.2 The Euro VI standards apply to Heavy Duty engines only. The Applicant would operate vehicles in its fleet with Heavy Duty engines which meet the prevailing emissions standards within the zones in which they are travelling. Where those vehicles are travelling within the London Ultra Low Emissions Zone their engines would be Euro VI compliant otherwise the operator would be duly fined.

7.4.3 Due to the specialist nature of much of the construction works at REP, the Applicant cannot commit to an absolute restriction on engine standards as this could cause insurmountable contracting problems where specialist contractors have to be employed who are operating vehicles with Heavy Duty engines not compliant with Euro VI standards. The Applicant is not responsible for the management of engines within the vehicle fleets of third parties. The operator would ensure its vehicles meet the prevailing emissions zone standards in order to avoid being fined.

8 Development Consent Order

8.1 Schedule 2 Requirements – changes proposed by the Applicant and by Interested Parties

Proposed New Requirement

8.1.1 The GLA has requested a requirement that requires the Applicant to provide the AD facility (Work 1B), battery storage (Work 1D) and solar panels (Work 1C) within a specified time frame. Similarly a requirement is requested that compels the Applicant to deliver Work 3 (works required to export heat from the REP site).

8.1.2 The Applicant is in the process of considering these proposals and will clarify its position later in the examination.

Requirement 11

8.1.3 The GLA notes that the Applicant has agreed to adopt the London Non-Road Mobile Machinery Low Emission Zone standards as a requirement of the DCO.

8.1.4 The GLA made submissions at the hearing that it was concerned that the CoCP would not be triggered until commencement of the authorised development and it was concerned about the scope of some of the pre-commencement works that could take place without the CoCP applying.

8.1.5 The Applicant amended Requirement 11 in the **dDCO** (**3.1, Rev 2, REP3-003**) and the CoCP now applies to pre-commencement works.

Requirement 13

8.1.6 The GLA made submissions at the hearing that it was concerned that the CTMP would not be triggered until commencement of the authorised development and it was concerned about the scope of some of the pre-commencement works that could take place without the CTMP applying.

8.1.7 The Applicant amended Requirement 13 in the **dDCO** (**3.1, Rev 2, REP3-003**) and the CTMP now applies to pre-commencement works.

Requirement 14

8.1.8 At paragraphs 93 to 98 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**, the GLA considers further the restrictions on the movement of vehicles associated with the operation of REP.

8.1.9 That section of the report rehearses the GLA's view on a restriction to the number of HCVs at REP and the tonnage of waste material imported. The Applicant has responded to these points at section 7.1 of this report.

8.1.10 In paragraph 94 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)** the GLA also proposes that the restriction on the number of HCV's per day attending REP should include those vehicles associated with the ancillary operations, such as: lime; fuel oil; and ammonia deliveries. These are not vehicle movements that could readily be transferred to waterborne transportation. As set out at section 7.1 of this report, the cap of 90 HCVs per day for the import of waste material to the ERF and Anaerobic Digestion facility is below the number of vehicles assessed within **Chapter 6 Transport** of the **ES (6.1, REP2-017).** Further constraining the number of HCVs visiting REP per day would unreasonably restrict the ancillary operations. Those ancillary vehicle movements would typically not affect roads within London with their origins generally elsewhere in England. The number of HCVs per day transporting waste to REP and as proposed by the Applicant is appropriate and in line with policy. **Requirement 14** of the **dDCO (3.1, Rev2, REP3-003)** proposed within the DCO is therefore sufficient to control the number of vehicles associated with the movement of waste material to REP.

8.1.11 The Applicant has amended the wording of **Requirement 14** of the **dDCO (3.1, Rev2, REP3-003)** as submitted at Deadline 3 to delete wording relating to the cross referencing to "surplus" HCV movements at RRRF. That amendment confirms the point raised by the GLA at paragraph 96 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**.

8.1.12 The GLA refers to paragraphs 5.13.9 and 5.13.10 of NPS EN-1 at paragraph 95 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)** stating that that document seeks a sustainable pattern of transport associated with the operation of REP. The section of the NPS EN-1 to which the GLA refers, relates to the "mitigation" of the effects on the transportation network of the Nationally Significant Infrastructure Project proposals.

8.1.13 The Applicant has shown through the assessment of transport effects as contained within **Chapter 6 Transport** of the **ES (6.1, REP2-017)** that there are no residual operational effects on the transportation network that would require mitigation. The operation of REP would focus on the movement of waste material by river for the large proportion of that material. Without REP there would be no certainty that much of the waste material to be moved via the riparian waste transfer stations would be achieved and those movements could instead be carried out by road vehicles. The proposed proportion of movement by river for the REP operation, therefore, represents a strong sustainable pattern of transport and accords with the policy in NPS EN-1.

8.1.14 Paragraphs 7.1.6 and 7.1.7 of this document report that the Applicant has submitted at Deadline 3 evidence, titled **Temporary Jetty Outage Review (Simultaneous Operations - Riverside Resource Recovery Facility and Riverside Energy Park) (8.02.31, REP3-036)**, which analyses the likely effects of the cumulative full capacity operation of RRRF and REP under a possible jetty outage scenario. That evidence shows that the cumulative effects are not judged to change the assessment of effects on the transport

network for the criteria as assessed for the 100% by road reasonable worst case scenario assessed within **Chapter 6 Transport** of the **ES (6.1, REP2-017)**. The resultant impacts would continue to be judged as Not Significant. That additional evidence responds to the GLA's comments at paragraph 97 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038).** The assessments as submitted to the Examination are robust and no further assessments are required or proposed in relation to that point.

8.1.15 Paragraph 7.1.13 of this report responds to the GLA's comment at paragraph 98 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)** relating to a Requirement to specify contingency management and maintenance of the jetty. The Applicant does not propose a specific Requirement.

Requirement 18

8.1.16 Requirement 18 has been agreed with London Borough of Bexley, who is required to approve the Employment and Skills Plan at the relevant time. If the London Borough of Bexley does not consider that the contents of the Employment and Skills Plan is acceptable then it can refuse to provide the relevant consent. As such, amendments to Requirement 18 are not considered relevant.

8.1.17 The GLA considers that Requirement 18 should include a commitment to paying the London Living Wage. There is no planning policy requirement for the Applicant to guarantee the London Living Wage in respect of the Proposed Development. In any event, the vast majority of the jobs at the Proposed Development will be highly skilled jobs, at degree level or above and therefore anticipated to be paid above the London Living Wage Therefore, the Applicant does not accept this suggested commitment.

Requirement 20

8.1.18 The GLA does not consider that Requirement 20 is sufficient and it cross refers to its Local Impact Report (REP2-075) at paragraphs 10.14 - 10.18. The Applicant has responded to this in the **'Applicants response to the Local Impact Report by Greater London Authority' (8.02.15, REP3-023).** Given the nature of heat network projects being geographically expansive, requiring cross-party involvement from public and private sector bodies, and requiring commercial agreement from heat suppliers, heat consumers and intermediates, it can be time consuming and complex to bring forward heat networks. As set out in Section 4.3 of this document, the Applicant has demonstrated clear commitments to deliver this ambition and the associated benefits, principally through developing REP as fully CHP-Enabled from the outset, as secured through the DCO under Schedule 1 Work No. 3 and its involvement in the Bexley District Heating Partnership Board. A requirement to guarantee delivery of this infrastructure under any scenario is unreasonable and is not required by London Plan policy. In addition, it would be entirely ill-advised to install heat export infrastructure at a point when the network

requirements were not understood and agreed with relative certainty. This would extend to the sizing and arrangement of heat exchangers, district heating pipework, circulation pumps, water treatment system, thermal stores and control system philosophy, in addition to the direction of pipe routing. Progressing in this manner would likely lead to a poorly designed system giving rise to poor performance and high heat losses, and consequently undermine the benefits that the export of heat intends to achieve.

8.1.19 The GLA considers that part 2a of requirement 20 should delete reference to 'reasonably'. The Applicant does not accept this suggested amendment. Deletion of 'reasonably' would require the Applicant to assess all conceivable opportunities to export heat from REP. With reference to relevant guidance on heat export appraisal, Environment Agency's 'CHP Ready Guidance for Combustion and Energy from Waste Power Plants', the Applicant would be obliged to consider opportunities within a search radius of up to 10 km. On the basis that there exists a total of 534,734 registered (existing) addresses demanding heat within this radius, as ascertained from the National Heat Map, see **Paragraph 6.3.8** of the **Combined Heat and Power Assessment (5.4, APP-035)**, in addition to a significant quantity of further proposed development, the wording proposed by the GLA would give rise to a disproportionate and unreasonable effort on behalf of the Applicant. The Applicant is not attempting to evade responsibilities in respect of heat export and has in fact demonstrated clear commitment in developing REP as CHP-Enabled from the outset of operations. However, the Applicant sees greatest value in focusing its efforts on reasonable opportunities which exist and are more likely to yield a district heating network and the associated benefits. Equivalent provision is made in the CHP Ready Guidance, which allows for consideration of "*technically and economically viable opportunities for the supply of heat*".

8.1.20 The GLA does not accept the drafting of part 2b of Requirement 20 and claims that "If Work 3 is carried out, there is no requirement to carry out any further work relating to the CHP if it will cost the undertaker more." However, a further draft of the DCO was submitted at deadline 3 **(3.1, Rev 2, REP3-003),** which amended the wording of requirement 20, which was not available to the GLA at the time that their comments were made. The amendments made to requirement 20(2)(b) require the Applicant to install combined heat and power pipework as long as sufficient details are known about the likely district heat network and do not link this requirement back to a caveat regarding material additional cost to the undertaker. That wording is now contained in part 2(c) of requirement 20 and relates to any additional actions that the Applicant is reasonably required to take, in addition to the installation of the combined heat and power pipework, to increase the potential for the export of heat. Requirement 20 therefore continues to require the Proposed Development to be CHP Enabled, in excess of the policy requirements of NPS EN-1. It is entirely appropriate that any steps that may be taken over and above making the Proposed Development CHP Enabled are linked back to a requirement that these steps are not at material additional cost to the Applicant.

8.1.21 The Applicant disagrees that submission of revised CHP reviews should be conducted every 24 months, as set out at paragraph 102 of the GLA's submission. As set out in **Paragraph 28.3** of the **Oral summary from the Issue Specific Hearing on Environmental Matters (8.02.19, REP3-027)**, the Applicant is content to look at the Eggborough Gas Fired Generation Stated Order 2018 in relation to a review on a 4 year basis. The GLA should also take account of the Applicant's involvement in the Bexley District Heating Partnership Board, which it believes will be the key driver in delivering a district heating network in the region through collaboration with key stakeholders. Notwithstanding the benefit of continued review of heat export opportunities by way of formal submission of CHP reviews, the commitment demonstrated by the Applicant in establishing and attending Partnership Board meetings and delivering associated actions will add significant value in bringing forward a district heating network. As district heating network development progresses, actions resulting from Partnership Board meetings and the collective momentum of key stakeholders is likely to supersede that which can be achieved by a desktop-based exercise. On this basis, the Applicant considers that submitting CHP reviews at 24-month intervals is not necessary.

8.1.22 In response to paragraph 103 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**, the Applicant responds to each point as follows.

a. The Applicant disagrees that the **Combined Heat and Power Assessment (5.4, APP-035)** makes no reference to the opportunity for RRRF to supply heat demand in the region. In accordance with the relevant National Planning Statement (Section 4.6 of NPS EN-1 and paragraphs 2.5.26 and 2.5.27 of NPS EN-3) and Environment Agency (EA) guidance '*CHP Ready Guidance for Combustion and Energy from Waste Power Plants*', the primary objective of a CHP assessment is to assess heat export opportunities, in a technical and economic context, with respect to the proposed development. In the case where alternative heat sources exist within sufficient proximity of the proposed development (as is the case for REP), the Applicant is obliged to consider the additional benefits which may be realised if an additional heat supply connection is made. Section 6.9 of the **Combined Heat and Power Assessment (5.4, APP-035)** presents the review of additional heat sources in the region and in particular, the benefits associated with heat supply from RRRF, which presents an opportunity to increase the capacity of a heat network developed in the region. The availability and thermal export capacity of RRRF is broadly equivalent to that of the proposed REP ERF. There is a significant volume of existing and proposed local heat demand which would require heat supply from both REP and RRRF to be satisfied and for the benefits of renewable/low carbon heat provision to be maximised. The GLA's interpretation that "*the existing RRRF would supply the demand*" is misleading as no heat demand is safeguarded exclusively for supply from RRRF. There is sufficient demand in the region to warrant heat supply from both REP and RRRF (a conclusion which is

independently recognised) and in any case, connecting both REP and RRRF to a network would offer the optimum case in terms of low carbon heat year round by reducing and/or eliminating the need for conventional back-up boilers, in addition to displacing air quality impacts in close proximity to residential areas.

b. Contrary to the GLA's view, International and European obligations certainly are relevant to the DCO examination. Regardless of the basis of the comparators adopted by the EU, the Directive is binding on Member States and has been transposed into UK law. Reference to performance metrics stipulated within the Energy Efficiency Directive is therefore appropriate and should be given due wright. In any case, this matter would not impact commitments relating to demonstrable steps, which the GLA is seeking to undermine.

c. As set out in detail in **Appendix C Section 4** of this report, the Applicant did not consider there to be a need to restate the adopted methodology and justification for its conclusions within the **Combined Heat and Power Supplementary Report (5.4.1, REP2-012)**. The underlying analysis contained within the supplementary report is no less rigorous than that submitted previously by the Applicant. In any case, this matter would not impact commitments relating to demonstrable steps which are set out clearly in the supplementary report and which the GLA is seeking to undermine.

8.1.23 The Applicant, as demonstrated, is committed to bringing forward the benefits associated with heat export. Operating in power-only or CHP mode, the ERF at REP would be the most efficient ERF delivered in the UK to date and as a result, is able to comply with the relevant CIF target using all versions (including those formally published and those not formally published) of the GLA's Ready Reckoner, and in every operational scenario. In the context of carbon outcomes, the proposals therefore meet relevant national, regional and local policy tests.

Appendix A Applicant's Response to Appendix 2A: GLA Post Hearing Written Oral Submission Summary- Waste Definitions

A.1 Definition of Municipal Waste

A.1.1 The GLA is correct to advise the ExA that there has been a change in the terminology used for waste types. However, the UK adopted the EU's definition of Municipal Waste in 2011; this is hardly 'recent' having occurred 8 years ago.

A.1.2 The Applicant notes the definitions of municipal waste set out by the GLA in Appendix 2a at paragraphs 3 and 4 and does not disagree with it as the current definition. However, ratification of the Circular Economy Package across the Member States means that a revised legislative framework on waste has also been agreed, which came into force on 4 July 2018. This revised legislative framework includes changes to Directive 2008/98/EC on waste (commonly referred to as the 2008 Waste Framework Directive) as set out in Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste (the '2018 Revised WFD').[7]

A.1.3 Article 3 of the 2018 Revised WFD presents definitions for the purposes of that Directive, setting out a more detailed definition for "municipal waste" at subsection 2b:

'*2b. "municipal waste" means*

a) mixed waste and separately collected waste from households including paper and cardboard, glass, metals, plastics, bio-waste, wood, textiles, packaging, waste electrical and electronic equipment, waste batteries and accumulators, and bulky waste, including mattresses and furniture;

b) mixed waste and separately collected waste from other sources where such waste is similar in nature and composition to household waste;

Municipal waste does not include waste from production, agriculture, forestry, fishing, septic tanks and sewage network and treatment, including sewage sludge, end-of-life vehicles and construction and demolition waste.

This definition is without prejudice to the allocation of responsibilities for waste management between public and private actors;'

[7] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.150.01.0109.01.ENG

A.1.4 Member States have two years to put in place the legislation to transpose the 2018 Revised WFD, which the UK Government has indicated it will implement in full. It is therefore likely that this is the definition of municipal waste that would apply going forward.

A.2 Estimation of the Municipal Fraction of Commercial and Industrial Waste

A.2.1 The Applicant does not agree that it is '*necessary to determine the component of the C&I waste stream which qualifies as similar in nature to household waste*' as suggested by the GLA at paragraph 5. [Underlining added] Not least, this approach leads to a level of detail which the GLA itself (at paragraph 7) recognises cannot be wholly substantiated.

A.2.2 In any event, the GLA is inconsistent in its consideration of the C&I waste stream. In preparing the draft London Plan (one of the two development plans relied upon by the Applicant) the GLA has simply used total C&I waste arisings and applied its forecasting assumptions to model future arisings (the Applicant has still not seen this model[8]). It is only in preparing the London Environment Strategy that the GLA begins to try to identify 'municipal waste' within the C&I waste survey data. As the Applicant has previously observed (not least at **Paragraph 1.2.2** of the **LWSA (Annex A** of **The Project and Its Benefits Report (7.2, APP-103)**) '*care is always needed when considering commercial and industrial (C&I) waste forecasts particularly those which are based on surveys which are over 10 years old. Great care is needed in interpreting such data and any modelling associated with it given the high level of uncertainty and general assumptions involved. For example, waste market assessments undertaken by the waste management industry, notably through the Environmental Services Association, by Tolvik Consulting Ltd and separately by the Applicant, highlight that the policy based conclusions may be a considerable underestimation when considering the reality of waste management within London and the South East of England*.'

A.2.3 In Appendix 2a, the proportions of C&I waste assumed to be municipal waste are not, of themselves, unreasonable. However, they have been produced from survey data that is now out of date, uses very broad categories and is potentially unlikely to reflect current (or future) C&I waste arisings in London, either in terms of type of waste or quantity.

A.2.4 The survey relied upon by the GLA was undertaken for Defra in 2009; the UK economy was in recession and the commercial and industrial context of London was quite different to its make up today. This can be seen by reference to Office for National Statistics ('ONS') data, as shown in **Table A.1** below. Over the period 2009 to 2017, the manufacturing sector turnover has declined by 1.2% (in real prices) and employment has declined by 5.1%. By

[8] Initial request to see the model was raised at a project update meeting between the Applicant and GLA on 11th September 2018. Additional requests were made by the Applicant on 17th September 2018, 2nd October 2018, 9th October 2018 and 17th October 2018.

contrast, over the same period, the retail sector turnover increased by 8.5% (in real terms) and employment grew by 9.5%; in non-financial service industries[9] growth has been even more substantial with 48.2% growth in turnover (in real terms) across the industries and 42.2% growth in employment just within Information and Communication.[10] In short, industrial activities have declined whilst commercial activities, and those industries likely to be producing 'municipal waste' have substantially increased.

A.2.5 Total turnover generated by businesses in London (excluding the financial sector) has grown in real terms by 18.4% over 2009-2017. Demonstrating that 2009 was the low point caused by the recession; real terms growth from 2008 is just 4.2%.

[9] Incorporating: Accommodation and food service activities; Information and Communication; Professional, scientific and technical activities; and Arts, entertainment and recreation.

[10] ONS (2018) Business Register and Employment Survey. Please note employment data prior to 2015 excludes pay as you earn (PAYE) units.

Table A.1: ONS Annual Business Survey, 2018

		Change 2009-2017		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Price adjustment	GDP Deflator (2018 = 100)		14.1 %	84.67	86.03	87.34	89.02	90.41	92.10	93.68	94.08	96.02	98.14
Turnover (£m nominal prices)	Total (non-financial business economy)	273,863	35.0 %	874,095	781,700	835,030	938,008	976,962	1,088,381	940,007	849,552	938,688	1,055,563
	Manufacturing	2,777	12.7 %	24,834	21,911	21,809	22,063	21,033	22,661	20,993	21,145	21,421	24,688
	Construction	13,922	46.0 %	35,969	30,249	31,348	33,223	33,961	34,531	37,827	41,254	41,468	44,171
	Retail trade, except of motor vehicles and motorcycles	14,101	23.7 %	60,019	59,393	58,363	61,436	60,088	63,698	64,799	69,547	78,538	73,494
	Non-Financial Service industries	194,807	69.1 %	297,383	282,013	297,429	318,232	333,584	363,919	385,988	420,626	466,806	476,820
	Accommodation and food service activities	6,969	45.1 %	14,811	15,456	16,076	17,388	17,240	18,313	19,711	20,532	21,839	22,425
	Information and communication	39,991	60.4 %	65,576	66,210	68,277	68,519	70,864	77,776	80,567	88,970	101,615	106,201
	Professional, scientific and technical activities	65,623	89.3 %	77,755	73,481	77,537	84,171	89,122	100,813	105,859	120,462	141,653	139,104
	Arts, entertainment and recreation	14,122	57.6 %	25,67	24,52	23,327	24,229	26,688	29,656	30,411	33,976	37,182	38,648

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	Construction and manufacturing	16,699	32.0%	60,803	52,160	53,157	55,286	54,994	57,192	58,820	62,399	62,889	68,859

Source: ONS (2019), Annual Business Survey

Turnover (£m - real prices)	Total (non-financial business economy)	166,939	18.4%	1,032,366	908,659	956,019	1,053,680	1,080,594	1,181,787	1,003,470	902,975	977,599	1,075,598
	Manufacturing	-313	-1.2%	29,331	25,470	24,969	24,784	23,264	24,606	22,410	22,475	22,309	25,157
	Construction	9,848	28.0%	42,482	35,162	35,890	37,320	37,563	37,494	40,381	43,848	43,187	45,009
	Retail trade, except of motor vehicles and motorcycles	5,850	8.5%	70,887	69,039	66,819	69,012	66,462	69,165	69,174	73,920	81,794	74,889
	Non-Financial Service industries	158,055	48.2%	351,230	327,816	340,524	357,475	368,969	395,151	412,048	447,076	486,156	485,870
	Accommodation and food service activities	4,884	27.2%	17,493	17,966	18,405	19,532	19,069	19,885	21,042	21,823	22,744	22,851
	Information and communication	31,253	40.6%	77,450	76,963	78,170	76,969	78,381	84,451	86,006	94,565	105,827	108,217
	Professional, scientific and technical activities	56,329	65.9%	91,834	85,415	88,771	94,551	98,576	109,465	113,006	128,037	147,525	141,744
	Arts, entertainment and recreation	10,872	38.1%	30,318	28,509	26,707	27,217	29,519	32,201	32,464	36,113	38,723	39,382
	Construction and manufacturing	9,534	15.7%	71,81	60,63	60,859	62,104	60,828	62,100	62,791	66,323	65,496	70,166

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Employment	Total (non-financial business economy)		995,000	23.3%	No data	4,273,000	4,324,000	4,450,000	4,594,000	4,707,000	4,857,000	5,081,000	5,147,000	5,268,000
	Manufacturing		-6,000	-5.1%		117,000	112,000	103,000	113,000	110,000	115,000	117,000	113,000	111,000
	Construction		60,000	40.5%		148,000	147,000	135,000	159,000	152,000	151,000	147,000	187,000	208,000
	Retail trade, except of motor vehicles and motorcycles		37,000	9.5%		390,000	376,000	386,000	393,000	402,000	420,000	441,000	401,000	427,000
	Accommodation and food service activities		89,000	29.5%		302,000	304,000	315,000	342,000	355,000	365,000	381,000	406,000	391,000
	Information and communication		125,000	42.2%		296,000	317,000	333,000	319,000	355,000	384,000	387,000	402,000	421,000
	Professional, scientific and technical activities		50,000	15.5%		323,000	334,000	358,000	360,000	344,000	356,000	363,000	392,000	373,000
	Arts, entertainment and recreation		37,000	33.0%		112,000	118,000	127,000	130,000	124,000	132,000	137,000	140,000	149,000
	Construction and manufacturing		54,000	20.4%		265,000	259,000	238,000	272,000	262,000	266,000	264,000	300,000	319,000

Source: ONS (2018), Business Register and Employment Survey

A.2.6 The Defra 2009 survey relied upon by the GLA is simply not reflective of the commercial and industrial activities undertaken in London today, let alone in another ten years or by 2036. This means that the GLA's submissions are relying on detailed analysis that is unlikely to be relevant.

A.2.7 Future classification of municipal waste is likely to be based on the European Waste Catalogue ('EWC') also referred to as the List of Wastes ('LoW') rather than the 'SOC' (substance oriented classification) coding presented in the GLA's Appendix 2a. The method employed by the GLA is consequently likely to be inconsistent with the UK as a whole. Under the LoW, 'municipal wastes' are listed under Chapter 20. Within Table 1, the GLA assumes that all chemical waste is non-municipal, however there are chemicals listed under the LoW Chapter 20. Conversely, Table 1 assumes that discarded vehicles are municipal waste, but these are excluded from the LoW Chapter 20. In any event the GLA's method is inconsistent within itself. At 'Healthcare wastes' explicit reference to the EWC/LoW Chapters 18 and 20 is made, which isdifferent to the GLA's stated method of relying upon the SOC. The GLA's assessment, relying on a spurious level of irrelevant detail, is flawed.

A.2.8 Further, the figures set out in Table 1 of Appendix 2a, do not always reflect the data relied upon within the London Environment Strategy (Table 9 of Appendix 2 the London Environment Strategy: Evidence Base (the 'LES: Evidence Base') is the relevant reference). This is shown in **Table A.2** below.

Table A.2: Comparison of Table 1, GLA Appendix 2a with Table 9 of LES: Evidence Base

SOC Group	Table 1, GLA Appendix 2a		Table 9, LES: Evidence Base	
	Assumed proportion classified as municipal	Estimated municipal component (Mt)	Assumed proportion classified as municipal	Estimated municipal component (Mt)
Animal & vegetable wastes	90%	0.49	90%	0.526
Chemical wastes	0%	0.00	Not mentioned	
Common sludges	0%	0.00	Not mentioned	
Discarded equipment	100%	0.15	100%	0.165
Healthcare wastes	10%	0.03	10%	0.03
Metallic wastes	80%	0.21	80%	0.277
Mineral wastes	10%	0.02	10%	0.02
Non-metallic wastes	90%	2.6	90%	2.807
Total		3.5		3.8

A.2.9 The GLA has still not provided the modelling it undertook to prepare the London Environment Strategy, despite being requested by the Applicant on several occasions and so it is not possible to see where these differences in the GLA's calculations arise.

A.2.10 From the information that has been provided by the GLA, which has been responded to by the Applicant within this Appendix and the **Applicant's responses to Written Representations (8.02.14, REP3-022)** it is clear that the GLA's assessment is flawed in that it: fails to apply its own policy fairly and reasonably; relies on out of date information; and does not calculate accurately. The GLA's approach underestimates the future level of need for residual waste treatment capacity in London, an approach that will fail to deliver the infrastructure that is sought by policy.

A.3 Modelling of Municipal Waste Processed via Energy from Waste

A.3.1 At paragraph 8 of Appendix 2a, the GLA confirms that it has focussed on the municipal waste stream in its forecasting future arisings and projections for energy from waste requirements. The Applicant has never seen this modelling and to date has been unable to replicate it from the information that is in the public domain.

A.3.2 At paragraph 9 of Appendix 2a, the GLA confirms that this approach has informed the projections detailed in Tables 2 and 3 of the GLA's Written Representation (see **REP2-071**) and the capacity need forecasts in Table 3 of the GLA's Local Impact Report (see **REP2-075**).

A.3.3 As was discussed at the Issue Specific Hearing held on 5 June 2019 and reported at **Paragraph 12.5** of the **Applicant's Oral Summary from the Issue Specific Hearing on Environmental Matters (8.02.19, REP3-027) and Paragraphs 2.1.139** to **2.1.141** of the **Applicant's Response to Written Representations (8.02.014, REP3-022)** the projections set out in Table 2 of the GLA's Written Representation (see **REP2-071**) are not clear to the Applicant and do not feature in any previous document prepared by the GLA and cannot be replicated by the Applicant.

A.3.4 Table 3 of the GLA's Written Representation (see **REP2-071**) does not provide any projections at all; it simply presents a summary comparison of waste modelling assumptions**.** **Paragraph 1.1.142** of the **Applicant's Response to Written Representations (8.02.014, REP3-022)** confirms that the Applicant has tried to replicate the GLA's data using its stated assumptions but cannot.

A.3.5 At paragraph 11 of Appendix 2a, the GLA concludes that:

'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).'*

A.3.6 The GLA is correct to say that the Applicant's assessment (the **LWSA, Annex A of The Project and Its Benefits Report, 7.2, APP-103**) considers 100% of C&I waste to be combustible. Not least because it has relied on the forecast arisings presented in the adopted and draft London Plans, which do not include an assumption on what proportion of waste is combustible; presumably because it was not considered to be relevant in preparing those policy documents. In any event, as set out at **Paragraph 2.1.146** of the **Applicant's Response to Written Representations (8.02.014, REP3-022)** the precise details of the composition of waste is neither relevant nor important. At paragraph 2.5.10, NPS EN-1 identifies that a proportion of the waste stream may be eligible for Renewable Obligations Certificates, but that '*this is not an issue of relevance to the IPC*.' The composition of waste will change over time and it is neither practicable nor reasonable to consider it in detail. What is relevant and important, and is the test set out in NPS EN-3, is consideration '*with reference to the relevant waste strategies and plans, that the proposed waste combustion generating station is in accordance with the waste hierarchy and of appropriate type and scale so as not to prejudice the achievement of local or national waste management targets … .'* This is demonstrated through the **LWSA (7.2, APP-103)** and as further explained at **Section 2** of this Report.

A.3.7 Further, the C&I data relied upon by the GLA is out of date and has been manipulated through modelling that has not been made available. The Applicant's assessment (summarised at **Table 6.1** of the **LWSA (7.2, APP-103)**) consistently shows a need for c.900,000 tonnes of residual waste treatment capacity; even applying the GLA's assumption of only 80% C&I waste being appropriate for combustion, there would remain a need for c,700,000 tonnes of new capacity. This remains higher than the nominal throughput proposed for the Energy Recovery Facility of REP.

A.3.8 That the GLA now also relies on '*a reduction in mass of residual waste due to pre-treatment'* (bullet point b of paragraph 11) is a wholly new point. This has never been raised by the GLA in any previous conversation with the Applicant or any of its policy or strategy documents. Within Appendix 2a, the GLA neither explains nor justifies this assumption. Despite this, the statement is wholly reliant on those new treatment facilities being brought forward to achieve that assumed mass reduction. The Applicant is not able to understand to which such proposals the GLA is referring, or to understand at what point of consenting or construction they are at. In contrast, the REP DCO Application has been submitted, is demonstrably in compliance with policy and will enable London to achieve sustainable self-sufficiency in both energy generation and waste management.

A.3.9 Table 3 of the GLA's Local Impact Report (see **REP2-075**) does indeed present the GLA's EfW infrastructure needs forecasts. As the Applicant responded (at **Paragraph 7.30** of the **Applicant's response to the Local Impact Report by Greater London Authority (8.02.15. REP3-023)**) the Applicant fundamentally disagrees with the GLA's assertion that no new energy recovery capacity is required and, despite requesting it, has had no sight of any of the GLA's modelling in order to understand how such an assertion could be made. Further, the approach promoted by Table 3 of the GLA's Local Impact Report (see **REP2-075**) continues to rely on capacity operating outside of London, which will mean that the policy priority to achieve net self-sufficiency by 2026 is being disadvantaged.

A.3.10 One such example of this can be gained by reference to the Waste Data Interrogator, held by the Environment Agency. **Table A.4** shows that in 2017 nearly 763,000 tonnes of waste, treated by facilities in London to create refuse derived fuel ('RDF'), was sent to a destination overseas, most likely to energy recovery facilities on mainland Europe. This amount of RDF alone is more than the nominal throughput of the ERF; London is missing out on a renewable/low carbon energy source from wastes that have been extensively treated in London.

Table A.4 Waste from facilities in London with destination of overseas, 2017

Operator	LoW 191210 combustible waste (RDF)	LoW 191212 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those in 191210	Total (tonnes)
Biffa Waste Services Ltd	127,031		127,031
Bywaters (1986) Ltd	16,887	5,075	21,962
Mc Grath Brothers (Waste Control) Ltd	144,262		144,262
Powerday Plc	31,284		31,284
Renewi UK Services Ltd	41,283		41,283
Seneca Environmental Solutions Ltd	155,165		155,165
Shanks Waste Management Ltd	51,737		51,737
Suez Recycling &	116,334	22,007	138,341

Operator	LoW 191210 combustible waste (RDF)	LoW 191212 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those in 191210	Total (tonnes)
Recovery South East Ltd			
Veolia ES (UK) Limited	26,212		26,212
Veolia ES Cleanaway (UK) Ltd	20,097		20,097
Veolia ES Southwark Ltd	5,439		5,439
Total (tonnes)	735,732	27,082	**762,815**

Source: Waste Data Interrogator, 2017

A.3.11 By contrast, **Paragraph 2.1.131** etc. of the **Applicant's Response to Written Representations (8.02.014, REP3-022)** confirm that the GLA's assumptions have been incorporated into the Applicant's assessment (the **LWSA (7.2, APP-103)**) and a substantial need for new residual waste treatment capacity remains, especially if London is to achieve its own policy priority of net self-sufficiency.

A.3.12 Paragraphs 9 and 10 of Appendix 2a introduce Table 2 of that document. Paragraph 10 confirms that for the GLA, Table 2 includes a hybridisation of draft London Plan and London Environment Strategy forecast arisings data and the Applicant's Scenario 1. This is compared to the Applicant's Scenario 1 which, as confirmed by the Applicant at the Issue Specific Hearing held on 5 June 2019 and reported at Paragraph 12.3 of the **Applicant's Oral Summaries for the Issue Specific Hearing on Environmental Matters (8.02.19, REP3-027)** represents the minimal expectation of forecast waste arisings.

A.3.13 Reference to Table 2 of Appendix 2a readily identifies several problems within it, primarily in relation to the data presented in the columns headed 'GLA'. These are presented in **Table A.3**.

A.3.14 It is clear that the GLA continues to submit confusing data that is constantly shifting and is not robustly justified. This can be demonstrated by further considering the discrepancy between the GLA forecast for future need and the Applicant's.

A.3.15 The Applicant does not agree with these forecasts, but if the GLA's assumptions are applied in regard to calculated municipal waste, recycling

rates and indigenous capacity gap, then there remains a need for 0.76 million tonnes of new capacity at 2026 and 0.53 million tonnes at 2036 (see row J of **Table A.3**). Comparing these with the Applicant's future forecast of need in Scenario 1 (0.87 at 2026 and 0.66 at 2036) leaves a discrepancy of around 100,000 tonnes at each point. In short, there would be little difference between the GLA and the Applicant, demonstrating the level of reasonableness and robustness deployed throughout the Applicant's assessment.

Table A.3 Review of Table 2 of Appendix 2a

		GLA			
		2026	**2036**	**Applicant's response**	**row**
Waste arisings (Mt)	Household waste	3.3	3.5	Agree, consistent with draft London Plan projections and as used in LWSA	A
	C&I waste total	5.0	5.1		B
	Municipal component of C&I waste	3.8	3.9	3.8 Mt is the total presented at Table 9 of the LES: Evidence Base for 2017. There are no forecasts provided for either 2026 or 2036. The Applicant does not know how the GLA has calculated these forecasts	C
	Municipal waste total	7.1	7.3	The GLA's total for year 2026 is calculated incorrectly and should be 7.3 Mt. The draft London Plan forecasts 3,287,000 tonnes of household waste and 5,012,000 tonnes of C&I waste. 80% of that C&I waste would be 4.0 million tonnes. The GLA's total for year 2036 is calculated incorrectly and should be 7.6 Mt. The draft London Plan forecasts 3,345,000 tonnes of household waste and 5,097,000 tonnes of C&I waste. 80% of that C&I waste would be 4.1 million tonnes. There are no such forecasts provided for either 2026 or 2036 in the LES: Evidence Base. Figure 63 of the LES: Evidence Base reports 6.9 Mt of municipal waste at 2017, with the associated foot note (number 72) stating: *'N.B. given the limitations of available data on municipal business waste streams, these findings involve an element of estimation and are indicative only. 'Other' includes treatment of waste to recover recycles or to prepare a fuel.* ' The GLA is presenting forecasts that have not been presented previously, and which are based on purely indicative data. The management of 'Other' wastes, as calculated by the GLA, requires a further 299,500 tonnes of treatment capacity.	D
Rec	Household waste	46%	50%	The 2026 recycling rates are not readily identifiable within the London Environment Strategy, but	E

		GLA			
		2026	2036	Applicant's response	row
	recycling rate			the Applicant agrees that they are broadly consistent with the assumptions within the London Waste Strategy Assessment	
	Municipal C&I recycling rate	69%	75%		F
	Combined recycling rate	58%	65%		G
Remaining residual waste, capacity and consequent gap (Mt)	Residual waste processible via EfW	2.6	2.3	The GLA's total for 2026 is calculated incorrectly and should be 2.7 Mt[11] The GLA's total for 2036 is calculated incorrectly and should be 2.5 Mt[12] The GLA has introduced a wholly new step in terms of including mass losses occurring through pre-treatment. This requires additional capacity which is currently not operational and the Applicant is not aware of any new proposals. Applying the GLA's assumptions except for mass losses results in the following level of need: • 2026: 3.0 Mt • 2036: 2.8 Mt	H
	Indigenous EfW capacity	2.2	2.2	Agree, no significant difference between the GLA and the Applicant	I
	Resultant indigenous capacity gap	0.42	0.09	The GLA's total for 2026 is calculated incorrectly and should be 0.5 Mt[13] The GLA's total for 2036 is calculated incorrectly and should be 0.3 Mt[14] Applying the GLA's assumptions except for mass losses results in the following level of need: • 2026: 0.8 Mt[15] (125% the nominal throughput of the ERF at REP) • 2036: 0.6 Mt[16] (87% the nominal throughput of the ERF at REP)	J

[11] Recycling 3.3 Mt of household waste at 46% recycles 1.5 Mt tonnes, leaving 1.8 Mt residual household waste. Recycling 4.0Mt of municipal C&I waste at 69% recycles 2.8 Mt, leaving 1.2 Mt residual municipal C&I waste. At 2026, there would be a total of 3.0 Mt residual waste, 10% of which is 0.300 Mt, which would leave 2.7 Mt.

[12] Recycling 3.5 Mt of household waste at 50% recycles 1.75 Mt tonnes, leaving 1.75 Mt residual household waste. Recycling 4.1 Mt of municipal C&I waste at 75% recycles 3.1 Mt, leaving 1.0 Mt residual municipal C&I waste. At 2036, there would be a total of 2.8 Mt residual waste, 10% of which is 0.277 Mt, which would leave 2.5 Mt.

[13] See row H: GLA's total residual waste at 2026 should be 2.7 Mt – 2.2 Mt capacity = 0.5 Mt

[14] See row H: GLA's total residual waste at 2036 should be 2.5 Mt – 2.2 Mt capacity = 0.3 Mt

[15] See row H, 2026: 3.0 Mt – 2.2 Mt = 0.8 Mt

		GLA			
		2026	**2036**	**Applicant's response**	**row**
	Contracted borough exports of residual waste to EfW facilities outside London	0.39	0.39	Agree, full agreement between the GLA and the Applicant	K
	Resultant EfW capacity gap accounting for contracted exports	0.03	-0.30	The GLA's total for 2026 is calculated incorrectly and should be 0.07 Mt The GLA's total for 2036 is calculated incorrectly and should be -0.14 Mt However, these conclusions incorporate the assumptions that only 80% of C&I waste is suitable for combustion and that there will be a further 10% mass loss of residual wastes (neither of which are justified) and does not deliver the Mayor's policy priority to achieve net self-sufficiency	L
	Discrepancy as per indigenous case	0.48	0.27	The GLA's stated discrepancies for both years are incorrect. The correct calculated discrepancy between the GLA's calculated level of need (0.46 Mt, see row J) and the Applicant's (0.87 Mt), applying all the GLA's assumptions for 2026 should be 0.41 Mt The correct calculated discrepancy between the GLA's calculated level of need (0.25 Mt, see row J) and the Applicant's (0.66 Mt), applying all the GLA's assumptions for 2036 should be 0.41 Mt	M

[16] See row H, 2036: 2.8 Mt – 2.2 Mt = 0.6 Mt

A.3.16 Paragraph 14 of Appendix 2a sets out a number of other considerations that the GLA considers to be relevant. These are addressed in turn below:

a. *'Applicant scenarios 2a, 3b and 4 are said to account for 'updated LACW' …'*

- This is true and is explained at **paragraphs 4.2.1 to 4.23** of the **London Waste Strategy Assessment, Annex A of The Project and Its Benefits Report (7.2, APP-103).**

b. *'Details provided by the Applicant do not allow full transparency around the basis of Scenarios 2a, 3b and 4 …'*

- **Paragraphs 4.2.1 to 4.23 of the London Waste Strategy Assessment, Annex A of The Project and Its Benefits Report (7.2, APP-103)** explain clearly how and why the household arisings in Scenario 1 have been updated to actual LACW[17] arisings in Scenario 2a. **Paragraphs 4.2.8 to 4.2.10** of the **London Waste Strategy Assessment, Annex A of The Project and Its Benefits Report (7.2, APP-103)** explain clearly how and why the C&I arisings in Scenarios 1 and 2a are amended from Scenario 2b.

c. *'However, it must be emphasised that local authority collected commercial waste is accounted for a part of the projected London Plan C&I waste tonnage. … On this understanding residual waste arisings projected under Scenario 2a are overstated …'*

- **Paragraph 4.2.10** of the **LWSA (7.2, APP-103)** makes clear that the amendment to forecast arisings has been undertaken '*to avoid the potential for double-counting*.' This is an explicit step undertaken in the Applicant's assessment, but does not mean that the Applicant believes double-counting has occurred. The residual waste arisings projected under Scenario 2a are not to be considered an over-statement. They are based on data that incorporates reductions in waste over time (5% by 2031) and which utilises baseline data (the Defra 2009 Survey) which is now over ten years old and is unlikely to reflect current or future C&I waste arisings in London. As is stated at **Paragraph 4.2.14** of the **LWSA (7.2, APP-103)** the requirement for additional, residual waste treatment capacity calculated in Scenario 2b *'is believed* [by the Applicant] *to be a conservative approach*.'

[17] Local Authority Collected Waste

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.'*

- Actually, the amendment is made from Scenario 2b. Scenarios 3b and 4 consider C&I recycling at 80% (see **Tables 4.5** and **4.6** of the **LWSA (7.2, APP-103)**), which wholly achieves a 65% municipal recycling rate. In these Scenarios, there still remains a need for 665,300 tonnes of additional residual waste treatment capacity at 2036 within London. This is before considering any of the residual wastes arising in authorities surrounding London, comprising at least 1.5 million tonnes (see from **Paragraph 2.1.155** of the **Applicant's Response to Written Representations (8.02.014, REP3-022)**).
- As a result of the Applicant updating household waste to actual LACW and consequently subtracting non-household waste from the C&I arisings, the total municipal waste arisings forecast to be generated in London presented by the Applicant in Scenarios 2b, 3a, 3b and 4 are 54,000 less than as forecast within the draft London Plan.
- In any event, the GLA is wrong in this assertion. The London Environment Strategy seeks 50% of LACW, not household waste (policy 7.2.1) and a minimum of 75% C&I waste (policy 7.2.2). The **LWSA (7.2, APP-103)** wholly incorporates the policy and objectives of the London Environment Strategy and consistently demonstrates a substantial remaining level of need for REP.

A.3.17 At paragraph 17 of Appendix 2a, the GLA asserts that it believes the Applicant overstates the potential for future energy recovery requirement. As the Applicant has previously responded (see **Paragraph 7.30** of the **Applicant's response to the Local Impact Report by Greater London Authority (8.02.15, REP3-023)** and **Paragraphs 2.1.122, 2.1.164** and **2.1.169** of the **Applicant's Response to Written Representations (8.02.014, REP3-022)**) the GLA's position is purely assertion; it has not provided any robust evidence to substantiate its position. As has further been demonstrated in this report (responding to the GLA's Appendix 2a) the GLA's modelling (such as it has provided) does not add up and is constantly changing. It is neither reliable nor consistent. It the GLA's figures are properly and consistently applied, the discrepancy between its forecasts and the Applicant's is very little (c.100,000 tonnes).

A.3.18 The Applicant has responded to the GLA's Rebuttal Sheet 4 at **Appendix F** of this report but responds to the summary points made at paragraph 17 of Appendix 2a here.

a. 2 million tonnes of residual waste treatment capacity required across authorities beyond London

- This is addressed from **Paragraph 2.1.155** of the **Applicant's Response to Written Representations (8.02.014, REP3-022)**). The Applicant has updated its review of other authorities' needs and provided full referencing; there remains a demand for at least 1.5 million tonnes.

b. A common finding across different commentators is that where the UK is assumed to comply with Circular Economy recycling targets then the capacity gap becomes minimal

- This is addressed at from **Paragraph 2.1.151** of the **Applicant's Response to Written Representations (8.02.014, REP3-022)**). This conclusion is always recognised as an extreme outcome and reliant upon the UK continuing to export residual wastes to energy recovery facilities located in Europe. Such an approach will not deliver sustainable waste management or self-sufficiency in London.

c. *'The case that a need exists for the REP to manage residual wastes appears to be predicated on the assumed failure of government to meet recycling targets to which Ministers have committed. …'*

A.3.19 As was made clear at the ISH on 5 June 2019 (**Paragraph 12.16** of the **Applicant's Oral Summaries for Issues Specific Hearing on Environmental Matter (8.02.19, REP3-027)**) the GLA is wholly wrong in this position. The **LWSA** assumes that London will succeed in all its key policy priorities, including delivery of the Circular Economy through: achieving 5% reduction in waste by 2031; achieving 65% municipal waste recycling; and being net self-sufficient by 2026. The **LWSA (7.2, APP-103)** demonstrates that there still remains a need for c.900,000 tonnes of additional residual waste treatment capacity at 2036 within London. This is before considering any of the residual wastes arising in authorities surrounding London, comprising at least 1.5 million tonnes (see **from Paragraph 2.1.155** of the **Applicant's Response to Written Representations (8.02.014, REP3-022)**). Strategically placed within the Belvedere Industrial Area and the Bexley Riverside Opportunity Area, and close to the district heating potential offered through the Thamesmead and Abbey Wood Opportunity Area, with river transport availability, REP is optimally located to treat these residual wastes.

d. *'Tolvik capacity gap projections do not appear to recognise large number of EfW projects which have gained planning permission and are actively being pursued by developers'*

- As was made clear at paragraph 1.2.3 of the **LWSA (7.2, APP-103)**, '*existing capacity should be considered as only that which is already operational, or in the very least, for which there is a more than reasonable prospect that it will become operational*.' This approach is entirely consistent with that of NPS EN-1 and is the approach also used by Tolvik.
- In any event, the evidence presented by Tolvik (**Figure 1 at Paragraph 3.4 of Appendix A to the Supplementary Report to the Project and its Benefits Report (7.2.1, REP2-045))** and being criticised by the GLA, is not new or bespoke to that report. The evidence regarding current EfW and EfW in construction is taken from the RWS Annex, a wholly relevant reference source.
- Further, as made clear from **Paragraph 2.1.125** of the **Applicant's Response to Written Representations (8.02.014, REP3-022)**) the National Policy Statements do not set any limitation on energy types or capacity.

Appendix B Applicant's Response to Appendix 3: Performance of the Riverside Energy Park in the context of the NPS Framework

B.1 Correct treatment of REP

B.1.1 Before addressing specific points raised by Eunomia, the Applicant wishes to emphasise, again, that it is not correct to treat the REP ERF, or indeed any other ERF, as purely a power station. The ERF will serve two purposes – it will treat residual waste which would otherwise be sent to landfill, where that waste would produce greenhouse gas emissions, and it will generate electricity and heat, thus displacing other sources of electricity and heat which would produce greenhouse gas emissions. By excluding the landfill displacement element of ERF, Eunomia presents a misleading picture of the carbon benefits of REP. The approach of considering the benefit associated with diversion of waste from landfill is justified in Department for the Environment Farming and Rural Affairs (DEFRA) report titled 'Energy from Waste – A guide to the debate 2014', paragraphs 35 to 46. This approach is also precedented in a substantial number of DCO and planning decisions.

B.1.2 The Applicant's **Carbon Assessment (8.02.08, REP2-059)** correctly considers both purposes and demonstrates that REP would reduce net greenhouse gas emissions by about 137,000 tonnes of CO2-equivalent per year, or about 229 kg CO2e per tonne of waste processed.

B.1.3 The Applicant notes that Eunomia quotes from the carbon assessment but continues to ignore the landfill displacement benefits without explaining why this approach is taken.

B.2 Marginal source of grid electricity

B.2.1 Eunomia notes that the Applicant refers to a DEFRA report from 2014 as the reference for the offset for electricity generation. This is correct. The DEFRA report is the latest report from the Government on Energy from Waste and so is the most appropriate reference.

B.2.2 In paragraph 3, Eunomia characterises the Applicant's case as being that *"gas CCGT should be used specifically as the marginal for Waste from Energy facilities –by implication suggesting that these facilities should deviate from the general application of marginal data as advised by government*." This is essentially correct. The Applicant has explained the reasons for this in **Paragraphs 3.1.16** and **3.1.17** of the **Carbon Assessment (8.02.08, REP2-059)** and in **Paragraphs 4.4.15** to **4.4.23** of **the Applicant's response to Relevant Representations (8.02.03, REP2-054).**

B.2.3 Eunomia states, in paragraph 5, that the Applicant's quote from DEFRA *"does not say that this comparison is relevant specifically for energy from waste*

facilities –the comparison is made with the building of a power station." However, this completely ignores the context of the quote. The Applicant was quoting footnote 29 in DEFRA's document "Energy-from-Waste – A Guide to the Debate". The footnote relates to paragraph 41 from this document (which was included as **Appendix D** to the **Carbon Assessment (8.02.08, REP2-059)**) which states *"The energy from waste plant will generate some energy (in addition to whatever it uses to run itself). This energy substitutes for energy that would otherwise need to be generated by a conventional gas-fired power station[29], thereby saving the fossil carbon dioxide that would have been released by that power station."* Hence, it is clear that the footnote is specifically related to the power displaced by an energy-from-waste plant and so the comparison is specifically relevant.

B.2.4 Eunomia explains its objection to the Applicant's use of CCGT as the comparator in paragraph 8, which is quoted in full below.

> *"More generally, waste plants do not operate like gas CCGT facilities, which can be switched on and off according to demand for power from the grid: the REP will need to continue to treat waste even if there is less demand for the electricity. In this sense, the operation of a waste incineration plant has more in common with a nuclear waste facility, in that both will generate electricity constantly, rather than being able to be switched off and on in response to changing demand like gas plant. 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."*

B.2.5 ERFs are entirely dispatchable and it is relatively straightforward to ramp the thermal input of such facilities up and down within the operational envelope, over relatively short timeframes. Surplus bunker and silo storage facilities are provided for incoming residual waste and for incinerator bottom ash and residues, which, in combination with the Applicant's control of transfer loading station and lighterage operations, means that the waste management provision offered by REP would be highly flexible. It is fair, however, to recognise that ERFs tend to operate on a continuous basis (notwithstanding maintenance outages) due to obligations placed on operators to run facilities efficiently, commercial drivers associated with energy sale revenues / subsidies and to seek retention of R1 status. Of principal importance is that operating ERFs reduces the demand from other power stations. This means that the power required from CCGTs will be reduced and so fewer CCGTs will switch on and off. The effect is that ERFs displace the marginal CCGT plant.

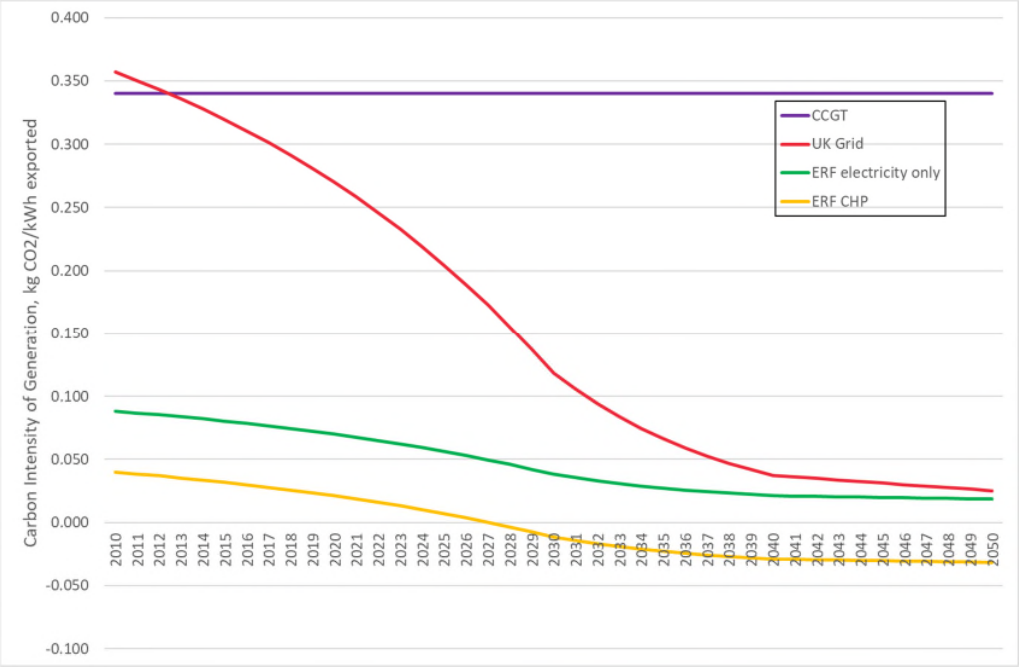
B.3 Comparison with Grid Electricity

B.3.1 As explained earlier, paragraphs 9-15 of Appendix 3 are predicated on treating the ERF as a power station only and calculating a carbon intensity on this basis. This is incorrect as it ignores the benefits of landfill displacement.

B.3.2 It is possible to express the carbon intensity of the power exported by the ERF in terms of kg CO2e/kWh by crediting the ERF with the greenhouse gases displaced by avoiding landfill. This is similar to Eunomia's approach to heat in paragraphs 13-15.

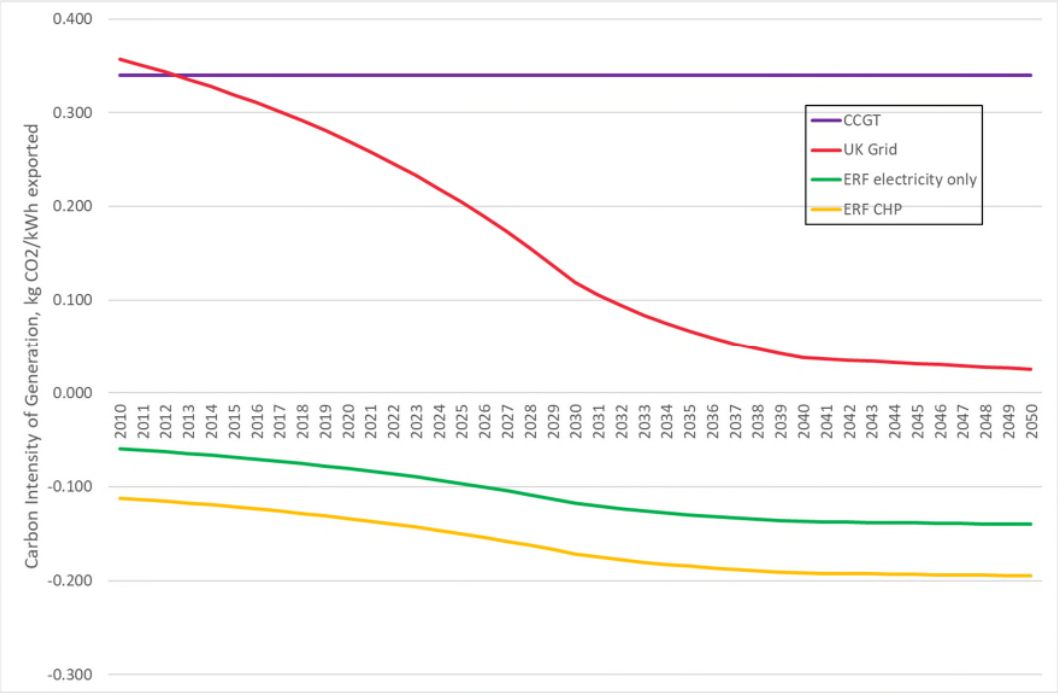
B.3.3 The Applicant can illustrate this using the base case in the **Carbon Assessment (8.02.08, REP2-059**) with RRRF waste. In the electricity only case, the ERF would export 511,200 MWh of power (see **paragraph 3.1.22**). (The Applicant is using exported power as Eunomia has taken account of energy usage by the plant, which the Applicant think's means parasitic electricity). Taking figures from **Table 8** in the **Carbon Assessment (8.02.08, REP2-059**), the ERF would have direct emissions of 265,831 tCO_2e and transport emissions of 3,056 tCO_2e, but would avoid net landfill emissions of 223,792 tCO_2e. Therefore, the net emissions would be 265831+3056-223792 = 45,095 tCO_2e. Therefore, the effective grid intensity in the electricity base case would be 45,095 tCO_2e ÷ 511,200 MWh = 0.08821 tCO_2e /MWh (or $kgCO_2/kWh$). This is very different from Eunomia's claimed figure of about 0.4 $kgCO_2/kWh$.

B.3.4 While the Applicant does not agree that the long run marginal emissions factor is appropriate, for the reasons explained earlier, the Applicant has recalculated the effective carbon intensity of the ERF for each year from 2010 to 2050. The effective carbon intensity varies because the benefit of landfill displacement increases if the grid is decarbonised, as the electricity generated from landfill gas becomes less beneficial. The figure below shows the effective carbon intensity of the ERF in electricity-only mode and in CHP-mode, exporting 13.9 MWth, and compares this with the long run marginal emissions factor, as used by Eunomia.



B.3.5 It can be seen that the REP ERF has a lower effective carbon intensity than the UK Grid in every year until 2050 in electricity-mode. It can also be seen that, in CHP-mode, the REP ERF has an effective negative carbon intensity when taking account of landfill displacement from 2028.

B.3.6 The Applicant has also carried out this calculation for the "future waste" case. As described in **Paragraph 3.1.4 d** of the **Carbon Assessment (8.02.08, REP2-059**), this is based on residual waste following additional source segregation, with 50% of food waste, 50% of plastics and 20% of metals removed from the current waste being delivered to RRRF. The figure below shows that, in this case, the REP ERF has an effective negative carbon intensity in all years.



B.4 Conclusion

B.4.1 Eunomia concludes that REP would have a higher carbon intensity than grid electricity and so cannot be considered to be a low carbon energy facility. This is incorrect because Eunomia does not take account of the wider benefit of REP in avoiding landfill. When this is taken into account, the carbon intensity of power generated by REP is lower than the long run marginal emissions factor preferred by Eunomia.

B.4.2 If heat is exported from REP, the carbon intensity of power generated by REP would be negative when the benefits of avoiding landfill are taken into account. This would also be the case if the waste processed by REP changes as a result of additional source segregation.

Appendix C Applicant's Response to GLA Sheet 1: Applicant's Response to GLA Relevant Representations

Contents

Tables

1 Introduction

1.1.1 **Appendix C** of this Report provides a response to *GLA Sheet 1: Applicant's Response to GLA Relevant Representations* (**REP3-045**) submitted by the Greater London Authority (GLA) at Deadline 3.

1.1.2 GLA (and TfL with respect to transport matters) have raised the following topics within Sheet 1 (**REP3-045**):

- Statement of Common Ground (SOCG);
- Waste Capacity, Need and the Proposed Development's consistency with National Policy;
- CHP/Heat;
- Air Quality; and
- Transport.

1.1.3 The above matters are addressed in order below.

2 Statement of Common Ground

Table C.1: Applicant's Response to SOCG matters raised in GLA's Sheet 1 Submission

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
2.5.3 Throughout the development and post submission of the Application, the Applicant has made continued efforts to engage with the GLA and to develop a SOCG. The Applicant has been unable to reach agreement on a SOCG with the GLA for submission to Deadline 2	The GLA has engaged with the Applicant and last provided comments on a draft SOCG submitted in an email to Peter Brett Associates (working on behalf of the Applicant) on the 17th of May 2019. The GLA acknowledges that the SOCG is an iterative process and will continue to engage with the Applicant. TfL has engaged with the applicant regarding the SoCG during meeting and via email and is currently waiting for an amended draft SoCG to be sent by the applicant.	The Applicant has been requesting a meeting with the GLA since the beginning of June 2019 to progress the SOCG. To date, no date has been confirmed by the GLA. The Applicant and TFL are in active discussions regarding the SOCG. A draft SOCG has been submitted to TFL and the Applicant is awaiting their comments.

3 Waste Capacity, Need and the Proposed Development's consistency with National Policy

Table C.2: Applicant's Response to Waste Capacity, Need and the Proposed Development's Consistency with National Policy matters raised in GLA's Sheet 1 Submission

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
GLA presents no evidence. The Applicant restates its case regarding the need for London, as set out in its London Waste Strategy Assessment (the 'LWSA'), Annex A of The Project and its Benefits Report (the 'PBR') (7.2, APP-103). 2.5.6 The Applicant's LWSA is undertaken using data and policy priorities from the adopted London Plan, the draft London Plan and from the London Environment Strategy. The LWSA concludes that even in the most conservative assessment, using the lowest waste arisings and the aspirational policy expectations regarding waste management, at least one third of the nominal throughput of the capacity of REP (principally the Energy Recovery Facility, the 'ERF') is required to sustainably manage London's residual waste. A more realistic level of need, calculated through using actual waste arisings and applying recycling objectives of the London Environment Strategy, demonstrates that all, if not more of that nominal throughput will be required if London is going to achieve self-sufficiency and diversion from landfill targets. 2.5.7 In addition, the LWSA identifies c.2 million tonnes of residual wastes in from authorities in the South East that should also be diverted from landfill.	The GLA in its Local Impact Report and Written Representation. has made its case and evidence that London, UK, and authorities in the South East needs no further EFW (energy from waste) capacity. The topic is further addressed in the Written Summary of Oral Case, submitted by the GLA for Deadline 3. Further information and clarification on the waste tonnage and EFW capacity projections applied by the GLA compared with those projections provided by the Applicant is set out in the GLA's Written Submission of Oral Case document and Sheet 4: 'GLA Comments on other documents submitted by the Applicant' submitted at Deadline 3.	The Applicant does not agree with the GLA's assertion that no additional residual waste recovery capacity is required in London and the South East. As presented in **Section 2** of this report**,** the Applicant has confirmed that even when the GLA's challenging waste reduction and recycling targets are met, there is still a need for c.900,000 tonnes of additional residual waste recovery infrastructure in London. Beyond London, within the South East there remains a further need for at least 1.5 million tonnes of residual waste treatment capacity (as described in the **Applicant's Responses to Written Representations (8.02.14, REP3-022**) (at **Paragraphs 2.1.155** to **2.1.157** and the associated **Appendix B**) which recognises that the Applicant's source data has been refreshed since the LWSA was prepared as some of the relevant data sources have been updated by Local Authorities.
2.5.9 The GLA's RR then asserts that the ERF would not be in compliance with national policy and will fail to effectively implement the waste hierarchy. Again, the GLA's assertions are not demonstrated, they are simply a position statement. The LWSA has been undertaken using the data and policy aspirations from the development plan documents prepared by the GLA, and has incorporated the London Environment Strategy. Even relying upon those documents, which the Applicant considers to underestimate future waste arisings and overestimate recycling capacity, the LWSA demonstrates that there remains a need for the ERF. In policy terms, the Applicant demonstrates that the ERF will not disadvantage recycling and therefore it is in compliance with Part 3.4 of NPS EN- 1.	The GLA disputes the statement that the Applicant has demonstrated that the ERF will not disadvantage recycling. As set out in the Written Representations, submitted at Deadline 2, the GLA case is that overcapacity of EfW and the absence of any proposals to pre-treat the feedstock will inevitably have a detrimental effect on recycling and therefore effective implementation of the waste hierarchy. The GLA is concerned that the Applicant is placing reliance on the environmental permit (EP) issued by the Environment Agency (EA) to ensure that waste going to the proposes ERF facility will not be recyclable. The extent to which residual municipal waste contains material that could be recycled is not considered a matter for the EP. The Applicant should demonstrate more steps to ensure material managed at the	Commentary on REP's compliance with, and place within, the waste hierarchy is provided in **Section 3** of this report.

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
	ERF is not recyclable. This issue is discussed in more detail in the GLA's Written Submission of Oral Case document and Sheet 4 'GLA Comments on other documents submitted by the Applicant' submitted at Deadline 3.	
2.5.10 Section 4.2 of the PBR (7.2, APP-103) references data gathered by WRAP in its annual Gate Fee Report, which consistently shows that gate fees at recycling facilities and organic waste treatment facilities, which are preferred in the waste hierarchy, are significantly lower than gate fees at energy from waste and landfill facilities. It is fundamental commercial logic that waste producers will seek out the most cost-effective method of waste treatment, consequently preferring recycling over recovery. In practical terms, the Applicant demonstrates that the ERF will not disadvantage recycling.	As stated in the GLA's comments on the Applicant's response to ExA questions, the GLA's view is that recycling is only likely to be the cheaper option for waste producers if source segregation is relatively easy. For certain types of waste, including for some households, source segregation incurs practical difficulties and the need for segregation therefore deters producers from recycling. In the GLA's opinion, recycling is not always the easier option for waste producers and therefore the market (gate fees) cannot be said to govern the behaviour of all waste producers. In determining EfW gate fees, WRAP focuses primarily on average rates paid under local authority contracts. WRAP findings can therefore not be relied upon as an indication of charges for commercial waste and may exceed levels ultimately charged by the Applicant's ERF facility. Moreover, gate fees quoted by WRAP are limited to the cost of disposal (onward management) of waste which has already been collected. WRAP gate fees are thus not 'whole system' costs in that they exclude the cost of collection from residents and commercial premises. Ultimately the costs of both collection and disposal are levied by waste management companies on customers, and this combined cost must be quantified in comparing financial impacts of waste management options. Furthermore, above and beyond collection and disposal charges, the practical issues associated with segregation of recyclables at source also have a cost (actual or time-based) for waste producers, and this additional cost will be taken into account in determining producers' behaviour and waste management option selection. Research by WRAP (Barriers to recycling: A review of evidence since 2008, WRAP 2014) demonstrates four factors which limit recycling behaviour: situational (e.g. lack of space, inconvenient collections), behavioural (e.g.	The Applicant agrees that source segregation will be easier at some premises than others and supports draft London Plan policy SI7/5 that should facilitate provision for improved waste separation and storage across London going into the future. However, it remains the case, as demonstrated by credible evidence prepared by WRAP, that recycling options are cheaper than recovery or disposal. On its website[1], WRAP describes its annual gate fee reports: '*WRAP's annual gate fees report is now in its 11th year. The report summarises a survey which covers gate fees charged to local authorities in the UK for a range of municipal waste recycling, recovery, treatment and disposal options, for the calendar year 2017. Some commercial gate fees are also reported, which have been provided by organic waste treatment facilities.* *The aim of this report is to increase price transparency and, by improving the flow of information, improve efficiency in the waste management market. A lack of market information may reduce a local authority's ability to make informed decisions on waste management options. The publication of indicative gate fee information, such as this, should assist authorities in making better informed decisions regarding waste management options*.' The WRAP annual gate fee reports provide a transparent, independent information source. By contrast, the GLA provides no evidence to support its assertions that these costs '*may exceed levels ultimately charged by the Applicant's ERF facility*'. Transport costs will be generated through a myriad of factors (source segregation systems, collection systems, collection frequency, distance between collection and end destinations, quality of transport network available, type of transport used etc). They are specific to each case and importantly, not driven by the type of waste treatment chosen for those wastes collected. It is simply neither important nor relevant to incorporate these costs in a comparison between waste

[1] http://www.wrap.org.uk/content/gate-fees-report-2018-comparing-costs-waste-treatment-options [11.07.2019@12:01]

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	where waste producers are busy with other tasks), knowledge (i.e. knowing which container to use) and attitude (e.g. not believing in the environmental benefit or taking responsibility). All four of these factors identified by WRAP place recycling at a disadvantage against relative to disposal of residual waste to energy from waste. Even assuming that recycling results in an apparent reduced collection and disposal cost, these factors can implicitly favour EfW. The Applicant's simplistic comparison of waste disposal gate fees is therefore an invalid basis for conclusions on the relative economics of recycling and energy from waste.	treatment options. The GLA has misplaced its reliance on WRAP's 2008 and 2014 research. Firstly, WRAP's research relates to householders' attitudes to recycling and there is no evidence that householders' attitudes can be directly translated to C&I waste producers, which are more likely to be based on compliance and economics. Therefore, the statement that the '*additional cost will be taken into account in determining producers' behaviour and waste management option selection*', is flawed because householders rarely do take into account the cost of waste management options. In addition, the GLA's response oversimplifies the WRAP's research. It is correct that in 2008 WRAP identified the attitudes and barriers to recycling and grouped them under four categories: situational; behavioural; knowledge; and attitude (Barriers to recycling at home; WRAP 2008). The 2014 WRAP report re-validated the four principal types of barriers set out in the 2008 report but went on to identify ten important conceptual developments and refinements, including: • The situational category used in the 2008 Model should be sub-divided into property type and system. • The 2008 WRAP Barriers Model works well for kerbside collections but less well for flats, where a very different and situation-specific adaptation of the model is required. The review identified 12 distinct types of premises loosely termed 'flats', each with a very particular set of barriers to effective use of the recycling service. • The ability of households to learn the effective behaviours is constrained by continuing change – to the systems and requirements and through population mobility. • The private rented sector is the single form of tenure that is expanding in the UK, but there are challenges to encouraging effective recycling behaviour within this tenure group. These developments and refinements are of particular relevance to London and how the local authorities in London design and develop their waste collection services, in order to achieve the local and national recycling targets. Given that REP is focussed on the C&I residual waste market and that any LACW it received would be the residual waste generated

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
		following the achievement of recycling targets, the GLA's arguments related to householders' attitudes to recycling would appear to the Applicant to be irrelevant. Furthermore, the GLA states '*Even assuming that recycling results in an apparent reduced collection and disposal cost, these factors* [situational; behavioural; knowledge; and attitude barriers] *can implicitly favour EfW*'. Cost is not a factor that has been identified as a barrier to householder recycling behaviour; whereas it is more likely to be a factor that influences C&I waste producers (who explicitly see the cost on their balance sheets). Therefore, stating that householders' barriers to recycling would '*implicitly favour EfW*'' would appear hard to justify. If it is to be argued that the factors listed above are a barrier to recycling, then they would implicitly favour all alternatives to recycling, i.e. RDF production, EfW or landfill, not just EfW. REP is designed to minimise the amount of waste which is sent to landfill after recycling targets have been achieved. As demonstrated from **Paragraph 2.1.62** of the **Applicant's Response to Written Representations (8.02.14, REP3-022)** the available data shows that energy recovery works well alongside recycling, providing an integrated network of waste management infrastructure to deliver the waste hierarchy and divert waste from landfill. **Section 3** of this report presents more detail on the key roles played by a number of bodies to deliver the waste hierarchy; REP and the Applicant, are just one element.
2.5.12) has considered the newly published Resources and Waste Strategy, December 2018, and the GLA's RR on this point is not considered further here, except to correct an inconsistency with that RR. The second quote set out in the GLA's RR "significant additional residual waste energy recovery capacity...would not necessarily be needed" is not in the Resources and Waste Strategy, but in the evidence Annex. Further, it is anyway not a complete quote, which reads: "…*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 more than 10%, Municipal Solid Waste (MSW) to landfill by 2035, if a 65% MSW recycling rate is achieved by that same year. The analysis assumes refuse derived fuel (RDF)*	The GLA has reviewed the Applicant's Supplementary Report to the Project and its Benefits Report (7.2.1), including Tolvik Appendix A. the Applicant is predicating need for additional EFW capacity on the Government not achieving targets set in national policy committed to by Ministers. The GLA's response to this document is set out in detail in GLA Sheet 4: 'GLA Comments on other documents submitted by the Applicant' submitted at Deadline 3.	The Applicant assumes that the GLA has meant to refer to '*GLA Sheet 4: 'GLA Comments on other documents submitted by the Applicant' submitted at Deadline 2'* and not Deadline 3. The Applicant's response to '*GLA Sheet 4: 'GLA Comments on other documents submitted by the Applicant' submitted at Deadline 2* is provided within **Appendix E** of this report. Within **Section 2** of this report**,** the Applicant has confirmed that even when the GLA's challenging waste reduction and recycling targets are met, there is still a need for c.900.000 tonnes of additional residual waste recovery infrastructure in London. Beyond London, within the South East there remains a further need for at least 1.5 million tonnes of new residual waste treatment capacity (as described in the **Applicant's Responses to Written Representations (8.02.14, REP3-022)** (at **Paragraphs 2.1.155** to **2.1.157** and the associated **Appendix B**) which recognises that the Applicant's source

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
exports remain at current levels. However, if energy recovery continues to provide a better environmental alternative to landfill, more investment to reduce tonnages of MSW to landfill further would deliver environmental benefits". 2.5.13 The full quote shows the full context of the Government's thinking and that it recognises the environmental benefits of energy from waste. In any event, the policy set out in the Resources and Waste Strategy, is to encourage greater private investment in new, modern, efficient energy recovery plant. As demonstrated in the Supplementary Report to the Project and its Benefits Report (7.2.1), that is exactly what REP is delivering. The final quote set out in the GLA's RR, that "no new EFW capacity would be needed", does not exist. A clear rebuttal from Tolvik Consulting Ltd, the consultancy that prepared that industry report, is provided at Appendix A to the Supplementary Report to the Project and its Benefits Report (7.2.1).	The "*no new EFW capacity is needed*' line referenced in the GLA's Relevant Representation relates to the following paragraph from page 78 of the RWS Evidence Annex: *''Tolvik Consulting Ltd. carried out a similar assessment, bringing together existing reports around Energy from Waste, and concluded that there would not be a gap in incineration capacity in 2030, provided the 65% MSW recycling rate ambition was met (Figure 9 below).''*	data has been refreshed since the LWSA was prepared). As previously stated within **The Supplementary Report to the Project and its Benefits Report (7.2.1, REP2-045)** and within the **Applicant's response the GLA's Relevant Representation (8.02.03; REP2-054)** the quote within the RWS Evidence Annex relating to the need for EfW capacity should be read in full. A clear rebuttal from Tolvik Consulting Ltd, the consultancy that prepared that industry report, is provided at **Appendix A** to the **Supplementary Report to the Project and its Benefits Report (7.2.1; REP2-045**). In short, the GLA both presents, and interprets, the quote from the RWS Evidence Annex inaccurately.

4 CHP/Heat

Table C.3: Applicant's Response to CHP/Heat matters raised in GLA's Sheet 1 Submission

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
2.5.15 Based on the results of the National Heat Map, a total demand of approximately 8,300 GWh/annum exists across a registered 534,734 addresses within 10 km of the Proposed Development. Owing to the high heat density around the REP site, heat networks are deemed by the Mayor of London to provide a competitive solution for supplying heat to buildings and consumers. REP therefore falls within an identified Heat Network Priority Area.	The National Heat Map is a desk-top estimating tool that gives an indication as to whether there is likely to be sufficient heat demand in an area to warrant a more detailed 'on the ground' feasibility study. Important decisions such as a DCO should be informed by a more detailed techno-economic feasibility study that more closely reflects local conditions and constraints and dialogue with the key stakeholders. The level of work carried out in the supplementary CHP report 5.4.1 falls short of that provided for the similar North London Waste Authority (NLWA) DCO that was granted for their new EfW plant at Edmonton.	The Applicant agrees that the National Heat Map provides a high-level indication of heat demand potential. However, the Applicant has gone beyond relying on the outputs of the National Heat Map (and other mapping tools) to inform the exploration of heat export opportunities. The **Combined Heat and Power Assessment** (**5.4, APP-035**) goes on to set out a review of proposed developments in the region (with a developer, Peabody, that has been consulted and expresses its support) (**Section 6.4**), heat consumer screening (**Section 6.5**), development of a heat network profile (**Section 6.6**), proposes a heat network design (**Section 6.7**), considers the need for a back-up heat source (**Section 6.8**), explores additional heat sources in the region (**Section 6.9**) and proposes an indicative pipe route (**Section 6.10**). This approach is entirely appropriate for the DCO application and examination stages, and the scope has been accepted by relevant examining authorities previously. The Applicant's heat demand investigation and economic assessment, presented in its **Combined Heat and Power Assessment (5.4, APP-035)**, are carried out in accordance with the overarching requirements of the Energy Efficiency Directive (EED) 2012/27/EU, which require the results of the "*National Comprehensive Assessment of the Potential for Combined Heat and Power and DH and Cooling in the UK*", December 2015 to be considered. The assessment also sets out clearly, in **Section 3.2** of the **Combined Heat and Power Assessment (5.4, APP-035)**, how Overarching National Policy Statement for Energy (NPS EN-1), and National Planning Statement – Renewable Energy Infrastructure (NPS EN-3) are complied with by considering opportunities for CHP, applying for consent as fully CHP-Enabled, consulting and engaging potential heat consumers and relevant public bodies, and proposing a scheme that would displace conventional heat generation from fossil fuel sources. Similarly, the assessment also sets out clearly, in **Sections 3.3** and **3.4** of the **Combined Heat and Power Assessment (5.4, APP-035)**, how regional and local planning policy is complied with, which substantially encourages the deployment of low carbon and renewable heat networks in response to climate change

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
		and public health. The Applicant has followed detailed Environment Agency (EA) guidance "*CHP Ready Guidance for Combustion and Energy from Waste Power Plants*", February 2013 and "*Draft Article 14 guidance – Cost-benefit assessment for combustion installations*", April 2015 and associated toolsets provided by the EA. National heat mapping tools developed by Department of Energy and Climate Change (DECC) and adopted by Department for Business, Energy and Industrial Strategy (BEIS), and the London Heat Map developed by the GLA have been used to establish heat network potential. Heat demand analysis is compliant with industry best practice and latest Chartered Institution of Building Services Engineers (CIBSE) benchmarks have been adopted. The Applicant therefore considers the assessment is underpinned by and supports the requirements of the national, regional and local policy position in relation to the provision and/or opportunity for CHP. The conclusions of the analysis indicate that there is sufficient heat demand in the region to warrant heat supply from both REP and RRRF, and that synergy opportunities exist in terms of reliability and displacing fossil fuelled back-up plant, if both facilities were to supply heat to a network. The **Combined Heat and Power Supplementary Report (5.4.1, REP2-012)** seeks to clarify the assessment approach and provide an update on the status of progress on heat export strategy and technical development. The underlying analysis contained within the supplementary report is no less rigorous than that submitted previously by the Applicant.
2.5.16 Following screening of consumers which cannot be viably be connected due to local infrastructure, topology and technical incompatibility, two key heat network options have been identified. 2.5.17 Based on a *comparatively* conservative assumption of proposed residential dwellings substantially located to the west of the REP site (those for which proposals were in the public domain at the time of drafting the CHP Assessment (5.4, APP-035), Option 1 would comprise supply of heat to these developments via a low temperature heat network. Based on indicative build out profiles, the total demand was estimated at	With regard to paragraph 2.5.16, the supplementary CHP report reference 5.4.1 did not undertake any viability assessment as the Applicant claim. The report did not set out any detailed methodology or process regarding the screening of local infrastructure, topology or technical incompatibility. The report appeared to make judgements in coming to the conclusions it did. This is not to the standard of the study reports submitted by the NLWA DCO and is not adequate to make informed decisions without further analysis involving stakeholder engagement and more detailed assessment. With regard to paragraph 2.5.17, the Applicant are referring to	The statement made in **Paragraph 2.5.16** of the **Combined Heat and Power Supplementary Report (5.4.1, REP2-012)** is a summary of the work undertaken in **Section 6.5** of the **Combined Heat and Power Assessment (5.4, APP-035).** The Applicant did not consider there to be a need to restate the adopted methodology and justification for its conclusions within the supplementary report. The Applicant can, however, confirm that the methodology adopted within the supplementary report does indeed account for connection viability, including physical constraints imposed by local infrastructure and topology and the technical compatibility of

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114 GWh/annum. Accounting for the anticipated heat demand profile and allowing for some level of thermal storage, peak loads align with the level of heat available from REP. Development ambitions for the region are significantly greater than the conservative numbers proposed in the original assessment. Up to 20,000 dwellings and commercial properties are proposed as part of a Thamesmead regeneration programme. When accounting for the entirety of the proposed development volume, there is a surplus of heat demand which could not be satisfied by REP exclusively.	the data contained in the December 2018 Ramboll draft report Thamesmead and Belvedere Heat Network Feasibility Study: Work Package 1. Since the issue of that report, Peabody provided Ramboll with their revised housing figures and reported the district heating feasibility in their May 2019, Thamesmead and Belvedere Heat Network Feasibility Study: Work Package 2. Work Package 1 estimated an annual heat demand of 139 GWh per year. Work Package 2 revised this to 141 GWh per year based on the revised housing numbers provided by Peabody. Both demand figures are within the RRRF annual heat supply capability of 200 GWh per year. There would be no surplus heat demand for the REP to supply.	potential heat consumers. A comprehensive pursuit of stakeholder engagement has been, and continues to be, undertaken by the Applicant. This has included discussions with local planning authorities (London Borough of Bexley and Royal Borough of Greenwich), the GLA, housing developers (Peabody and Orbit Homes), and local industry partners. The Applicant is proud to have been a founding member of the Bexley District Heating Partnership Board through which a collective ambition to deliver a heat network in the locality has been formed. These discussions have been used to inform the technical design and commercial parameters for the proposed heat network. The Applicant therefore considers that the proposals are robust and represent a realistic and achievable ambition, notwithstanding third party responsibilities for a scheme of this scale. The level of detail adopted within the basis of proposals is fully aligned with relevant Environment Agency (EA) guidance (discussed subsequently) and is appropriate given the development stage of the Proposed Development. As discussed previously, the heat demand investigation and economic assessment are underpinned by relevant policy and carried out in accordance with detailed EA guidance. Qualitative screening, based on engineering judgement, is an entirely valid approach to disregard potential heat consumers which cannot viably be connected, both on technical and economic grounds. Section 4.1 of EA guidance "*CHP Ready Guidance for Combustion and Energy from Waste Power Plants*", February 2013 states "*Accordingly, the appropriate selection of heat loads will likely include a discussion with the Environment Agency and potential heat load recipient(s), and / or a degree of qualitative economic screening.*" As part of the screening exercise, it is clear that the Applicant has prioritised a district heating network which would achieve the relevant thresholds for primary energy savings to be considered high efficiency cogeneration under the EED and to be defined as 'Good Quality' CHP under the Combined Heat and Power Quality Assurance (CHPQA) scheme. The proposed district heating network would also support local policy and development plans by offering associated benefits of minimising heat losses, supporting economic growth and regeneration and providing social benefits. This would be achieved by connecting to new housing developments as part

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		of the Thamesmead regeneration programme. The Applicant disagrees with the statement that there would be no surplus heat demand for REP to supply. Firstly, Ramboll states at paragraph 5 of Section 7, that "*If a more aggressive build-out scenarios are considered for both the Core Scheme and additional sites further afield, in both Bexley and Greenwich, it is likely that a further heat source(s) beyond the existing Cory plant [RRRF] would be required to meet total heat demands.*" Given the Mayor's desire to tackle London's housing crises and the Mayor's own assessment conceding that build out rates need to rapidly increase, the Applicant is surprised that the GLA does not recognise this independent conclusion that heat sources beyond RRRF are likely to be required. Secondly, even a simple review of Ramboll's phase 2 study shows that heat demand projections are grossly under represented. Taking the announced Thamesmead Waterfront development as an example, which comprises 11,500 homes and associated commercial space, the residential units alone could be expected to demand around 10,000 kWh per dwelling per year based on new, well insulated properties. This would equate to 115 GWh at point of use and would not account for heat losses in the distribution pipework from heat source to heat consumer. While it is difficult to ascertain specific figures since they are not provided in tabulated form, in Figure 3 "*Overall heat demand development*" of Ramboll's Phase 2 feasibility study, the total demand reported for Thamesmead developments, including refurbished tower blocks which the Applicant has not included in its proposed scheme, is approximately 23 GWh per year. Thirdly, even if the Applicant were to accept the revised projection of 141 GWh per year, the headline figure is based on a residential led network and is likely to necessitate an additional source of heat on this basis alone. This is because heat demand resulting from residential led networks are highly variable in nature, undergoing both seasonal and diurnal variation due to heat consumption patterns. Even with incorporation of a proportionately high level of thermal storage, surplus heat supply capacity must be allowed for to ensure heat demand can be met at peak times. While Ramboll mentions that thermal stores will be located at the end of the distribution network around the new development areas, no detailed heat network profiling analysis appears to have been

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		undertaken in this regard. Fourthly, Ramboll's Phase 2 feasibility study also recognises that the provision of supplementary heat generation and storage is required to meet year-round demand, which is proposed to comprise a mix of centralised and distributed plant. In paragraph 2 of section 7 of Ramboll's Phase 2 feasibility study, Ramboll reports back-up requirements as a necessity. The benefits of connecting both REP and RRRF to a network would offer the optimum case in terms of low carbon heat year round by reducing and/or eliminating the need for conventional back-up boilers, in addition to displacing air quality impacts in close proximity to residential areas.
2.5.18 Option 2 would comprise connection of businesses located to the south and east of the REP site along Burt's Wharf. An estimated total heat demand of 291 GWh/annum has been identified following screening of buildings which would be unviable to connect. The heat demand requirements of individual businesses, and whether the REP ERF could supply the heat grade required, would need to be explored further. However, there appears to be an abundance of heat demand in relatively close proximity to the REP site, which could be supplied by hot water or steam from REP and offset carbon emissions. 2.5.20 The surplus heat demand captured under Option 2 should not be overlooked. Should heat export to consumers identified within Option 1 not materialise, the Applicant intends to engage further with key businesses identified within the CHP Assessment (5.4, APP-035). Of interest would be Archer Daniels Midland, a rapeseed oil refinery, which is suitably located on the south bank of the River Thames, approximately 1.8 km from the Proposed Development. This site alone has an estimated heat demand of 213 GWh/annum, as specified by BEIS UK CHP Development Map tool.	With regard to paragraph 2.5.18/2.5.19, the GLA comments in 2.5.16 above apply regarding the high-level nature of the analysis carried out in coming to the conclusions it has.	See the Applicant's response to 2.5.16 & 2.5.17 above.
2.5.21 The availability and thermal export capacity of RRRF is broadly equivalent to that of the proposed REP ERF. As discussed in the preceding sections, there is a significant volume of existing and proposed local heat demand which would require heat supply from both REP and RRRF to be satisfied more comprehensively and for the benefits of renewable/low carbon heat provision to be maximised.	The GLA comments in relation to the Applicant's paragraph 2.5.16, set out above, apply regarding the high-level nature of the analysis carried out in coming to the conclusions it has.	See the Applicant's response to 2.5.16 & 2.5.17 above.
2.5.22 The results of Phase 1 of the Thamesmead and	The GLA comment in relation to the Applicant's paragraph	To clarify further, as set out in **Paragraph 3.2.5** of the

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Belvedere study feasibility study, referred to in the GLA's RR, indicate that opportunities exist to connect 15,200 new homes over the next 20 years, assuming a "realistic" scenario, although it has become evident that this level of growth is overly conservative. Attention is drawn to a recent announcement4 that Landlease has been selected as preferred bidder for the 11,500 home Thamesmead Waterfront development, which is being progressed by LBB's development partner for the Thamesmead and Abbey Wood area of the Borough, Peabody. This scheme is not fully accounted for in the Phase 1 feasibility study. Industrial heat demand in the Burt's Wharf area also appears to be under represented, and the study's authors intend to obtain energy consumption data for the largest industrial sites as part of its Phase 2 study. A finalised version of the Phase 2 study is due to be issued imminently.	2.5.17, as set out above, addresses the Thamesmead revised figures. Ramboll have been asked to clarify whether Burt's Wharf has been included in the Belvedere Industrial area, the later having an insignificant demand compared with the former.	**Combined Heat and Power Supplementary Report (5.4.1, REP2-012),** there is a surplus of heat demand which exists at Burt's Wharf. A single heat consumer, Archer Daniels Midland, a rapeseed oil refinery, is suitably located on the south bank of the River Thames, approximately 1.8 km from the Proposed Development. This site alone has an estimated heat demand of 213 GWh/annum, as specified by BEIS UK CHP Development Map tool. With reference to Figure 4 "*Full assessment area heat map*" of Ramboll's Phase 2 feasibility study, it can be seen clearly that the numerous businesses and industrial premises, comprising distribution centres, materials and equipment suppliers, warehousing and storage depots, packaging centres, maintenance depots, food and drink manufacturers are not accounted for at Burt's Wharf. Based on a very simplistic review of Ramboll's phase 2 study, heat demand projections are grossly underrepresented. Taking the announced Thamesmead Waterfront development as an example, which comprises 11,500 homes and associated commercial space, the residential units alone could be expected to demand around 10,000 kWh per dwelling per year based on new, well insulated properties. This would equate to 115 GWh at point of use and would not account for heat losses in the distribution pipework from heat source to heat consumer. While it is difficult to ascertain specific figures since they are not provided in tabulated form, in Figure 3 "*Overall heat demand development*" of Ramboll's Phase 2 feasibility study, the total demand reported for Thamesmead developments, including refurbished tower blocks which the Applicant has not included in its proposed scheme, is approximately 23 GWh per year.
2.5.23 Regarding the GLA's dispute of the projected performance of the proposed Facility against the Mayor's Carbon Intensity Floor (CIF) policy, the Applicant maintains that the Proposed Development would be compliant with the target outlined in the Adopted and Draft London Plans and the London Environment Strategy across all operational scenarios. The Applicant has provided a detailed explanation of the progression of discussions and calculations in respect of CIF performance in the Combined Heat and Power Supplementary Report (5.4.1) and these are repeated below for reference.	The Applicant has yet to provide adequate evidence that the efficiency performance of the ERF will be achieved in order to meet the claimed performances of the three scenarios modelled meeting the CIF. The GLA disputes that the CIF could be met in power-only mode (Scenario 1) because the Applicant's claimed electricity generating efficiency has never been achieved by similar operating plant. This is explained within the GLA's Written Representation, submitted at Deadline 2 (in section WR4). To reinforce the concern's regarding the REP's inability to reduce carbon emissions in power-only mode, the GLA	The Applicant has previously set out, in **Appendix A** and **Paragraphs 1.1.1-1.1.12** of the **Applicant's responses to Written Representations (8.02.14, REP3-022)**, why the efficiency level proposed for REP is entirely plausible, and how this compares to other modern ERFs. The proposed efficiency level, when compared on a consistent basis, is marginally above what is achieved by other modern facilities in the UK and Europe, and is justified by technological advancements within the design, which have been independently verified by Fichtner through thermodynamic modelling. The Eunomia report is flawed because it is predicated on

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
	commissioned Eunomia to carry out further work on carbon emissions based on government (BEIS) data. This approach was to ensure that the ExA would consider the report conclusions within the scope of the application process. The Eunomia report, dated 10 June 19, compares the carbon emissions of the REP in power-only mode against government forecasts for grid carbon intensity. The report determines the carbon impact of the REP electricity displacing grid electricity, based on the Applicant's claimed electricity generating efficiency. The report is appended at Appendix 3 of the Written Submission of Oral Case, submitted for Deadline 3. It concludes that, compared with the marginal generating plant comprising gas-fired combined cycle gas turbine plant, the REP carbon dioxide emissions are higher. Compared with the forecast grid carbon factor in 2021, the assumed operational start date of the REP, the emissions are considerably higher (see graph below). The REP, therefore, does not at any time contribute towards the transition to the low carbon economy in power-only mode.	treating the ERF as a power station only. The ERF will serve two purposes – it will treat residual waste which would otherwise be sent to landfill, where that waste would produce greenhouse gas emissions, and it will generate electricity and heat, thus displacing other sources of electricity and heat which would produce greenhouse gas emissions. By excluding the landfill displacement element of ERF, Eunomia presents a misleading picture of the carbon benefits of REP. As explained in the detailed response to Eunomia's report at **Appendix B** of this report**,** the Applicant has calculated the effective carbon intensity of power from REP in power-only mode by taking account of the benefits of landfill displacement. This shows that REP has a lower carbon intensity than the forecast grid carbon intensity preferred by Eunomia for every year until at least 2050. This confirms that REP contributes to the low carbon economy even in power-only mode, and the contribution would be improved if heat is exported.
2.5.28 Irrespective of the positive results under even the power only (non-CHP) scenario, the Applicant has put in place a number of demonstrable steps in order to realise heat export from REP.	This attempts to show adequate 'demonstrable steps' which is helpful in that it indicates acceptance by The Applicant that the policy is relevant.	The Applicant acknowledges this comment.
2.5.29 The Applicant is making significant steps, at its own cost, in establishing and maintaining momentum in the heat network development process via the Bexley District Heating Partnership Board. The Partnership Board is attended by representatives from the London Borough of Bexley (LBB), the London Borough of Greenwich (LBG), the Greater London Authority (GLA), housing developers Peabody and Orbit Homes, and the Applicant, and was established in 2018 with the ambition of establishing a collective approach to the development of a heat network in the locality. The Applicant has expressed its intention to supply renewable/low carbon heat for residents and commercial developments through the provision of a low temperature heat network.	The steps are however considered inadequate in that they only refer to discussions and an intention to supply; they do not go far enough in demonstrating that the waste is truly residual, a commitment via a Section 106 agreement or similar to deliver the necessary infrastructure or an agreed timeframe (as per Part D of Policy SI8).	The steps taken by the Applicant do not only refer to discussions and an intention to supply. REP is being developed as fully CHP-Enabled from the outset by virtue of installing the necessary on-site heat export infrastructure as part of the proposed construction programme. This approach means that REP would be capable of exporting heat from the commencement of operations and demonstrates clear commitment from the Applicant by exceeding the Environment Agency best available technique (BAT) requirement and going beyond the requirements at section 4.6 of NPS EN-1. As advised orally at the Environmental Matters Issue Specific Hearing on 6 June 2019, the Applicant has revised Requirement 20 of the DCO to address the GLA's concerns. The revisions to the drafting are provided in **dDCO** (with track changes) (**3.1, Rev 2, REP3-004**). The revised drafting is aligned with recent DCO requirements and places obligations on the Applicant to bring forward commercial opportunities for CHP that reasonably exist, establish a working group and maintain accountability to the relevant planning authority. The Applicant also notes that Draft London Plan policy SI8

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
		section 9.8.13 notes specific demonstrable steps required under part D3, including commitments to deliver infrastructure to achieve high energy efficiency by way of "*investment in the development of a heat distribution network to the site boundary, or technology modifications that improve plant efficiency*" and "*the establishment of a working group to progress the agreed steps and monitor and report performance to the consenting authority*", both of which the Applicant is actively delivering. The GLA's point on the residual nature of the waste is discussed separately in **Section 3** of this report.

5 Air Quality

Table C.4: Applicant's Response to Air Quality matters raised in GLA's Sheet 1 Submission

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
2.5.32 The GLA states that the geographical scope and magnitude of the impacts on air quality is not in accordance with the London Plan or the draft London Plan air quality policies. The Applicant is uncertain what is meant by this.	This is further explained within the GLA's LIR and WR, submitted for Deadline 2.	The Applicant has provided a full response to the GLA's Written Representation and Local Impact Report at Deadline 3 of the Examination (see **REP3-022** and **REP3-023**, respectively).
2.5.36 As detailed in the Environmental Permit and Air Quality Note (8.02.06), submitted for Deadline 2, the Applicant is proposing the installation of the NOx abatement technology of Selective Catalytic Reduction (SCR). The proposed SCR will result in significantly lower NOx emissions than were applied in the air quality assessment reported in Chapter 7 Air Quality of the ES (6.1, Rev 1).	The Industrial Emissions Directive does not allow for permits to specify the technology that is used to achieve specific emission limits, so the use of SCR cannot be directly secured through the permit. The SCR is shown on the indicative process diagram for the permit application but there are no plans showing how it will be accommodated within the proposed building envelope. Both the current and draft BREF notes state that the space needed to install and maintain SCR are significant constraints on their use as BAT. Without assurance that the unit can be accommodated on site it would therefore be open to the Applicant to argue at a later stage that it is not BAT, particularly if DCO requirements impose restrictions on the size and shape of the building. The Applicant should provide more detail on this point. As the provision of SCR has now formally been offered by the Applicant through its document 8.02.06 Environmental Permit and Air Quality, the Applicant should be asked to demonstrate how the SCR technology would be provided within its Works Plans. The use of SCR usually imposes a parasitic load on the plant as the catalyst requires a relatively high temperature to operate and the flue gas may require re-heating to attain this temperature after it has passed through other treatment equipment. The GLA has noted in the Written Submission of Oral Case document that the emissions limits requested by the Applicant in their permit application are not guaranteed to be imposed by the Environment Agency.	Whilst the Industrial Emissions Directive (IED) may not specify the technology to achieve the emissions, the permit application has been made on the basis of a NO_x emission limit that can only feasibly be achieved by the incorporation of SCR to abate emissions. In granting an EP for REP, the EA will apply a series of 'Operating Techniques' which the EA will require REP to be operated in accordance with. Typically, the Operating Techniques are identified from various statements within the EP application where the Applicant has set out how it is proposed to 'operate' a facility – this is consistent with the approach currently applied by the EA for the adjacent RRRF. Within the EP application for REP, the Applicant has provided a number of operating techniques which are specifically related to the operation of SCR. Furthermore, the Applicant has submitted an EP application which identifies that they consider the application of SCR as representing BAT for the abatement of emissions of nitrogen dioxide from the ERF. In granting the EP, the Applicant expects that the EA will include these Operating Techniques within the EP, using a standard permit condition which requires the Applicant to apply the Operating Techniques described in specific sections of the application. Therefore, unless the Applicant installs the proposed SCR system, the design of REP will not be in accordance with the Operating Techniques as set out in the EP Application and the Applicant will be in breach of its EP. The DCO application has been based on a Rochdale Envelope building configuration which is larger than the stepped building configuration on which the permit application has been based. The stepped building configuration incorporates SCR and therefore this can be accommodated within the Rochdale Envelope building configuration on which the DCO application has been based. The Applicant agrees that the use of SCR would necessitate reheating of flue gases to ensure high NOx abatement efficacy

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
		across the catalyst. This would be achieved by means of steam extraction from the turbine or auxiliary fuelled burners. Surplus heat within the flue gases downstream of the SCR catalyst would be recovered into the steam-water cycle via a condensate pre-heater to maximise efficiency. The Applicant disagrees with the GLA's assertions in the **Applicant's Responses to Written Representations (8.02.14, REP3-022)** that the EA will apply an 'emissions limit at the upper bound of ranges set out in the BREF notes, or at the level set out in the Industrial Emissions Directive (IED) where the BREF note is not yet adopted' within the EP for REP. The IED Article 75 Committee signed-off the Draft Waste Incineration BREF (herein referred to as the WI BREF), on 17 June 2019. Therefore, there are no further review steps for the WI BREF and it will be published in the Official Journal in due course. Once it has been published, the requirements of the Final WI BREF will apply to all waste incineration plants within Europe, such as the ERF, within four years. In addition, EA has advised that the impact of the UK's withdrawal, or otherwise, from the EU (Brexit) will have no impact on the implementation of WI BREF, which will be transposed into UK law regardless. DEFRA has published guidance, titled '*Industrial Emissions Directive EPR Guidance on Part A installations'* dated February 2013. The DEFRA guidance sets out how the regulatory authorities should apply emission limits for facilities which are regulated in accordance with the requirements of the Environmental Permitting Regulations, such as the ERF and the anaerobic digestion facility at REP. The section of the DEFRA guidance titled 'Setting ELVs where Article 15(3) applies', paragraph 4.35, states, 'The requirements of Article 15(3) apply only where BAT Conclusions have (i) been adopted and published by the European Commission under Articles 13(5) and (6), and (ii) those Conclusions contain BAT-associated emission levels. In such cases, the regulator should then set ELVs such that, under normal operating conditions, emissions do not exceed the relevant BAT-AEL. Where the BAT-AELs are expressed as a range, the ELV should be set on the basis of the top of the relevant BAT-AEL range – that is to say, at the highest associated emission level - unless the installation is demonstrably capable of compliance with a substantially lower ELV, based on the BAT proposed by the operator, or exceptional environmental considerations compel a tighter ELV.' [Emphasis applied]. For

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
		the avoidance of doubt, the WI BREF contains BAT-associated emission levels as referenced in this quote. Section 4.5.4.4 of the WI BREF, dated December 2018, states '*The application of SCR generally results in lower NO_x emissions than other techniques'*. Therefore, the WI BREF acknowledges that 'lower' emission limits can be achieved with the application of SCR. Taking this into consideration, it is expected when granting an EP for REP that the EA will apply an emission limit which is lower than the upper range of the WI BREF. As the Applicant has committed to an emission limit of 75 mg/Nm^3 for the ERF, it is considered reasonable for the EA to apply this as an 'upper range' emission limit when granting an EP for REP.
2.5.37 The Applicant understands the general sensitivity of air quality impacts within Greater London. Taking this into consideration, within the Environmental Permit (EP) application, the Applicant has proposed to commit and invest in the 'lowest' emission limit within the EP application for any conventional ERF within London or the UK. This will be secured in the EP.	The BAT-ELV range for NOx *with* SCR is 50 – 120 mg/m3 so 75 mg/m3 does not in fact represent the lowest potentially available. In any event assessments are usually predicated on a worst-case emission limit rather than a best case. In this instance a true worst-case would be to model to the current emission limits in the Industrial Emissions Directive (for instance the IED limit for NOx is 200 mg/m3 as opposed to 120 mg/m3 in the draft BREF). However, the GLA accepts that the draft BREF is likely to be adopted in time for the new emission limits to apply to this development. It should be noted that this point applies only to NOx emissions. Emissions of other substances, including metals, would not be further reduced by the use of SCR and appear to have been modelled at the upper bound of expected emissions limits or measured performance of similar plant.	The Applicant agrees that the Draft WI BREF presents a BAT-ELV range of 50 – 120 mg/Nm^3 for abatement of NO_x from new ERFs. A balance must be drawn between the limit imposed, the level that can be accepted by funders in terms of proven technology, space constraints and the cost of delivering the specified limit. It should be noted that at the proposed limit of 75 mg/Nm^3 the ERF at REP would be the lowest NO_x emitter of any conventional ERF currently consented or operating within the UK. There is no obligation to propose an emission limit at the bottom of the BAT-ELV range and the impacts at the proposed limit of 75mg/Nm^3 have been demonstrated to be 'negligible' at sensitive receptors, as reported in **Chapter 7 – Air Quality** of the **ES** (**6.1, REP2-019**) (even with emissions of 120mg/Nm^3) and clarified within the **Environmental Permit and Air Quality Note** (**8.02.06, REP2-057**). The air quality modelling approach adopted is consistent for all emissions in that the proposed emission limit (being the maximum which could be expected to arise), assuming the ERF is operated on a continuous basis at maximum throughput is assumed, being a reasonable worst-case scenario. Furthermore, it is not true to suggest that the worst case is 200mg/Nm^3 as the ERF would not be able to operate with such an emission limit as the draft BREF will be adopted before the installation comes into operation (as accepted by the GLA). In terms of the other pollutants, as noted in **Table 7.17** of **Chapter 7 – Air Quality** of the **ES** (**6.1, REP2-019**), where the draft BREF note imposes tighter emission limits

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
		than the IED the tighter emission limits have been used.

6 Transport

Table C.5: Applicant's Response to Transport matters raised in GLA's Sheet 1 Submission

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
3.11.11 Operational controls on waste by road are now proposed (max of 90 HGV movements each way) - see proposed new DCO requirement	TfL and GLA have reviewed new draft Requirement 14 provided by the Applicant at Deadline 2. Commentary is provided within Sheet 4 'GLA commentary on other documents prepared by the Applicant for Deadline 2'.	The Applicant has provided comments on the GLA's and TfL's commentary on Requirement 14 of the dDCO in **Appendix F** of this report.
3.11.13 – 3.11.24 Construction phase impacts on A2016/A206 Corridor - The Applicant has prepared two additional technical notes that reflect the decision to route the Electrical Connection along the A2016/A206 (appended to The Applicant Response to RRs)	TfL consider that it is likely that the construction of the Electrical Connection will result in disruption to road users, including buses run by Transport for London. The applicant has conceded this in their TA as well as Technical Note 13. The route for the Electrical Connection was only recently determined. The Applicant has provided more information in the form of Technical Notes for 'Deadline 2' on 20 May 2019. In these Technical Notes, the applicant indicates that the impact of the Electrical Connection would not be significant on most of the road network based on the theoretical capacity of a dual carriageway road as set out in the DMRB (which would be 3,200 vehicles in each direction and the current number of vehicles on much of the network is closer to 1,300 per vehicles). TfL notes that this is a theoretical maximum capacity and that the road network is constrained mostly by the capacity of the junctions along the route, not by the links themselves. The Applicant states that there are some impacts, most clearly at the Erith Roundabout and James Watt Way junction. TfL think that it is likely that impacts will also occur at other junctions, given that loss of an arm or even a lane on a junction, which is likely to be the case as part of the Electrical Connection construction, would have impacts on this road network which TfL understands is currently already busy, especially during the peak hours. Now that the route has been chosen, TfL has set out a list of likely pinch points, for which additional assessment is expected should the construction of the Electrical Connection require an arm or lane closure at these junctions. These junctions are set out below in this document. The additional assessment will need to focus on impact of construction on bus services: what will the additional delay be at these junctions and will bus diversions or frequency increases be required?	The Applicant, through discussions with UKPN, has taken a balanced view on the most suitable routeing for the Electrical Connection and has concluded that the lesser impact (including considerations of all Environmental impacts and construction challenges) would be for the Electrical Connection to follow the line of the A2016/A206 corridor. The supplementary evidence is provided at **Appendix F** and **G** of the **Applicant's responses to Relevant Representations (8.02.03, REP2-054)** considers the operation of the A2016/A206 road network within the London Borough of Bexley and the possible implications on the capacity of the network. It is acknowledged by the Applicant that the construction of the Electrical Connection would have a temporary impact on the operation of parts of the network, particularly during peak traffic periods. It is concluded within **Chapter 6 Transport** of the **ES (6.1, REP2-017)** that the resultant residual effects, following mitigation through a CTMP secured by Requirement 13 of the **dDCO (3.1, Rev2, REP3-003),** would be no greater than Minor Adverse and as such would be Not Significant. That mitigation includes, importantly, the commitment to limit on-site workforce parking to 275 parking spaces and for the standard weekday construction period to be between 07:00-19:00 (Mon.-Fri.) such that the large majority of workers would commute outside of the network peak periods. At Paragraph 86 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**, it is stated that "*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*". The mitigation measures proposed in the **Outline CoCP (7.5,**

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
	Bus routes affected include the 99, 180, 229, 401, and 428	**REP3-012)** and the **Outline CTMP (6.3, REP3-010)** (to be secured by Requirements 11 and Requirement 13 of the **dDCO (3.1, Rev 2, REP3-003)** would reduce the temporary effects on the road network of the construction of the Electrical Connection, as far as is reasonably and proportionately practicable. The Applicant, therefore, does not propose to undertake further assessment of the operation of the network and the operation of local buses. The Applicant continues to engage with TfL and Arriva London buses to seek ways to minimise the effects on local bus service operations during the construction of the Electrical Connection and to establish an appropriate and proportional method by which to anticipate the magnitude of those effects. That temporary traffic management mitigation and construction management process would reflect the emerging information surrounding the alignment of the Electrical Connection, further to advice from the preferred Electrical Connection contractor. Matters being considered are the estimated timescales for construction at key road crossings and along the bus service corridors; locations where the cable route could run remote from the main bus routes; and points along the Electrical Connection where the route would have a lesser impact on traffic flow by following the carriageway with a lower traffic volume (typically the southbound carriageway). The Applicant agrees with the anticipated points of interface between the Electrical Connection and local bus services, within the London Borough of Bexley, as set out at Appendix 4, Figure 3 of the **GLA's Post Hearing Written Submission of Oral Case (REP3-038)**. The Applicant is also collaborating with and discussing with LBB, TfL and Arriva London buses the engineering challenges which have informed the selection of the route – such as underground structures and existing Statutory Undertakers' equipment. Those challenges will influence the alignment of the Electrical Connection, within the order limits, and the broader considerations required when determining the most suitable corridor for this element of the Nationally Significant Infrastructure Project. The emerging detail and methodology will be captured within an update to the **Outline CTMP (6.3, REP3-010)** and submitted to the Examining Authority in due course. The Applicant does not consider that it is necessary to amend the wording of **Requirement 13**, as submitted at Deadline 3 within

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
		the **dDCO (3.1, Rev2, REP3-003)**.
3.11.16 Parking - following discussion with TfL, The Applicant has reduced on construction phase site parking by 50% and amended the proposed hours of working	The applicant is now proposing reducing the maximum amount of construction parking from 550 to 275 spaces, which means 25% of their workforce would drive. This would be from month 9 to month 22 (13 months) before and after there would be fewer construction workers required on-site and fewer parking spaces provided. Their construction workforce workday will be a single shift 12h workday from 07:00-19:00 with people arriving between 06:00-07:00 and departing after 19:00. This would take their construction workforce trips out of the peak, reducing the impact on the network. This has been secured in the Construction Traffic Management Plan. The CTMP and Construction Worker Travel Plans, secured through DCO, will set out how staff are brought to site and at that stage TfL will determine if the measures are acceptable	The Applicant notes the GLA's and TfL's comments on construction parking and, confirms, that Requirement 13 of the **dDCO (3.1, Rev 2, REP3-003)** has been adjusted to reflect the cap on parking spaces of 275 spaces within the Main Temporary Construction Compound. The revised wording for the Requirement includes for TfL to be a consultee to the CTMP, at which time a system of monitoring and management during the construction of the associated works can be agreed. The **Outline CTMP (6.3, REP3-010)** submitted at Deadline 3, identifies the broad timescales for the construction period for REP and the Electrical Connection. The final CTMP, secured through Requirement 13 of the **dDCO (3.1, Rev 2, REP3-003)** will set out the programme for the associated works and detail the expected workforce profiles and the parking provision to accompany that profile. Paragraphs 5.3.1 and 5.3.4 of the **Outline CTMP (6.3, REP3-010)** confirms that a maximum of 275 spaces will be provides and that the final numbers within the 275 space cap for the parking area would be confirmed within the final agreed CTMP. Section 10.7 of the **Outline CTMP (6.3, REP3-010)** includes a framework for a Construction Workforce Travel Plan – including management of working hours and methods of commuting to the worksite. That framework would be refined within the final CTMP, secured through Requirement 13 of the **dDCO (3.1, Rev 2, REP3-003).**
3.11.23 The Applicant proposes further mitigation in revised Outline CTMP for Erith Roundabout	The Applicant proposes specific routing/construction around Erith roundabout to reduce impact of construction as much as they see possible. 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. Based on this, the junction should be modelled with this impact to show the likely effect on queueing and time delay. Assessing the time delay 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	The Applicant has responded to this matter in the response to **Paragraphs 3.11.13 – 3.11.24** above.

Applicant's Comment	GLA/TfL Comment/Action	Applicant's Response to GLA/TFL's Comment/Action
	affect all main junctions along its route if arm/road closures are required, which the Applicant has not ruled out at this time. Therefore, as set out in the Written Submission of Oral Case document, TfL would seek additional assessment of several highlighted junctions once the detailed construction routing (including the location/necessity of lane and road closures) is set. This assessment would need to be included in the CTMPs for each of these sections. ▪ A2016/Eastern way/Yarnton Way/Clydesdale Way ▪ Horse roundabout ▪ Erith Roundabout (or Fish Roundabout) ▪ James Watt Way/A206 junction ▪ A2016/Colyers Lane junction ▪ A206/Bridge Road junction ▪ A206 Northend Road/Parkside Avenue/A2000 Perry Street/Wyatt Road roundabout ▪ A206 Thames Road/Thomas Road/Howbury Lane/A206 roundabout ▪ A206 Thames Road/B2186 Crayford Way roundabout It may be that through choosing a specific routing of the Electrical Connection or timing of the works that the impacts on the junctions listed could be minimised to the point that they are negligible. However, at this stage this cannot be determined as full details regarding the construction of the Electrical Connection are not available.	

Appendix D: Applicant's Response to GLA Sheet 2: GLA Commentary on Applicant's Response to ExA's First Written Questions

Contents

Tables

1 Introduction

1.1.1 **Appendix D** of this report provides a response to *GLA Sheet 2: GLA Commentary on Applicant's Response to ExA's First Written Questions* (**REP3-043**) submitted by the Greater London Authority (GLA) at Deadline 3.

1.1.2 GLA (and TfL with respect to transport matters) have provided comments on the following ExA First Written Questions within Sheet 2 (**REP3-043**):

- General and Cross-Topic: ExA Questions 1.0.1, 1.0.3, 1.0.11, 1.0.12, 1.0.14 and 1.0.15;
- Air Quality and Emissions: ExA Questions 2.0.1, 2.0.4, 2.0.10 and 2.0.11;
- Biodiversity: ExA Questions 3.0.8 and 3.0.16;
- Transport and Traffic: ExA Questions 6.0.1 and 6.0.2; and
- Draft Development Consent Order: ExA Question 7.0.9.

1.1.3 The above matters are addressed in order below.

2 ExA Written Question Reference – Q1.0.1

2.1.1 Written Question Q1.0.1 states:

"The proposed capacity of the Energy Recovery Facility (ERF) appears to be in the region of 95MW and as such would qualify as a Nationally Significant Infrastructure Project (NSIP). Please consider including the maximum capacity of the ERF both in terms of MW electrical output and tonnes of waste input in the draft DCO or provide an explanation as to why the capacity should not be included."

Table D.1: Applicant's Response to GLA/TfL Comments on ExA Written Question 1.0.1

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Extract: 1.1.3 It is not appropriate to refer to the maximum MW electrical output of the generating station (which collectively comprises the Energy Recovery Facility (ERF), anaerobic digestion facility, solar photovoltaic installation and battery storage, being the integrated Riverside Energy Park (REP)), as this could change over time as technology becomes more efficient. The Development Consent Order, if granted, should not prevent the Applicant from maintaining REP by replacing parts that ultimately result in REP's electrical output and/or thermal efficiency increasing. 1.1.5 Regarding the maximum tonnes of waste throughput, again it is not appropriate to limit this through a requirement on the dDCO. The actual waste throughput will vary over time depending on the calorific value of the waste itself and the operational availability of the ERF 1.1.6 This is because the REP ERF will have a maximum thermal input that it can process at any given time via the components installed in the plant. The thermal input of waste is governed by a number of factors, not just the tonnage. Therefore, if the calorific value of the waste is higher, then the REP ERF will process a lower waste throughput and vice versa. It is the thermal input of the REP ERF, rather than the waste throughput, which is important in assessing the REP ERF's operating effects. A tonnage restriction would not be an effective mitigation measure, which is why specific requirements controlling those areas which would influence the operating effects of the ERF are included in the dDCO. In acknowledgement of this, at Deadline 2 the Applicant has submitted a revised dDCO which includes a requirement restricting the number of heavy commercial vehicles delivering	**Waste:** The GLA considers a tonnage cap on the ERF is necessary to get certainty on the volume of waste to be managed and the impacts of bringing waste in and out of the facility. The GLA understands that the EA will issue a maximum tonnage licence in issuing a permit. It is unhelpful that the Applicant has only recently submitted its EP application and therefore the outcome of the permitting process is currently unknown and likely to be unresolved at the close of the Examination period**.** Whilst the Secretary of State should not duplicate the relevant environmental regulatory regime, including maximum capacity in the draft DCO would not do so; rather, importantly, it would ensure the integrity of the EIA process. The North London Heat and Power Generating Station Order was granted by the Secretary of State with restrictions on both power and throughput, indicating that it is not always the case that such restrictions are set solely via the permitting route1 and there is precedent for doing so. In the absence of a tonnage cap on REP capacity, the GLA would wish to ensure that matters such as capacity of the transport system to transfer waste to the REP by river, including use of existing transfer stations, would be assessed if there was a future proposal to increase throughout beyond that modelled and assessed in the EIA. In the absence of any such assessment there could be unacceptable consequences that extend beyond the boundary of the site. The EA's responsibility when considering future applications to vary the EP would not necessarily extend to all potential consequences in the same way as EIA. The Applicant's proposed DCO requirement with regard to a cap on road imports is referred to below at 6.0.2. However, the restriction on road vehicle movements would not function	**Waste:** The Applicant set out its position in respect of whether it is appropriate for an annual cap on the tonnage of waste to be processed at REP in its response to Q.1.0.in the **Applicant's responses to ExA First Written Questions** (**8.2.04; REP2-055**) and in the **Oral Summary for the Issue Specific Hearing on the draft Development Consent Order** (**8.02.20, REP3-028**). Nothing in GLA/TFL comments changes that position. Indeed, the GLA/TfL comment says that a tonnage cap is needed to understand the 'impacts of bringing waste in and out of the facility'. This is precisely the Applicant's point. It is not appropriate to impose a limit on the tonnage of waste – which would be an arbitrary figure, rather it is appropriate to control the environmental impacts at an acceptable level. Therefore, by way of example, a limit on movement of Heavy Commercial Vehicles is appropriate - to ensure that the environmental impacts are acceptable. A limit on the tonnage of waste that can be processed per annum does not achieve this. As stated in **Section 2.2** of the **Environmental Permit and Air Quality Note** (**8.02.06, REP2-057**), the Applicant made the decision to 'parallel track' the DCO and EP applications in line with good practice, and in agreement with the EA. The EP application was acknowledged as received by the EA on 17 December 2018. The EP application was subsequently confirmed as being Duly Made on 5 February 2019. The application is currently going through the determination process with the EA. REP will not be able to receive and process waste until an EP has been granted and relevant pre-operational conditions have been discharged. LBB has also made submissions which refer to other development consent orders that include limits on tonnage of waste that can be processed per annum. The Applicant

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
waste to the ERF. Emissions levels are not included in the dDCO as emissions will be controlled by the Environmental Permit and monitored by the Environment Agency. As guidance makes clear, and indeed as paragraph 4.10.3 of NPS EN-1 states, the Development Consent Order should "not duplicate" another consenting regime. *1.1.7 In addition, NPS EN-1 at paragraph 4.10.5 states that the Environmental Permitting regime also incorporates operational waste management requirements for certain activities which could include a restriction on tonnage should the Environment Agency consider it appropriate when assessing the Environmental Permit application. The Development Consent Order should not seek to impose operational waste management restrictions when this area is clearly the remit of the Environmental Permitting regime, as is made clear in NPS EN-1.*	in any way as a cap or restriction in the operational capacity of the plant as the Applicant has stated that the majority of waste input would come in by River. **Air Quality:** For the purposes of modelling the impact of the REP on air quality the Environmental Statement uses an emissions rate (g/s) for each of the pollutants of concern. This is a sensible approach as the impact on air quality is related to the total amount of pollutant emitted over time. By contrast the emissions limits that can be set via an environmental permit are expressed in terms of an allowable concentration of pollutants (mg/m3). In order to translate the concentration limit into an emission rate the air quality assessment had to assume certain operational parameters for the plant, including the rate at which air is expelled from the stack. In turn these operational parameters are related to the size and throughput of the plant. Without a limit of some kind on the operational capacity of the plant it is not possible to be certain that the predicted impacts on air quality will not exceed those stated in the environmental statement. *The Applicant has noted that the environmental permit may impose a tonnage restriction. However, permits can be varied over time and it is quite possible that any tonnage restriction in the permit could be raised at a later date. This is an important consideration for the ExA as, in the above situation, the REP could have adverse effects beyond those assessed*	responds fully on this point in the **Applicant's Response to London Borough of Bexley Deadline 3 Submissions (8.02.35).** The Applicant has submitted a **Navigational Risk Assessment (Appendix B.2** to **Chapter 6 Transport** of the **ES (6.3, APP-067)** as part of the evidence base for the Application. The **Navigational Risk Assessment (6.3, APP-067)** assesses three scenarios where all of the waste throughput is transported to REP by river. The assessment concludes that there are no residual adverse significant effects on the operation of the river. **Air Quality:** It is correct that the emission rates have been calculated from the volumetric flowrate from the ERF multiplied by the pollutant concentration. The volumetric flowrate is calculated based on the maximum mechanical throughput of the ERF and is therefore the maximum quantity of waste which the ERF is designed to process. The emission limits are assumed to apply 100% of the time without any allowance for downtime. In addition, in order for the installation to comply with the emission limits there would need to be headroom below the emission limits during normal operation. For these reasons, the emissions that have been included in the modelling are considered maximum emission rates. Whilst it is true that permits can be varied, for this to occur a new air quality risk assessment would have to be undertaken and submitted to the Environment Agency for their approval. A variation in the permit would only be granted if the Environment Agency were confident that no environmental harm would result. Ultimately therefore, the permitting process will ensure that no environmental harm will be caused by the emissions from the installation.

3 ExA Written Question Reference – Q1.0.3

3.1.1 Written Question Q1.0.3 states:

"The capacities for the proposed solar panels, anaerobic digestion system and battery storage are not specified in detail but appear to be below the NSIP threshold of 50MW. Please clarify the proposed capacity for each of these elements and provide an explanation as to why they are included as part of the NSIP."

Table D.2: Applicant's Response to GLA/TfL Comments on ExA Written Question 1.0.3

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Full response: 1.3.2 Riverside Energy Park (REP) presents a range of complementary and integrated technologies which are designed to operate together, maximise efficient operation and together mitigate environmental effects, including the potential for: ▪ heat from the Energy Recovery Facility (ERF) to support the Anaerobic Digestion process; ▪ digestate drying using heat from the ERF; ▪ combustion of potential odours from the Anaerobic Digestion facility in the ERF; ▪ Solar Photovoltaic Panels providing back up power to the ERF; ▪ Battery Storage providing resilience both on and off site; and ▪ maximisation of solar gain by the location of the solar panels on top of the stepped roof design. 1.3.3 As can be seen from the above, all generating elements of REP are intrinsically linked, and provide support, to each other. All of these elements are, therefore, part of the NSIP and together will have a generating capacity in excess of 50 MW. In addition, all generating elements of REP will be controlled by the same control room and will be connected to the same cables to transmit electricity to Littlebrook substation.	The GLA considers that the Applicant's response raises an important further point. The Applicant presents helpful potential synergies between the proposed REP infrastructure, but the GLA does not consider these to be co-dependent on each other fully. As far as the GLA is aware, the Applicant would be able to construct each of the constituent parts of the proposed REP (with the exception of the battery storage) independently. The GLA considers that the Applicant's response does not demonstrate a clear and strong enough commitment to deliver all the non-ERF infrastructure and the benefits associated with such co-location. The GLA would like to see specific measures secured to ensure that the linkages and their benefits will materialise. Without these further measures being secured the benefits of the scheme are overstated.	As per the Applicant's response to **Q1.0.3** in the **Applicant's responses to ExA First Written Questions (8.02.04, REP2-055)**, the Applicant confirms that all generating elements of REP are intrinsically linked both in terms of processing and where appropriate, delivered within one building. Consequently, the Applicant does not consider that the commitment requested is justified or appropriate.

4 ExA Written Question Reference – Q1.0.11

4.1.1 Written Question Q1.0.11 states:

"Paragraph 3.3.37 of the ES refers to bottom ash from the incinerator (IBA) being transported off-site by barge. Please consider including a requirement to this effect in the draft DCO."

Table D.3: Applicant's Response to GLA/TfL Comments on ExA Written Question 1.0.11

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Full response: 1.11.2 The Applicant is content to include a new requirement in the draft Development Consent Order (3.1; APP-014) (dDCO) that the incinerator bottom ash (IBA) from the REP ERF will be transported off-site by barge under normal operating conditions. This requirement would not apply in the event of a jetty outage. 1.11.3 This amendment is reflected in a new requirement in Schedule 2 to the dDCO (3.1, Rev 1) submitted at Deadline 2.	The revised draft DCO includes a requirement 14(5) to this effect. However, the definition of jetty outage remains unacceptably wide. In addition, the GLA cannot support the current drafting if it allows any potential surplus trips pursuant to the existing RRRF planning permissions to be counted towards the proposed REP cap. It is noted that the Applicant committed to removing this sharing of surplus at the Issue Specific Hearing on 6th June; however, this also needs to be reflected in the drafting of the DCO. The GLA also awaits confirmation that the cumulative vehicle movements in the event of a jetty outage from both RRRF and REP have been assessed as required, as discussed at the Issue Specific Hearing on the 6th June and within the GLA's Post Hearing Written Submission of Oral Case document, submitted for Deadline 3.	As per the **Applicant's response to the Local Impact Report by Greater London Authority (8.02.15, REP3-023)**, the Applicant confirmed that Requirement 14 of **Rev 1** of the **dDCO** (**3.1, REP2-006**), places a daily restriction on the number of heavy commercial vehicles delivering waste to the ERF, being 90 in and 90 out per day; save in the event of a jetty outage. The Applicant has updated Requirement 14 to also apply to the Anaerobic Digestion facility and remove the ability to use any surplus road transport movements from the existing RRRF facility. Further it has amended the definition of jetty outage so that a jetty outage only now occurs once the jetty has been unavailable for a period of 48 hours. These amendments are made in the **dDCO (3.1, Rev 2, REP3-003)** submitted at Deadline 3. Following queries raised at the Issue Specific Hearing on the dDCO (ISH2) held on 06 June 2019, the Applicant has produced a technical note – **Temporary Jetty Outage Review (8.02.31, REP3-036)**. The technical note provides a summary of the movement of heavy commercial vehicles (HCVs) for the likely transport effects arising from REP and RRRF operating simultaneously at maximum capacity under a temporary jetty outage scenario (i.e 100% by road). **Section 5** of the **Temporary Jetty Outage Review (8.02.31, REP3-036)** concludes that the increased vehicle movements generated by the simultaneous operation of REP and RRRF at full capacity during a temporary jetty outage is judged as Not Significant.

5 ExA Written Question Reference – Q1.0.12

5.1.1 Written Question Q1.0.12 states:

"Paragraph 3.3.41 of the ES sets out options for the use of biogas from the anaerobic digester. Please explain how these have been taken into account in the ES and set out how any infrastructure associated with the use of this biogas has been included in the proposed development."

Table D.4: Applicant's Response to GLA/TfL Comments on ExA Written Question 1.0.12

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Extract: 1.12.2 Paragraph 3.3.41 of Chapter 3 Project and Site Description of the ES (6.1, Rev 1) states that the biogas resulting from the Anaerobic Digestion process would be passed through a gas-upgrading and filtering system suitable for the production of Compressed Natural Gas (CNG) and/or for injection into a local gas network. CNG can be used as a fuel for vehicles, including through converting onsite vehicles (which shuttle waste containers within the site). CNG would be the preferred option if feasible and viable. However, if a CNG option is not progressed, then REP would incorporate a Combined Heat and Power (CHP) engine which would use biogas to generate electricity and heat. The additional heat and energy could be used to support the Anaerobic Digestion process or provide additional energy export from REP. 1.12.3 Plate 3.12 in Chapter 3 Project and Site Description of the ES (6.1, Rev 1) discusses the infrastructure associated with the use of biogas. This includes both a gas storage tank and Combined Heat and Power (CHP) infrastructure which would be required for either combustion of biogas in a CHP engine or storage of biogas for use as a fuel for on-site vehicles. Work number 1B(x) in Schedule 1 of the draft Development Consent Order (3.1, Rev 1 1) identifies the gas storage and upgrading equipment and Work number 1B(viii) in Schedule 1 of the draft Development Consent Order (3.1, Rev 1 1) identifies the CHP infrastructure.	The Applicant makes no comment on providing commitments or exploring use of gas. The rest of the Applicant's response (other than the extract quoted here) refers to assessment of environmental effects of the biogas options. 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. The downside of using biogas for CHP rather than in vehicles or for injection into the grid is not only that energy would be wasted in the conversion process, but also that emissions from the AD plant would be greater. The GLA firmly believes that the REP should not use any biogas for the purpose of power generation with or without heat offtake. The GLA considers that the use of biogas in an on-site combustion process, such as power generation or CHP, would give rise to the polluting emissions the Mayor is trying to prevent in the draft London Plan. It would be a more effective use of the biogas resource to inject it into the grid so it can be used elsewhere in the country to help decarbonise some high value-adding industrial process.	The Applicant agrees that injection of biogas to the gas grid, or upgrade to vehicle fuel are the preferred options, as set out in **Paragraph 3.3.41** of **Chapter 3 – Project and Site Description** of the **ES (6.1, REP2-013).** However, the Applicant is aware that there may be obstacles to the preferred option, principally (in the case of injection to grid) whether there is capacity in the local gas network to facilitate biogas injection, engineering of a gas delivery pipeline and securing of relevant (off-site) consents for the installation. In the case of upgrade of biogas to compressed natural gas (CNG) vehicle fuel, there would be a need to establish a market for the sale of vehicle fuel and secure associated licenses, and/or upgrade the waste delivery vehicle fleet to operate on this fuel source, which is outside of the Applicant's control. The Applicant has therefore allowed for an option to utilise biogas to generate electricity and heat using CHP engines, and has committed to installing a selective catalytic reduction (SCR) abatement system to achieve a negligible impact on human health exposure and insignificant impact on biodiversity. This approach and associated modelling is set out in the **Anaerobic Digestion Facility Emissions Mitigation Note (8.02.42).** **Chapter 7- Air Quality** of the **ES (6.1, REP2-019**) has been prepared on the basis that biogas will be burnt in a gas engine on site to create electricity and this is considered the worst-case scenario, as exporting gas to the grid or using bio gas in on site vehicles will result in less emissions to air than the scenario assessed**.** It is worth noting that the worst-case scenario assessed identifies negligible impacts that do not result in significant adverse effects and therefore there is no justification to require the Applicant to consider alternative use of biogas. The GLA's assertion that biogas use in vehicles or injection into the gas network is preferred over onsite combustion due to less energy wastage and higher anaerobic digestion facility

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
		emissions is misleading. Any of the biogas utilisation options identified would undergo conversion losses during refinement, transport and by final consumers, whether that be in an internal combustion engine (if used in a vehicle) or in a domestic boiler or other process (if injected into the gas network). Indeed, there is a strong argument that losses would be greater (relative to CHP engine combustion) due to the need to upgrade the biogas to CNG, compress it to around 250 bar and cool it to produce a suitable vehicle fuel. Biogas injection to the gas network would require the biogas to be transported to remote consumers using compressors which consume energy. Similarly, regarding emissions resulting from biogas utilisation, combustion within a CHP engine would be regulated via REP's permit to limits specified within the Medium Combustion Plant Directive (MCPD). Akin to the ERF, the Applicant is seeking to impose more stringent NOx emission limits than the limits specified by legislation and this scenario has been robustly tested within the DCO process, via **Chapter 7 – Air Quality** of the **ES (6.1, REP2-019)** and clarified within the **Anaerobic Digestion Facility Emissions Mitigation Note (8.02.42**). This note concludes that under the onsite CHP engine combustion scenario, impacts on human health exposure are negligible and impacts on biodiversity are insignificant. The impact of the lower NO_x emissions is addressed in the **Anaerobic Digestion Facility Emissions Mitigation Note (8.02.42)** where the impact of emissions from burning the biogas in a CHP engine is demonstrated to be negligible. Further, the Applicant will consider the inclusion in the dDCO to be submitted at Deadline 5, a requirement for the provision of abatement of the CHP engine of the Anaerobic Digestion Facility. The Applicant considers that the production of electricity and heat from a low carbon and renewable source is a high value adding process, and this view is shared by Government as set out in Overarching National Policy Statement for Energy (NPS EN-1).

6 ExA Written Question Reference – Q1.0.14

6.1.1 Written Question Q1.0.14 states:

"Paragraph 3.3.66 of the ES refers to the installation of district Heating (DH) pipes. Please explain how the potential environmental impacts resulting from the construction of the DH network have been considered in the ES?"

Table D.5: Applicant's Response to GLA/TfL Comments on ExA Written Question 1.0.14

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Extract: 1.14.8 It is acknowledged that any future supply of waste heat (e.g. to district heat network scheme for a local residential area) could give rise to potential effects on the local environment. The assessment of this is reported in the cumulative assessment discussed at Paragraphs 7.10.5, 8.10.4, 9.10.19, 10.10.17, 11.10.9, 12.10.3, 13.10.4 and 14.10.7 of Chapters 7 – 14 of the ES (6.1). However, until the end users are identified, the routing of the heat network cannot be identified. Such work can only come later. 1.14.9 Further, such development would be subject to a separate planning application which, depending on its scale, would be subject to a requirement to undertake an environmental impact assessment. Such assessment would take into account REP either as part of its baseline or its cumulative assessment. The ExA can therefore be confident that the environmental effects of the further infrastructure required for the installation of any district heating scheme will be assessed as part of any future planning application.	The construction of these district heating pipe routes would likely have an impact on the operation of the highway network, similar to the construction of the Electrical Connection and therefore TfL would expect the planning application for the district heating pipes to provide details on the impacts of the route on buses and other road users and propose appropriate measures to mitigate this impact.	The assessment of environmental effects would be carried out in accordance with the appropriate planning processes at the time of application. Those processes are anticipated to include the assessment of transport effects with associated mitigation considered as needed. The method of assessment would include scoping with the affected authorities.

7 ExA Written Question Reference – Q1.0.15

7.1.1 Written Question Q1.0.15 states:

"The ES states that the proposed development will comply with the waste hierarchy by reducing the volume of waste sent to landfill. Please set out what consideration has been given to ensuring that the full use has been taken of opportunities for recycling of waste before it is considered for incineration."

Table D.6: Applicant's Response to GLA/TfL Comments on ExA Written Question 1.0.15

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Extract: 1.15.2 The Energy Recovery Facility (ERF) component of REP will recover residual waste and avoid its disposal to landfill or export overseas. 1.15.3 The Applicant has demonstrated within Table 4.2 of the Project and its Benefits Report (7.3, APP-103) that even if the challenging and aspirational high recycling targets for London are met in full, there is still a need for additional residual waste management infrastructure capacity. 1.15.5 The legislative requirement (through the Waste (England and Wales) Regulations 2011/988) is for waste producers to consider options which are higher in the waste hierarchy and therefore, the requirement for considering recycling components of the waste is placed upon the waste producer rather than the ERF itself. 1.15.6 The Environment Agency (EA) is the competent authority for waste management within England. As the Competent Authority in England for waste management, the EA has a 'duty of care' to ensure that the waste hierarchy is suitably implemented. The EA applies a European Union wide system for the categorisation of wastes, which is referred to as the EWC (European Waste Catalogue) code. The EWC code system provides for the identification of the source of the waste; the hazardous status/nature of the waste; and a description of the waste type. The EP will constrain the types of wastes which can be accepted for processing at the individual waste treatment facilities by limiting the waste types to a specific list of EWC codes. The EA will prohibit the waste treatment facilities from processing wastes other than those stated in the EP.	In response to the Applicant's response at paragraph 1.15.3, the GLA would reiterate its case set out in the WRs that the demonstrated need for waste from London is significantly less than the proposed capacity of the ERF. The GLA rejects the Applicant's description of the GLA's recycling targets as 'challenging and aspirational'. The Mayor's recycling targets are high but eminently achievable, adopted in his London Environment Strategy which has been through a full public consultation. The Mayor has introduced measures to accelerate recycling performance including setting a minimum level of recycling service that all London local authorities need to meet by 2020. The Mayor's recycling targets and strategic approach are in line with national policy and the EU Circular Economy policy package, albeit to be achieved five years earlier as the Mayor wants to demonstrate leadership. In response to Applicant's paragraph 1.15.5, the GLA considers that there is no practical mechanism that requires waste producers to consider options that are higher up the waste hierarchy with limited exceptions such as new development projects (construction sites), where compliance is required through planning conditions. The majority of MSW is collected from residential properties and existing businesses and there is currently no mechanism in place to enforce consideration of options. Local authority collections try to limit the quantity of residual waste collected from households through mechanisms such as fortnightly collection, but enforcement is unpopular and seldom pursued. The Applicant as a waste collector has not provided any evidence or assurances to demonstrate options higher up the waste hierarchy have been considered and applied. With regard to the Applicant's response at paragraph 1.15.6 and 1.15.7, the EA's regulation of incoming waste is primarily aimed at environmental controls of the waste stream and to	The Applicant does not agree with the GLA's assertion that no additional residual waste recovery capacity is required in London and the South East. As presented in **Section 2** of this report, the Applicant has confirmed that even when the GLA's challenging waste reduction and recycling targets are met, there is still a need for c.900,000 tonnes of new residual waste recovery infrastructure in London. Beyond London, within the South East there remains a further need for at least 1.5 million tonnes of new residual waste treatment capacity (as described in the **Applicant's Responses to Written Representations (8.02.14, REP3-022)** (at **Paragraphs 2.1.155** to **2.1.157** and the associated **Appendix B**) which recognises that the Applicant's source data has been refreshed since the LWSA was prepared). The GLA's recycling targets are challenging and aspirational in nature. The Mayor is setting out policy to increase municipal waste recycling within London from 41% in 2016/17 (see page 95 of the London Environment Strategy (LES): Evidence Base) to 65% by 2030 (draft London Plan policy SI7). The GLA will be aware that recycling levels across Local Authority Collected Waste has essentially flat-lined over the past ten years, essentially due to successful implementation of the 'easy win' strategies and budget cuts. The London Environment Strategy sets out some methods to achieve further growth in recycling, but there is little substantive resource being made available, particularly for local authorities that have experienced 10 years of austerity. In any event, as presented in **Sections 2** and **3** of this report**,** REP is just one element of the sustainable waste management infrastructure required in London. As demonstrated at **Section 2.1** of the **Applicant's responses to Written Representations (8.02.14, REP3-022)** and **Sections 4.2** and **4.3** of **The Project and its Benefits Report (7.2, APP-103)**

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
1.15.7 An application for an Environmental Permit (EP) to operate the ERF and Anaerobic Digestion facility at REP was submitted to the EA in December 2018. The Applicant will need to have the EP in place before any waste can be received at the ERF and Anaerobic Digestion facility. If granted, the EP will restrict the types of wastes which can be processed at the ERF and Anaerobic Digestion facility to a series of EWC codes. Therefore, in granting the EP for the ERF and Anaerobic Digestion facility, the EA will only permit the ERF and Anaerobic Digestion facility to process wastes which are suitable for processing in the ERF and Anaerobic Digestion facility, 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. 1.15.8 The duty of care in relation to the appropriate application of EWC codes to wastes is the responsibility of waste producers. In implementing the waste pre-acceptance and waste acceptance procedures the Applicant will undertake its own duty of care investigation into whether the Applicant believes that the appropriate EWC codes has been applied to the waste; and whether it is an acceptable waste stream for REP. If the Applicant believes the waste to be either incorrectly coded and/or unsuitable for processing at REP, the Applicant would not accept the waste and it will be transferred off-site to a suitably licensed waste treatment facility. 1.15.9 In addition to this, there is a significant commercial imperative for waste producers to recycle waste prior to sending it for recovery/ disposal. Waste management follows the most cost-effective solution. As explained within paragraph 4.2.8 of the Project and its Benefits Project and its Benefits Report (7.3, APP-103), the ERF component of REP will not hinder recycling rates as recycling is a cheaper process for waste producers and it has been demonstrated that the median gate fees at material recycling facilities and organic waste treatment facilities (e.g. anaerobic digestion facilities), which are preferred in the waste hierarchy, are significantly lower than gate fees at energy from waste plant and landfill facilities, with	avoid waste movements being 'lost' in transit, i.e. to avoid illegal tipping. The EA through the EP will not give detailed consideration to the content of residual MSW and whether it contains any recyclable material. The Applicant should commit to additional measures through the DCO to ensure waste being managed at the ERF does not contain waste that could otherwise be reused or recycled. Without this the benefits of the REP are overstated. More detail on the role of the EA permit process on this matter is set out in the GLA's Post Hearing Written Submission of Oral Case. The GLA's comment on a pre-treatment requirement to be included in the DCO is set out in Sheet 4, the GLA's commentary on Applicant's other documents (response to document 3.1). 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. With regard to paragraph 1.15.8, these measures relate to the identification and removal of unsuitable or significantly harmful wastes from being incinerated. Recyclable waste exists within the EWC coded waste accepted at an ERF. The Duty of Care measures were not designed, and should not be relied on, to recover materials for recycling from residual waste going to an ERF. With regard to the Applicant's paragraph 1.15.9 which states that recycling is a cheaper process for waste producers, the GLA's view is that recycling is only likely to be the cheaper option for waste producers if source segregation is relatively easy. For certain types of waste, including for some households, source segregation incurs practical difficulties and the need for segregation therefore deters producers from recycling. In the GLA's opinion, recycling is not always the easier option for waste producers and therefore the market (gate fees) cannot be said to govern the behaviour of all waste producers. Further explanation of the practical barriers to recycling is provided in Sheet 4 GLA's Commentary on Applicant's Other Documents (response to document 7.2.1).	REP will work alongside recycling, increased to meet policy expectations, to divert residual wastes from landfill. It is not the role of a waste treatment facility, operating at the end of the life cycle of wastes, to intervene at the early stages of waste management. As confirmed in **Section 3** of this report**,** the Applicant is <u>not</u> the waste collector. **Section 3** of this report confirms the different roles and responsibilities of organisations across London (across England) to share delivery of the waste hierarchy. It is for Local Authorities to determine the waste management services that are appropriate for their area; the Applicant has no role or responsibility in this regard. As confirmed at **Section 3** of this report, REP is just one element of the waste management infrastructure required to manage London's waste sustainably. The GLA gives scant regard to the relevant legislation implementing the waste hierarchy and the Duty of Care provisions. As set out at **Section 3** of this report, Regulation 12(1) of the Waste (England and Wales) Regulations 2011 (as amended) ('the 2011 Regulations') places a legal requirement to '*take all such measures available to it* [the relevant organisation] *as are reasonable in the circumstances to apply the following waste hierarchy as a priority order'.* This is assured through a statutory declaration, made on the relevant Duty of Care Waste Transfer Note, confirming that the duty has been complied with. The 'Waste Duty of Care: A Code of Practice'[1] (summarised at **Section 3** of this report) was prepared by Defra to set out practical guidance on how to meet waste duty of care requirements. Failure to comply with the duty of care is an offence with no upper limit on the courts' power to fine. In some instances, a fixed penalty notice may be issued for failure to comply with the duty of care in place of prosecution. The Code is admissible as evidence in legal proceedings for Section 34(1) offences and its rules must be taken into account where relevant to questions raised in the case. The Duty of Care, and associated legislation, is the Government's key tool for delivery

[1] https://www.gov.uk/government/publications/waste-duty-of-care-code-of-practice/waste-duty-of-care-code-of-practice, [11.07.2019@15:51]

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
the median anaerobic digestion gate fee for England continuing to decline. As such, REP will support the drive to move waste further up the waste hierarchy by preventing residual waste going to landfill. 1.15.10 Finally, as explained in the Operational Waste Statement (6.3, APP-097), the residues (Incinerator Bottom Ash and Air Pollution Control Residue) which are generated by the ERF will be transferred by river or recycling. Therefore, the residual waste processed at the ERF will be subject to further recycling of the residues generated by the ERF.		of the waste hierarchy and is a wholly appropriate system to rely upon. This is especially the case for REP. **Section 3** of this report confirms that REP is a development proposed at the right scale and the right level of the waste hierarchy, diverting residual wastes from landfill and working alongside increased recycling as sought by policy. **Section 3** of this report also confirms the appropriate roles of the Environment Agency and the Environmental Permit in the future regulation of REP. The Applicant's confirmation that a pre-treatment requirement is neither justified nor reasonable is set out in **Section 3** of this report. As is explained at **Section 3 (***Waste Capacity, Need and the Proposed Development's consistency with National Policy)* of **Appendix C** to this report, the GLA's focus on householder behaviour is misplaced. Cost is not a factor that has been identified as a barrier to householder recycling behaviour; whereas it is more likely to be a factor that influences C&I waste producers (who explicitly see the cost on their balance sheets). REP is designed to minimise the amount of waste which is landfilled after recycling targets have been achieved. As demonstrated from **Paragraph 2.1.62** of the **Applicant's Response to Written Representations (8.02.14, REP3-022)** the available data shows that energy recovery works well alongside recycling, providing an integrated network of waste management infrastructure to deliver the waste hierarchy and divert waste from landfill. Further, it is pertinent to note that this analysis includes neither the digestate recovered from the Anaerobic Digestion facility, nor the post-combustion recovery of secondary aggregates, building materials and metals, all of which contribute to the Circular Economy.

8 ExA Written Question Reference – Q2.0.1

8.1.1 Written Question Q2.0.1 states:

"Concern about the impact of the proposed development on Air Quality Management Areas (AQMA) was raised during the consultation stage. Can the Applicant explain the extent to which Air Quality impacts within the Borough of Dartford have been assessed? Can the Applicant also explain whether the Proposed Development is likely to threaten delivery of the measures contained within the AQMA Action Plan."

Table D.7: Applicant's Response to GLA/TfL Comments on ExA Written Question 2.0.1

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Extract: It is considered that air quality impacts within the Borough of Dartford have been adequately assessed and the Proposed Development will have no significant effects on NO2 or PM10 concentrations within the Borough of Dartford AQMAs. As a result, it is considered that the delivery of the measures contained within the AQMA Action Plan will not be threatened	As Dartford is outside the GLA boundary, the GLA have no direct comment on this question. However, the GLA would note that the proposed development is within the Bexley AQMA and will have impacts on air quality in the Havering AQMA. As the REP is an additional source of pollution which cannot be further mitigated or removed as a result of the implementation of Air Quality Action Plans it will inherently be in tension with the aims of local Air Quality Action Plans: even where it does not directly threaten the delivery of specific measures it will by its very nature reduce the scale of any improvements.	As demonstrated in the air quality assessment (**6.1, REP2-019)**, REP has no significant impacts on NO_2 and PM_{10} concentrations within either the Bexley AQMA or Havering AQMA. None of the receptor locations that are potentially impacted by emissions from REP are predicted to have exceedances of the National Air Quality Strategy Objectives for NO_2 or PM_{10} concentrations (see **Appendix C.2- Stack Modelling** of the **ES (6.3, REP2-038**). As there are no predicted exceedances, and Air Quality Action Plans are designed to reduce or remove exceedances, there is no tension between the aims of the Air Quality Action Plans and REP.

9 ExA Written Question Reference – Q2.0.4

9.1.1 Written Question Q2.0.4 states:

"Paragraph 7.9.12 states that the number of trips during construction is not known but that it will not be significant and therefore the impact on air quality will not be significant either. It is noted that this statement is not substantiated, and it is contradicted by the information included in Chapter 6 (transport) which included estimated trips for both workers and material delivery during construction. Given that an estimate of traffic generation during construction for both workers and material delivery is provided in the ES at Chapter 6, can the Applicant explain paragraph 7.9.12 and why the assessment of the effects of construction traffic is not included."

Table D.8: Applicant's Response to GLA/TfL Comments on ExA Written Question 2.0.4

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Information now provided and assessment included in response. Construction traffic will be less than operational traffic assessed in 100% by road scenario	The GLA will expect all vehicles to comply with Euro VI emissions standards, through the CoCP. This requirement should apply whether or not construction commences prior to the implementation of new LEZ standards.	The Applicant's contractors will ensure that their vehicles are compliant with the prevailing emissions standard for the zones in which they are travelling. Due to the specialist nature of the project it is not appropriate to commit to all vehicles powered by Heavy Duty engines being compliant with Euro VI emissions standards, albeit many main suppliers and hauliers now operate vehicle fleets with only this standard of vehicle It will be the responsibility of the supplier/haulier to ensure that their vehicles comply with the prevailing emission standard for the zones in which they are travelling or to pay the fees as required. From 20 October 2020, all Heavy Duty engines travelling to REP will be required to be Euro VI as the London Ultra Low Emission Zone standard is being extended to the Greater London Authority boundary.
Summary: The Applicant has now provided the figures requested and also provided an updated assessment	If the construction movements are fewer than predicted in the "worst case" operational scenario of 100% of deliveries by road, the GLA are content to assume that the impact of construction traffic on air quality is likely to be lower than the modelled impacts. However, the GLA would also note that the concern that the most affected receptor on the transport network was omitted from the air quality modelling is still yet to be addressed. Without this information the GLA are not content that impacts from site traffic, in the worst case, are acceptable.	The GLA has not quoted which is the "*most affected receptor on the transport network*", however the Applicant has assumed, based on a comment in the GLA's Written Representation (see **REP2-071**), that the GLA is referring to the residential property on the east side of the A206 Queens Road at its junction with James Watt Way. In order to assess the potential impact of road traffic at this location modelling of the impact of road traffic emissions has been undertaken. A receptor location at the ground floor level of 16-72, James Watt Way has been used. The ADMS Roads model has been updated to include this receptor (grid reference 551496.6, 177717.5) and the additional road links within 200m as follows: • Queens Road north and south of James Watt Way; • James Watt Way; • Erith High Street;

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
		• Manor Road. In order to simulate queuing traffic at the junction, vehicle speeds were reduced for 50m either side of the junction on the A206 and for the complete length of James Watt Way to the roundabout. This is likely to overpredict concentrations as queuing traffic is unlikely to be continuously present on all links to this extent. The modelled NO_2 concentration at this receptor has been determined using the same approach as presented in the ES (i.e. same Emission Factor Toolkit and verification process) assuming that operational HGV movements are capped as per the requirement in the draft DCO. The predicted 2024 'Do Something' NO_2 concentration at the additional receptor location is 42.0 µg/m^3 with an increase of 0.1 µg/m^3 (0.25% of the objective) when compared to the 2024 'Do Minimum' scenario. The impact at this receptor is therefore described as 'negligible' in accordance with **Table 7.21** of **Chapter 7- Air Quality** of the **ES (6.1, REP2-019).**

10 ExA Written Question Reference – Q2.0.10

10.1.1 Written Question Q2.0.10 states:

"The summary of the air quality dispersion modelling carried out in connection with the ERF stacks is provided at Appendix C2. The Applicant has identified the pollutants which required additional modelling following the guidance included in the Environment Agency air quality risk assessment for environmental permit. Table C2.2.8 in Appendix C2 reports a Minor impact due to predicted annual average nickel concentrations at 7 receptors. Although 2 are within a business park, the remaining 5 are residential areas. The Applicant states that this is not significant. However, it should be noted that at paragraph 7.5.62 (methodology) the Applicant has stated that according to IAQM guidance the assessment of significance should be based on professional judgement taking into account several factors, including the number of properties affected. This information has not been found in the ES. Can the Applicant explain how the IAQM guidance has been applied to determine the significance of the identified minor effects at Table C2.2.8?"

Table D.9: Applicant's Response to GLA/TfL Comments on ExA Written Question 2.0.10

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Extract: 2.10.3 In terms of the number of properties, the judgement is to balance the number of properties that receive different levels of effect across the whole of the study area. Whilst the results at individual receptor locations are representative of the area in which they are located and there will be additional receptors subject to minor effects than those presented in Table C.2.2.8 of Appendix C.2 of the ES (6.3, Rev 1), it is also true that the majority of receptors in the study area will receive negligible impacts. The extent of the potential effects for nickel is illustrated in Figure 7.5 of Chapter 7 Air Quality of the ES (6.2 Rev 1). The receptors with minor adverse effects are located in the residential parts of Rainham closest to REP. Residential areas further away (as illustrated by receptor R22) have negligible impacts which would be the majority of the exposed population in Rainham. As the majority of the population exposure is negligible and the maximum level of exposure is minor, and in particular, there are no breaches of assessment levels with the maximum Predicted Environmental Concentrations (PECs) well below (less than 25%) of the assessment level, then the overall significance is judged to be negligible, which is a not significant effect. The rationale is summarised in Paragraph 7.9.30 of Chapter 7 Air Quality of the ES, (6.1 Rev 1).	The GLA do not agree that the selection of example receptors was representative of the worst case, especially for NO2 where "worst case" receptors on the A206 and A1306 were not considered. In any event the Applicant's answer appears to miss the point: the specific receptors are only a sample of the affected properties. The GLA agree that the applicant should provide some assessment of how widespread the impacts modelled actually are.	The impact at worst case receptors on the A206 is addressed in the response to Q2.0.10 above. In terms of receptors adjacent to the A1306 in Rainham there is no impact of development traffic in this area. Baseline concentrations for residential receptors to the north of the A1306 are represented by Receptor R11, where the modelled road and background concentration is 31.7µg/m^3. Based on the contour plot of annual mean NO_2 concentrations (see **Figure 1c** of **the Applicants Response to the Local Impact Report by London Borough Havering (8.02.18, REP3-026**)) the maximum contribution from REP will be approximately the same as at receptor R7, or approximately 0.4µg/m^3. Taking into account a contribution to the baseline from RRRF and Crossness of approximately 1µg/m^3 (the maximum modelled at any of the receptors), the maximum concentration for residential receptors to the north of the A1306 is approximately 33.1µg/m^3, well below the annual mean NO_2 objective of 40µg/m^3. In accordance with **Table 7.21** of **Chapter 7- Air Quality** of the **ES (6.1, REP2-019),** the impact is described as negligible. The extent of the impacts are shown in the contour plots that accompany the application; predicted concentrations are shown geographically and clearly displays where the modelled impacts actually are.

11 ExA Written Question Reference – Q2.0.11

11.1.1 Written Question Q2.0.11 states:

"The ES does not include an assessment of the ecological features of interest potentially affected by the NOx and Ammonia emission concentrations from the REP neither in the ecology nor air quality chapters. Therefore, it is not possible to determine whether there is significant impact considering the Predicted Environmental Concentrations (PEC) at both sites are high. Can the Applicant explain how potential effects of the predicted NOx and Ammonia concentration generated by the REP on features of interest at Inner Thames Marshes SSSI and Ingrebourne Marshes SSSI have been assessed and whether there would be significant effects at the SSSIs?"

Table D.10: Applicant's Response to GLA/TfL Comments on ExA Written Question 2.0.11

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Full response: An assessment of the potential significance of the impact of NOx and ammonia concentrations has been included and is presented in Chapter 7 Air Quality of the Environmental Statement (ES) (6.1; Rev 1) and in Appendix C.2.3 of Chapter 7 Air Quality of the Environmental Statement (ES) (6.3; Rev 1). 1.1.1 Information on the nitrogen deposition arising from the NOx and ammonia concentrations has been updated from that presented at the time of the original submission in Chapter 7 Air Quality of the ES (6.1, APP-044) in relation to Paragraph 7.9.43, as reported in the Clarifications and Corrections document submitted at Deadline 2. Where the impacts of nitrogen deposition are potentially significant in terms of the air quality criteria, the potential effects on the ecological features of interest are discussed in Chapter 11 Terrestrial Biodiversity of the ES (6.1, Rev 1), with Paragraph 11.9.23 being updated as per the Clarifications and Corrections submitted at Deadline 2. 2.11.3 The significance of effects on air quality from the predicted concentrations is unaltered from the information provided in the original Paragraphs 7.9.42 to 7.9.43 of Chapter 7 Air Quality of the ES (6.1 APP-044). 2.11.4 The significance of the change in nitrogen deposition on the features of interest is discussed in the revised Paragraph 11.9.23 to 11.9.30 of Chapter 11 Terrestrial Biodiversity of the ES (6.1, Rev 1). The updated information presented Chapter 11 Terrestrial Biodiversity of the ES (6.1, Rev 1) has been discussed with Natural England. As confirmed in Paragraph 2.3.18 of the SOCG with Natural England, it is agreed that the predicted effects through nitrogen deposition are Not Significant.	The GLA note Natural England's agreed statement of common ground, indicating that they have no outstanding concerns about nitrate deposition on sensitive sites.	The Applicant welcomes the GLA's acknowledgement of Natural England's agreed Statement of Common Ground and that they have no outstanding concerns about nitrate deposition on sensitive sites.

12 ExA Written Question Reference – Q3.0.8 and 3.0.16

12.1.1 Written Question Q3.0.08 states:

"Paragraph 11.9.5 of the ES states that habitat compensation will be provided off-site. Can the Applicant explain what are the objectives for the delivery of off-site measures, how they will be secured, when and to what extent they will address effects associated with loss of habitat on site and what confidence there is in securing the mitigation in perpetuity? Can the Applicant also provide additional information on how the off-site measures will be monitored and which parameters will be used to ensure the compensation is successful?"

12.1.2 Written Question Q3.0.16 states:

"Please will the Applicant provide information to explain its approach to the identification and delivery of off-site compensation having regard to its biodiversity characteristics and the ability to address the loss of open mosaic habitat? The explanation should also address the timescales associated with the delivery and the proposed mechanism that will secure its implementation and monitoring."

Table D.11: Applicant's Response to GLA/TfL Comments on ExA Written Questions 3.0.8 & 3.0.16

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Answered Together - **Extract:** 3.8.3 The principles for the delivery of the off-site measures (biodiversity off-setting) are set out in Section 5 of the Outline Biodiversity and Landscape Mitigation Strategy (OBLMS) (7.6, APP-107). Biodiversity offsetting principles establish a framework for designing and implementing biodiversity offsets and verifying their success These are expanded further within the Biodiversity Accounting Report (Ref 8.02.09) (submitted at Deadline 2) which sets out the standards required for the off-set delivery, including a commitment to a minimum 10% net gain in biodiversity value, as measured in Biodiversity Units through a biodiversity metric. The Biodiversity Accounting Report (Ref 8.02.09) presents the outcome of metric calculations based on "probable worst-case" and "likely case" impact scenarios.	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.	The Biodiversity Metric has been progressed and is included in the **Biodiversity Accounting Report (8.02.09, REP2-060)** submitted at Deadline 2. This metric has been progressed with the Environment Bank. The Applicant has committed to providing a minimum of 10% biodiversity net gain and has commissioned the Environment Bank to assist with its delivery, which will be secured via **Requirement 5** at **Schedule 2** of the **dDCO** (**3.1, Rev 2**) submitted at Deadline 3. The Biodiversity and Landscape Mitigation Strategy that must be submitted under **Requirement 5** of **Schedule 2** to the **dDCO (3.1, Rev 2, submitted at Deadline 3),** must contain the results of the biodiversity offsetting metric together with the value of off-setting, the nature of such off-setting and the mechanism for securing the off-setting value. The value cannot be determined until the final design of the Proposed Development, through **Requirement 2** of **Schedule 2** to the dDCO, has been approved by LBB. The Biodiversity and Landscape Mitigation Strategy that is submitted under **Requirement 5** must be substantially in accordance with the **Outline Biodiversity and Landscape Mitigation Strategy (7.6, Rev 1, submitted at Deadline 3)**, which contains the minimum 10% net gain commitment. The Applicant has confirmed to LBB, that it is keen for LBB to be involved in the Environment Bank site search process, such that opportunities local to the REP proposals can be considered, and, if suitable, brought forward.

13 ExA Written Question Reference – Q6.0.1

13.1.1 Written Question Q6.0.1 states:

"London Borough of Bexley (LBB), Transport for London (TfL) and others have raised concerns about the volume of traffic that would be generated during construction of the plant and of the electrical connection and during operation of the plant. They have suggested that this has been under-estimated in the ES. What is the Applicant's response to these concerns?"

Table D.12: Applicant's Response to GLA/TfL Comments on ExA Written Question 6.0.1

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Full response: The Applicant has addressed these concerns in the Applicant responses to Relevant Representations document, which responds to the relevant representations made, and has been submitted at Deadline 2. The Examining Authority's attention is drawn, in particular to the Applicant's response to LBB, TfL and Arriva found at RR-088, RR-087 and RR-055 respectively and its themed responses on construction and operational traffic impacts at TR-022 and TR-023	RR-087 referenced by the applicant states that two technical notes have been submitted to supplement the appraisal of impact of the construction phase. The reduction in construction worker parking and commitment to a 07:00-19:00 workday is welcomed by TfL. Full comments are set out in Sheet 1 'Applicant's Response to GLA Relevant Representations'. Paragraph 3.11.14 of the Applicants response states that the Applicant's preferred route of the Electrical Connection follows the SRN and would therefore have a reduced interface with Arriva's bus network. It does include short sections which may affect bus routes along the A2016/A206 corridor but to a much lesser extent than the other previously identified route options. While TfL agree that the proposed route would likely have a lesser impact on buses than the alternative originally included in the application, the 'short sections' mentioned which may affect bus routes are junctions along the SRN which would likely be severely affected by a lane or arm closure necessitated by construction of the Electrical Connection, causing delays to road users including buses. TfL consider that the level of assessment on bus impacts has not been adequately considered in the TNs submitted. The applicant concedes that the impacts are not determined at this stage, stating in paragraph 1.11.9 of the Applicant's response that-: *"…due to the nature of the proposed works, for example the length of road works sections, the extent of these potential effects is not currently fully known."* TN13 does note some likely impacts of the proposals on the Erith Roundabout and James Watt Way, but does not quantify the level of impact and therefore it is impossible for TfL to determine the level of mitigation required. TfL would require the Applicant to propose a realistic assessment to determine	The Applicant has responded to this point at **Section 7.3** of this report and at **Section 6** (*Transpor*t) of **Appendix C** to this report. The Applicant has provided supplementary evidence at Deadline 2 at **Appendices F** and **G** of the **Applicant's responses to Relevant Representations (8.02.03, REP2-054)** which considers the operation of the A2016/A206 road network within the London Borough of Bexley and the possible implications on the capacity of the network. It is acknowledged by the Applicant that the construction of the Electrical Connection would have a temporary impact on the operation of parts of the network, particularly during peak traffic periods. It is concluded within **Chapter 6 Transport** of the **ES (6.1, REP2-017)** that the resultant residual effects, following mitigation through a CTMP secured by Requirement 13 of the **dDCO (3.1, Rev2, REP3-003),** would be no greater than Minor Adverse and as such would be Not Significant. The mitigation measures proposed in the **Outline CoCP (6.3, REP3-010)** and the **Outline CTMP (7.5, REP3-012**) (to be secured by Requirements 11 and Requirement 13 of the **dDCO (3.1, Rev2, REP3-003)** would reduce the temporary effects on the road network of the construction of the Electrical Connection, as far as is reasonably and proportionately practicable. The Applicant, therefore, does not propose to undertake further assessment of the operation of the network and the operation of local buses. The Applicant continues to engage with TfL and Arriva London buses to seek ways to minimise the effects on local bus service operations during the construction of the Electrical Connection and to establish an appropriate and proportional method by which to anticipate the magnitude of those effects. **Paragraph 1.11.9** of the **Applicant's Response to Relevant Representations (8.02.03, REP2-054)** cross refers to **Paragraph 6.9.67** of **Chapter 6 Transport** of the **ES (6.1,**

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
	quantifiable delay to road users so that TfL and bus operators would be able to propose appropriate mitigation in the form of bus frequency improvements, diversions, or construction site-specific arrangements to minimise impact on buses. The applicant has not committed to this level of assessment in their Construction Traffic Management Plan, as noted in Sheet 4 'GLA commentary on other documents prepared by the Applicant for Deadline 2'. Furthermore, the applicant's mitigation within Paragraph 3.11.23 of the Applicants response focusses solely on Erith Roundabout and as stated above multiple other junctions would be affected if a lane or arm closure was required as part of the Electrical Connection construction; the list is included in Sheet 1 'Applicant's Response to GLA Relevant Representations'.	**REP2-017)** and notes that the details of the design of the Electrical Connection are not yet known. The Applicant has now confirmed the route for the Electrical Connection and is working with UKPN, the preferred Electrical Connection contractor, to further refine the proposals. The associated temporary traffic management mitigation and construction management process would reflect the emerging information surrounding the alignment of the Electrical Connection. Matters being considered are the estimated timescales for construction at key road crossings and along the bus service corridors; locations where the cable route could run remote from the main bus routes; and points along the Electrical Connection where the route would have a lesser impact on traffic flow by following the carriageway with a lower traffic volume (typically the southbound carriageway). The detail of the mitigation and methodology will be captured within the final CTMP which will be substantially in accordance with the **Outline CTMP (6.3, REP3-010)** or agreed modifications thereof. The final CTMP would be secured by **Requirement 13**, as submitted at Deadline 3 within the **dDCO (3.1, Rev2, REP3-003)**.

14 ExA Written Question Reference – Q6.0.2

14.1.1 Written Question Q6.0.2 states:

"The ES has considered a worst-case scenario under which all waste is delivered to the site by road. But the Planning Statement states that the use of the river to transport materials to and from the REP will minimise road and vehicle use. Please consider a requirement setting a percentage of waste to be delivered to the site by river during normal operating conditions."

Table D.13: Applicant's Response to GLA/TfL Comments on ExA Written Question 6.0.2

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Full response: Following a review of the relevant representations received, the Applicant recognises that a concern of some local residents and some of the local authorities is the potential impact of the REP ERF on the road network. 6.2.3 Therefore, the Applicant has inserted into the revised draft Development Consent Order (dDCO) (3.1, Rev 1) submitted at Deadline 2, a requirement that restricts the number of heavy commercial vehicles delivering waste to Work Number 1A (the ERF) during the operational period to 90 vehicles in and 90 vehicles out, unless there is a jetty outage.	GLA/TfL welcome that the Applicant has taken a step in the right direction regarding a commitment towards river-based transport to the site. The REP has committed to a 90-vehicle cap, which according to the Transport Assessment submitted is roughly 28% of the ERF's 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 higher as a proportion of total waste. The Applicant has said that the 90-cap is slightly above 25% to provide some flexibility for the site. However, as the site is not expected to generally operate at maximum capacity (as stated by the Applicant at the 5 June 2019 Issue Specific Hearing) it is considered that a hard cap of 25% would already have some contingency built in and more flexibility would therefore not be acceptable in meeting the required London Plan policies. The site's location and easy access to river transfer infrastructure means that the development should strive for maximum freight movements by river. TfL/GLA propose that a cap of 80 vehicles per day which would account for around 25% of the ERF's vehicle movement demand in a 100% by road scenario. This cap should not just apply to vehicles delivering waste to the ERF, but also to vehicles delivering and collecting by products and consumables, including deliveries to/from the AD facility (except where the AD deliveries originate within Bexley). To ensure that the applicant does not simply use larger size HGV (i.e 20 tonnes per vehicle) vehicles to transport a higher proportion of the waste to the site by road or use a lot of small vehicles which would not be subject to the cap; the GLA/TfL would request a provision to be included in the requirement to	The Applicant has responded to this point at **Section 7.1.** of this report. That response concludes that through the adjustment to the wording for Requirement 14, the Applicant commits to a cap on the cumulative number of HCVs visiting REP during the day, under combined standard operations for the ERF and Anaerobic Digestion facility (i.e. 90 HCVs per day), which is lower than that propose by the GLA for the ERF alone (i.e. 80 HCVs per day). The GLA did not propose a cap on the Anaerobic Digestion facility which was assessed at **Chapter 6 Transport** of the **ES (6.1, REP2-017)** to operate at 17 HCVs per day (i.e. a cumulative figure of 80 HCVs + 17 HCVs). The Applicant does not propose further amendments to **Requirement 14** of the **dDCO (3.1, Rev2, REP3-003)**.

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
	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 maximum waste throughput and around 30% of the ERF's nominal scenario waste throughput (655,000 t/pa); therefore, still allowing for some contingency. Further comments on the proposed vehicle cap are included in Sheet 4 'GLA commentary on other documents prepared by the Applicant for Deadline 2'. The GLA would query where these inputs would be sourced from, as waste from central London is expected to be brought to site by river. It is understood that waste from Bexley ie. the local area, is delivered by road to RRRF, and there would be no further requirement to deliver any waste from Bexley by road to REP. The GLA / TfL would not wish to see waste transferred long distances by road if a river-borne solution exists. Therefore, whilst a cap on HGV movements per day would be welcomed as backstop position, the GLA / TfL would only wish to see this level of road delivery if river delivery options have been assessed and are considered less environmentally acceptable. The GLA welcome the Applicant's verbal statement (at the DCO Issue Specific Hearing on 7th June) that the Cap on the existing RRRF would not be shared with the ERF and that they would be considered separately. However, the DCO must also include a suitable requirement so that it is clear which facility the vehicles are coming from or accessing so that the separate caps can be adequately enforced. Therefore, position not accepted at this stage.	

15 ExA Written Question Reference – Q7.0.9

15.1.1 Written Question Q7.0.9 states:

"Schedule 1 does not specify the capacity of any of the elements of the proposed development either in terms of input of waste or energy output. Please consider the inclusion of specific capacity limits in accordance with the levels assessed in the ES."

Table D.14: Applicant's Response to GLA/TfL Comments on ExA Written Question 7.0.9

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Extracts: 7.9.3 It is not appropriate to refer to the maximum MW electrical output of the generating station (which collectively comprises the Energy Recovery Facility (ERF), Anaerobic Digestion facility, solar photovoltaic installation and battery storage, being the integrated Riverside Energy Park (REP)), as this could change over time as technology becomes more efficient. The Development Consent Order, if granted, should not prevent the Applicant from maintaining REP by replacing parts that ultimately result in REP's electrical output and/or thermal efficiency increasing. 7.9.4 In terms of input of waste for the ERF and Anaerobic Digestion facility, it is not appropriate for this to be constrained by the Development Consent Order, as the Order should only impose requirements where they are justified to manage the environmental effects of the authorised development. A tonnage restriction would not be an effective mitigation measure, which is why specific requirements controlling those areas which would influence the operating effects of the ERF and the Anaerobic Digestion facility are included in the dDCO. In acknowledgement of this, at Deadline 2 the Applicant has submitted a revised dDCO (3. 1, Rev 1 1) which includes a requirement restricting the number of heavy commercial vehicles delivering waste to the ERF. 7.9.5 Input of waste for the ERF and the Anaerobic Digestion facility is more appropriately controlled by the Environmental Permit (EP) for REP that will be issued by the Environment Agency (EA). The EP for REP will include a constraint on the 'maximum quantity' of waste feedstocks which can be received for processing at REP on an annual basis. The EP will prohibit the Applicant from processing more waste than the maximum quantity stated. Within the EP application submitted to the EA,	**Waste:** The GLA's comments above in relation to question 1.0.1 above is relevant. A response on this issue is set out in more detail GLA Sheet 4, called GLA commentary on Applicant's other documents. This includes comments on the relationship between the throughput of the plant and the assessed impacts on air quality presented in the Environmental Statement. The GLA fully acknowledges the NPS position that there should be no duplication of controls. However, as detailed in GLA Sheet 4 and Post Hearing Written Submission of Oral Case document, both submitted for Deadline 3, the GLA has consulted with the EA on this matter and received confirmation that the issues of concern to the GLA regarding the control of waste type would not be adequately addressed through the EP. It should be recognised that the primary function of any Environmental Permit is to ensure that "Best Available Techniques" are used to mitigate or prevent pollution. Permits can be varied at any time either by the enforcing agency or upon application of the permit holder. Where restrictions on the size or throughput of the installation are imposed only by the permit any increase in the size of operations could lead to greater environmental impacts than those assumed in making the planning decision on the acceptability or otherwise of the development. The North London Heat and Power Generating Station Order was granted with restrictions on both power and throughput, indicating that it is not always the case that such restrictions are set solely via the permitting route. Notwithstanding these points, the GLA are already concerned that the impact on air quality is unacceptable and the permit alone is not sufficient to	As per the points made by the Applicant in response to Question 1.0.1 above (see **Table D.1),** in order to secure a processing capacity which is higher than that set out in the current EP application, would require the Applicant to apply for a variation to the EP. The application for the EP variation would need to consider all of the relevant environmental assessments associated with any increase in capacity, including the air quality impacts of processing a higher capacity of waste. The EA would only grant a variation to the EP for a higher capacity if they were satisfied that the environmental impact associated with increase capacity would be acceptable and that they consider that the waste processing equipment is capable of processing the increased capacity. LBB has also made submissions which refer to other development consent orders that include limits on tonnage of waste that can be processed per annum. The Applicant responds fully on this point in the **Applicant's response to London Borough of Bexley Deadline 3 submission. (8.02.36)** submitted at Deadline 4. In respect of the comments relating to a restriction on numbers of HCV please refer to the Applicant's response above.

Applicant's Comment	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
the Applicant has stated the maximum throughput of the two proposed waste processing facilities, as follows: ERF – 805,920 tonnes per annum; and Anaerobic Digestion plant – 40,000 tonnes per annum. 7.9.6 During the EP determination process, the EA will review the capacities which are proposed within the EP application. The EA will only grant an EP for a facility which the EA considers is representative of the constraints set out within the EP application. *7.9.12 It should be noted that the Overarching National Policy Statement for Energy (NPS EN-1) recognises that the Environmental Permitting regime will incorporate operational waste management requirements in any permit issued under that regime (paragraph 4.10.5). As paragraph 4.10.3 states, the Secretary of State should not duplicate relevant pollution control and other environmental regulatory regimes. Accordingly, given it is the EA that will monitor the operational waste side of REP, it should be the EP that imposes any restrictions on waste type and quantity. This is logical, given it is not the waste throughput that gives rise to the environmental effects of operating REP, instead specific requirements should be imposed on those areas that would give rise to potential adverse effects.*	secure the pollutant outputs described in the environmental statement as it can be varied at a later date. *The revised draft DCO submitted by the applicant does include a restriction on the number of heavy commercial vehicles. However, as noted in the GLA/TfL commentary provided within Sheet 4 'GLA commentary on other documents prepared by the Applicant for Deadline 2', currently this cap would allow for unlimited movements by smaller vehicles and would allow the applicant to use larger vehicles than the 7t vehicles assessed in the ES to bring a larger proportion of waste in via road. Therefore, the GLA/TfL have proposed amendments in Sheet 4 'GLA commentary on other documents prepared by the Applicant for Deadline 2' including a cap on waste tonnage per annum (tpa) brought in by road of 200,000, approximately 25% of the nominal tpa of the facility.*	

Appendix E Applicant's Response to GLA Sheet 3: GLA Commentary on other parties' Local Impact Reports/Written Representations

Contents

Tables

1 Introduction

1.1.1 **Appendix E** of this document provides a response to *GLA Sheet 3: GLA Commentary on other parties' Local Impact Reports/Written Representations* (**REP3-044**) submitted by the Greater London Authority (GLA) at Deadline 3.

1.1.2 GLA (and Transport for London (TfL) with respect to transport matters) have commented on the following documents within Sheet 3 (**REP3-044**):

- London Borough of Bexley Local Impact Report (**REP2-082**);
- London Borough of Bexley Written Representation (**REP2-080 to REP2-081**);
- London Borough of Havering Local Impact Report (**REP2-084**);
- ELWA Written Representation (**REP2-066 to REP2-068**);
- WRWA Written Representation (**REP2-093 to REP2-103**);
- Rt Hon Jon Cruddas MP Written Representation (**REP2-104**);
- Rt Hon Jon Cruddas MP Petition (**REP2-105**); and
- Rt Hon Theresa Pearce MP (**REP2-106 to REP2-107**).

1.1.3 The above matters are addressed in order below.

2 The Applicant's Response to the GLA's Commentary on London Borough of Bexley's Local Impact Report

2.1 Introduction

2.1.1 London Borough of Bexley (LBB) submitted a Local Impact Report (LIR) at Deadline 2 of the Examination (**REP2-082**). The Applicant has provided its response to the topics raised in LBB's LIR at Deadline 3 of the Examination (**8.02.17, REP3-025**).

2.1.2 GLA (and TfL with respect to transport matters) have provided comments on the following topics raised in LBB's LIR (**REP2-082**) in Sheet 3 of its Deadline 3 submission (**REP3-043**):

- Need for additional waste capacity;
- River transport;
- Combined Heat and Power (CHP);
- Anaerobic Digestion;
- ERF Capacity; and
- Air Quality.

2.1.3 The above topics are addressed in **Tables E.1** to **E.6** below.

2.2 Need for additional waste capacity

Table E.1: The Applicant's Response to GLA's Commentary on LBB LIR (Need)

GLA/TfL Commentary	The Applicant's Response
LBB provides some detailed analysis at paragraph 4.15 of their LIR on the current position with regard to the need for additional waste capacity, as set out in the latest joint waste technical paper prepared by South East London boroughs in support of local plan preparation. It notes that the most recent joint waste report (2017) identifies a surplus of waste capacity from operational waste management facilities through to 2036. LBB also refer to the need position identified in the draft London Plan. LBB comment that "*the accordance of the proposals with these policy elements is uncertain*". GLA concurs with this view, and provides detailed evidence elsewhere, including its LIR and written representations, and also in its Post Hearing Written Submission of Oral Case, submitted at Deadline 3.	The Applicant provided a response to the points made in the LIR submitted by LBB at Deadline 2 (**REP2-082**) regarding the need for additional waste capacity in **Table 1.1** of the **Applicant's response to the Local Impact Report by London Borough Bexley** submitted at Deadline 3 (**8.02.17, REP3-025**). The **Project and Its Benefits Report (7.2, APP-103)**, through the **LWSA** (**Annex A** of the **PBR (7.2, APP-103)**) considers the range of residual wastes available in nearby authorities. The **LWSA** (**Annex A** of the **PBR (7.2, APP-103)**) shows there is approximately two million tonnes of existing residual waste management capacity required across counties close to London (Essex, Hertfordshire, Kent, Norfolk, Surrey and Suffolk) identified through their respective development plan documents. At Deadline 3 of the Examination, the Applicant reviewed the data presented in the **LWSA** (**Annex A** of the **PBR (7.2, APP-103)**) as some of the relevant data sources have been updated. In short, the Applicant considers that there remains at least 1.5 million tonnes of residual waste in nearby local authorities outside of London that should be moved up the waste hierarchy and diverted from landfill (see **Paragraphs 2.1.155** to **2.1.157** and **Appendix B** of **the Applicant's Responses to Written Representations (8.02.14, REP3-022)**). Even if you look at London's need on

GLA/TfL Commentary	The Applicant's Response
	its own, to be self-sufficient there is an immediate capacity issue in London which remains in 2036. All of this data shows that there is a need for the ERF at REP. The Applicant maintains that the Proposed Development is in accordance with both the Adopted London Plan and the draft London Plan. The Applicant's **Planning Statement** (**7.1, APP-102**) reports the assessment of the Proposed Development against national, regional and local planning policy. In addition, NPS EN-1 is clear (at paragraph 3.3.24) that it is *"not the Government's intention to set targets or limits on any new generating infrastructure to be consented in accordance with the energy NPSs. It is not the [Secretary of State's] role to deliver specific amounts of generating capacity for each technology type."* The role of the NPSs, therefore, is to enable those technology types set out in the NPSs to come forward and, if acceptable in planning terms, be consented. It is then for the market to decide how to build those projects (see paragraph 2.2.19 of EN-1). The Applicant provided a response to the points made in the LIR and WR submitted by the GLA at Deadline 2 (**REP2-075** and **REP2-071**) in the **Applicant's response to the Local Impact Report by Greater London Authority** (**8.02.15**, **REP3-023**) and in **Section 2.1** of the **Applicant's Responses to Written Representations** (**8.02.14, REP3-022**), respectively.

GLA/TfL Commentary	The Applicant's Response
	The Applicant notes the matters raised in the GLA's Post Hearing Written Submission of Oral Case (**REP3-038**). The Applicant has provided detailed comments on the matters raised in that document in **Sections 2 – 8** of this report. Matters relating to projections of volume of waste available are addressed in **Section 2** of this report, which demonstrates that even when the waste reduction and recycling policy priorities set out in the draft London Plan are met in full, the Applicant's assessment consistently demonstrates that the remaining level of need for residual waste treatment capacity is c.900,000 tonnes per annum in London, and at least 1.5 million tonnes of residual wastes in nearby local authorities outside of London within the south-east. The Applicant notes that LBB has not raised any further matters relating to policy compliance within its Deadline 3 submission (**REP3-047**).

2.3 River Transport

Table E.2: The Applicant's Response to GLA's Commentary on LBB LIR (River Transport)

GLA/TfL Commentary	The Applicant's Response
LBB states at paragraph 9.11 that "*Unless river transport of waste material is maximised then the development would not accord with Policies CS03 and CS15*", and further information has been requested from the Applicant with regard to the underlying assumptions. As set out in the GLA's Post Hearing Written Submission of Oral Case and the commentary on the Applicant's answers to the ExA's first questions, both submitted for Deadline 3, the GLA consider that the use of the river should be maximised for transportation of wastes to/from the site.	The Applicant provided a response to the points made in the LIR submitted by LBB at Deadline 2 (**REP2-082**) regarding maximising the use of the river in **Table 1.1** of the **Applicant's Response to the Local Impact Report by London Borough Bexley** submitted at Deadline 3 (**8.02.17, REP3-025**). Following discussions with LBB, the Applicant has included Requirement 14 in the **draft Development Consent Order (dDCO)** (**3.1, REP3-003**) to restrict the number of vehicle movements by road to the ERF and Anaerobic Digestion elements of REP. **Chapter 6 Transport** of the **ES (6.1, REP2-017)** has assessed the 100% by road and 25% by road scenarios for ERF waste material movement and the 100% by road Anaerobic Digestion facility waste material movement. Under a cumulative assessment of 25% by road ERF waste material plus 100% by road Anaerobic Digestion facility waste material by road scenario, it is anticipated that approximately 96 HCVs per day would be required for the material import – (in rounded figures) 79 HCVs importing waste to the ERF + 17 HCVs importing waste to the Anaerobic Digestion facility. The proposed cap of 90 HCVs per day is therefore below that assessed and marginally less than the quantum considered necessary to achieve the 25% nominal by road operation (see

GLA/TfL Commentary	The Applicant's Response
	Chapter 6 Transport of the **ES (6.1, REP2-017)**). This restriction will therefore achieve a modal split strongly in favour of river use. The Applicant notes the matters raised in the GLA's Post Hearing Written Submission of Oral Case (**REP3-038**). The Applicant has provided detailed comments on the matters raised in that document in **Sections 2 – 8** of this report. Matters relating to transport are addressed in **Section 7** of this report. The Applicant has also responded to the '*GLA Commentary on Applicant's Response to ExA's first Written Questions'* in **Appendix D** to this report.

2.4 Combined Heat and Power (CHP)

Table E.3: The Applicant's Response to GLA's Commentary on LBB LIR (CHP)

GLA/TfL Commentary	The Applicant's Response
LBB states at paragraph 4.10 that the difficulty in delivering the export of heat from EfW plants is evidenced by the fact that heat export has yet to be realised from the existing RRRF EfW plant. LBB refers to ongoing heat studies being prepared by the Applicant to help meet policy objectives. The GLA notes that the final study was completed on 5 May 2019 and was submitted as an appendix to the Written Representation, submitted for Deadline 2. This report concluded that revised heat demand remains within the capacity of the existing RRRF. The GLA agrees with LBB that the Applicant's position on CHP is underdeveloped and is concerned that the updated Supplementary Statement (document 5.4.1) still does not adequately address the key issues regarding need and deliverability. The GLA sets outs the reasons for this in document Sheet 4, Other Documents Prepared by the Applicant, when discussing Requirement 20 – Combined Heat and Power.	The Applicant provided a response to the points made in the LIR submitted by LBB at Deadline 2 (**REP2-082**) regarding deliverability of CHP in **Table 1.1** of the **Applicant's response to the Local Impact Report by London Borough Bexley** submitted at Deadline 3 (**8.02.17**, **REP3-025**). The Applicant also provided responses to the GLA Written Representation and appendices in the **Applicant's Responses to Written Representations** (**8.02.14**, **REP3-022**). In its response the Applicant has highlighted that Ramboll's Phase 2 feasibility study '*Thamesmead & Belvedere Heat Network Feasibility Study: Work Package 2*' (May 2019) recognises that the provision of supplementary heat generation and storage is required to meet year-round demand which is proposed to comprise a mix of centralised and distributed plant. It also highlights that Ramboll states at paragraph 5 of Section 7, that "*If more aggressive build-out scenarios are considered for both the Core Scheme and additional sites further afield, in both Bexley and Greenwich, it is likely that a further heat source(s) beyond the existing Cory plant [RRRF] would be required to meet total heat demands.*" Given the Mayor's desire to tackle London's housing crises and the Mayor's own assessment conceding that build out rates need to rapidly increase, the Applicant is surprised that

GLA/TfL Commentary	The Applicant's Response
	the GLA does not recognise this independent conclusion that heat sources beyond RRRF are likely to be required. The Applicant notes the matters raised here and in the '*GLA Commentary on other documents prepared by the Applicant for Deadline 2'* (**REP3-042**). The Applicant has provided detailed comments on the matters raised in the GLA's submissions to Deadline 3 in **Sections 2 – 8** of this report. Matters relating to CHP are addressed in **Section 4** of this report. The Applicant has put in place a number of demonstrable steps to realise heat export from REP, as set out in the **Combined Heat and Power Supplementary Report (5.4.1, REP2-012).** The Applicant notes that Draft London Plan policy SI8 section 9.8.13 highlights specific demonstrable steps required under part D3, including commitments to deliver infrastructure to achieve high energy efficiency by way of *"investment in the development of a heat distribution network to the site boundary, or technology modifications that improve plant efficiency"* and *"the establishment of a working group to progress the agreed steps and monitor and report performance to the consenting authority"*, both of which the Applicant is actively delivering. Every effort is being made to recover energy with the highest levels of energy efficiency and, based on a design developed in collaboration with a highly reputable and industry leading technology and

GLA/TfL Commentary	The Applicant's Response
	construction contractor, REP would be the most efficient Energy Recovery Facility in the UK.

2.5 Anaerobic Digestion

Table E.4: The Applicant's Response to GLA's Commentary on LBB LIR (Anaerobic Digestion)

GLA/TfL Commentary	The Applicant's Response
The GLA supports LBB's statement at paragraph 4.11 that the digestate produced by the AD plant should be managed as far up the waste hierarchy as possible and should not be burned in a dedicated CHP gas engine.	The Applicant provided a response to the points made in the LIR submitted by LBB at Deadline 2 (**REP2-082**) regarding the use of digestate from the Anaerobic Digestion plant in **Table 1.1** of the **Applicant's response to the Local Impact Report by London Borough Bexley** submitted at Deadline 3 (**8.02.17, REP3-025**). As stated in that response, the Applicant's preference is to export digestate from the Anaerobic Digestion facility for use in agriculture, as preferred by LBB and which the Applicant agrees with. However, this will be subject to commercial contracts being in place which cannot be confirmed until consent for REP is granted. Accordingly, it would be inappropriate to restrict the Applicant's re-use of the digestate to a particular use, although the Applicant can confirm that it will prioritise re-use in agriculture.

2.6 ERF Capacity

Table E.5: The Applicant's Response to GLA's Commentary on LBB LIR (ERF Capacity)

GLA/TfL Commentary	The Applicant's Response
LBB notes at paragraph 4.12 that the London Waste Strategy Assessment (LWSA) appended to the Applicant's 'Project and its Benefits Report' (document 7.2) does not assess the need for an EfW facility with a capacity of 805,920 t/pa, but only assesses a facility with capacity of 655,000 t/pa. The GLA agrees that this is a failing on the part of the DCO application, and results in an underestimate of the overcapacity that would be provided by the REP. The GLA noted in its written representations that the DCO application estimates a need for 272,300 tpa of additional EfW capacity by 2036 and, that based on the lower throughput of 650,000 tpa, this represents less than half of the proposed ERF capacity. Whereas, under the higher case of 805,920 tpa, the Applicant's estimate of need represents less than one third of the proposed ERF capacity. It is clear that the proposed ERF has the potential to provide an unacceptable level of overcapacity even based on the Applicant's own estimates of demand. The GLA has provided, at Appendix 2a of its Post Hearing Written Submission of Oral Case submitted at Deadline 3, a commentary on the waste tonnage and EFW capacity scenarios presented in Table 6.1 of The Project and its Benefits Report. The commentary has been provided at the	The Applicant provided a response to this matter raised in the LIR submitted by LBB at Deadline 2 (**REP2-082**) regarding the use of the nominal capacity of 655,000 tpa in the Applicant's assessment of need, in **Table 1.1** of the **Applicant's response to the Local Impact Report by London Borough Bexley** submitted at Deadline 3 (**8.02.17, REP3-025**). The Applicant notes that the GLA re-iterates its position that the ERF element of REP has the potential to provide overcapacity and disagrees with this position. As stated in the Applicant's previous response to the Written Representation, the **London Waste Strategy Assessment (LWSA) (Annex A of the Project Benefits Report (7.2, APP-103))** utilises the anticipated nominal tonnage throughput of 655,000 tpa, as it is expected that under normal operating conditions and allowing for scheduled maintenance down time, the ERF element of REP would treat approximately 655,000 tonnes of residual (non-recyclable) waste per annum. For the EIA a 'reasonable worst case' assessment of a maximum throughput of approximately 805,920 tpa has been assessed, which assumes the ERF element of REP operating 24 hours per day, 7 days per week. However, it should be recognised that the **LWSA** (**7.2, APP-103**) demonstrates that the principles of need remain should the maximum capacity

GLA/TfL Commentary	The Applicant's Response
Examining Authority's (ExA) request to further explain the divergence between the GLA's and the Applicant's projections	figure of 805,920 tpa be utilised and that in fact, the LWSA demonstrates a clear need for at least 900,000 tpa of additional recovery capacity in London. This is based on London achieving the Mayor's net self-sufficiency and waste reduction aspirations, as well as the recycling targets set within the draft new London Plan. This is before any consideration is given to further need in the South East and surrounding areas. The Applicant notes the matters raised in the GLA's Post Hearing Written Submission of Oral Case (**REP3-038**). The Applicant has provided detailed comments on the matters raised in that document in **Sections 2 – 8** of this report. Matters relating to projections of volume of waste available are addressed in **Section 2** of this report. Further, the Applicant has commented on the '*Appendix 2A: GLA Post Hearing Written Oral Submission Summary- Waste Definitions'* in **Appendix A** of this report.

2.7 Air Quality

Table E.6: The Applicant's Response to GLA's Commentary on LBB LIR (Air Quality)

GLA/TfL Commentary	The Applicant's Response
LBB raise two specific issues: the in-combination effects with the existing plant; and potential under-reporting of emissions of some pollutants. The GLA's understanding is that the existing impacts of Crossness and the RRRF have been included in the modelling study. The GLA are not clear what is meant by Bexley's point about under-reporting of emissions of some pollutants. However, the Applicant should confirm that the emission rates are correct and, if necessary, explain what abatement is used to secure these emission rates, as they have done for NO2.	The Applicant notes and welcomes the GLA's observation with regards to its understanding of the modelling and confirms the existing impacts of Crossness and the RRRF have been included. The Applicant set out in its response to the LBB LIR (**8.02.17, REP3-025**) that the potential cumulative effects arising from the existing RRRF, Crossness sludge incinerator and REP were modelled together with background concentrations and the contribution from local traffic. The results can be found in the results tables in **Appendix C.2.2** of the **Environmental Statement (ES)** (**6.3, REP2-038**) where the column 'REP+RRRF+Crossness' is provided separately to the REP process contribution. In terms of the comment raised by the GLA regarding the under-reporting of emissions for some pollutants, the Applicant assumes this refers to the assertion made by LBB in its LIR at Paragraph 6.15 *that "the study results for dioxins and furans, nickel, arsenic and short-term nitrogen dioxide and sulphur dioxide levels have been under-reported in the ES."* The Applicant responded to this comment from LBB in **Table 1.1** of the **Applicant's response to the Local Impact Report by London Borough Bexley** submitted at Deadline 3

GLA/TfL Commentary	The Applicant's Response
	(**8.02.17, REP3-025**) providing the justification for the emissions levels assessed. The Applicant submitted an **Environmental Permit and Air Quality Note** (**8.02.06, REP2-057**) at Deadline 2 which sets out the abatement technology proposed for the ERF element of REP. The Applicant has since submitted the **Anaerobic Digestion Facility Mitigation Emissions Mitigation Note** (**8.02.42**) at Deadline 4 which sets out the abatement technology proposed for the Anaerobic Digestion element of REP. An update on the Air Quality assessment has been provided on the basis of the further mitigation proposed, which concludes that impacts on human health exposure are not significant, and impacts on terrestrial biodiversity, including within Crossness Nature Reserve, are insignificant. Further, the Applicant will consider the inclusion in the Draft DCO to be submitted at Deadline 5 a requirement for the provision of abatement of the CHP engine of the Anaerobic Digestion Facility.

3 The Applicant's Response to the GLA's Commentary on London Borough of Bexley's Written Representation

3.1 Introduction

3.1.1 London Borough of Bexley (LBB) submitted its Written Representation (WR) at Deadline 2 of the Examination (**REP2-080 to REP2-081**). The Applicant has provided a response to LBB's WR at Deadline 3 of the Examination (**8.02.14**, **REP3-022**).

3.1.2 GLA (and TfL with respect to transport matters) have provided comments on the following topics discussed in LBB's WR (**REP2-080 to REP2-081)** in Sheet 3 of its Deadline 3 submission (**REP3-043**):

- Waste Hierarchy;
- Delivery by river;
- CHP;
- Employment and Skills;
- Air Quality; and
- Construction Traffic.

3.1.3 The above topics are addressed in **Tables E.7** to **E.12** below.

3.2 Waste Hierarchy

Table E.7: The Applicant's Response to GLA's Commentary on LBB WR (Waste Hierarchy)

GLA/TfL Commentary	The Applicant's Response
LBB says at paragraph 3.2 that, in accordance with the waste hierarchy, the ERF should only treat residual waste. Although LBB asks the ExA at paragraph 3.4 to consider the issue of the waste hierarchy, it makes no specific proposals.	As explained at the Issue Specific Hearing on Environmental Matters (held on 5th June 2019), and as described in the Applicant's **Oral summary from the Issue Specific Hearing on Environmental Matters** (**8.02.19, REP3-027**), there are two primary European Waste Catalogue (EWC) Codes that REP will accept: 20 03 01 (being residual waste) and 19 12 10 (being combustible material left after the treatment of waste). The waste that can be processed at REP will be controlled by the Environmental Permit (EP) granted by the Environment Agency. The Applicant has responded to the comments made by the GLA regarding the treatment of residual waste only in **Section 3** of this report. This re-iterates that the Proposed Development does not incorporate a pre-treatment facility and that there is no policy or legislative requirement to do so. The ERF at REP will only be able to accept, by virtue of its Environmental Permit, waste that is classified as *'residual'* waste. When the residual waste is received at the ERF, the Applicant has a duty of care to manage it appropriately. This is done through: appropriate contracts with those who are delivering the waste; and on-site spot-checks to ensure that only waste that complies with the Environmental Permit is received. Whilst the Applicant

GLA/TfL Commentary	The Applicant's Response
	maintains that such a requirement is not necessary or supported by policy, the Applicant is willing to consider the inclusion of a requirement in the draft DCO to be submitted at Deadline 5 to ensure the waste hierarchy is followed.
The GLA has been advised by the Environment Agency (EA) that, whilst the EA will review the EWC type codes presented in issuing a permit and will set caps on total waste managed, the extent to which residual waste contains material that could be recycled is not considered a matter for the Environmental Permit. The GLA has provided a note at Appendix 2b of its Post Hearing Written Submission of Oral Case setting out correspondence with the EA on this matter.	The Applicant has reviewed the *'Appendix 2B: GLA Post Hearing Written Oral Summary Submission – EA Correspondence*' of the GLA's Post Hearing Written Submission of Oral Case (**REP3-040**) and has provided its detailed comments in **Section 3** of this report.
The GLA would therefore request that the ExA's consideration of the waste hierarchy, as requested by LBB in its written representations, includes consideration of how the waste hierarchy would be enforced. In this regard, the GLA in its Written Representation, submitted for Deadline 2, and within the Written Summary of Oral Case, submitted for Deadline 3, has proposed that there should be a requirement committing the ERF to sourcing truly residual waste, and monitoring arrangements put in place to ensure that the ERF feedstock has been pre-treated to recover all materials for recycling before delivery to the ERF. The GLA considers that this would be an appropriate requirement in the circumstances in order to ensure that the proposed development complies with the	The Applicant provided responses to the matters raised in the LBB WR (**REP2-080**) and the GLA WR (**REP2-071**) in **Sections 2.1 and 2.3** of the **Applicant's responses to Written Representations** (**8.02.14, REP3-022**) respectively. The Applicant notes that the proposal of a requirement to restrict the types of waste entering REP is addressed in the GLA's Post Hearing Written Submission of Oral Case (**REP3-038**). The Applicant has provided detailed comments on the matters raised in that document in **Sections 2 – 8** of this report. Matters relating to the waste hierarchy and waste feedstock are addressed in **Section 3** of this report.

GLA/TfL Commentary	The Applicant's Response
waste hierarchy in accordance with NPS EN-1 as there is no other regulatory mechanism available.	

3.3 Delivery by River

Table E.8: The Applicant's Response to GLA's Commentary on LBB WR (Delivery by river)

GLA/TfL Commentary	The Applicant's Response
LBB confirms that Local Plan Policy CS20 and draft London Plan Table 9.2 identify waste apportionment targets for the LBB and these both suggest a lack of need for further EfW capacity in the LBB administrative area. LBB seeks clarification as to how waste from outside of LBB is to be transported to the REP site, having regard to other existing and committed waste management facilities in and around London. This representation by LBB aligns with the GLA's principal concerns about the lack of need for the ERF as a waste management facility and also how the feedstock deliveries to the ERF would be transported to the site. The GLA has made the case in its Written Representation, submitted at Deadline 2, and in its Post Hearing Written Submission of Oral Case, submitted at Deadline 3, that there is sufficient recovery capacity for the management of residual waste in London and also in the surrounding counties if recycling targets are met. Overprovision risks impacting these targets not being met, with a consequential detrimental effect on the movement of waste up the waste hierarchy.	The Applicant has commented on matters raised by LBB in its Written Representation (**REP2-080**) in **Section 2.3** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). Further, the Applicant has commented on matters raised by the GLA in its WR (**REP2-071**) relating to excess waste capacity in **Paragraphs 2.1.111 – 2.1.128** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). The Applicant notes the matters raised in the GLA's Post Hearing Written Submission of Oral Case (**REP3-038**) regarding projections of volume of waste available and the waste hierarchy. The Applicant has provided detailed comments on the matters raised in that document in **Sections 2 – 8** of this report. Matters relating to projections of volume of waste available and the waste hierarchy are specifically addressed in **Sections 2 and 3** of this report. The **London Waste Strategy Assessment (Annex A** to **The Project and its Benefits Report (7.2, APP-103))** ('the **LWSA**') demonstrates that new infrastructure will be required to achieve the aims of the draft London Plan, namely at least 1.4 million tonnes of new recycling capacity (London Environment Strategy, page 325) and at least c. 900,000 tonnes of new residual waste treatment capacity in London,

GLA/TfL Commentary	The Applicant's Response
	before the needs of the South East are considered (see **Table 6.1** of the **LWSA (7.2, APP-103),** and **Paragraphs 2.1.155 to 157** and **Appendix B** of the **Applicant's responses to Written Representations (8.02.14, REP3-022)**. This assessment has accounted for the following assumptions relating to future waste generation and management: ▪ It will be in line with the GLA's London Plan forecasts (which incorporate an assumed 5% reduction in waste arisings until 2031); ▪ Recycling will meet the 65% target set in the draft London Plan and London Environment Strategy (increasing from the ~ 45% currently being achieved); and ▪ It will be managed within London to achieve the policy priority of London being 'net self-sufficient'. The Applicant therefore rejects the GLA's assertion that *'there is sufficient recovery capacity for the management of residual waste in London and also in the surrounding counties if recycling targets are met'.* The **LWSA (7.2, APP-103)** demonstrates that delivering the waste hierarchy in London (reducing waste arisings over time and achieving 65% recycling) there remains a need for new energy recovery capacity to divert remaining wastes from landfill. The new recovery capacity proposed at REP will complement the Circular Economy, working alongside

GLA/TfL Commentary	The Applicant's Response
	recycling activities in London in line with the waste hierarchy as illustrated in **Figure 2** in **Section 3** of this report and will not impact on the achievement of the targets being met.
The GLA has also made the case in its Written Representation that the Applicant failed to demonstrate how waste feedstock for the ERF would be transported to the proposed ERF, and what the source of the material would be. The GLA shares LBB's concerns that the waste would not be sourced from the local area as there is a lack of need for residual waste treatment for Bexley's waste, and therefore waste would inevitably be travelling from further afield; this point is also made in the GLA's Post Hearing Written Submission of Oral Case, submitted for Deadline 3.	The Applicant has commented on matters raised by the GLA in its WR (**REP2-071**) relating to waste feedstock in **Section 2.1** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). The Applicant notes the matters raised in the GLA's Post Hearing Written Submission of Oral Case (**REP3-038**) regarding origins of waste feedstock. The Applicant has provided detailed comments on the matters raised in that document in **Sections 2 – 8** of this report. Matters relating to waste feedstock are specifically addressed in **Section 2** of this report. The Applicant has responded to LBB's concerns regarding need and capacity in **Section 2.3** of the **Applicant's Responses to Written Representations** (**8.02.14, REP3-022**). The Applicant submitted a comprehensive assessment of both commercial and local authority collected residual waste management capacity requirement in the **LWSA** (**Annex A** of the **Project and its Benefits Report (7.2, APP-103**)). The **LWSA** considers how the Proposed Development contributes to meeting the waste management strategy set out in the London Plans. The Assessment considers a range of scenarios based on the different waste forecasts and recycling and recovery policies within the London Plans, and applies

GLA/TfL Commentary	The Applicant's Response
	updated assumptions from the LES. The Assessment demonstrates that REP is required to deliver sustainable waste management and net self-sufficiency within London and that there is always a need for REP.
Whilst the GLA shares LBB's desire to see waste transported by river, it is concerned that the opportunities for waste to be transferred onto the river have not been sufficiently assessed. Similarly, although the Applicant has sought to show that waste could be sourced from surrounding counties, it is not clear how the waste from surrounding counties would be loaded onto barges for delivery by river. The potential for transporting waste from outside of London to waste transfer stations upstream of the REP (in inner London) would be inappropriate and unsustainable. However, the Applicant has not yet demonstrated that it has access to wharves downstream of the REP that would be suitable for the proposed volume of material.	The Applicant notes these comments. The Applicant can confirm that in the 100% by road scenario, the Applicant makes reasonable worst-case assumptions and considers the transfer of waste to REP from the riparian Waste Transfer Stations at Smugglers Way, Cringle Dock, Walbrook Wharf, Northumberland Wharf and the Port of Tilbury. This scope of assessment was agreed with LBB as Highway Authority and TfL as set out in **Table 6.6** of **Chapter 6 Transport** of the **ES (6.1, REP2-017).** The Applicant also assessed a 100% by river scenario, and a nominal scenario as set out in **Table 6.6**. The DCO Application included a **Navigational Risk Assessment** (**6.3, APP-067**) which considered REP on the precautionary assumption that all waste is delivered to REP via the river and not by road. The Applicant therefore considers that the opportunities for waste to be transferred on the river have been sufficiently assessed. **Section 3** of this report provides further information with regards to the Waste Transfer Stations, and highlights that there is spare permitted capacity at these WTSs which could notionally be fulfilled by another facility if the waste were not transferred to REP.

GLA/TfL Commentary	The Applicant's Response
	Contrary to the statement made at Paragraph 17 of the GLA's Post Hearing Written Submission of Oral Case **(REP3-038)**, the Applicant is not a waste collector. It is one of the UK's leading resource management, recycling and energy recovery companies, but does not collect waste from waste producers. Waste is delivered to the Applicant's waste transfer/recycling facilities and RRRF by the waste producers either public or private. Waste is brought to it, under contract, by other companies that may either collect directly from the producer or handle waste that has been collected by another entity. The transportation of waste to be transferred to the WTSs is therefore the responsibility of the waste collector or handler collecting from another entity. The origin of waste collected for transportation to these WTSs from outside of inner London and surrounding counties, and the impacts of this, will have been assessed as part of consenting and permitting of those facilities.
The GLA is of the view that the demonstrable lack of need for waste recovery in Bexley underlines the lack of a convincing sourcing and logistical strategy for the proposed REP. The application is vague and ambiguous about the source of waste and how it would be transported, as a result of which it is not possible to identify fully the potential impacts on the	The Applicant disagrees with this assertion. As set out throughout the DCO Application and Examination submissions made by the Applicant, a clear need has been identified through the assessment work undertaken and presented in the **Project and Its Benefits Report** (**7.2, APP-103**) and the **LWSA** (**Annex A of the Project Benefits Report** (**7.2, APP-103**)).

GLA/TfL Commentary	The Applicant's Response
achievement of national and local waste management policy, nor potential environmental effects.	The Applicant has been clear throughout the process about the scenarios that have been assessed for the purpose of the Transport Assessment, and the reasoning as to why this presents a reasonable worst case scenario. The Applicant therefore rejects the GLA's assertion that the application is *"vague and ambiguous"*. **Section 3** of this report provides further justification with regards to the information presented on the Waste Transfer Stations, and the consideration of sources of waste within the assessment.

3.4 Combined Heat and Power (CHP)

Table E.9: The Applicant's Response to GLA's Commentary on LBB WR (CHP)

GLA/TfL Commentary	The Applicant's Response
LBB confirms at paragraph 3.9 that to date no export of heat has been achieved from the RRRF but does not present any further evidence in this regard. It states that LBB wishes to see the Applicant provide further details to explain how the proposed development would meet the GLA's CIF requirements. The GLA has provided detailed comments in this regard in its LIR and Written Representations, and also in its Post Hearing Written Submission of Oral Case, submitted for Deadline 3, Agenda Item 3.4.	The Applicant provided responses to the matters raised in the GLA LIR (**REP2-075**) and the GLA WR (**REP2-071**) in **Table 3** of the **Applicant's response to the Local Impact Report by Greater London Authority** (**8.02.15, REP3-023**) and in **Paragraphs 2.1.72 – 2.1.110** of the **Applicant's responses to Written Representations** (**8.02.14, REP3-022**), respectively. The Applicant notes the matters raised in the GLA's Post Hearing Written Submission of Oral Case (**REP3-038**) regarding the GLA's CIF requirements. The Applicant has provided detailed comments on the matters raised in that document in **Sections 2 – 8** of this report. Matters relating to CIF are specifically addressed in **Section 5** of this report.

3.5 Employment and Skills

Table E.10: The Applicant's Response to GLA's Commentary on LBB WR (Employment and Skills)

GLA/TfL Commentary	The Applicant's Response
LBB identifies in section 4 the need for the Applicant to agree an employment and skills plan to optimise local employment, skills and economic development benefits, and suggests that	The Applicant provided responses to the matters raised in the LBB WR (**REP2-080**) regarding employment and skills in

GLA/TfL Commentary	The Applicant's Response
such a plan should be agreed in advance of any development by the Applicant, LBB and other stakeholders. This is a similar request to that put forward by the GLA in its LIR, and the GLA considers that such a plan is essential for the proposed REP to conform with London policy on employment and skills. The GLA would therefore wish to be a party to the development of an employment and skills plan as one of the relevant stakeholders, as set out in the Post Hearing Written Submission of Oral Case, submitted for Deadline 3. The GLA notes that the Applicant has offered in its Revised Draft DCO document 3.1 Rev.1 to commit to an employment and skills plan, but no details are provided as to the scope or content of the plan. Also, as noted above, the GLA would wish to be consulted on the plan and would welcome engagement with the Applicant in this regard.	**Paragraphs 2.3.32 – 2.3.33** of the **Applicant's responses to Written Representations** (**8.02.14, REP3-022**). Following further consultation with LBB, the Applicant has agreed to the preparation and implementation of an Employment and Skills Plan to optimise opportunities for local employment, skills and economic development benefits. **Requirement 18** of **Schedule 2** to the **dDCO** (**3.1, Rev 2, REP3-003**) submitted at Deadline 3, secures the provision of, and implementation of, an Employment and Skills Plan. The final detail of the scope and content of the Employment and Skills Plan will be determined post-consent through the discharge of Requirement 18, once the final detailed design of the Proposed Development, and the final construction and operational working practices, are known. The relevant planning authority, in this case LBB (or Dartford Borough Council where relevant), are the appropriate authority to discharge the Requirements of the final DCO, and as such will be the body consulted with in preparation of the Employment and Skills Plan.

3.6 Air Quality

Table E.11: The Applicant's Response to GLA's Commentary on LBB WR (Air Quality)

GLA/TfL Commentary	The Applicant's Response
The concerns about under-reporting of some pollutants and in-combination effects are also made in Bexley's LIR.	In terms of the comment raised by the GLA regarding the under-reporting of emissions for some pollutants, the Applicant assumes this refers to the assertion made by LBB in its LIR at Paragraph 6.15 that *"the study results for dioxins and furans, nickel, arsenic and short-term nitrogen dioxide and sulphur dioxide levels have been under-reported in the ES."* The Applicant responded to this comment from LBB in **Table 1.1** of the **Applicant's response to the Local Impact Report by London Borough Bexley** submitted at Deadline 3 (**8.02.17, REP3-025**) providing the justification for the emissions levels assessed.
Bexley have requested that the Code of Construction Practice consider dust controls in line with guidance from the Institute of Air Quality Management and that the CoCP should apply at the pre-commencement phase as well as post-commencement, as set out in the Written Summary of Oral Case, submitted for Deadline 3. The GLA supports the imposition of the CoCP during the pre-commencement phase. In the GLA's Written Representation it was requested that the CoCP be in accordance with the GLA's SPG on the Control of Dust and Emissions during Construction and Demolition. With the exception of the NRMM Low Emission Zone, which the	The Applicant provided responses to the matters raised in the LBB WR (**REP2-080**) and the GLA WR (**REP2-071**) in **Sections 2.1 and 2.3** of the **Applicant's responses to Written Representations** (**8.02.14, REP3-022**) respectively. Following the Issue Specific Hearing on the Development Consent Order held on 5 June 2019, the Applicant has revised Requirement 11 which secures a CoCP so that it applies to the pre-commencement works as well as the commencement of the authorised development. This has been made in **Rev 2** of the **dDCO** (**3.1, Rev 2, REP3-003**) submitted at Deadline 3. Reference to the GLA's SPG on the Control of Dust and Emissions during Construction and Demolition is already

GLA/TfL Commentary	The Applicant's Response
Applicant agreed to adopt at the Issue Specific Hearing on Environmental Matters, the GLA guidance is broadly similar to the IAQM guidance. The GLA do not foresee any likely conflict in drafting the CoCP between measures required by the different guidance document, however if there are differences in detail we would suggest that the Applicant be required to adopt the more stringent controls.	included in the **Outline Code of Construction Practice** (**CoCP**) (**7.5, REP2-046**) at **Paragraph 4.3.2** which states: *"Good site management practices (e.g. adherence to guidance such as the London Mayor's SPG on The Control of Dust and Emissions During Construction and Demolition, 2014) during the construction works will help to prevent the generation of airborne dust. It will be the responsibility of the Contractor and site manager to ensure, through the CoCP, that sufficient precautionary measures to limit dust generation are undertaken."* Further, reference to IAQM guidance is already included in the **Outline Code of Construction Practice** (**CoCP**) (**7.5, REP2-046**) at **Paragraph 4.3.3** which states: *"Additionally, standard mitigation measures for low risk sites, taken from the Institute of Air Quality Management (IAQM) document 'Dust and Air Emissions Mitigation Measures' tables, would also be applied".* The Outline CoCP allows for a range of different guidance documents to be included.
Bexley have requested funding for monitoring if the development goes ahead. Monitoring of air quality is a responsibility of the London Boroughs and is not generally undertaken by the GLA. However, the GLA provides statutory guidance for London boroughs' Air Quality Action Plans and, in this guidance, it is recommended that s106 agreements	The Applicant notes the support for Bexley's request for Air Quality monitoring. The Applicant provided responses to the matters raised in the LBB WR (**REP2-080**) relating to Air Quality monitoring in **Paragraphs 2.3.50 – 2.3.53** of the **Applicant's responses to Written Representations** (**8.02.14, REP3-022**).

GLA/TfL Commentary	The Applicant's Response
should be used to secure funding for monitoring. The GLA support Bexley's request for funding for monitoring.	Given the Environment Agency requires the ERF to have continuous emissions monitoring, and as it is the Environment Agency that is responsible for enforcing the emission limits, it is not appropriate for the DCO to duplicate the Environmental Permitting regime (as indeed is accepted at paragraph 4.10.3 of NPS EN-1). However, the Applicant has considered its position in light of the GLA's further submissions. It is willing to accept a requirement in relation to air quality and will update the draft development consent order for Deadline 5, which will include the Applicant's preferred wording for this requirement. The Applicant has further responded to matters raised by LBB at Deadline 3 with respect to Air Quality monitoring in **Section 1.3** of **The Applicant's Response to London Borough of Bexley's Deadline 3 Submission** (submitted at Deadline 4**, 8.02.36**). The Applicant considers it appropriate that LBB are consulted on the air quality monitoring scheme developed through the EP process and will therefore include a requirement to this effect in the **dDCO** (**Rev 3**) to be submitted at Deadline 5.

3.7 Construction Traffic

Table E.12: The Applicant's Response to GLA's Commentary on LBB WR (Construction Traffic)

GLA/TfL Commentary	The Applicant's Response
At paragraph 8.5, LBB states that the technical feasibility of river transport of construction materials needs to be fully investigated by the Applicant. LBB further states that while the Applicant has indicated that transporting abnormal loads by river may not reduce the number of movements by roads and that the jetty facilities are not suitable these statements need to be supported by firm evidence. TfL would agree with this statement and would want the outline CTMP to commit to exploring the option of river transport for construction deliveries including abnormal loads.	The Applicant responded to the matters raised in LBB's WR (**REP2-080**) regarding use of the river during construction in **Paragraphs 2.3.95 – 2.3.101** of the **Applicant's responses to Written Representations** (**8.02.14, REP3-022**). The responses stated that: *"The **Outline CTMP** (**6.3, REP2-064**) sets out, at **Paragraph 4.3.4**, that "The use of tugs on the River Thames will be explored and used where practical to transport construction materials and waste, which, if feasible, would help to reduce construction road traffic movements and emissions." This existing provision in the **Outline CTMP** (**6.3, REP2-064**) is considered adequate to achieve the aims of the proposed wording from LBB."* **Paragraph 2.3.99** of the **Applicant's responses to Written Representations** (**8.02.14, REP3-022**) provides a description of the considerations given to transporting abnormal loads via the river, and sets out the reasons why this option has been deemed unfeasible by the Applicant, in consultation with the Port of London Authority.
At paragraph 8.9, LBB states the cumulative Impacts of REP Construction traffic and Electrical Connection traffic have not been established by the Applicant. LBB seeks clarification from the Applicant as to how the combined potential impact of	The Applicant responded to the matters raised in LBB's WR (**REP2-080**) regarding cumulative transport effects in **Paragraphs 2.3.106 – 2.3.108** of the **Applicant's**

GLA/TfL Commentary	The Applicant's Response
the REP construction and associated temporary works, and those regarding the Electrical Connection has been assessed. LBB further states that it is important that the added implication of the works associated with the Electrical Connection is considered with the impact of the REP construction especially as there may be programme overlap. TfL would agree that in the assessment of the impacts of the Electrical Connection construction on road users (including buses) as part of the CTMP, the applicant should show the combined impacts of the two construction activities whenever there is overlap. TfL would seek additional wording in the CTMP to state that cumulative effects of construction of the REP site and Electrical Connection will be assessed as part of the CTMP.	**responses to Written Representations** (**8.02.14, REP3-022**). The assessment of the construction period is included at **Paragraphs 6.9.2** to **6.9.96** of **Chapter 6 Transport** of the **ES** (**6.1, REP2-017**) and **Section 6.4** of **Appendix B.1 - Transport Assessment** of **Chapter 6 Transport** of the **ES** (**6.3, APP-066** (with **Appendix J** and **L** being submitted at Deadline 2, **REP2-034** and **REP2-064** respectively)). These assessments include consideration of the potential cumulative traffic effects during construction at the REP site and the Electrical Connection. **Paragraph 2.3.108** of the **Applicant's responses to Written Representations (8.02.14, REP2-022)** confirmed that, at **Paragraph 2.6.1** of the **Outline CTMP** submitted at Deadline 2 (**6.3, REP2-064**) coordination between the construction of the REP site and the Electrical Connection will be set out in the associated CTMP, secured through **Requirement 13** of **Schedule 2** to the **dDCO** (**3.1, Rev 2, REP-003**) submitted at Deadline 3. As necessary, the CTMP will identify how the construction programmes for REP and the Electrical Connection will align, and the necessary temporary traffic management required. That document will reflect the temporary and transient nature of the construction of the Electrical Connection. The Applicant considers this to be adequate provision for ensuring any cumulative effects are managed and mitigated as appropriate.

4 The Applicant's Response to the GLA's Commentary on London Borough of Havering's Local Impact Report

4.1 Introduction

4.1.1 London Borough of Havering (LBH) submitted a LIR at Deadline 2 of the Examination (**REP2-084**). The Applicant has provided a response to LBH's LIR at Deadline 3 of the Examination (**8.02.18**, **REP3-026**).

4.1.2 The GLA has provided comments on the following topic discussed in LBH's LIR (**REP2-084)** in Sheet 3 of its Deadline 3 submission (**REP3-043**):

- Air Quality.

4.1.3 The above topic is addressed in **Table E.13** below.

4.2 Air Quality

Table E.13: The Applicant's Response to GLA's Commentary on LBH LIR (Air Quality)

GLA/TfL Commentary	The Applicant's Response
The GLA note LBH's point regarding the number of receptors potentially exposed to "minor" adverse impacts and agree with Havering that the Applicant needs to provide better estimates of the number of properties affected and that they should also provide more robust assessment of the health impacts.	The Applicant provided a response to the points made in the LIR submitted by LBH at Deadline 2 (**REP2-083**) regarding Air Quality in **Section 1.4** of the **Applicant's response to the Local Impact Report by London Borough Havering** submitted at Deadline 3 (**8.02.18, REP3-026**). Further, the Applicant submitted a **Post Hearing Note on Public Health and Evidence** (**8.02.27**, **REP3-033**) providing further evidence with respect to effects from emissions on human health. The Applicant notes the GLA's support of the points made by LBH. Further information regarding the Applicant's position on Air Quality matters is set out in **Section 6** of this report.

5 The Applicant's Response to the GLA's Commentary on East London Waste Authority Written Representation

5.1 Introduction

5.1.1 East London Waste Authority (ELWA) submitted a WR at Deadline 2 of the Examination (see **REP2-066 to REP2-068**). The Applicant has provided a response to ELWA's WR at Deadline 3 of the Examination (see **8.02.14**, **REP3-022**).

5.1.2 GLA (and TfL with respect to transport matters) have provided comments on the following topics discussed in ELWA's WR (**REP2-066 to REP2-068**) in Sheet 3 of its Deadline 3 submission (**REP3-043**):

- Sources of Waste and River Transport; and
- Heat Source Distribution.

5.1.3 The above topics are addressed in **Tables E.14 and E.15** below.

5.2 Sources of Waste and River Transport

Table E.14: The Applicant's Response to GLA's Commentary on ELWA WR (Sources of Waste and River Transport)

GLA/TfL Commentary	The Applicant's Response
ELWA puts the case well that the concentration of waste facilities in one location is inefficient as far as transport deliveries are concerned. EfW, unlike most renewable technologies, has a requirement for a material feedstock using (in this case) road or river transport. ELWA notes the lack of capacity at existing waste transfer stations, and that the application does not appear to include any proposals for additional riverside capacity whether within the boundaries of Greater London or in locations along the Essex or Kent shorelines of the Thames Estuary. The GLA is similarly concerned that these matters have not been fully addressed and assessed in the application - as most of the feedstock available along the river axis has already been secured by the RRRF, waste deliveries to the REP will not be from sources located along the river axis, resulting in increased transport on the road network to reach the river.	The Applicant provided a response to the points made in the WR submitted by ELWA at Deadline 2 (**REP2-066**) regarding the distribution of EfW facilities in **Paragraphs 3.1.3 – 3.1.8** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14. REP3-022**). The Applicant highlights that ELWA does confirm in its WR that it *"does not contest or object to this decision [the Examining Authority's conclusion that the need for REP is set out in National Policy Statements EN-1 and EN-3]"* however questions the appropriateness of siting Riverside Energy Park (REP) adjacent to an existing waste management facility. The Applicant notes the GLA's similar concerns relating to the points made by WRWA. The position set out by the Applicant in **Paragraphs 3.1.3 – 3.1.8** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**) remains. Further, the Applicant has responded to the concerns raised by the GLA on these matters in **Paragraphs 2.1.171 – 2.1.179** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). Further information regarding the Applicant's position on these matters is set out in **Section 3** of this report.

GLA/TfL Commentary	The Applicant's Response
GLA would agree with ELWA that there is no obvious route by river from the north and therefore it is increasingly likely that the REP would not serve nearby London boroughs.	The Applicant provided a response to the points made in the WR submitted by ELWA at Deadline 2 (**REP2-066**) regarding the comments made on sources of waste, in **Paragraphs 3.1.9 – 3.1.10** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). The Applicant re-iterates that REP is a 100% commercially-funded venture and is not tied to long term local authority municipal contracts. Therefore, the origin of waste for disposal at REP cannot be confirmed at this time. ELWA's WR focusses on the management contracts for local authority collected waste (LACW). However, as set out in the **Project and its Benefits Report** (**7.2, APP-103**) at **Paragraph 4.2.44**: *"REP is not reliant on any one local authority contract. It is a merchant facility, meaning that it would offer its services within the market. REP is available to receive those wastes that are not recycled from a range of customers, rather than operating as a fixed element within a single waste management contract. The residual C&I market has historically been underserved and REP represents private investment to bridge that gap."*

5.3 Heat Source Distribution

Table E.15: The Applicant's Response to GLA's Commentary on ELWA WR (Heat Source Distribution)

GLA/TfL Commentary	The Applicant's Response
ELWA raises several points: ▪ The existence of other substantial, unutilised heat sources at RRRF and Thames Water Crossness; ▪ Disputes the Applicant's claim that the RRRF and REP would provide for a resilient heat supply arrangement; and ▪ That such a concentration of heat production (Crossness, RRRF and REP) in a single area would lead to an expensive district heating system because of the longer distance of network needed to supply other neighbourhoods. The GLA has raised the above points (with the exception of the Crossness potential) in its Written Representation and in the Post Hearing Written Submission of Oral Case, submitted for Deadline 3. The GLA agrees with ELWA that the proposed concentration of heat generation and waste management facilities in one location is excessive and results in operational inefficiencies in addition to environmental effects.	The Applicant has responded to the points as made in the GLA WR (**REP2-071**) and the ELWA WR (**REP2-066**) regarding heat offtake in **Paragraphs 2.1.4 – 2.1.42** and **Paragraphs 3.1.19 – 3.1.31** respectively of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). The Applicant notes the matters raised in the GLA's Post Hearing Written Submission of Oral Case (**REP3-038**). The Applicant has provided detailed comments on the matters raised in that document in **Sections 2 – 8** of this report. Matters relating to CHP are addressed in **Section 4** of this report. The Applicant disagrees with the GLA and ELWA that *"the proposed concentration of heat generation and waste management facilities in one location is excessive and results in operational inefficiencies in addition to environmental effects".* On the contrary the Applicant has explained throughout its submissions the operational benefits of siting REP adjacent to RRRF, and the significance of utilising the existing river-based logistics infrastructure.

6 The Applicant's Response to the GLA's Commentary on Western Riverside Waste Authority Written Representation

6.1 Introduction

6.1.1 Western Riverside Waste Authority (WRWA) submitted a WR at Deadline 2 of the Examination (**REP2-093 to REP2-103**). The Applicant has provided a response to WRWA's WR at Deadline 3 of the Examination (**8.02.14**, **REP3-022**).

6.1.2 GLA has provided comments on the following topic discussed in WRWA's WR (**REP2-093 to REP2-103**) in Sheet 3 of its Deadline 3 submission (**REP3-043**):

- Waste.

6.1.3 The above topic is addressed in **Table E.16** below.

6.2 Waste

Table E.16: The Applicant's Response to GLA's Commentary on WRWA WR (Waste)

GLA/TfL Commentary	The Applicant's Response
OPS-11 Feedstock competition resulting from overcapacity in the region, leading to operational issues at RRRL. The suggestion is that the overcapacity would draw in undesirable waste, which could include (though not stated explicitly) recyclable waste. The GLA has raised similar concerns in its Written Representations regarding oversupply of waste recovery facilities and is of the view that the proposed ERF would undermine delivery of the waste hierarchy. Whilst this remains a concern, the GLA has also proposed in its LIR that there should be a DCO requirement to address the pre-treatment of waste to preclude the incineration of recyclable material.	The Applicant has commented on matters raised by WRWA in its WR (**REP2-093**) in **Section 3.5** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). Further, the Applicant has commented on matters raised by the GLA in its WR (**REP2-071**) relating to excess waste capacity in **Paragraphs 2.1.111 – 2.1.128** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). The Applicant notes the proposal for a Requirement to address the pre-treatment of waste to preclude the incineration of recyclable material, and does not consider such a requirement necessary. Whilst the Applicant maintains that such a requirement is not necessary or supported by policy, the Applicant is willing to consider the inclusion of a requirement in the draft DCO to be submitted at Deadline 5 to ensure the waste hierarchy is followed. As set out in **Sections 1.5** and **1.9** of the **Applicant's response to the Local Impact Report by Greater London Authority** (**8.02.15, REP3-023**) there is no policy requirement, either in the NPS or in the London Plan, to require energy from waste facilities to include pre-treatment. This position was reiterated at the Issue Specific Hearing on Environmental Matters held on 5 June 2019, as set out in

GLA/TfL Commentary	The Applicant's Response
	Section 13 of the **Oral summary from the Issue Specific Hearing on Environmental Matters** (**8.02.19, REP3-027**). Further information regarding the Applicant's position on Waste Hierarchy matters, and the need for pre-treatment, is set out in **Section 3** of this report.

7 The Applicant's Response to the GLA's Commentary on Rt Hon Jon Cruddas MP Written Representation

7.1 Introduction

7.1.1 Jon Cruddas submitted a WR at Deadline 2 of the Examination (**REP2-104**). The Applicant has provided a response to Jon Cruddas's WR at Deadline 3 of the Examination (**REP3-022**).

7.1.2 GLA has provided comments on the following topics discussed in Jon Cruddas's WR (**REP2-104**) in Sheet 3 of its Deadline 3 submission (**REP3-043**):

- Air Quality;
- Carbon/Energy; and
- Recycling Rates.

7.1.3 The above topics are addressed in **Tables E.17 to E.19** below.

7.2 Air Quality

Table E.17: The Applicant's Response to GLA's Commentary on Jon Cruddas WR (Air Quality)

GLA/TfL Commentary	The Applicant's Response
In general, the GLA support the points made regarding Air Quality.	The Applicant provided a response to the points made in the WR submitted by Jon Cruddas at Deadline 2 (**REP2-104**) regarding Air Quality in **Paragraphs 5.6.3 – 5.6.19** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). Further, the Applicant submitted a **Post Hearing Note on Public Health and Evidence** (**8.02.27, REP3-033**) providing further evidence with respect to effects from emissions on human health. The Applicant notes the GLA's support of the points made by Jon Cruddas. Further information regarding the Applicant's position on Air Quality matters is set out in **Section 6** of this report.

7.3 Carbon/Energy

Table E.18: The Applicant's Response to GLA's Commentary on Jon Cruddas WR (Carbon/Energy)

GLA/TfL Commentary	The Applicant's Response
Regarding energy, the letter claims that 2006 evidence suggests that waste incinerators produce more CO2 emissions than gas powered stations producing the same amount of energy.	The Applicant notes the comments made with respect to the 2006 evidence referenced in Jon Cruddas' Written Representation (**REP2-104**). The Applicant provided a response to the points made in Jon Cruddas' WR submitted at Deadline 2 (**REP2-104**) regarding carbon emissions in **Paragraphs 5.6.28 – 5.6.30** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). The Applicant has prepared a detailed **Carbon Assessment** (**8.02.08, REP2-059**) to assess the carbon benefits of the REP ERF (submitted at Deadline 2 of the Examination). The assessment considered the sensitivity to changes in waste composition, changes in landfill gas recovery rates and changes in the source of displaced electricity. As demonstrated in Paragraph 5.1.2 of the **Carbon Assessment** (**8.02.08, REP2-059**), the base case for the assessment shows that the benefit of REP is about 137,000 tonnes of CO_2-equivalent per year, or about 229 kg CO_2e per tonne of waste processed, compared to sending the same waste for disposal in a landfill site. **Paragraph 5.1.3** adds, that, if heat is exported, this benefit increases to 157,000 t CO_2e or 263 kg CO_2e per tonne of waste processed. Therefore, the **Carbon Assessment** (**8.02.08, REP2-059**) concludes that the

GLA/TfL Commentary	The Applicant's Response
	ERF component of REP continues to have a benefit over landfill. The evidence referenced by Cruddas is a 2006 report by Friends of the Earth 'Dirty truths – Incineration and climate change'[1]. The GLA's interpretation of the conclusion is misleading. The report claims that **electricity-only** ERFs emit more fossil CO_2 than gas power stations, but also states that ERFs configured for CHP operation actually emit less fossil CO_2 than gas power stations. This position is projected to change in 2020 based on emissions improvements to fossil fuelled generators, but these improvements have not been realised to the extent assumed in the report. Crucially, the report does not take account of diverting waste from landfill and the associated carbon saving when appraising ERF technologies. Furthermore, the assessment is generic and therefore cannot appropriately assess specific proposals for REP including technological performance, waste composition, transport impacts etc. In any case, it is evident that the report is outdated and the assessment methodology is not transparent; therefore the Applicant does not accept the claims and instead refers to its **Carbon Assessment (8.02.08, REP2-059)**, which aligns with the latest Government position and sector performance figures.

[1] https://friendsoftheearth.uk/sites/default/files/downloads/dirty_truths.pdf

GLA/TfL Commentary	The Applicant's Response
	As set out in **Appendix B** of this response, the Applicant has assessed the carbon intensity of the power exported by the ERF in terms of kg CO_2e/kWh by crediting the ERF with the greenhouse gases displaced by avoiding landfill. In conclusion, the effective grid intensity in the electricity base case for REP would be 45,095 t CO_2e ÷ 511,200 MWh = 0.08821 t CO_2e /MWh (or kg CO_2/kWh). This is significantly below current carbon dioxide emissions from the combustion of natural gas to generate power, which are reported by the Department for Business Energy and Industrial Strategy (BEIS) in its Fuel Mix Disclosure data table dated 01 April 2017 to 31 March 2018 (revised on 24 August 2018) as 0.357 kg CO_2e/kWh[2]. The ERF at REP will therefore emit significantly less CO_2 than gas power stations, and this performance level will improve further if the ERF exports heat, as intended by the Applicant.
The GLA commissioned Eunomia to prepare a report, which is submitted at Appendix 3 of the Post Hearing Written Submission of Oral Case, 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 established that the REP would produce more carbon dioxide emissions than gas-fired power stations producing the same amount of electricity. The report therefore reaffirms the	The Applicant submitted a Carbon Assessment (**8.02.08**, **REP2-059**) at Deadline 2 which concludes that the base case for the assessment shows that the benefit of the REP ERF compared to landfill is about 137,000 tonnes of CO_2-equivalent per year, or about 229 kg CO_2e per tonne of waste processed. The Applicant has reviewed the report '*Performance of the Riverside Energy Park in the context of the NPS framework*' at Appendix 3 of the GLA's Post Hearing Written Submission of

[2] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/737451/fuel-mix-disclosure-data-2018-revised-2.pdf accessed on 16/05/2019

GLA/TfL Commentary	The Applicant's Response
2006 letter's understanding about waste incinerator carbon dioxide emissions.	Oral Case (**REP3-041**) and provided its detailed comments in **Appendix B** of this report.

7.4 Recycling Rates

Table E.19: The Applicant's Response to GLA's Commentary on Jon Cruddas WR (Recycling Rates)

GLA/TfL Commentary	The Applicant's Response
The GLA agrees that the proposed REP fails to fit with the Mayor's recycling targets and would adversely affect movement of waste management up the waste hierarchy.	The Applicant provided a response to the points made in Jon Cruddas' WR submitted at Deadline 2 (**REP2-104**) regarding the need for the Proposed Development in **Paragraphs 5.6.25 – 5.6.27**, and regarding impact on recycling rates in **Paragraphs 5.6.42 – 5.6.47**, of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). The Applicant provides further information regarding the Waste Hierarchy and how ERF capacity is complimentary to the wider waste industry operations and infrastructure whilst maintaining total compliance with the Waste Hierarchy in **Section 3** of this report.

8 The Applicant's Response to the GLA's Commentary on Rt Hon Jon Cruddas MP Petition

8.1 Introduction

8.1.1 Jon Cruddas submitted a petition alongside his WR at Deadline 2 of the Examination (**REP2-105**). The Applicant has provided a response to Jon Cruddas's WR at Deadline 3 of the Examination (**8.02.14**, **REP3-022**).

8.1.2 GLA has provided comments on the following topic raised in Jon Cruddas's petition (**REP2-105**) in Sheet 3 of its Deadline 3 submission (**REP3-043**):

- Air Quality.

8.1.3 The above topic is addressed in **Tables E.20** below.

8.2 Air Quality

Table E.20: The Applicant's Response to GLA's Commentary on Jon Cruddas Petition (Air Quality)

GLA/TfL Commentary	The Applicant's Response
The petition highlights the importance put on air quality by residents in the area most likely to be affected by the proposed development. The impact on Rainham in terms of air quality is raised in the Written Summary of Oral Case, submitted for Deadline 3.	The Applicant has responded to the matters referenced regarding air quality impacts on residents in the following Examination submissions: ▪ **Section 1.1** of **Applicant responses to Relevant Representations** (**8.02.03**, **REP2-054**); ▪ **Section 5.6** of the **Applicant's responses to Written Representations** (**8.02.14**, **REP3-022**); and ▪ **Paragraphs 17.6 – 17.12** of the **Oral Summary from the Issue Specific Hearing on Environmental Matters** (**8.02.19, REP3-027**). The Applicant notes that air quality impacts on Rainham are addressed in the GLA's Post Hearing Written Submission of Oral Case (**REP3-038**). The Applicant has provided detailed comments on the matters raised in that document in **Sections 2 – 8** of this report. Matters relating to Air Quality are addressed in **Section 6** of this report.

9 The Applicant's Response to the GLA's Commentary on Rt Hon Teresa Pearce MP Written Representation

9.1 Introduction

9.1.1 Teresa Pearce MP submitted a WR at Deadline 2 of the Examination (**REP2-106 to REP2-107**). The Applicant has provided a response to Teresa Pearce's WR at Deadline 3 of the Examination (**8.02.14**, **REP3-022**).

9.1.2 GLA has provided comments on the following topics raised in Teresa Pearce's WR (**REP2-106 to REP2-107**) in Sheet 3 of its Deadline 3 submission (**REP3-043**):

- Air Quality;
- Recycling; and
- CHP.

9.1.3 The above topics are addressed in **Tables E.21 to E.23** below.

9.2 Air Quality

Table E.21: The Applicant's Response to GLA's Commentary on Teresa Pearce's WR (Air Quality)

GLA/TfL Commentary	The Applicant's Response
In general, the GLA support the points made regarding Air Quality.	The Applicant provided a response to the points made in the WR submitted by Teresa Pearce MP at Deadline 2 (**REP2-106**) regarding Air Quality in **Paragraphs 5.7.49 – 5.7.64** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). The Applicant notes the GLA's support of the points made by Teresa Pearce MP. Further information regarding the Applicant's position on Air Quality matters is set out in **Section 6** of this report.

9.3 Recycling

Table E.22: The Applicant's Response to GLA's Commentary on Teresa Pearce's WR (Recycling)

GLA/TfL Commentary	The Applicant's Response
The GLA agrees that management of waste further up the waste hierarchy would be preferable, and that the expansion of EfW is contrary to the urgent need to address climate change.	The Applicant agrees that management of waste further up the waste hierarchy is essential and supports the policy drivers to ensure this happens. However, as detailed in **Paragraphs 5.7.65 – 5.7.73** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**), the planning system should ensure that there are facilities available should targets be missed such that they are available to treat waste at the next stage of the waste hierarchy. Otherwise, waste would then be diverted further down the hierarchy, e.g. to landfill, which is a far more carbon intensive process and a last resort for waste disposal. Further information regarding the Applicant's position on Waste Hierarchy matters is set out in **Section 3** of this report.

9.4 Combined Heat and Power (CHP)

Table E.23: The Applicant's Response to GLA's Commentary on Teresa Pearce's WR (CHP)

GLA/TfL Commentary	The Applicant's Response
Regarding CHP, the letter raises concerns about the gaps in the evidence that CHP is viable. The letter recognises that CHP is an integral and necessary part of the scheme and highlights that the Examiner would no doubt wish to establish clarity on this. The GLA agree with this position.	The Applicant submitted a **Combined Heat and Power Assessment** (**5.4, APP-035**) with the DCO Application, and further information in the **Combined Heat and Power Supplementary Report** (**5.4.1, REP2-012**) submitted at Deadline 2. The Applicant provided a response to the points made in the WR submitted by Teresa Pearce MP at Deadline 2 (**REP2-106**) regarding CHP in **Paragraphs 5.7.74 – 5.7.87** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). Further information regarding the Applicant's position on CHP matters is set out in **Section 4** of this report.

Appendix F Applicant's Response to GLA Sheet 4: GLA Commentary on other documents prepared by the Applicant for Deadline 2

Contents

Tables

Appendices

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1 Introduction

1.1.1 **Appendix F** of this report provides a response to *GLA Sheet 4: GLA Commentary on other documents prepared by the Applicant for Deadline 2* (**REP3-042**) submitted by the Greater London Authority (GLA) at Deadline 3.

1.1.2 GLA (and TfL with respect to transport matters) have provided comments on the following documents within Sheet 4 (**REP3-042**):

- Draft Development Consent Order (dDCO) (**3.1, REP2-006**);
- CHP Supplementary Report (**5.4.1, REP2-012**);
- Supplementary Report to the Project and its Benefits Report (**7.2.1, REP2-045**);
- Carbon Assessment (**8.02.08, REP2-059**);
- Outline Construction Transport Management Plan (CTMP) (**6.3, REP2-064**);
- Environmental Permit and Air Quality Note (**8.02.06; REP2-057**);
- Clarifications and Corrections Report (**8.02.05; REP2-056**);
- Electrical Connection Progress Report (**8.02.07; REP2-058**); and
- ES Chapter 7 – Air Quality (**6.1, REP2-019**).

1.1.3 The above documents are addressed in order below.

2 The Applicant's Response to GLA's Comments on the draft Development Consent Order submitted at Deadline 2 of the Examination

2.1 Introduction

2.1.1 The Applicant submitted a revised **draft Development Consent Order (dDCO) (3.1, REP2-006, Rev 1**) at Deadline 2 of the Examination which the GLA (and TfL with respect to transport matters) have provided comments on in Sheet 4 of its Deadline 3 Submission documents (**REP3-042**).

2.1.2 GLA (and TfL with respect to transport matters) have raised the following issues relating to the **dDCO (3.1, REP2-006, Rev 1**):

- Requirement 11;
- Requirement 13;
- Requirement 14;
- Requirement 15;
- Requirement 18;
- Requirement 20; and
- Additional Requirements Required.

2.1.3 The above topics are addressed in **Tables F.1** to **F.7** below.

2.1.4 To note, the Applicant submitted a Revision 2 of the **dDCO (3.1, REP3-003)** at Deadline 3 of the Examination.

2.2 Requirement 11 – Code of Construction Practice

Table F.1: Applicant's Response to GLA/TfL Comments on dDCO (Requirement 11)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Issue 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).	The Applicant responded to the submission in the **Applicant's response to the Local Impact Report by Greater London Authority (8.02.15, REP3-023).** The Applicant considers that requirement 11 is already sufficient to achieve the objective that the GLA/TFL are seeking.

2.3 Requirement 13 – Construction Traffic Management Plan(s)

Table F.2: Applicant's Response to GLA/TfL Comments on dDCO (Requirement 13)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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 Representation. 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.	The Applicant is considering the proposal made by the GLA to ensure that any CTMP submitted is in accordance not only with the ES but other examination documents. It will update the ExA at Deadline 5 when it submits the next iteration of the dDCO. The Applicant has since submitted a further revision to the **dDCO (3.1, REP3-005)** which includes a further revision to Requirement 13. The requirement for the relevant planning authority to consult Transport for London in respect of the CTMP within its administrative area is retained but is moved from paragraph (3) to (1) where it is more appropriate.

2.4 Requirement 14 – Heavy Commercial Vehicle Movement Delivering Waste

Table F.3: Applicant's Response to GLA/TfL Comments on dDCO (Requirement 14)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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 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	The Applicant has provided a response in respect of the GLA and TFL's requested amendments to Requirement 14 in the main report at **Paragraph 8.1**. The suggested amendment for there to be a total cap of 200,000 tpa of waste to be delivered by road has also been responded to in Appendix D of this report. Requirement 14(4) has been amended and submitted at Deadline 3 to include the provision to the relevant planning authority of data on HCV visits to REP during the preceding year (with provision for further requests during the year). The Applicant will consider the GLA/TfL's request that the data be provided to TfL as well as the relevant planning authority and will provide any update to Requirement 14(4) in the revised DCO to be submitted at Deadline 5.

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
	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.	

2.5 Requirement 15 – Operational Worker Travel Plan

Table F.4: Applicant's Response to GLA/TfL Comments on dDCO (Requirement 15)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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.	The Applicant submitted a revised **dDCO (3.1, Rev2, REP3-003)** at Deadline 3. Requirement 15 was amended in that document so that the operational worker travel plan would be approved by the relevant planning authority, in consultation with TfL. **Table 5.3** of the **Outline Operational Worker Travel Plan (Appendix M** to **Appendix B.1** of **Chapter 6 Transport** of the **ES (6.1 Rev1, REP2-017)** provides indicative Targets within and Section 6 outlines a suite of measures that would be employed to achieve those targets. Section 7.4 sets out the monitoring framework for the Operational Worker Travel Plan and recognises that within London the management of Travel Plans is the role of the London Borough, particularly recognising the role of the London Borough as Local Highway Authority for the SRN. Section 7.6.3 recognises the enforcement of the Travel Plan as being the role of LBB. As such, the Applicant does not consider that consultation of the GLA/TfL is justified or appropriate in these circumstances.

2.6 Requirement 18 – Community Benefits

Table F.5: Applicant's Response to GLA/TfL Comments on dDCO (Requirement 18)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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 18 has been agreed with London Borough of Bexley, which is required to approve the Employment and Skills Plan at the relevant time. If the London Borough of Bexley does not consider that the contents of the Employment and Skills Plan is acceptable then it can refuse to provide the relevant approval. As such amendments to Requirement 18 are not considered relevant. The Employment and Skills Plan will include how the use of the shared site with RRRF, within operational and safety constraints, could provide beneficial opportunities for training, educational or community purposes. However, the Applicant does not accept the suggested commitment to paying the London Living Wage. There is no planning policy requirement for the Applicant to guarantee the London Living Wage, in respect of the Proposed Development. In any event, the vast majority of the jobs at the Proposed Development will be highly skilled jobs, at degree level or above.

2.7 Requirement 20 – Combined Heat and Power

Table F.6: Applicant's Response to GLA/TfL Comments on dDCO (Requirement 20)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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	The Applicant has responded to the GLA's points on Requirement 20 at **Paragraph 8.2.18 to 8.2.23** of the main report and in **Table 7** of the **Applicant's Response to the Local Impact Report by Greater London Authority (8.02.15, REP3-023).**

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
	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. 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.	

2.8 Additional Requirements Required

Table F.7: Applicant's Response to GLA/TfL Comments on dDCO (Additional Requirements)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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.	As set out in **Table 7** of the **Applicant's Response to the Local Impact Report by Greater London Authority** (**8.02.15, REP3-023**), the operation of the jetty and the pier is governed by River Works Licences with the Port of London Authority. It is therefore not appropriate or justified to place such a requirement, as requested by the GLA and TfL, on the Applicant when the jetty and pier are shared assets. In the event that the jetty was not available and the reason was in the Applicant's control, then the Applicant would still be bound by the road traffic movement restriction in Requirement 14 of the **dDCO (3.1, REP3-003**). Only where the reason is beyond the Applicant's control would there be a jetty outage. As such, no amendment is required.
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.	As per the Applicant's response to the **ExA Written Question Q1.0.3 (8.02.04, REP2-055),** the Applicant confirms that all generating elements of REP are intrinsically linked both in terms of processing and where appropriate, delivered within one building. Consequently, the Applicant does not consider that the commitment requested is justified or appropriate.
Pre-treatment 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	The Applicant notes the proposal for a Requirement to address the pre-treatment of waste to preclude the incineration of recyclable material, however, as set out in **Sections 1.5** and **1.9** of the **Applicants response to the Local Impact Report by Greater London Authority** (**8.02.15, REP3-023**) there is no policy requirement, either in the NPS or in the London Plan, to require energy from waste facilities to include pre-treatment.

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
	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 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.	This position was reiterated at the Issue Specific Hearing on Environmental Matters held on 5 June 2019, as set out in **Section 13** of the **Oral summary from the Issue Specific Hearing on Environmental Matters** (**8.02.19, REP3-027**). Further information regarding the Applicant's position on Waste Hierarchy matters, and the need for pre-treatment, is set out in **Section 3** of this report. Whilst the Applicant maintains that such a requirement is not necessary or supported by policy, the Applicant is willing to consider the inclusion of a requirement in the draft DCO to be submitted at Deadline 5 to ensure the waste hierarchy is followed.
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	The Applicant has considered its position in light of the GLA's further submissions. It is willing to accept a requirement in relation to air quality and will update the draft Development Consent Order for Deadline 5, which will include the Applicant's preferred wording for this requirement.

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
	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.	The Applicant responded to the submission in the **Applicant's response to the Local Impact Report by Greater London Authority (8.02.15, REP3-023).** In summary it stated: 1) The Applicant does not own or operate the vehicles that would bring the waste to the ERF and AD plants and therefore will have no influence or control over them. The correct target for this requirement would be the waste suppliers, which would include the local authorities. In any event, the Applicant is not aware of any London Plan policy that requires a development that would have deliveries to ensure that those delivers are in zero carbon vehicles. 2) The export of ash will be by barge only, as per Requirement 14 of the draft Development Consent Order, except in the event of a jetty outage, as provided for in Requirement 14. 3) No amendment required.
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.	The Applicant responded to the submission in the **Applicant's response to the Local Impact Report by Greater London Authority (8.02.15, REP3-023).** In summary it stated: 1) As was discussed at the Issue Specific Hearing on Environmental Matters held on 5 June 2019, the refinement of the Electrical Connection route at Deadline 2 means that there has been a significant reduction in the impact on buses during the construction of the Electrical Connection. 2) There is no legal obligation on the Applicant to provide compensation for delays as a result of works to construct the Electrical Connection. There is no entitlement to compensation if a business, including bus services, is affected by road works undertaken by statutory undertakers or the highway authority – the circumstances here are no different. Therefore, there is no claim against the Applicant or indeed UKPN, who would be carrying out the works. 3) No amendment required.

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Use of anaerobic digestion 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).	The Applicant agrees that injection of biogas to the gas grid, or upgrade to vehicle fuel are the preferred options, as set out in Paragraph 3.3.41 of **Chapter 3 Project and Site Description (6.1, REP2-013)**. However, the Applicant is aware that there may be obstacles to the preferred option, principally (in the case of injection to grid) whether there is capacity in the local gas network to facilitate biogas injection, engineering of a gas delivery pipeline and securing of relevant (off-site) consents for the installation. In the case of upgrade of biogas to compressed natural gas (CNG) vehicle fuel, there would be a need to establish a market for the sale of vehicle fuel and secure associated licenses, and/or upgrade the waste delivery vehicle fleet to operate on this fuel source, which is outside of the Applicant's control. The Applicant has therefore allowed for an option to utilise biogas to generate electricity using CHP engines, if necessary.

3 The Applicant's Response to GLA's Comments on the CHP Supplementary Report submitted at Deadline 2 of the Examination

3.1 Introduction

3.1.1 The Applicant submitted a **CHP Supplementary Report** (**5.4.1, REP2-012)** at Deadline 2 of the Examination which the GLA (and TfL with respect to transport matters) have provided comments on in Sheet 4 of its Deadline 3 Submission documents (**REP3-042**).

3.1.2 GLA has raised the following topics on the **CHP Supplementary Report** (**5.4.1, REP2-012)** submitted at Deadline 2 of the Examination:

- Demonstrable Steps;
- Heat Demand Analysis; and
- CIF and its relevance to NPS Policy for low carbon energy.

3.1.3 The above topics are addressed in **Tables F.8** to **F.10** below.

3.2 Demonstrable Steps

Table F.8: Applicant's Response to GLA/TfL Comments on CHP Supplementary Report (Demonstrable Steps)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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.	Connection of both REP and RRRF to a heat network could increase the volume of heat that could be delivered and would lessen the reliance on fossil fuelled back-up boilers and associated carbon emissions, the extent to which would be dependent on realised network growth and the preferred back-up and thermal storage strategy. These variables will be clarified as a scheme is developed further. While any ERF operating as a power-only generator would not operate as efficiently as it would in CHP mode, it would not be operating inefficiently. Through the permitting regime, the ERF must achieve minimum energy efficiency benchmarks in line with Environment Agency (EA) sector guidance note (EPR5.01), and an obligation is typically placed on the operator to establish an energy efficiency plan with provision for review and amendment to include improvements in efficiency as and when proven new equipment and operating techniques become available. In addition, since RRRF was developed as a CHP-Ready facility, EA CHP Ready Guidance stipulates that the electrical efficiency of a CHP-Ready facility should be no less than that of the equivalent non-CHP-Ready plant. On this basis, when operating in power-only mode, even when connected to a heat network, the RRRF would be no less efficient than it otherwise would have been as a generator optimised for electrical generation exclusively. Due to the variable nature of heat demand profiles and best practice sizing of heat supply infrastructure (relative to demand), the heat export system would not be operating at full capacity for a significant proportion of the year. During these times, the loss of two of three boilers (from RRRF) or one of two boilers (from REP), would not render the back-up heat supply system ineffective. In addition, resilience of each ERF is strengthened due to the fact that steam supply to the heat export system could, in the event of a turbine outage, be maintained from the live steam system via a pressure reducing station. On this basis the likelihood of total loss of heat supply is significantly reduced. In any case, it would not be unusual for heat consumers to retain existing heating systems as back up (where viable) or for gas-fired boilers to be provided as back-up as a tertiary fallback. The heat supply system would therefore not fall short of what is accepted as good district heating practice.

3.3 Heat Demand Analysis

Table F.9: Applicant's Response to GLA/TfL Comments on CHP Supplementary Report (Heat Demand Analysis)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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.	See the Applicant's response in **Table C.3** of this document.

3.4 CIF and its relevance to NPS policy for low carbon energy

Table F.10: Applicant's Response to GLA/TfL Comments on CHP Supplementary Report (CIF)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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 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	As explained in **Section 4.2** of the **Combined Heat and Power Supplementary Report (5.4.1, REP2-012)**, the proposed ERF would meet the required CIF level in power-only mode. The Applicant has responded to the GLA's specific challenges to the CIF calculation in **Section 5.1** of this report and in **Appendix B**. In summary, the proposed efficiency of the ERF is entirely plausible when accounting for technical provisions within the design and has been independently verified by Fichtner. The CIF threshold is met under every operational scenario, adopting both formally published and unpublished versions of the GLA's Ready Reckoner tool. Using net calorific value as the basis for CIF calculations is correct and justified to ensure a consistent approach, and this position has been accepted by the GLA when assessing previous proposals. The GLA claims that the Applicant in its revised CHP Report commits to making the ERF 'heat ready' – this is incorrect. As explained in **Sections 1.1.6, 1.1.10, 1.1.12, 2.5.3, 3.2.4, 3.3.4, 3.4.5, 3.4.15** and **10.1.1** of the **Combined Heat and Power Assessment** (**5.4, APP-035**), REP exceeds the requirement for 'CHP ready' and will be CHP Enabled. This means that REP would be fully capable of exporting heat from commencement of operations, with all required on site infrastructure in place, thereby demonstrating the Applicant's strong commitment in implementing a district heating scheme. This approach has been communicated consistently from the outset. Part 4.6 'Consideration of Combined Heat and Power (CHP)' of NPS EN-1 makes clear the preference or requirement for a development to consider and/or implement CHP. Paragraph 4.6.7 states "*developers should consider the opportunities for CHP from the very earliest point and it should be adopted as a criterion when considering locations for a project*". From an early stage in the development of the Proposed Development, the Applicant has considered opportunities for CHP. The Proposed Development will be CHP Enabled from the outset, and the Applicant has also identified wider opportunities to

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
	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.	maximise the benefits associated with heat export by considering a district heating network, and wider opportunities for export if new residential developments do not materialise. Paragraph 4.6.7 NPS EN-1 states that "*…applicants should not only consult those potential customers they have identified themselves but also bodies such as the Homes and Communities Agency (HCA), Local Enterprise Partnerships (LEPs) and Local Authorities and obtain their advice on opportunities for CHP*". The Applicant has engaged with local developers, local planning authorities (LBB and Royal Borough of Greenwich (RBG)) and the GLA in regards to the opportunities for CHP. The Applicant was central to the establishment of and ongoing contribution to the Bexley District Hearing Partnership Board. NPS EN-3 states that new developments should consider CHP as part of its application, or demonstrate that CHP has been considered, and the Secretary of State can seek further information should this not be provided. Section 2.5 of NPS EN-3 states that biomass/Energy from Waste generating stations can be configured to produce CHP. As such, the **Combined Heat and Power Assessment** (**5.4, APP-035**) satisfies NPS EN-3 requirements as being appropriate evidence submitted to demonstrate the opportunities for CHP have been explored. The Applicant notes that Draft London Plan policy SI8 section 9.8.13 notes specific demonstrable steps required under part D3, including commitments to deliver infrastructure to achieve high energy efficiency by way of "*investment in the development of a heat distribution network to the site boundary, or technology modifications that improve plant efficiency*" and "*the establishment of a working group to progress the agreed steps and monitor and report performance to the consenting authority*", both of which the Applicant is actively delivering. The Applicant's proposals are therefore compliant with relevant policy.

4 The Applicant's Response to GLA's Comments on the Supplementary Report to the Project and its Benefits Report submitted at Deadline 2 of the Examination

4.1 Introduction

4.1.1 The Applicant submitted the **Supplementary Report to the Project and its Benefits Report** (**7.2.1, REP2-045)** at Deadline 2 of the Examination which the GLA has provided comments on in Sheet 4 of its Deadline 3 Submission documents (**REP3-042**).

4.1.2 GLA has raised the following issues on the **Supplementary Report to the Project and its Benefits Report** (**7.2.1, REP2-045)** submitted at Deadline 2 of the Examination:

- Role of the RWS in the SoS decision making for the DCO application; and
- Assumptions regarding incineration potential of municipal waste.

4.1.3 The above topics are addressed in **Tables F.11** to **F.12** below.

4.2 Role of the RWS in the SoS decision making for the DCO application

Table F.11: Applicant's Response to GLA/TfL Comments on the Supplementary Report to the Project and its Benefits Report (Role of RWS)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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 does not agree with the GLA's assertion, **The Project and its Benefits Report (7.2, APP-103)** demonstrates that REP is wholly in compliance with policy and delivers substantial environmental, economic and social benefits. Commentary on REP's compliance with, and place within, the waste hierarchy is provided in **Section 3** of this report. As confirmed at **Section 3** of this report, REP is just one element of the waste management infrastructure required to manage London's waste sustainably.
	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.	The GLA is correct, the various elements of REP could be constructed independently. However, such an approach would not deliver the benefits sought (not least) through draft London Plan policy SI8/C which seeks to deliver optimal site use through the co-location of complementary waste and energy generating facilities that will deliver a carbon positive outcome including the potential to deliver CHP. As per the Applicant's response to the **ExA Written Question Q1.0.3 (8.02.04, REP2-055)**, the Applicant confirms that all generating elements of REP are intrinsically linked. Consequently, the Applicant does not consider that the commitment requested is justified or appropriate.
	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.	The lack of progress on the provision of nuclear energy is an example of the continued, urgent, need for new energy generating stations, especially those such as REP that will deliver renewable/low carbon 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".* 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: ▪ 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&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	The need for new waste management capacity driven by authorities beyond London is addressed in the **Applicant's responses to Written Representations (8.02.14, REP3-022) (**see paragraphs 2.1.155 to 157 and Appendix B) in which the sources of both the GLA's table data and that formerly presented in the **LWSA Appendix A (7.2, APP-103)** have been reviewed and compared. This update recognises that the Applicant's source data has been refreshed since the **LWSA** was prepared, confirming that there remains at least 1.5 million tonnes of residual wastes in nearby local authorities outside of London that should be moved up the waste hierarchy and diverted from landfill. Further, the **Applicant's responses to Written Representations (8.02.14, REP3-022)** notes (at paragraph 2.1.157) that the GLA has focussed on the lower end of future need estimates as forecast by the authorities reported in the GLA's table 4. This approach will always favour an underestimation and is likely to result in a failure to deliver the infrastructure required. The Applicant is familiar with some of the forecasts presented and has substantial concerns with them (and was noted at **Appendix B** to **Applicant's responses to Written Representations (8.02.14, REP3-022).** These concerns are set out below in response to each of the authority's listed by the

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
	high case. ▪ 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&I waste2. ▪ 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. ▪ Suffolk – The Applicant indicates capacity gaps of circa 210 ktpa for LACW, and circa 390 ktpa for C&I waste. The Suffolk Minerals & 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'. 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.	GLA. **Hertfordshire** – Appendix B incorporates an updated capacity gap of 154,000 tonnes. **Essex** – Appendix B retains the identified capacity gap of 200,000 tonnes. Policy 1 of the Essex and Southend-on-Sea Waste Local Plan does not specify if this is for LACW or C&I waste but the supporting text indicates it is RDF resulting from LACW treatment. It requires a destination other than landfill. The capacity surplus referred to by the GLA relies upon consented but not operational capacity. It is taken from a waste capacity update published in May 2018. The Authority Monitoring Report for 2016/17 identifies that just over 1 million tonnes of LACW and C&I wastes continue to be exported from the county, indicating a continued need for residual waste management capacity. **Kent** - The Applicant is aware of the Kent MWLP Early Partial Review and of submissions made in response to that document by Wheelabrator Technologies Inc (WTI). The Applicant shares the concerns raised by WTI, particularly in identifying: • a shortfall in the LACW arisings forecast and future residual waste management demand, potentially 88,000 to 193,000 additional tonnes of LACW arising and up to an additional 130,000 tonnes of residual LACW that should be diverted from landfill; • substantial elements of C&I waste potentially not accounted for in the KCC C&I Need Assessment resulting in an additional 28,000 to 141,000 tonnes of residual C&I wastes to be diverted from landfill; and • substantial amount of refuse derived fuel generated in Kent that is subsequently exported out of the UK; nearly 200,000 tonnes of RDF was manufactured in Kent, with between 100,000 to 188,000 tonnes from waste generated in Kent or the South East, and exported outside the UK. The Applicant has demonstrated that there remains a substantial level of need for new waste treatment capacity in Kent. **Suffolk** – The GLA fails to recognise, or comment upon, the fact that the Suffolk Waste Study (2018) also identifies that Suffolk exported (Table 25) nearly 810,000 tonnes of waste in 2015 (the latest year reported in the report). Table 39 of the Suffolk Waste Study (2018) indicates that nearly 110,000 tonnes of this was LACW or C&I wastes. The data presented within the Suffolk Waste Study (2018) is not entirely clear, but it does indicate that there remains a level of need for additional residual waste treatment capacity to manage the County's waste. Further, the Applicant believes the Suffolk Waste Study (2018) conclusion that no additional treatment capacity is required is incorrect, not least in that it relies on over 400,000 tonnes (per annum) of waste transfer station capacity. Waste transfer station capacity is very useful (principally to segregate and

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
		bulk up wastes prior to transportation) but cannot be relied upon to treat wastes.
	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).	**Section 2.4 Resources and Waste Strategy (RWS):** The Applicant has wholly incorporated the policy expectation that 65% recycling of municipal waste will be achieved. As presented in **Section 2** of this report, the Applicant has confirmed even when the GLA's challenging waste reduction and recycling targets are met, there is still a need for c.900.000 tonnes of additional residual waste recovery infrastructure in London. Beyond London, within the South East there remains a further need for at least 1.5 million tonnes of new residual waste treatment capacity.
	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).	**Sections 3.5 – 3.16 RWS Evidence Annex :**At **Paragraph 2.5.12** of the **Applicant's response to the Relevant Representations (8.02.03, REP2-054)** the Applicant responded to the GLA's assertions, noting that the summary of the RWS presented by the GLA was not wholly correct. As is noted at **Paragraph 1.2** of **Appendix A** to the **Supplementary Report to the Project and its Benefits Report (7.2.1, REP2-045)** the author of Appendix A (Tolvik Consulting Ltd) was also the author of the Evidence Annex to the Resources and Waste Strategy. Tolvik Consulting Ltd is consequently appropriately placed to prepare Appendix A.
	Section 3.6 - Environmental permit and air quality. 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 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).	The GLA states that SCR cannot be secured through the environmental permit. This is incorrect. The environmental permit will include a condition which requires the plant to be operated in accordance with the techniques described in the application, which will effectively require SCR to be used. In addition, the proposed emission limit for NOx of 75 mg/Nm^3 can only be achieved by using SCR.
	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.	As is explained at **Paragraph 1.5** of **Appendix A** to the **Supplementary Report to the Project and its Benefits Report (7.2.1, REP2-045)** this report is not a 'new assessment' but simply a report prepared to: • Respond to the GLA's Relevant Representation; and • Consider how the Resources and Waste Strategy impacts upon Tolvik's report titled 'Residual Waste in London and the South East: Where is it going to go?' The key findings of 'Residual Waste in London and the South East: Where is it going to go?' are presented on page 23 of that document, and include that by 2025 there could be a cumulative shortfall of 5 to 9 million tonnes; which

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		aligns with the range presented in **Appendix A** to the **Supplementary Report to the Project and its Benefits Report (7.2.1, REP2-045).**
	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 more than 10% Municipal Solid Waste (MSW) to landfill by 2035, if a 65% MSW recycling rate is achieved by that same year".5* 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 sub-ordinate 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 2.56 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.	The GLA is continuing to conflate the strategy or policy that is set out in the main text of the Resources and Waste Strategy with the information or data that is set out in the text of the Evidence Annex. The Applicant believes this is an incorrect approach. The strategy or policy of the Resources and Waste Strategy is set out in the main text of that Strategy, not in the Evidence Annex. The role of the Evidence Annex is made clear at page 6 of the Evidence Annex which states: '*This Annex sets out the evidence underpinning the Resources and Waste Strategy. It is positioned within the policy analysis framework provided by HM Government's Green Book*[1]*. Its primary purpose is to explain the rationale for intervention and provide transparent evidence behind the actions in the Resources and Waste Strategy. It will be a source of information for policy makers as they develop specific policy proposals and have a wide range of applications external to government….'* The GLA is able to use the Evidence Annex as a source of information, but not as a statement of policy. In its quoting of the Evidence Annex, the GLA continues to fail to include the following sentence, which states: '*The analysis assumes refuse derived fuel (RDF) exports remain at current levels*.' What is clear from the Evidence Annex, and the other documents referenced by the GLA, is that a surplus of energy recovery capacity is only identified when high recycling is combined with the continued export of c.3million tonnes of RDF to mainland Europe. As explained at the ISH held on 5 June 2019 **(Paragraph 12.16** of the **Applicant's Oral Summaries for Issue Specific Hearing on Environmental Matter (8.02.19, REP3-027),** this approach fails to deliver net self-sufficiency. In making its response the GLA ignores that the Applicant has prepared a bespoke assessment, specific to London, and wholly incorporating London's key policy priorities, including 65% recycling across municipal waste and achieving net self-sufficiency. As presented in **Section 2** of this report, the Applicant has confirmed even when the GLA's challenging waste reduction and recycling targets are met, there is still a need for c.900.000 tonnes of additional residual waste recovery infrastructure in London. Beyond London, within the South East there remains a further need for at least 1.5 million tonnes of new residual waste treatment capacity. The Applicant agrees, energy recovery is not relevant to the UK meeting higher levels of *recycling*. That outcome will require new systems and new recycling infrastructure. Energy recovery is relevant only as one part of the network of infrastructure required to divert waste from landfill and gain most energy from our waste. Landfill capacity is diminishing, **Paragraph 1.5.16** and **Figure 3** of **The Project and its Benefits Report (7.2, APP-103)** shows the rate of closure (from 8 to just 2) of the landfill sites relied upon by London. New energy recovery facilities enable the remaining landfill capacity to be

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		used appropriately, retained for those wastes that cannot be combusted and that require safe disposal. In its final bullet, the GLA references paragraph 2.56 of the Tolvic report. The Applicant believes the GLA is referring to **Paragraph 2.5** of **Appendix A to the Supplementary Report to the Project and its Benefits Report (7.2.1, REP2-045),** not 2.56. It is a quote taken directly from the Resources and Waste Strategy and with which the Applicant concurs. Energy recovery is one of the most expensive forms of treatment; and waste reduction, re-use and recycling should be favoured. It is for all of these reasons that the Applicant has demonstrated (at **Sections 2** and **3** of this report and within the **LWSA (7.2, APP-103)**) that REP is in accordance with the waste hierarchy.
	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. Despite these uncertainties, it is clear that where modellers have assumed high recycling in line with circular economy targets, the UK capacity is typically found to be either negligible, or negative. For reference, those scenarios under which a household waste recycling rate of 60% or higher is assumed are highlighted yellow in the graphic above. More recent research, informing the Chartered Institution for Wastes Management's Presidential Report 2018 further reinforces this finding concluding that at 60% recycling the UK residual waste capacity gap reduces to zero, with a significant capacity surplus at 65% recycling.	The evidence presented by Tolvik (**Figure 1 at Paragraph 3.4 of Appendix A to the Supplementary Report to the Project and its Benefits Report (7.2.1, REP2,045))** and being criticised by the GLA, is not new or bespoke to that report. The evidence regarding current EfW and EfW in construction is taken from the RWS Annex, a wholly relevant reference source.
	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	As confirmed at **Section 2** of this report, the Applicant's assessment (the **LWSA (7.2, APP-103)**) fundamentally expects that the Mayor's policy priorities of achieving the Circular Economy will be delivered. The Applicant has confirmed even when the GLA's challenging waste reduction and recycling targets are met, there is still a need for c.900.000 tonnes of additional residual waste recovery infrastructure in London. Beyond London, within the South East there remains a further need for at least 1.5 million tonnes of new residual waste treatment capacity.

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	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.	The export of waste from the UK to mainland Europe is wholly and directly relevant to London, not least because (as demonstrated at **Appendix A** to this report) London exports a substantial proportion of the UK's RDF; nearly 763,000 tonnes in 2016/17.
	Section 4 of Appendix A 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).	The Applicant has consistently been clear that it is going to be challenging for London to meet a 65% municipal recycling rate. The GLA has acknowledged this by reducing household/LACW waste recycling aspirations from 50% by 2020 and 60% by 2031 (adopted London Plan policy 5.16/B/c) to 50% by 2025 (London Environment Strategy, policy 7.21). The LES: Evidence Base shows that, even introducing the most comprehensive household waste recycling services, there remains a 7.8% gap in household waste recycling achieving 50% by 2025 (Figure 69, LES: Evidence Base). This is the reality of waste management within London; however, the GLA's complaint is misconceived. As confirmed at **Section 2** of this report, the Applicant has confirmed even when the GLA's challenging waste reduction and recycling targets (65% across municipal waste) are assumed to be met, there is still a need for c.900.000 tonnes of additional residual waste recovery infrastructure in London. In making its response the GLA ignores that the Applicant has prepared a bespoke assessment, specific to London, and wholly incorporating London's key policy priorities, including 65% recycling across municipal waste and achieving net self-sufficiency. As presented in **Section 2** of this report, the Applicant has confirmed even when the GLA's challenging waste reduction and recycling targets are met, there is still a need for c.900.000 tonnes of additional residual waste recovery infrastructure in London. Beyond London, within the South East there remains a further need for at least 1.5 million tonnes of new residual waste treatment capacity.
	Paragraphs 4.1-4.12 of Appendix A 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	The GLA states that '*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.*' This is simply a statement, there is no evidence presented of the 'burden' perceived by the GLA. Further, the statement ignores the facts that in 2015, London exported 11.4 million tonnes of waste, most of which went to landfill (draft London Plan, paragraph 9.8.1). As demonstrated at **Appendix A** to this report London exported a substantial proportion of the UK's RDF; nearly 763,000 tonnes in 2016/17. As is demonstrated through **The Project and its Benefits Report (7.2. APP-103)** not least at **section 4.3,**

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	(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.	there is benefit to London in bringing waste to REP, delivering energy, jobs and societal benefits to London. The evidence regarding 'operational capacity' relied upon by Tolvik (presented at **Figure 1** at **Paragraph 3.4 of Appendix A to the Supplementary Report to the Project and its Benefits Report (7.2.1))** and being criticised by the GLA, is not new or bespoke to that report. The evidence regarding current EfW and EfW in construction is taken from the RWS Annex, a wholly relevant reference source. As was made clear at **Paragraph 1.2.3 of the LWSA (7.2, APP-103),** 'existing capacity should be considered as only that which is already operational, or in the very least, for which there is a more than reasonable prospect that it will become operational.' This approach is entirely consistent with that of NPS EN-1 and is the approach also used by Tolvik. Any estimation of future requirements is reliant upon the assumptions used; this is equally true of the forecasts made by Tolvik, the Applicant and the GLA. The Applicant wholly disagrees with the GLA and confirms that projections made by Tolvik are not inconsistent with other commentators. It is simply that the GLA looks only to the most conservative forecasts presented and fails to consider the assumptions within those projections. The principal discrepancy is the GLA's failure to acknowledge both that: all commentators recognise the difficulties that will be faced in meeting 65% municipal waste recycling (but still model on the assumption that this will happen); and that to avoid building any new residual waste treatment capacity will require the UK to continue exporting c.3.2 million tonnes of residual wastes to mainland Europe. The continued export of residual wastes fails to deliver policy priorities of seeking net self-sufficiency and resilience in terms of both waste management and energy supply.
	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) ▪ 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. ▪ the average household recycling rate now for outer London LA's is currently ~40% (and inner London 25%) 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	The Applicant agrees that waste management services offered by the London Boroughs are likely to change over future years. As is shown from **Paragraph 2.1.162** of the **Applicant's Response to Written Representations (8.02.14, REP3-022),** energy recovery works well alongside increased recycling. REP provides another opportunity for those Boroughs that look for a sustainable, local, destination for their residual wastes.

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	policy intervention this is likely to push recycling levels even further towards national and EU policy goals of 65% by 2035.	

4.3 Assumptions regarding incineration potential of municipal waste

Table F.12: Applicant's Response to GLA/TfL Comments on the Supplementary Report to the Project and its Benefits Report (Assumptions regarding incineration potential of municipal waste)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
	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). 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.	As presented in **Section 2** of this report, the GLA's submissions to this Examination are inconsistent and incorrect. For example, simple calculation errors in the GLA's Appendix 2a, Table 2 result in the loss of between 200,000 to 3,000,000 tonnes of residual waste. Further, the GLA has introduced reference to reduction in the mass of residual waste due to pre-treatment, which is a wholly new assertion that has not been made previously. Also, the GLA continues to rely on data that is out of date. In **Section 2** of this report, the Applicant has confirmed even when the GLA's challenging waste reduction and recycling targets are met, there is still a need for at least c.900.000 tonnes of additional residual waste recovery infrastructure in London. Beyond London, within the South East there remains a further need for at least 1.5 million tonnes of new residual waste treatment capacity. By contrast, it is clear that the GLA's assessment is flawed in that it: fails to apply its own policy fairly and reasonably; relies on out of date information; and does not calculate accurately. The GLA's approach underestimates the future level of need for residual waste treatment capacity in London, an approach that will fail to deliver the infrastructure that is sought by policy. **Appendix A** to this report addresses all of the GLA's assumptions and concerns in detail. The Applicant confirms that C&I is not double counted within the Applicant's assessment, and the GLA is wrong to suggest as such. As a result of the Applicant updating household waste to actual LACW and consequently subtracting non-household waste from the C&I arisings, the total municipal waste arisings forecast to be generated in London presented by the Applicant in Scenarios 2b, 3a, 3b and 4 are 54,000 less than as forecast within the draft London Plan. Even if it is assumed that only 80% of C&I waste is combustible there still remains at least c.700,000 tonnes of residual waste that should be diverted from landfill. This outcome is achieved on the assumption that all the GLA's recycling aspirations are delivered. Further, **Appendix A** to this report address that the GLA's submissions fail to recognise the substantial proportion of RDF that is produced in, and exported from London, nearly 763,000 tonnes in 2016/17. The Applicant has consistently demonstrated that there remains a substantial need for REP.

5 The Applicant's Response to GLA's Comments on the Carbon Assessment submitted at Deadline 2 of the Examination

5.1 Introduction

5.1.1 The Applicant submitted a **Carbon Assessment (8.02.08, REP2-059)** at Deadline 2 of the Examination which the GLA has provided comments on in Sheet 4 of its Deadline 3 Submission documents (**REP3-042**).

5.1.2 GLA has raised the following issues regarding the **Carbon Assessment (8.02.08, REP2-059)** submitted at Deadline 2 of the Examination:

- Purpose in comparison of the ERF (only) with sending waste to landfill; and
- Inputs into the calculations

5.1.3 The above topics are addressed in **Tables F.13** to **F.14** below.

5.2 Purpose in comparison of the ERF (only) with sending waste to landfill

Table F.13: Applicant's Response to GLA/TfL Comments on the Carbon Assessment (Purpose in comparison of the ERF (only) with sending waste to landfill)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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 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	The Applicant has explained the reasons for using CCGT as the marginal energy source in **Paragraphs 3.1.16** and **3.1.17** of the **Carbon Assessment (8.02.08, REP2-059)** and in **Paragraphs 4.4.15** to **4.4.23** of **the Applicant's response to Relevant Representations (8.02.04, REP2-054).** ERFs are entirely dispatchable and it is relatively straightforward to ramp the thermal input of such facilities up and down within the operational envelope, over relatively short timeframes. Surplus bunker and silo storage facilities are provided for incoming residual waste and for incinerator bottom ash and residues, which, in combination with the Applicant's control of transfer loading station and lighterage operations, means that the waste management provision offered by REP would be highly flexible. It is fair, however, to recognise that ERFs tend to operate on a continuous basis (notwithstanding maintenance outages) due to obligations placed on operators to run facilities efficiently, commercial drivers associated with energy sale revenues / subsidies and to seek retention of R1 status. Of principal importance is that operating ERFs reduces the demand from other power stations. This means that the power required from CCGTs will be reduced and so fewer CCGTs will switch on and off. The effect is that ERFs displace the marginal CCGT plant. The Applicant does not agree with the GLA's assertion that the baseline for comparison of carbon emissions would not be landfill, as zero landfill (of combustible materials) would have been achieved by these dates. Firstly, the approach of considering the benefit associated with diversion of waste from landfill is justified in Department for the Environment Farming and Rural Affairs (DEFRA) report titled 'Energy from Waste – A guide to the debate 2014', paragraphs 35 to 46. This approach is also precedented in a substantial number of DCO and planning decisions. Further, zero landfill (of combustible materials) is achieved by driving waste up the waste hierarchy, though development of more sustainable waste management infrastructure such as REP. As presented in **Section 2** of this report, the Applicant has confirmed even when the GLA's challenging waste reduction and recycling targets are met, there is still a need for c.900.000 tonnes of additional residual waste recovery infrastructure in London. Beyond London, within the South East there remains a further need for at least 1.5 million tonnes of new residual waste treatment capacity. Therefore taking account of diverting this waste from landfill is appropriate. The GLA suggests that the savings from landfill displacement are too high, although does not suggest any other figures. The Applicant is surprised by this assertion as the source of all assumptions is clearly stated in the **Carbon Assessment (8.02.08, REP2-059**), mainly in paragraphs 3.2.2 and

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	is highly conservative. Even if the facility is operational in 2021, it will continue to operate for around another 25 years from this 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.	3.2.3, and the source documents were provided as appendices to the Carbon Assessment. The Applicant's position on grid displacement factor, as set out clearly in paragraphs 3.1.14 to 3.1.19 of the **Carbon Assessment (8.02.08, REP2-059**), is to adopt CCGT as a comparator for electricity generated from the combustion of waste, a position which is supported by DEFRA. The Applicant has set out a series of sensitivities in Table 10 of the Carbon Assessment, including considering the effect of adopting UKWIN's position that the long-run marginal generation-based emissions factor for 2021 (0.258 kg CO2e / kWh) should be used. Regardless of the GLA's opinion of this figure, this is the figure which UKWIN considers appropriate and has therefore been modelled as a sensitivity. As set out in the analysis, there is a carbon benefit in all cases. It is disingenuous and fallible to adopt a position which requires the projection of grid displacement factors several decades into the future, which may or may not arise and to an unknown extent. The approach of adopting current CCGT performance as the comparator is supported by Government and is also precedented in a substantial number of DCO and planning decisions.

5.3 Inputs into calculations

Table F.14: Applicant's Response to GLA/TfL Comments on the Carbon Assessment (Inputs into calculations)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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.	The Applicant has commented on matters raised relating to waste feedstock in **Section 2.1** of the **Applicant's responses to Written Representations** submitted at Deadline 3 (**8.02.14, REP3-022**). REP is not directly linked to local authority contracts and therefore the specific origin of the waste is not known at this stage. However, the Applicant has a network of waste transfer stations to the north and south of the river to enable the delivery of waste from around both London and the South East. Matters relating to waste feedstock are specifically addressed in **Section 3.2** of this report. Furthermore, Eunomia's approach is flawed as it is predicated on treating the ERF as a power station only and calculating a carbon intensity on this basis. This is incorrect as it ignores the benefits of landfill displacement. The Applicant's response to Eunomia is set out in **Appendix B** of this report.

6 The Applicant's Response to GLA's Comments on the revised Outline CTMP submitted at Deadline 2 of the Examination

6.1 Introduction

6.1.1 The Applicant submitted a revised **Outline Construction Traffic Management Plan (CTMP) (6.3, REP2-064, Rev 1**) at Deadline 2 of the Examination, which supersedes the **Outline CTMP**, **Appendix L** of the **Transport Assessment, Appendix B.1** of the **ES** (**6.3, APP-066**). The GLA and TfL have provided comments on the revised **Outline CTMP (6.3, REP2-064, Rev 1**) in Sheet 4 of its Deadline 3 Submission documents (**REP3-042**).

6.1.2 GLA and TfL have raised the following issues relating to the revised **Outline CTMP (6.3, REP2-064, Rev 1**):

- Construction traffic management (including workforce parking and workforce travel plan to be agreed with London Borough of Bexley (LBB) and TfL); and
- New measures relating to the Electrical Connection route.

6.1.3 The above topics are addressed in **Tables F.15** to **F.16** below.

6.1.4 To note, the Applicant submitted a Revision 2 of the **Outline CTMP (6.3, REP3-010, Rev 2**) at Deadline 3 of the Examination.

6.2 Construction Traffic Management

Table F.15: Applicant's Response to GLA/TfL Comments on the CTMP (Construction Traffic Management)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Additional wording to be added to secure a full assessment of traffic impacts on bus operations	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.	The Applicant welcomes TfL's comments on the commitments set out in the revised **Outline CTMP (6.3, REP2-064)**.
	Section 2 of Requirement 13, which covers Construction Traffic Management Plans states: *"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 any proposed diversions or suspensions to* ▪ *bus stop suspensions or temporary relocations; and* ▪ *the programme for those impacts; and* ▪ *the monitoring and review processes to be used."* 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 Applicant responds to these points at **Appendix C** of this report in its response to paragraphs 3.11.13 – 3.11.24 of the "GLA Sheet 1: Applicant's Response to GLA Relevant Representations".

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
	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.	

6.3 New measures relating to the Electrical Connection route

Table F.16: Applicant's Response to GLA/TfL Comments on the CTMP (Electrical Connection Route)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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 GLA's response. Modelling of the junctions along the electrical connection route as highlighted in the figure above 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.	As stated at **Paragraph 2.1.236** of **the Applicant's Response to Written Representations (8.02.14, REP3-022)**, the Applicant and the Electrical Connection Contractor will agree with London Borough of Bexley, in consultation with TfL, a system of temporary traffic management in the vicinity of junctions of Bexley Road and James Watt Way to minimise the effects of the roadworks on road users. Traffic mitigation during the construction of the Electrical Connection is identified in the **Outline CTMP (6.3, REP3-010).** The Applicant does not consider that it is necessary or proportionate to undertake any further traffic modelling exercise to assess the potential temporary impacts on the road network associated with the construction of the Electrical Connection. In email correspondence with TfL after the ISH on 6th June 2019, TfL confirmed that micro-simulation traffic modelling is not required to assess potential temporary impacts on the road network. This point is being captured within a SoCG between the Applicant and TfL, a draft of which is with TfL and will be submitted during the Examination. The Applicant does not propose to undertake further modelling assessment of the temporary effects on the local road network of the construction of the Electrical Connection. The effects would be temporary and transient. Traffic modelling would be disproportionate to the effects and is not certain to reliably inform further mitigation to that being proposed currently by the Applicant.

7 The Applicant's Response to GLA's Comments on the Environmental Permit and Air Quality Note submitted at Deadline 2 of the Examination

7.1 Introduction

7.1.1 The Applicant submitted an **Environmental Permit and Air Quality Note (8.02.06, REP2-057)** at Deadline 2 of the Examination. The GLA (and TfL with respect to transport matters) have provided comments on the Environmental Permit and Air Quality Note in Sheet 4 of its Deadline 3 Submission documents (**REP3-042**).

7.1.2 GLA (and TfL with respect to transport matters) have commented on the following:

- Interactions between the Environmental Permit (EP) and DCO Application – Processing capacity and waste types (source segregated only); and
- Interactions between the EP and DCO Application – Air Quality.

7.1.3 The above topics are addressed in **Tables F.17** to **F.18** below.

7.2 Processing Capacity and Waste Types

Table F.17: Applicant's Response to GLA/TfL Comments on the Environmental Permit and Air Quality Note (Processing Capacity and Waste Types)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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.	An environmental permit has been applied for with the same emission limits as assessed in the ES, apart from NOx, where the permit limit is lower. The permit will ensure that emissions are regulated in accordance with the limits applied for unless the Environment Agency judges that the emission limits are too high given the predicted Environmental Impact. Whilst a permit can be varied, for this to occur new impact assessment would have to be undertaken and submitted to the Environment Agency for their approval. A variation in the permit would only be granted if the Environment Agency were confident that no environmental harm would result. Ultimately therefore, the permitting process will ensure that no environmental harm will be caused by the emissions from the installation. Turning to the specific requirements that has been requested by the GLA: 1. The Applicant has considered its position in light of the GLA's further submissions. It is willing to accept a requirement in relation to air quality and will update the draft development consent order for Deadline 5, which will include the Applicant's preferred wording for this requirement. 2. Whilst the Applicant maintains that such a requirement is not necessary or supported

7.3 Air Quality

Table F.18: Applicant's Response to GLA/TfL Comments on the Environmental Permit and Air Quality Note (Air Quality)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
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	An environmental permit has been applied for with the same emission limits as assessed in the ES, apart from NOx, where the permit limit is lower. However, even with a higher NOx emission rate and worst case assumptions regarding building dimensions in terms of the Rochdale Envelope, no significant effects have been identified in the ES. The permit will ensure that emissions are regulated in accordance with the limits applied for unless the Environment Agency judges that the emission limits are too high given the predicted Environmental Impact. Whilst a permit can be varied, for this to occur new impact assessment would have to be undertaken and submitted to the Environment Agency for their approval. A variation in the permit would only be granted if the Environment Agency were confident that no environmental harm

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
	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.	would result. Ultimately therefore, the permitting process will ensure that no environmental harm will be caused by the emissions from the installation. It is therefore not necessary to include these assumptions as additional DCO commitments. The Applicant has considered its position in light of the GLA's further submissions. It is willing to accept a requirement in relation to air quality and will update the draft Development Consent Order for Deadline 5, which will include the Applicant's preferred wording for this requirement.

8 The Applicant's Response to GLA's Comments on the Clarifications and Correction Report submitted at Deadline 2 of the Examination

8.1 Introduction

8.1.1 The Applicant submitted the **Clarifications and Correction Report (8.02.05, REP2-056)** at Deadline 2 of the Examination. The GLA (and TfL with respect to transport matters) have provided comments on the **Clarifications and Correction Report (8.02.05, REP2-056)** in Sheet 4 of its Deadline 3 Submission documents (**REP3-042**).

8.1.2 GLA (and TfL with respect to transport matters) have commented on the following topics in the **Clarifications and Correction Report (8.02.05, REP2-056)**:

- Terrestrial Biodiversity; and
- Revisited DCO Application Tables.

8.1.3 The above topics are addressed in **Tables F.19** to **F.20** below.

8.2 Terrestrial Biodiversity

Table F.19: Applicant's Response to GLA/TfL Comments on the Clarifications and Correction Report (Biodiversity)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
More Information Needed	**Section 3.1:** 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.	The Biodiversity Metric has been progressed and is included in the **Biodiversity Accounting Report (8.02.09, REP2-060)** submitted at Deadline 2. This metric has been progressed with the Environment Bank. The Applicant is committed to providing a minimum of 10% biodiversity net gain and has commissioned the Environment Bank to assist with its delivery, which will be secured via **Requirement 5** at **Schedule 2** of the **dDCO** (**3.1, Rev 2**) submitted at Deadline 3. The Biodiversity and Landscape Mitigation Strategy that is submitted under **Requirement 5** must be substantially in accordance with the **Outline Biodiversity and Landscape Mitigation Strategy (7.6, Rev 1, submitted at Deadline 3)**, which contains the minimum 10% net gain commitment. The Applicant confirms that it intends to work with the Environment Bank to explore a range of options for providing the off-site biodiversity compensation, which will be presented to LBB.
N/A	**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	The Applicant welcomes the GLA's acknowledgement of Natural England's agreed Statement of Common Ground and that they have no outstanding concerns about nitrate deposition on sensitive sites.

8.3 Revisited DCO Application Tables

Table F.20: Applicant's Response to GLA/TfL Comments on the Clarifications and Correction Report (Revisited DCO Application Tables)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
N/A	**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.	The Applicant acknowledges the GLA's comments.

9 The Applicant's Response to GLA's Comments on the Electrical Connection Progress Report submitted at Deadline 2 of the Examination

9.1 Introduction

9.1.1 The Applicant submitted the **Electrical Connection Progress Report (8.02.07, REP2-058)** at Deadline 2 of the Examination. The GLA (and TfL with respect to transport matters) have provided comments on the **Electrical Connection Progress Report (8.02.07, REP2-058)** in Sheet 4 of its Deadline 3 Submission documents (**REP3-042**).

9.1.2 **Table F.21** below addresses the GLA's (and TfL with respect to transport matters) comments.

9.2 Connection Route

Table F.21: Applicant's Response to GLA/TfL Comments on the Electrical Connection Progress Report (Connection Route)

Issue/Action	GLA/TfL Comments	Applicant's Response to GLA/TfL's Comments
Additional assessment to determine quantifiable impacts of the Electrical Connection construction on buses.	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 presented in Sheet 4. The figure shows that bus routes are expected to cross over the Electrical Connection route at several points via junctions and some bus routes would still run along the Electrical Connection 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.	Paragraphs 5.11.7 to 5.11.11 of the **Applicants Responses to Relevant Representations (8.02.03, REP2-054)** to Newell Projects Ltd on behalf of Arriva London Limited's Relevant Representation (RR-055) provides a detailed review of the interface between the Electrical Connection works and local bus services. The Applicant agrees with the anticipated points of interface between the Electrical Connection and local bus services and these will be considered in detail in the final CTMP(s), to be secured through Requirement 13 of the **dDCO (3.1, REP3-003)**. The Applicant continues to engage with TfL and Arriva buses to seek ways to minimise the effects on local bus services and to establish an appropriate and proportional method by which to anticipate the magnitude of those effects. The temporary traffic management mitigation and construction management processes would reflect the emerging information surrounding the alignment of the Electrical Connection, further to advice from the preferred Electrical Connection contractor. Matters being considered are the estimated timescales for construction at key road crossings and along the bus service corridors; locations where the cable route could run remote from the main bus routes; and points along the Electrical Connection where the route would have a lesser impact on traffic flow by following the carriageway with a lower traffic volume (typically the southbound carriageway). It is not anticipated that roads would be closed today-time local bus services so that services will not be cancelled or diverted from their current routes. The appointed contractor will review opportunities to construct the Electrical Connection within the footway corridor such that it minimises potential effects on bus routes and associated infrastructure and provide a balance with other viability criteria, such as physical obstructions and other environmental effects. The emerging detail and methodology will be captured within an update to the Outline CTMP and submitted to the Examining Authority in due course. The Applicant is also engaging with Arriva London and TfL to consider the effects on bus services and to co-ordinate and collaborate on a method of management and mitigation during the construction of the Electrical Connection.

10 The Applicant's Response to GLA's Comments on the Revised ES – Air Quality Chapter submitted at Deadline 2 of the Examination

10.1 Introduction

10.1.1 The Applicant submitted a number of revised Environmental Statement (ES) chapters at Deadline 2 of the Examination, including **Chapter 7 – Air Quality (6.1, REP2-017)**. The GLA (and TfL with respect to transport matters) have provided comments on the **revised Air Quality ES Chapter (6.1, REP2-017)** in Sheet 4 of its Deadline 3 Submission documents (**REP3-042**).

10.1.2 **Table F.22** below addresses the GLA comments.

10.2 Air Quality

Table F.22: Applicant's Response to GLA Comments on revised Air Quality ES Chapter

Issue/Action	GLA/Comments	Applicant's Response to GLA's Comments
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, relate 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.)	The Applicant can confirm that the changes to the model inputs only relate to the written report, they do not affect the actual model inputs that were used for the modelling. The same modelling files for the air quality assessments were used for both the EP and DCO application. As part of the EP determination, the Environment Agency's Air Quality Management Assessment Unit (AQMAU) will audit the air quality assessment modelling files to ensure that they are consistent with the air quality modelling. If the EA do not consider that modelling files are consistent with the air quality assessments, they will require the Applicant to undertake additional/revised modelling to address any concerns.

Appendix G : EA Correspondence

From: Price, Helen [redacted]>
Sent: 17 July 2019 16:30
To: Fran Comerford-Cole [redacted]>
Cc: Lee Tidman [redacted]>; Andy Pike [redacted]; Mick Kirwan <[redacted] Togher, James <[redacted]>; Gorrod, Will J <[redacted]>
Subject: RE: Cory Riverside Energy Park Planning Process

Dear Fran

I am well thank you and I hope you are too.

Thank you for your email. We are writing to confirm the Cringle Dock site is not in breach of its Waste permit (EAWML 83275) based on the most up to date information we hold, and following an unannounced site inspection on 10th June 2019.

The latest permit EAWML 83275 (1991) has tonnage limits specified in a modification in 1996 with the following annual tonnage permitted as per your email:

i) Waste Category A: Inert waste 145t/d 52,780pa
ii) Waste Category B: (i) General non-putrescible waste 200t/d 72,800pa
iii) Waste Category C: General putrescible waste 850t/d 309,400pa
iv) Waste Category E: Difficult Waste 5t/d 1,820pa

As you are aware permitted waste sites are assessed from band A to F with band A being the most compliant sites and band F the least compliant with permitting legislation. We last visited Cringle Dock on 10th June 2019 and there were no major compliance issues and the site is currently assessed as Band A.

We will also contact the GLA to confirm Cringle Dock is not in breach of its current Environmental Permit and remind them to check the accuracy of data stored on databases with the Environment Agency on permitted waste sites as there is potential for the data to be inaccurate if there have been subsequent permit variations.

I hope this clarifies the issues raised and if you require additional information please let me know.

Kind Regards

Helen

Helen Price
Environment Officer
South London Waste Team
[redacted]