Riverside Energy Park

Applicant's response to GLA Deadline 4 Submission

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CORY
RIVERSIDE ENERGY

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1.1 Purpose of this Document

1.1.1 This document provides a response to the documentation submitted by the Greater London Authority (GLA) at Deadline 4. Responses to comments on the dDCO from all interested parties, including the GLA, are contained in a single submission document, the **Applicant's response to comments on the draft Development Consent Order (8.02.54)**. This response therefore comments on the following documents/remaining matters:

- Deadline 4 Final Report (**REP4-024**);
  - WR1: Heat Offtake (see **Section 2**);
  - WR2: Renewable Energy (see **Section 3**);
  - WR3: Carbon (see **Section 4**);
  - WR4: Implications of Excess Waste Capacity (see **Section 5**);
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  - London Borough of Bexley (LBB) Written Representation (see **Section 9**);
  - Applicant's Response to the GLA's and TfL's Local Impact Report (see **Section 10**);
  - Draft Development Consent Order (Rev 2) (see **Section 11**);
  - Other Documents submitted by the Applicant at Deadline 3 (see **Section 12**);
  - Third Party Submissions (see **Section 13**); and
  - Statement of Common Ground (see **Section 14**).
- Appendix 1 – GLA Correspondence with Peabody (**REP4-025**) (see **Section WR1**);
- Appendix 2 – Climate Change and Energy Policy since 2008 (**REP4-026**) (see **Section WR2**);
- Appendix 3 – Climate Change Act (2008) (**REP4-027**) (see **Section WR2**);

- Appendix 4 – RRRF Development Consent Order (**REP4-028**) (see **Section 13**); and
- Appendix 5 – Congenital Anomalies paper within Environment International Journal (2019) (**REP4-029**) (see **Section 12**).

2 WR1: Heat Offtake

2.1 Introduction

2.1.1 This section responds to paragraphs 2.2 to 2.14 (WR1 Heat Offtake) of 'Section 2 – Applicant's Response to Written Representations' of the GLA's **Deadline 4 Final Report (REP4-024).**

2.1.2 GLA has raised the following topics at paragraphs 2.2 to 2.14:

- Projected Heat Demand;
- Public Involvement in Delivering District Heating Networks;
- Technical Information; and
- Synergy between RRRF and REP.

2.1.3 The above matters are addressed in order below.

2.2 WR1 Projected Heat Demand

2.2.1 In Paragraph 2.3 of the GLA's **Deadline 4 Final Report** (**REP4-024**), the GLA contests the validity of a headline conclusion arrived at by Ramboll in its Phase 2 feasibility study '*Thamesmead & Belvedere Heat Network Feasibility Study: Work Package 2*'. Key finding 6 on page 5 of the study is reproduced as follows:

2.2.2 "*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. It is also likely that a further heat source(s) beyond the existing Cory plant would be required to meet any significant increases to total heat demands.*"

2.2.3 Conclusion 5 on page 60 of the study is presented as follows:

2.2.4 "*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 would be required to meet total heat demands.*"

2.2.5 The GLA discredits this headline conclusion, which is defined as a **key finding** in the report, on the basis that it is not supported by any form of quantitative analysis or structured argument. The Applicant queries how the GLA can depend so strongly on the report conclusions which support its own agenda, but discounts a "key finding". The Applicant can only presume this is because it is not helpful to the GLA's position.

2.2.6 The Applicant has set out in detail in **Table C.3** of **Appendix C** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** the heat demand analysis methodology adopted within both the **Combined Heat and Power Assessment (5.4, APP-035)** and the **Combined Heat and Power Supplementary Report (5.4.1, REP2-012)**, and how this accords with relevant policy and guidance. In summary, the Applicant's methodology in appraising heat export opportunities from a technical and economic perspective aligns with:

a. the overarching requirements of the Energy Efficiency Directive (EED) 2012/27/EU;

b. Overarching National Policy Statement for Energy (NPS EN-1), and National Policy Statement – Renewable Energy Infrastructure (NPS EN-3) in respect of development proposals and consumer engagement;

c. the results of the "*National Comprehensive Assessment of the Potential for Combined Heat and Power and DH and Cooling in the UK*", December 2015;

d. Environment Agency (EA) guidance "*CHP Ready Guidance for Combustion and Energy from Waste Power Plants*", February 2013; and

e. EA "*Draft Article 14 guidance – Cost-benefit assessment for combustion installations*", April 2015 and associated toolsets.

2.2.7 It also:

a. responds directly to regional and local policy and strategic ambitions, in particular those set out in the adopted and draft London Plan, London Environment Strategy, Bexley Energy Master Plan, and London Borough of Bexley, Dartford Borough Council, Kent County Council and Royal Borough of Greenwich policies;

b. utilises data from Government commissioned heat mapping tools;

c. undertakes heat demand analysis in accordance with industry best practice and latest Chartered Institution of Building Services Engineers (CIBSE) benchmarks;

d. takes account of a comprehensive pursuit of stakeholder engagement from both public and private sectors, which continues to be evolved by the Applicant; and

e. considers proposals against performance metrics established under the EED and the Government's Combined Heat and Power Quality Assurance (CHPQA) scheme.

2.2.8 The Applicant therefore considers that its CHP 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. On the basis

that the analysis undertaken is comprehensive, detailed and compliant with policy and industry best practice methodology, the Applicant is of the view that further analysis in respect of the scope which has already been covered is not required and does not intend to carry out that further analysis. 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.

2.2.9 The Applicant has committed to realising heat export through a number of demonstrable steps, which are set out in **Section 4.3** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014).**

2.2.10 Regarding amendments to **Requirement 20** (now **Requirement 26**) of the **draft Development Consent Order (dDCO) (3.1, Rev 3)**, as proposed by the GLA in Paragraph 2.3 of its submission **(REP4-024)**, the Applicant has responded to this at Deadline 4, in **Paragraphs 8.1.18** to **8.1.21** of the **Applicants response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)**. However, at this Deadline 5, the Applicant has further revised the CHP Requirement and the GLA is referred to **Applicant's response to comments on the draft Development Consent Order (8.02.54).**

2.2.11 In response to Paragraph 2.5 of the GLA's **Deadline 4 Final Report** (**REP4-024**), the **Combined Heat and Power Supplementary Report (5.4.1, REP2-012)** is not exclusively a desktop study, nor does it not draw on stakeholder engagement. The Applicant has set out its adopted methodology in **Table C.3** of **Appendix C** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)**. The Applicant has undertaken a thorough analysis of heat export opportunities from both a technical and economic perspective and has relied on robust engineering principles to arrive at its conclusions. Specifically regarding the GLA's assertion that only high-level judgements have been used for the purpose of heat demand screening, the Applicant has set out in **Table C.3** of **Appendix C** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** how qualitative screening, based on engineering judgement, is an entirely valid approach, and is explicitly sanctioned within EA guidance "*CHP Ready Guidance for Combustion and Energy from Waste Power Plants*", February 2013.

2.2.12 In any case, 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 (all CHP infrastructure would be installed save for the pipe work to the site boundary which can only be installed once it is clear where the point of connection would be - as soon as that is known, the Applicant would install the pipework to the boundary as required under **Requirement 26** of the **dDCO (3.1, Rev 3)**). 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 EA best available technique (BAT) requirement and going beyond the requirements at section 4.6 of NPS EN-1.

2.2.13 In response to Paragraph 2.6 of the GLA's **Deadline 4 Final Report** (**REP4-024**), the Applicant accepts the clarified position expressed by Peabody (provided as Appendix 1 of the GLA's Deadline 4 Submission (**REP4-025**)), noting that Peabody supports the proposed heat network. The principal points made by the Applicant remain valid though:

a. As quoted by the GLA, "*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*". This statement, as mirrored by the entirety of the letter, is entirely positive and recognises how low carbon and renewable heat provision from RRRF and REP would support housing development in the region. This quote also demonstrates that the Applicant has been engaging in developing a heat network in Thamesmead and Belvedere. There can be no question of the Applicant's commitment in that regard, as agreed by Peabody.

b. Peabody has not raised any objections to the Proposed Development.

2.2.14 In response to Paragraph 2.7 of the GLA's **Deadline 4 Final Report** (**REP4-024**), Paragraph 4.6.8 of NPS EN-1 states that: "*Utilisation of useful heat that displaces conventional heat generation from fossil fuel sources is to be encouraged where, as will often be the case, it is more efficient than the alternative electricity/heat generation mix. To encourage proper consideration of CHP, substantial additional positive weight should therefore be given by the IPC to applications incorporating CHP…"*. The Applicant reiterates that the **Combined Heat and Power Assessment (5.4, APP-035)** and the **Combined Heat and Power Supplementary Report (5.4.1, REP2-012)**, in addition to the authorised development and requirements secured within the dDCO, demonstrate that tangible and far reaching commitment is made in respect of CHP proposals. As such, the Applicant's proposals attract substantial additional positive weight. Regarding the GLA's criticism of a lack of an audit trail in this regard, the Applicant would offer to the GLA meeting minutes from Bexley District Heating Partnership Board meetings held on 29 May 2018 and 09 January 2019 (see **Appendix B** of this document), which demonstrates that the Applicant is fully engaged and committed to supplying heat to a network. The GLA was present at both of these meetings. **Paragraph 2.3.1** of this document sets out further liaison between the Applicant and the public sector in respect of heat export. Additionally, Peabody's letter of support dated 17 April 2019, provided in **Appendix A** to the **Supplementary Combined Heat and Power Report (5.4.1, REP2-012)**, evidences earlier dialogue and meaningful progression with regards heat export.

2.2.15 The Applicant disagrees with the GLA's assertion in Paragraph 2.8 of its **Deadline 4 Final Report** (**REP4-024**), that the Proposed Development would only be low carbon if it operates as a CHP plant. This matter is discussed in detail in **Section 4** of this document.

2.2.16 The Applicant notes the GLA's comment on the commentary relating to Paragraph 5.9 of the London Plan. The Applicant's commentary in **Table 2.1** of the **Applicant's responses to Written Representations (8.02.14, REP3-022)** sought to highlight that the Proposed Development meets both the Mayor's aim of net-self sufficiency (with respect to waste), and supports the aim of the London Plan in supporting the development of decentralised energy systems to *"allow London to generate more of its own energy needs and enhance the security of its energy supply."* The fact that the London Environment Strategy states that London can *"never be fully self-sufficient in energy"* does not diminish the substantive case that the development supports meeting the objectives of Paragraph 5.9 of the adopted London Plan.

2.2.17 In Paragraph 2.10 of its **Deadline 4 Final Report** (**REP4-024**), the GLA notes that the Applicant compares the carbon savings with REP operating in power-only mode with those from the same amount of waste going to landfill and states that this is inappropriate, referring to arguments made in Paragraph 32 of the GLA's **Post Hearing Written Submission of Oral Case (REP3-038)**. The only argument made by the GLA is that REP would displace recycling rather than landfill. The Applicant explained in **Paragraph 4.4.2** and **Section 2** of the **Applicants response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** that this is incorrect as REP would process residual waste and thereby displace landfill.

2.2.18 The GLA asserts that the Applicant has overstated the extent to which the feedstock is likely to be renewable. This is considered in **Section 3** of this document.

2.2.19 In the unnumbered paragraph below paragraph 2.10, the GLA states that it maintains its position that the CHP documents do not assist the ExA in considering compliance with a number of policies. The Applicant confirms that it maintains its position that REP is:

a. compliant with NPS EN-1, 4.6;

b. supports the transition to the low carbon economy and has a positive effect on the climate change objective even without CHP; and

c. compliant with the London Plan and draft London plan requirements for demonstrable steps to meet the Carbon Intensity Floor.

2.3 WR1 Public Involvement in Delivering District Heat Networks

2.3.1 Contrary to GLA's assertion in Paragraph 2.11 of its **Deadline 4 Final Report** (**REP4-024**), the role and likelihood of public sector involvement has been investigated, and discussed in detail with the GLA. Heat export opportunities were amongst the first items to be discussed with the GLA in respect of REP in early 2017, and this clearly represents an early and considered approach. More recently, heat export has been discussed 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.

2.3.2 The Applicant has responded in detail to Paragraph 3.16 of the **GLA's Written Representation (REP2-071)**, and public sector involvement more broadly, in **Paragraphs 2.1.15** to **2.1.26** of the **Applicant's Response to Written Representations (8.02.14, REP3-022)**.

2.3.3 The Applicant has further updated the CHP Requirement in the **dDCO** (**3.1, Rev 3**) (**Requirement 26**), which responds to the GLA's proposed amendments. This requirement is discussed in **Paragraphs 2.2.10** to **2.2.12** of this document.

2.4 WR1 Technical Information

2.4.1 The level of detail of plant and equipment presented within the dDCO is entirely appropriate and consistent with previous Orders. It would not be appropriate from a technical or legal perspective to set out the level of design detail which the GLA appears to be requesting within the **dDCO** (**3.1, Rev 3**). As can be seen in the **dDCO**, and as was the case for the preceding versions, Schedule 1 Work No. 3 (in combination with Work No. 5) contains all of the works required to deliver a fully operational heat export system in accordance with the proposals, and the level of detail is commensurate with the other elements of the Proposed Development.

2.4.2 The Applicant rejects in the strongest possible terms that little or no preliminary engineering of the heat off-take arrangements has been carried out. **Section 6.7** of the **Combined Heat and Power Assessment (5.4, APP-035)** sets out the design criteria for the proposed heat network, in so far as is possible at this pre-consent stage of the Proposed Development. This includes information on infrastructure arrangement, design criteria including temperatures and equipment capacities, and transmission pipe sizes. An indicative pipe route is discussed in **Section 6.10** of the **Combined Heat and Power Assessment (5.4, APP-035)**. **Section 9.4** of the **Combined Heat and Power Assessment (5.4, APP-035)** indicates that the preferred technology provider has undertaken design of the heat export system and prepared an illustrative masterplan which includes a CHP plant room located adjacent to the turbine hall to facilitate steam and condensate interfaces. The indicative heat and mass balance (provided in **Appendix C** of the **Combined Heat and Power Assessment (5.4, APP-035)**) demonstrates that the REP ERF would be designed to supply hot water at up to 100°C via suitable low-pressure steam extractions from the turbine. The technical solution conclusions provided in **Section 10.2** of the **Combined Heat and Power Assessment (5.4, APP-035)** set out the headline performance capability of the heat export

system and confirms that sufficient space has been safeguarded within the REP Site for the installation of the required infrastructure to achieve the maximum heat export capacity.

2.4.3 There is simply no basis for the GLA's criticism of the technical information.

2.5 WR1 Synergy Between RRRF and REP

2.5.1 In Paragraph 2.14 of its **Deadline 4 Final Report** (**REP4-024**), the GLA states that the Applicant has accepted the GLA's contention that heat provision from the two facilities (RRRF and REP) would not double heat output. The Applicant disagrees. As stated quite clearly in **Paragraph 2.1.30** of the **Applicant's Responses to Written Representations (REP3-022, 8.02.1)**, the degree to which capacity were increased "*would be subject to the volume of heat demand connected, the capacity of alternative (non ERF) back-up plant and thermal storage built into the network, and the time of year at which one facility became unavailable.*" Under a configuration where back-up provision is provided by alternative (non-ERF) plant, the heat export capacity could be doubled. However, if the two facilities were utilised mutually as back-up for each other and the total heat capacity supplied to the network was large (relative to the maximum capacity offered by each facility), then the level of additional heat export capacity which could be offered by each facility would be reduced.

2.5.2 The main point to recognise is that in either case, provision of heat from both RRRF and REP would offer benefit by either or both of the following:

a. increasing the volume of low carbon and renewable heat which would be supplied to heat consumers and consequently the associated benefits; and

b. reducing or eliminating the need for conventional back-up boilers, in addition to displacing air quality impacts in close proximity to residential areas.

3 WR2: Renewable Energy

3.1 Introduction

3.1.1 This section responds to paragraphs 2.15 to 2.37 (WR2 Renewable Energy) of 'Section 2 – Applicant's Response to Written Representations' of the GLA's **Deadline 4 Final Report (REP4-024).**

3.1.2 GLA has raised the following topics at paragraphs 2.15 to 2.37:

- Characterisation of the Waste Stream;
- ERF would be a Carbon Producer;
- Conflict with National Policy;
- Benefits of Energy from Waste;
- Fossil Fuel Generator; and
- Use of Biogas.

3.1.3 The above matters are addressed in order below.

3.2 WR2 Characterisation of the Waste Stream

3.2.1 In Paragraphs 2.15 to 2.17 of GLA's **Deadline 4 Final Report (REP4-024)**, the GLA asserts that the bioenergy content of the waste to be processed at REP will be less than 50% and implies that the Applicant's previous responses did not address the GLA's concerns.

3.2.2 The Applicant agrees that there are three measurements for the proportion of the waste which is derived from biomass. These are the biogenic content (the proportion by weight), the biocarbon content (the proportion of the carbon in the waste derived from biomass) and the bioenergy content (the proportion of the energy in the waste derived from biomass).

a. **Paragraph 3.2.5** of **The Projects and its Benefits Report (7.2, APP-103)** states "*Waste composition analysis undertaken for RRRF shows a biogenic fraction of around 50%.*" As this statement was imprecise, the Applicant produced a more detailed analysis in the **Carbon Assessment (8.02.08, REP2-059)**.

b. Four waste scenarios were considered in the **Carbon Assessment (8.02.08, REP2-059)**. The biocarbon content for each waste scenario was set out in table 1 in the document, as the biocarbon content was the relevant quantity. It was repeated in **Table 2.3** of the **Applicant's Responses to Written Representations (8.02.14, REP3-022)** and is repeated below in **Table 3.1** below for convenience.

c. As the GLA has raised this point, the Applicant has calculated the bioenergy content of each waste scenario as follows.

Table 3.1: Biocarbon figures for all 4 scenarios within the Carbon Assessment

Waste Scenario	Biocarbon content	Bioenergy content
Operational RRRF	57.2%	50.0%
Design Waste – RRRF but with some of the plastics removed	64.58%	58.1%
Reduced food waste – RRRF but with 50% of the putrescible waste removed to take into account more separate collection of food and garden waste	54.05%	47.4%
Future waste - RRRF waste but with 50% plastics, 50% food and 20% metals removed to model a significant increase in source segregation	64.92%	59.4%

3.2.3 It can be seen that the Applicant expects the bioenergy content of the waste to be greater than 50% in all scenarios apart from the reduced food waste scenario. This scenario assumes that there is an improvement in food and garden waste collections but no improvements in any other waste collections, particularly plastics. Hence, this is not a realistic scenario as it is not consistent with current policy trends.

3.2.4 The GLA asserts that it has used information provided by the Applicant in the Ready Reckoner tool to determine a bioenergy content of 45%. The Applicant has not seen this calculation so cannot comment but notes that its own calculations do not agree with the GLA's assertions.

3.2.5 More importantly, the GLA seems to be asserting that there is a significant difference in policy terms between an ERF for which more than 50% of the energy is renewable and an ERF for which less than 50% of the energy is renewable. There is no policy support for this position, as explained in **Paragraphs 2.1.48** to **2.1.51** of the **Applicant's Responses to Written Representations (8.02.14, REP3-022).**

3.3 WR2 ERF would be a Carbon Producer

3.3.1 In Paragraph 2.19 of its **Deadline 4 Final Report (REP4-024)**, the GLA states that the Applicant's Carbon Assessment shows that the ERF would make a net contribution to climate change emissions. This ignores the benefit of displacing landfill. The Applicant continues to reject the GLA's position on this and the GLA has presented no new information to support its position. The Applicant repeats its statement from **Paragraph B.1.1** of **Appendix B** to

Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014), that the approach of considering the benefit associated with diversion of waste from landfill is justified in the Department for the Environment Farming and Rural Affairs (DEFRA) report titled '*Energy from Waste – A guide to the debate 2014*', paragraphs 35 to 46. The Applicant also notes that this approach was taken in the carbon assessment supporting the application made by Veolia for an ERF at Ratty's Lane in Hoddesdon (ref 7/0067-17) and that the inspector and Secretary of State supported this approach.

3.3.2 In Paragraphs 2.20 and 2.21 of its **Deadline 4 Final Report (REP4-024)**, the GLA continues to assert that the use of combined cycle gas turbine (CCGT) as the marginal source of electricity generation is incorrect. The Applicant has fully responded to this point in **Section B.2** of **Appendix B** to **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** and the GLA has presented no response to the arguments in this section.

3.3.3 However, the Applicant notes that its position has been supported by the Secretary of State very recently in its decision on the application made by Veolia for an ERF at Ratty's Lane in Hoddesdon (ref 7/0067-17). The decision was issued on 19 July 2019:

a. The Secretary of State states in Paragraph 19, "*For the reasons given in IR17.54-17.64 and IR18.3-18.4, the Secretary of State agrees with the Inspector that there would be a saving in greenhouse gas emissions compared to the status quo.*"

b. The Inspector considered the use of gas CCGT as the counterfactual in Paragraph IR17.57.

"*As set out above, the figure referred to by the applicant takes account of the 'build margin' or counterfactual referred to by the GIG, namely a Combined Cycle Gas Turbine (CCGT). Herts Without Waste challenged the use of that as an appropriate comparator for electricity generated by the proposed ERF. However, since electricity generated by the ERF would be exported to the grid, I see no reason why, consistent with DEFRA's Guide to the Debate, that energy should not be assumed to substitute electricity that would otherwise have been generated by a CCGT. The same argument was also put to the New Barnfield Inspector who noted that the Guide to the Debate provides specific support for the use of CCGT in making such an assessment. That Guide is still current, with footnote 29 on page 18 confirming that 'A gas fired power station (Combined Cycle Gas Turbine – CCGT) is the current standard comparator as this is the 'marginal' technology if you wanted to build a new power station'. As noted by the New Barnfield Inspector, it is not disputed that the absolute level of climate change benefit will vary over time, as the energy mix changes and decarbonises. However, it is reasonable to make the assessment of benefits using the marginal technology at the present time as the appropriate comparator. In light of*

the current guidance, I have no reason to take a different view and consider that the appropriate counterfactual has been used by the applicant."

c. The Applicant notes that Herts Without Waste, a rule 6 party to the Inquiry, argued that the BEIS marginal emissions factor should be used (Paragraphs 12.15 to 12.20) as the GLA argued in Paragraph 44 of the GLA's **Post Hearing Written Submission of Oral Case (REP3-038)**. The Inspector in the Ratty's Lane case specifically rejected this argument.

3.4 WR2 Conflict with National Policy

Environmental Permit

3.4.1 The Applicant's response to points raised by the GLA at paragraphs 2.22 and 2.23 of the GLA's **Deadline 4 Final Report (REP4-024)** is covered below in **Section 5.4**.

3.4.2 In the **dDCO (3.1, Rev 3)** submitted at Deadline 5, the Applicant has included a Requirement regarding the Waste Hierarchy (Requirement 18), obliging the Applicant to submit a scheme for approval that sets out the arrangements for maintenance of the waste hierarchy in priority order minimising recyclable and reusable waste received at the ERF.

Evolution of Climate Change Policy

3.4.3 The GLA sets out its position in respect of the recent amendments to the Climate Change Act 2008 ("CCA") at paragraphs 2.24 to 2.29 of the **Deadline 4 Final Report (REP4-024)**. The GLA's position is as follows:

a. the adverse impacts of the ERF element of the Proposed Development outweigh the Proposed Development's benefits, meaning that section 104(7) of the PA 2008 is engaged. The GLA interprets section 104(7) as meaning that the Application should not be decided in accordance with the NPS and that the Applicant must set out a need case;

b. the Energy NPSs were published in 2011 and that Climate Change policy has evolved significantly during the intervening period;

c. the Climate Change Committee report on reaching net zero published in May 2019 suggests that intermittent renewable energy capacity could meet increased demand for electricity from heat and transport - only a small proportion would be generated by energy from waste; and

d. the government has now enacted a net zero carbon by 2050 target. The GLA accepts that the NPS is the extant policy but asserts that if the Applicant is required to set out an explicit need case, the legal context in which it must do so is different to that which existed when the NPS was adopted.

Legal and Policy Context

Legal context

3.4.4 Section 104(3) of the PA 2008 provides:

> *The Secretary of State must decide the application in accordance with any relevant national policy statement, except to the extent that one or more of subsections (4) to (8) applies.*

3.4.5 Subsections (4) to (8) of section 104 effectively provide exceptions to the application of section 104(3), and those exceptions are as follows:

> *(4) This subsection applies if the Secretary of State is satisfied that deciding the application in accordance with any relevant national policy statement would lead to the United Kingdom being in breach of any of its international obligations.*
> *(5) This subsection applies if the Secretary of State is satisfied that deciding the application in accordance with any relevant national policy statement would lead to the Secretary of State being in breach of any duty imposed on the Secretary of State by or under any enactment.*
> *(6) This subsection applies if the Secretary of State is satisfied that deciding the application in accordance with any relevant national policy statement would be unlawful by virtue of any enactment.*
> *(7) This subsection applies if the Secretary of State is satisfied that the adverse impact of the proposed development would outweigh its benefits.*
> *(8) This subsection applies if the Secretary of State is satisfied that any condition prescribed for deciding an application otherwise than in accordance with a national policy statement is met.*

Policy context

3.4.6 The NPSs relevant to the Proposed Development for the purposes of section 104(3) of the PA 2008 are EN-1, EN-3 and EN-5. That the Proposed Development will be decided in accordance with these 3 NPSs is set out at section 1.3.1 of the Planning Statement (7.1, APP-102).

3.4.7 The UK needs all the types of energy infrastructure covered in EN-1 (which includes energy from waste generation) in order to achieve energy security at the same time as reducing (dramatically) greenhouse gas emissions (EN-1, paragraph 3.1.1). As the Applicant stated at paragraph 2.1.51 of the Applicant's responses to Written Representations (8.02.14, REP3-022), NPS EN-3 (at paragraph 2.1.2) is explicit, the decision maker should act on the basis that the need for energy from waste electricity generating infrastructure has been demonstrated.

3.4.8 Applications should be assessed on the basis that the Government has demonstrated that there is a need for those types of infrastructure covered by the energy NPSs (EN-1, paragraph 3.1.3):

"The [Secretary of State] should therefore assess all applications for development consent for the types of infrastructure covered by the energy NPSs on the basis that the Government has demonstrated that there is a need for those types of infrastructure and that the scale and urgency of that need is as described for each of them in this Part."

3.4.9 EN-1 covers energy from waste electricity generation (see section 3.4) and EN-3 specifically sets out the national policy for energy from waste generating infrastructure.

3.4.10 In terms of urgency, paragraph 3.3.15 states that "*In order to secure energy supplies that enable us to meet our obligations for 2050, there is an urgent need for new (and particularly low carbon) energy NSIPs to be brought forward as soon as possible, and certainly in the next 10 to 15 years, given the crucial role of electricity as the UK decarbonises its energy sector.*" Given the ERF element of the Proposed Development can be classed a partly renewable, with the Anaerobic Digestion plant, solar panels and battery all renewable forms of energy, there is a particular urgent need for the vast majority of the Proposed Development.

3.4.11 Substantial weight should be given to the contribution that projects would make towards satisfying this urgent need (EN-1, paragraph 3.1.4).

3.4.12 As to the scale of the need, as at July 2011, the Government anticipated a need for "around" 33 GW of new capacity by 2025 would need to come from renewable sources with 18 GW to come from new non-renewable capacity (EN-1, paragraph 3.3.22). However, the figures in paragraph 3.3.22 are not targets or limits on any new generating infrastructure to be consented in accordance with the energy NPSs (EN-1, paragraph 3.3.24).

3.4.13 The Government does not consider it appropriate for planning policy to set targets or limits on different technologies (EN-1, paragraph 3.1.2). This is in part because it is not possible to make accurate predictions about the size and shape of energy demand in the future (EN-1, paragraph 3.3.18). Paragraph 3.3.5 of EN-1 says, "*The UK is choosing to largely decarbonise its power sector by adopting low carbon sources quickly. There are likely to be advantages to the UK of maintaining a diverse range of energy sources so that we are not overly reliant on any one technology (avoiding dependency on a particular fuel or technology type). This is why Government would like industry to bring forward many new low carbon developments (renewables, nuclear and fossil fuel generation with CCS) within the next 10 to 15 years to meet the twin challenge of energy security and climate change as we move towards 2050*."

3.4.14 Paragraph 3.4.3 continues: *"Energy from Waste (EfW) – the principal purpose of the combustion of waste, or similar processes (for example pyrolysis or*

gasification) is to reduce the amount of waste going to landfill in accordance with the Waste Hierarchy and to recover energy from that waste as electricity or heat. Only waste that cannot be re-used or recycled with less environmental impact and would otherwise go to landfill should be used for energy recovery. The energy produced from the biomass fraction of waste is renewable and is in some circumstances eligible for Renewables Obligation Certificates, although the arrangements vary from plant to plant." The ERF element of the Proposed Development is in accordance with this paragraph of EN-1, and the Applicant draws the GLA's attention to the waste hierarchy scheme requirement now inserted into the draft Development Consent Order.

3.4.15 In relation to Energy from Waste, paragraph 3.4.4 of EN-1 states that *"the ability of biomass and EfW to deliver predictable, controllable electricity is increasingly important in ensuring the security of UK supplies."*

3.4.16 In determining applications for energy development consents there is a requirement for the decision maker to undertake a balancing exercise. Paragraph 4.1.3 of EN-1 states that, "*In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the [Secretary of State] should take into account: its potential benefits including its contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits; and its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts."*

3.4.17 EN-3 provides the policy for renewable energy. EN-3 should be read in conjunction with EN-1. Part 2.5 of EN-3 states that *'the combustion generating stations covered by this NPS are those which generate electricity: using waste (possibly including non-renewable sources of waste) and/or biomass as a fuel; and generate more than 50MW of electricity.'*

3.4.18 EN-5 provides the policy for electricity networks infrastructure, so applies to the associated electrical connections that form part of the project. EN-5 should be read in conjunction with EN-1.

3.4.19 **Section 5.3** and **Table 5.1** of the **Planning Statement (7.2, APP-102)** for the Proposed Development set out the assessment of the Proposed Development against the principles contained in EN-1 and EN-5. Table 5.1 also summarises the requirements of both polices and signposts out to where further details of how the Proposed Development has been assessed are provided in other application documents.

In summary:

3.4.20 NPS EN-1, as reaffirmed by NPS EN-3, establishes the need for the Proposed Development;

3.4.21 NPS EN-1 requires that substantial weight be given to the contribution that the Proposed Development would make towards satisfying the identified need;

3.4.22 there is a presumption in favour of granting consent for the Proposed Development; and

3.4.23 the ExA, and the Secretary of State then has to balance the Proposed Development's adverse impacts against its benefits (as per EN-1 paragraph 4.1.3, the latter includes the substantial weight that must be given to the Proposed Development's contribution to satisfying the identified need).

Response to the GLA submissions

3.4.24 The Applicant notes that that GLA's position is, by its own admission, that the NPSs are the extant planning policy that applies (paragraph 2.29 of the GLA's **Deadline 4 Final Report (REP4-024).** It is the Applicant's position that under section 104 of the PA 2008, the Application for the Proposed Development must be determined in accordance with the relevant NPSs. This statement is explored further in the proceeding sections.

Section 104(2) and section 104(3) of the Planning Act 2008

3.4.25 Section 104(2) of the PA 2008 lists matters the Secretary of State must have regard to, which includes any relevant NPS. The GLA states that the legal context in which the Application must be determined is vastly different to the legal context that existed when the Energy NPSs were adopted in 2011. However, whilst the Climate Change Act 2008 has been amended, that does not change the position that EN-1, EN-3 and EN-5 remain the NPSs relevant to the Application, and pursuant to section 104(2) the Secretary of State must have regard to those NPSs. Furthermore, under section 104(3) of the PA 2008, the Secretary of State must determine the Application in accordance with those NPSs, except to the extent that any one or more of the exceptions apply (see further below).

3.4.26 The Secretary of State is able to review a NPS pursuant to section 6 of the PA 2008 where there has been a significant change in any circumstances on the basis of which any of the policy set out in the NPS was decided. The Secretary of State, to date, has not exercised this power despite the, as the GLA puts it, "*evolution of climate change policy*" since the adoption of the energy NPSs in 2011. Accordingly, and as the GLA accepts, the NPSs remain the extant primary policy against which the Application must be determined against.

3.4.27 Appendix 2 of GLA's **Deadline 4 Final Report (REP4-024)** has included a synopsis of the key milestones in the development of government policy on climate change. The Applicant welcomes this submission as the Proposed Development supports the delivery of these stronger ambitions and policies. The evolution of climate change policy is only an issue if one accepts that REP would be a carbon producer. The Applicant does not accept that REP is and has made detailed submissions on this point in **Appendix B** of the **Applicant's response to Greater London Authority Deadline 3 Submission (REP4-014)**.

3.4.28 The ExA will be aware of the Millbrook Power[1] decision where the ExA gave consideration to whether changes in technology meant that there should be flexibility given to the interpretation of EN-1 (as to whether additional fossil fuel power stations are required) as the ExA report stated the following at Paragraphs 3.1.11-12:

"EN-1 states that the decision maker should start with a presumption in favour of granting consent to applications for energy NSIPs. At the PM an IP argued that due to the rapid change in technology in renewable energy and battery storage there was no need for the type of gas fired peaking plant proposed [EV-001 and EV-002]. I raised the question of whether, given changes in technology since the publication of the energy NPSs, there was any flexibility around the interpretation of the NPS. The Applicant responded that the need for additional fossil fuel generating capacity had been established in the NPS EN-1 and that under s104 of PA 2008 the Secretary of State had to decide the application in accordance with any NPS. It was open to the Secretary of State to revise the NPS but he had not chosen to do so.

Part 3 of EN-1 sets out principles to be followed in decision taking on NSIP applications. The NPS states that 'the UK needs all the types of energy infrastructure covered by this NPS in order to achieve energy security …. The Government does not consider it appropriate for planning policy to set targets for or limits on different technologies.' The NPS identifies the role that can be played by a range of different generating technologies including gas and other fossil fuel generation. It states that applications should be assessed '… on the basis that the Government has demonstrated that there is a need for those types of infrastructure …. Taking these principles into account I agree with the Applicant's interpretation of the application of the NPS in this case and I do not consider that the choice of technology is an issue that I should address in the Examination."

3.4.29 It is submitted that the Secretary of State should take the same approach in determining the Application. The Secretary of State must apply the policy set out in NPSs EN1, EN3 and EN-5 which, the Applicant submits, overwhelmingly supports the Application.

3.4.30 In any event, alternatives to the policy contained in the NPSs were explored in the Appraisal of Sustainability. Alternative A3 placed more emphasis on a reduction in CO2 emissions as that would "*by definition be beneficial from a climate change point of view*" (EN-1, paragraph 1.7.8). However, this alternative was rejected on the grounds that "*it is not clear that it would be possible to give practical effect to such an alternative through the planning system in the next ten years or so without risking negative impacts on security of supply. Equally the planning policies in the energy NPSs as drafted do not put any unjustified barriers in the way of the development of low carbon energy infrastructure*" (EN-1, paragraph 1.7.9). Paragraph 1.7.9 goes on to

[1] EN010068

say that the "*Government is actively considering other ways in which to encourage industry to accelerate progress towards a low carbon economy*...".

3.4.31 This is the fundamental point, energy policy has three limbs - low carbon, security of supply and affordability. The energy NPSs are there to enable the planning system to delivery energy infrastructure that helps the UK economy to transition to a low carbon system, whilst protecting and enhancing security of supply and being affordable.

Application of section 104(7)

3.4.32 Section 104(7) provides an exception to deciding the Application in accordance with section 104(3) where the Secretary of State is satisfied that the adverse impact of the Proposed Development would outweigh its benefits. This sub-section therefore requires the Secretary of State and the ExA to undertake a balancing exercise.

3.4.33 The NPS policies are relevant to that balancing exercise, as they provide guidance or a framework within which various factors are to be balanced against each other. NPS EN-1 does not only provide such advice in relation to the actual contribution of the scheme in question to the established need for all types of energy infrastructure, other examples in EN-1 are directions on the weight to be given to alternatives (paragraph 4.4.3), CHP (paragraph 4.6.8), air quality (paragraph 5.2.9) sites designated for their biodiversity (paragraph 5.3.8), harm to protected species (paragraph 5.3.17), flooding (paragraph 5.5.16) and protected areas of natural beauty (paragraph 5.9.9).

3.4.34 The GLA appears to assert that the exercise required by section 104(7) and the application of the weight to be given to various factors pursuant to the NPS policies, are two separate exercises. The effect of this is that the balancing exercise in section 104(7) is carried out in a vacuum, the consequence of which would presumably be that all impacts are treated equally. By way of example, adverse harm to an Area of Outstanding Natural Beauty would be treated equally to adverse harm to an unprotected view or landscape.

3.4.35 Section 104(7) is not a disapplication of the NPSs. It is a section that provides important flexibility to the decision maker. It does not require that the contents of any relevant NPS must be put out of mind and assumed not to exist. The balance of benefits and dis-benefits can only properly be measured by taking full account of the Government's national policies relevant to the development in question, including any presumptions in relation to need. To do otherwise would be to set aside the national policy that is put at the heart of the PA 2008 and to ignore a relevant consideration: section 104(2)(a) of the PA 2008 which requires a decision maker as a matter of law to take relevant NPSs into account. Section 104(7) does not dis-apply section 104(2). Accordingly, it would be unlawful to consider the balancing exercise under section 104(7) without regard to the relevant NPSs.

3.4.36 The Applicant therefore disagrees with the GLA that the Application should not be decided in accordance with the NPSs, as that would be unlawful as stated

above. The Applicant therefore also disagrees with the GLA that it needs to set out an explicit need case. Regardless of that position, the Applicant submitted as part of its Application the **Project and its Benefits Report (7.2, APP-103)** and the **Supplementary Report to the Projects and its Benefits Report (7.2.1, REP2-045)**, which set out the need for the Proposed Development. This includes:

3.4.37 The Proposed Development will deliver much needed facilities to process waste for London which does not result in that waste going to landfill. From evidence and reports that the Applicant has submitted, it has demonstrated that in 2017 London produced 4.4 million tonnes of residual waste for disposal. 34% of that material is currently sent to landfill (being 1.5 million tonnes) and will continue to do so unless new infrastructure is built. 19% (being 836,000 tonnes) of the material is currently exported overseas to Europe. Those landfill sites can be up to 80 miles outside of London. There is a clear waste infrastructure gap in London. Almost 2.4 million tonnes of waste is going outside of London to landfill, EfW or overseas. Between now and 2025 when the Applicant's Proposed Development will be operational, there is estimated to be an additional 7.5 million tonnes of waste going to landfill, this is based on extrapolating the 1.5 million tonnes currently being sent to landfill for 5 years to 2025.

3.4.38 The Proposed Development is preferred to landfill on the basis that the climate change impact of producing energy from the waste in terms of CO2 equivalent, is less than the potential impact from the methane that would be emitted if the waste were to go to landfill. This is considered further in the **Carbon Assessment (8.02.08, REP2-059)**, but in summary the report compares the releases of greenhouse gases for two scenarios: (1) processing residual waste in the ERF element of the Proposed Development, generating electricity and heat for export; and (2) sending that same residual waste to landfill and generating electricity from the recovery of landfill gas. The base case for the assessment shows that the benefit of the Proposed Development is about 137,000 tonnes of CO2-equivalent per year, or about 229 kg CO2e per tonne of waste processed, compared to sending the same waste for disposal in a landfill site. If heat is exported, this benefit increases to 157,000 tonnes of CO2e or 263 kg CO2e per tonne of waste processed. The approach taken by the Applicant is approved in the recent decision of the Secretary of state for the Ministry of Housing, Communities and Local Government in respect of the Energy from Waste plant proposed by Veolia at Ratty's Lane, Hoddesdon[2]:

a. The Proposed Development delivers renewable energy through the anaerobic digester and solar panels; and

b. The REP site is accessible by river transport using existing lighterage infrastructure. The delivery of waste to the REP site by river transport will ensure that waste does not have to be transported by road.

[2] APP/M1900/V/18/31953743 – paragraph 17.64

3.4.39 The Applicant's position, as set out above with respect to section 104(3) of the PA 2008, is that the Application must be decided in accordance with NPSs EN-1, EN-3 and EN-5 and that the Proposed Development's benefits clearly outweigh any adverse impacts. Accordingly, the Secretary of State has to approve the Application for the Proposed Development and make the DCO.

Compliance with UK Enactments and International Obligations in relation to Climate Change

3.4.40 The UK is a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) and its 'Paris Agreement' on international commitments to tackle the causes and effects of climate change. This commitment was made at the national level and the UK government is responsible for setting national policy and legislation in order to meet this commitment.

3.4.41 The CCA is the UK government's primary legislation seeking to tackle the causes and effects of climate change. Amongst other things, it commits the UK Government to achieving a 100% reduction in the UK carbon account against the 1990 baseline.

3.4.42 Whilst the target in section 1 of the CCA has been updated on 27 June 2019 by the CCA (2050 Target Amendment) Order 2019, it is notable that this has not resulted in changes to or updates to policy applicable to the consenting of NSIPs and therefore granting development consent for the Application would not breach the existing policy matrix.

3.4.43 The international and national climate obligations do not specify the maximum carbon emissions which are allowable for particular sectors of the UK economy nor for individual projects or economic activities. This recognises the fact that different sectors and projects will need to contribute to emissions reductions in different ways.

3.4.44 The Committee on Climate Change has considered the likely risks to the UK achieving its carbon budgets (Reducing UK emissions 2018 Progress Report to Parliament, 2018), finding that "*legally binding carbon budgets will only be achieved if effective policy extends beyond waste and power, into sectors that have not so far achieved significant reductions*." Indeed, the Committee on Climate Change notes that "*reducing emissions from electricity generation is one of the simpler challenges for policy*." This confirms the position that the Proposed Development, which will reduce the average emissions intensity of UK electricity generation, will not adversely affect the UK's progress towards meeting the carbon budgets and will in fact contribute to that progress.

3.4.45 The overarching energy NPS EN-1 establishes the UK Government's policy for achieving multiple energy policy objectives, including energy security alongside the need for decarbonisation. The NPS was devised in the context of climate change and EN-1 expressly deals with climate change. Indeed, as set out above, alternatives were considered that **placed more emphasis on a reduction in CO2 emissions**. It is in that context that NPS EN-1 recognises

the expectation of an increase in demand for electricity, including as a result of the need to decarbonise other sectors of the UK economy such as transport and building heating.

3.4.46 It is clear that a single project, supported by the NPS, cannot in itself result in a breach of international or domestic obligations on carbon emissions. Therefore, sections 104(4), (5) and (6) are not engaged. The Applicant notes that the GLA does not assert that they are.

3.4.47 In paragraph 2.29 of the GLA's **Deadline 4 Final Report (REP4-024)** reference is made to the Climate Change Committee (CCC) report on reaching net zero by 2050. In particular the GLA refers to energy from waste meeting just 2% of energy generation by 2050 if combined with hydro power. The Applicant has been unable to find this statement in the CCC report and no paragraph reference has been provided by the GLA.

Introduction of a cap

3.4.48 If the Secretary of State were to follow the GLA's assertions through and refuse development consent for the Proposed Development on the basis that approving the Proposed Development would mean that the UK could not reach the target set in section 1 of the CCA, the implications would be that a cap is introduced on energy from waste plants (and in fact any energy generation at the same or greater carbon emissions intensity than the Proposed Development). The effect of that decision is to put a limit on the need for generating plants and a limit on the type of generating technology (neither of which is in accordance with NPS EN-1).

3.4.49 That decision has far-reaching implications for the energy sector, and potentially projects in other sectors with similar carbon emissions intensities.

3.5 WR2 Benefits of Energy from Waste

3.5.1 The Applicant has responded to bullets a and b of paragraph 2.31 of the GLA's **Deadline 4 Final Report (REP4-024)** in **Section 3.2** above, and has made clear REP's role in delivering the waste hierarchy in the Applicant's previous submissions, most recently at **Section 3.1** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)**. **Paragraph 3.1.25** of **the Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** concludes:

3.5.2 "*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 **Project 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.*"

3.5.3 Taking waste out of landfill moves it up the hierarchy to gain the benefits of energy recovery.

3.5.4 In response to bullet c of paragraph 2.31 of the GLA's **Deadline 4 Final Report (REP4-024),** the Applicant has reconfirmed at **Section 5** of this report (**8.02.46**) and **Section 2** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014),** that the assessment presented in the **London Waste Strategy Assessment (Annex A** of the **Project and its Benefits Report (7.2, APP-103)** is robust, correct, and consistent. The GLA's assertion that importing waste from outside of London would affect its ability to achieve net self-sufficiency, which '*is dependent on London facilities managing waste produced in London, with only small amounts coming from outside London*' is a new point being raised by the GLA and one that does not sit easily alongside the substantial tonnage of waste that is being exported from London. In any event, **Figure 1** of **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** demonstrates the Applicant's approach incorporates GLA policy and assumptions (including achieving net self-sufficiency by 2026) to demonstrate a substantial remaining need (c.900,000 tonnes) for new residual waste treatment infrastructure. There is more than sufficient residual waste generated within London for REP, wastes that should be diverted from landfill, and treated within London to deliver policy priorities including net self-sufficiency.

3.6 WR2 Fossil Fuel Generator

3.6.1 The Applicant has responded to paragraph 2.32 of the GLA's **Deadline 4 Final Report (REP4-024)** in **Section 3.2** above.

3.6.2 In paragraph 2.33, the GLA is once again incorrect in its understanding of energy policy - the GLA asserts that "*fossil fuel generation in the absence of CCS is not supported by Government*." This is incorrect; the Energy NPSs support sub 300 MW fossil fuel plants coming forward without CCS and indeed the Secretary of State has authorised such plants - most recently the Millbrook Gas Fired Generating Station Order 2019. In addition, the Government does not require above 300MW fossil fuel generating stations to have CCS, but rather to be carbon capture ready (CCR). There is a difference.

3.7 WR2 Use of Biogas

3.7.1 The GLA asserts, in **Paragraph 2.35** of its **Deadline 4 Final Report (REP4-024)**, that "*there is no mention of the gas offtake pipe or gas storage in the project description or elsewhere in the application, and the GLA is concerned that the Applicant has not demonstrated any commitment to build these essential elements.*" These straightforward points have been raised by the GLA previously in Paragraph 3.37 of its Written Representation (see **REP2-071**) and fully responded to by the Applicant in **Paragraphs 2.1.65** to **2.1.71** of the **Applicants responses to Written Representations (8.02.14, REP3-022)**.

3.7.2 The Applicant maintains that these proposals have been fully described from the application stage and are secured through the **dDCO (3.1, Rev 3)**. Gas storage equipment is included in Work No. 1B of the dDCO, which specifies

an anaerobic digestion system including "*(x) gas storage and upgrading equipment*".

3.7.3 Similarly, proposals for a gas offtake pipe are described under Work No. 1B of the dDCO, which specifies an anaerobic digestion system including "*(xi) associated gas and process heat pipes*". To facilitate wider distribution of compressed natural gas to an appropriate fuelling point on the site, Work No. 5 of the dDCO describes "*(o) infrastructure for the transmission and/or storage of compressed natural gas*".

3.7.4 The GLA should also note that the Applicant has committed to a requirement that obliges the Applicant to submit a phasing plan for the construction and commissioning of each element of Work Nos. 1A, 1B, 1C and 1D and that Work No. 1B must be constructed in the same phase as Work No. 1A. This is included in the dDCO submitted for Deadline 5.

3.7.5 In response to the GLA's comments in Paragraph 2.37 of its **Deadline 4 Final Report (REP4-024)**, the Applicant considers that by virtue of generating renewable biogas from residual food and green waste, any of the biogas utilisation options proposed would represent a highly beneficial use of the resource and would not give rise to unnecessary environmental burdens. This is demonstrated in air quality monitoring undertaken, which conservatively models the reasonable "worst case" (onsite) emissions that would result from combusting the biogas in a CHP engine. This approach is set out in detail in **Paragraphs 2.1.65** to **2.1.71** of the **Applicants responses to Written Representations (8.02.14, REP3-022)**. While this scenario means that the biogas would be substantially combusted onsite and therefore give rise to higher levels of local emissions (relative to alternative options), this does not mean that this scenario is any worse than other options when adequately contextualised. As set out in **Table D.4** of **Appendix D** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)**, any of the biogas utilisation options identified would generate emissions during final use, 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).

3.7.6 Biogas combustion within a CHP engine would be regulated via REP's Environmental Permit to, at minimum, the 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, REP4-021)** submitted at Deadline 4.

3.7.7 In addition, the Applicant has committed to installing a selective catalytic reduction (SCR) abatement system on under the CHP engine scenario. The **Anaerobic Digestion Facility Emissions Mitigation Note (8.02.42, REP4-021)** concludes that under the CHP engine scenario, impacts on human health exposure are negligible and impacts on biodiversity are insignificant. Further,

the Applicant has included, in the **dDCO (3.1, Rev 3)** to be submitted at Deadline 5, a requirement for the provision of abatement of the CHP engine of the Anaerobic Digestion Facility (see the Requirement on Emissions limits for Work No 1B).

3.7.8 The Applicant has also engaged with the local gas network operator to undertake further analysis into the viability of supplying biomethane into the local gas grid. The Applicant will provide an update on this analysis at the earliest opportunity. To this end, the Applicant has included in the **dDCO (3.1, Rev 3)**, a Requirement that obliges the Applicant to review the opportunities for exporting gas to the grid.

4 WR3: Carbon

4.1 Introduction

4.1.1 This section responds to paragraphs 2.38 to 2.50 (WR3 Carbon) of 'Section 2 – Applicant's Response to Written Representations' of the GLA's **Deadline 4 Final Report (REP4-024).**

4.1.2 GLA has raised the following topics at paragraphs 2.38 to 2.50:

- Transition to low carbon economy;
- Importance of the CIF policy to London;
- How the CIF will be achieved; and
- Conflict with National Policy.

4.1.3 The above matters are addressed in order below.

4.2 WR3 Transition to Low Carbon Economy

4.2.1 In Paragraph 2.39 of its **Deadline 4 Final Report (REP4-024)**, the GLA states that REP should ensure that its contribution to the low carbon and renewable economy should be ahead of the curve. The Applicant agrees and has demonstrated that this is the case in **Appendix B** to **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)**. The figure in **Paragraph B.3.4** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** shows that the effective carbon intensity of REP in electricity-only mode operating on design waste, when taking account of landfill displacement, is less than the long run marginal emissions factor favoured by the GLA until 2050. The figure in **Paragraph B.3.6** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** considers the benefit of REP using "future waste", which includes increased diversion of food waste, plastics and metals. It shows that REP has a negative carbon intensity in all years.

4.2.2 For this reason, the Applicant rejects the GLA's assertion in Paragraph 2.40 of its **Deadline 4 Final Report (REP4-024)**, that REP would only contribute to the transition towards a low carbon economy if it includes district heating and manages truly non-recyclable waste. While these are both aims which the Applicant supports, it is clear from the calculations referenced above that REP would contribute to this transition in electricity-only mode with no changes to waste composition.

4.2.3 In the **dDCO (3.1, Rev 3)** submitted at Deadline 5, the Applicant has included a Requirement regarding the Waste Hierarchy, obliging the Applicant to submit a scheme for approval that sets out the arrangements for maintenance

of the waste hierarchy in priority order minimising recyclable and reusable waste received at the ERF.

4.3 WR3 Importance of the CIF Policy to London

4.3.1 In Paragraph 2.42 of its **Deadline 4 Final Report (REP4-024)**, the GLA states that "*The GLA disagrees that meeting the CIF does not specifically support the use of non-recyclable waste to generate energy. Managing non-recyclable waste is paramount to achieving the CIF as set out in the London Environment Strategy Policy 7.3.2 and London Plan Policy 5.17Be*". While the Applicant notes that the use of non-recyclable waste for energy generation is one example of the way that the policy can be achieved, the only metric used to assess CIF performance is to achieve a target level of CO_2 emissions for every unit of energy generated. While the calculation is impacted by the waste composition (driven, in part, by recycling rates), CIF performance is clearly subject to both waste composition and plant efficiency.

4.3.2 The GLA continues to assert that the Applicant has not provided adequate demonstrable steps but does not provide any further explanation for this view. The Applicant continues to reject this, as described in **Paragraph 2.1.83** of **Applicant's Responses to Written Representations (8.02.14, REP3-022)**.

4.3.3 In terms of electrical efficiency, the Applicant continues to confirm that the ERF will achieve the claimed levels and accepts that REP will be the most efficient plant in the UK. On this basis, REP is able to meet the CIF (using all versions of the GLA's Ready Reckoner tool) without the need for additional processing of waste and without the need for heat export, as the CIF is calculated to be 400 gCO_2/kWh when using GLA's base waste composition. Assuming that the Mayor's policies (SI7 of the draft London Plan and proposal 7.1.1b and Objective 7.3 of the London Environment Strategy) achieve the desired reduction in plastic waste, the CIF performance of REP would improve, relative to current analysis, in the future. In addition, as the Applicant is committed to bringing forward heat export from REP, the CIF performance of REP would improve further. The Applicant has explained in detail how the CIF will be achieved, and responded to Eunomia's comments, in **Paragraph 2.1.84** and **Appendix A** (see **Paragraphs 1.1.1** to **1.1.12**) of **Applicant's Responses to Written Representations (8.02.14, REP3-022)**.

4.3.4 **Paragraphs 3.1.4** to **3.1.25** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** provides a detailed response to the GLA's concerns at paragraph 2.44 of its **Deadline 4 Final Report (REP4-024)**. Furthermore, the updated **dDCO (3.1, Rev 3)**, submitted at Deadline 5, includes a new requirement (Requirement 18) which requires the Applicant to prepare a scheme setting out arrangements for maintenance of the waste hierarchy. It is considered that the addition of **Requirement 18** to the **dDCO (3.1, Rev 3)** addresses the GLA's concerns regarding the absence of a pre-treatment facility.

4.4 WR3 How the CIF will be Achieved

4.4.1 The Applicant welcomes the GLA's acceptance that the use of net calorific value (NCV) within the CIF calculation is correct.

4.4.2 With this exception, the GLA has not made any new points in this section or provided any further evidence. The Applicant maintains its position, which is that REP will meet the CIF in power-only mode and that its performance against CIF will be improved if heat is exported. As explained in **Section 4.2** of the **Combined Heat and Power Supplementary Report (5.4.1, REP2-012)**, the Applicant has calculated the CIF using the GLA's own tools published in October 2011 and November 2018 and using the draft unpublished tool provided to the Applicant in April 2019. In all cases, REP achieves the CIF target.

4.4.3 In addition, since the Applicant is committing via a DCO requirement at Deadline 5 (**3.1, Rev 3**) to construct the Anaerobic Digestion facility element of the Proposed Development in the same phase as the ERF, REP's CIF score should be credited with the renewable energy generated by food and green waste. This cannot be done in the GLA's draft unpublished tool.

4.5 WR3 Conflicts with National Policy

4.5.1 At paragraph 2.49 of its **Deadline 4 Final Report (REP4-024),** the GLA refers to the Anthesis Report 2018, asserting that the Applicant provides *'an analysis of'* it at **paragraph 2.1.101** to **2.1.107** of **the Applicant's responses to Written Representations (8.02.14, REP3-022)).** This is not a correct assertion to make. Within the **Applicant's responses to Written Representations (8.02.14, REP3-022)**:

- Paragraph 2.1.101 simply quotes the GLA's reference to the Anthesis report 2018;
- Paragraph 2.1.102 simply observes that the Anthesis report is not addressed under the GLA title of waste capacity;
- Paragraph 2.1.103 introduces Anthesis and the report it had undertaken for the National Infrastructure Commission, quoting directly from the executive summary of the report;
- Paragraph 2.1.104 again quotes from the Executive Summary, commenting that the GLA had presented '*an overly simplified summary of its conclusions*';
- Paragraph 2.1.105 observes that the conclusion quoted, from the Executive Summary, was based on an assumption that RDF is continued to be exported overseas and refers back to **The Project and its Benefits Report (7.2, APP-103)** which identifies the risks associated with this practice. The paragraph continues simply to observe the level of electricity that is imported from Europe;

- Paragraph 2.1.106 introduces and quotes the second bullet point in the overall findings of the Executive Summary (of the Anthesis report 2018); and

- Paragraph 2.1.107 concludes, recognising the number of variables that will affect all our futures. It refers back to the **London Waste Strategy Assessment (LWSA) (Annex A** of the **Project and its Benefits Report (7.2, APP-103))** to conclude that *'even when incorporating the most conservative assumptions, there remains a need for REP.*'

4.5.2 There is no analysis of the Anthesis report 2018. The Applicant simply quotes from that report, showing how its conclusions, when understood in their totality, align with those of the **LWSA (Annex A** of the **Project and its Benefits Report (7.2, APP-103)).**

4.5.3 At paragraph 2.50 of its **Deadline 4 Final Report (REP4-024)**, the GLA asserts that the Applicant's projections as set out in the **LWSA (Annex A** of **The Project and its Benefits Report (7.2, APP-103))** are 'misleading'**.** The GLA does not state how the **LWSA (Annex A** of **The Project and its Benefits Report (7.2, APP-103))** can be considered misleading other than to refer to its submissions at Appendix 2a of its Post Hearing Written Summary of Oral Submissions **(REP3-039).** Appendix 2a to the GLA's Post Hearing Written Summary of Oral Submissions **(REP3-039)** cannot be relied upon, as has been shown in **Appendix A** to the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** it contains a number of miscalculations and fails to apply GLA policy appropriately or reasonably.

4.5.4 The title of this section of the GLA's Submission is '*Conflict with National Policy*.' It is perhaps worth noting that the Anthesis report 2018 is not policy. By contrast, the **LWSA (Annex A** of **The Project and its Benefits Report (7.2, APP-103))** is built around the policy priorities of the London Plan, and incorporates targets from the London Environment Strategy.

5 WR4: Implications of Excess Waste Capacity

5.1 Introduction

5.1.1 This section responds to paragraphs 2.51 to 2.75 (WR4 Implications of Excess Waste Capacity) of 'Section 2 – Applicant's Response to Written Representations' of the GLA's **Deadline 4 Final Report (REP4-024)**.

5.1.2 GLA has raised the following topics at paragraphs 2.51 to 2.75:

- Excess Waste Capacity;
- London's Waste Capacity;
- Consequences of Overcapacity; and
- Absence of Pre-Treatment.

5.1.3 The above matters are addressed in order below.

5.2 WR4 Excess Waste Capacity

5.2.1 There is continued disagreement between the GLA and the Applicant on the future tonnage of residual wastes available for REP. Paragraph 2.52 of the GLA's **Deadline 4 Final Report** (**REP4-024**), refers to its previous submissions on this point, all of which have been robustly refuted by the Applicant as signposted below:

- The GLA's Written Representation (specifically WR4, pages 17 to 28 (see **REP2-071**)) in the **Applicant's responses to Written Representations** (see **paragraphs 2.1.111** to **2.1.157 (8.02.14, REP3-022)**);
- The GLA's Local Impact Report (LIR7, particularly paragraph 7.29 and Table 3 (see **REP2-075**)) in the **Applicant's response to the Local Impact Report by Greater London Authority** (see **Table 1**, LIR Summary Reference (paragraph) 4.1 to 4.7, and **Table 4 (8.02.15, REP3-023)**); and
- Appendix 2a to the GLA's Post Hearing Written Summary of Oral Submissions (see **REP3-038**) in the **Applicant's response to Greater London Authority Deadline 3 Submission** (see **Section 2** and **Appendix A** (**8.02.35, REP4-014**)).

5.2.2 The Applicant's responses show that the GLA is not correct to assert that its submissions demonstrate that the ERF will be oversized and therefore lead to the diversion of waste from recycling to incineration in direct contradiction to the waste hierarchy. Instead, the Applicant's responses show that the GLA is failing to apply its own policy either appropriately or reasonably, is introducing new elements into its analysis and that the calculations provided in its submissions do not add up. As is identified at **Paragraph 2.1.6** of the

Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014), the GLA's miscalculations result in the loss of 200,000 tonnes of residual wastes at 2026 and nearly 300,000 tonnes in 2036. The Applicant suggests that this is clearly one of the reasons for the discrepancy in forecast need for residual waste treatment between the GLA and the Applicant.

5.2.3 **Figure 1** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** demonstrates the Applicant's approach; which incorporates GLA policy and assumptions to demonstrate a substantial remaining need for new residual waste treatment infrastructure.

5.2.4 At paragraph 2.53 of the GLA's **Deadline 4 Final Report** (**REP4-024**), the GLA criticises the Applicant for quoting that in 2015 London exported 11.4 million tonnes of waste, with 5.1 million tonnes of that export to landfill and approximately 1.3 million tonnes exported to energy recovery facilities on mainland Europe. This data is taken directly from, and referenced to, the draft London Plan,[3] which has just finished the hearings stage of its Examination. It is the most up to date information presented by the GLA and is provided for context.

5.2.5 Whilst it is agreed that a substantial proportion of that waste would be inert, the GLA is continuing to ignore that material which would be appropriate for REP, not least including the 1.3 million tonnes exported to energy recovery facilities on mainland Europe.

5.2.6 The GLA's assertion regarding the proportion of *potentially* reusable or recyclable untreated residual waste is not aligned to any evidence; it is simply a statement. It is a relatively simple statement to make by reference to the 41% municipal waste recycling[4] achieved in London currently. However, it fails to recognise that the Applicant's assessment, the **London Waste Strategy Assessment (Annex A of The Project and its Benefits Report (7.2, APP-103))** and with summary illustration at **Figure 1** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** assumes that municipal waste recycling in London will increase to 65%. The Applicant's assessment incorporates the expectation that most of the waste stream will be recycled, and still demonstrates a need for REP, in the order of 900,000 tonnes of residual wastes.

5.2.7 The GLA has not demonstrated that the Applicant's use of WRAP's gate fee data is misleading (see paragraph 2.55 of the GLA's **Deadline 4 Final Report** (**REP4-024**)). The only objection that the GLA makes in regard to WRAP's gate fee data is that it does not evaluate whole systems costs. This is rebutted in the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** at **Appendix C, Table C.2.** The Applicant considers that the GLA's reliance on research carried out by

[3] Draft London Plan, showing minor suggested changes, July 2018. Paragraphs 9.8.1 and 9.8.2.

[4] London Environment Strategy Evidence Base, page 95.

WRAP in 2008 and 2014 is oversimplified and misplaced. Principally, WRAP's research relates to householders' attitudes to recycling, and there is no evidence that this can be directly translated to C&I waste producers, which are more likely to focus on compliance and costs of waste management.

5.2.8 This is demonstrated by reference to the 2009 Defra C&I Waste Survey that the GLA relies upon for its forecasts. The Waste Management Plan for England, 2013 (page 18) reports that the 2009 Defra C&I Waste Survey identified a 52% recycling rate within this waste stream. In 2009, London's household waste recycling rate was 31.8% (WasteDataFlow). It is widely believed across the industry that C&I waste recycling has increased since that time; whilst in 2017/18 London's household waste recycling rate was 33.1%.

5.2.9 At paragraph 2.56 of the GLA's **Deadline 4 Final Report** (**REP4-024**), GLA asserts that the Proposed Development is in conflict with national, regional and local policies on account of: the GLA's analysis; and the Applicant's misrepresentation of other Local Plan documents.

5.2.10 As set out in paragraph 5.2.2 above, the Applicant has demonstrated how the GLA's analysis: fails to apply its own policy appropriately or reasonably, introduces new elements; and is not calculated correctly. Contrary to its assertion in paragraph 2.59, the GLA has not provided the detail behind its forecasts; the modelling used to inform the London Environment Strategy and the draft London Plan is not available. The London Environment Strategy Evidence Base provides a written overview of the analysis that was undertaken, but it is not entirely clear about all of the steps that have been undertaken. The only publically available documentation in relation to the draft London Plan are reports prepared by SLR Consulting[5], which themselves simply report SLR's review of GLA's modelling, not the original modelling. This modelling has been requested numerous times by the Applicant both in relation to the project and at the Examination in Public of the new draft London Plan. The GLA has continued to ignore these requests and instead keeps referencing the written SLR reports.

5.2.11 The Applicant does not misrepresent the findings of other Local Plan documents. Any comment made by the Applicant on the forecasts made in the other Local Plan documents (which are limited) has been clearly presented in our submissions. The GLA addresses this data in more detail from its paragraph 2.67, particularly focussing on Kent, Essex, Surrey, Hertfordshire and Norfolk. The Applicant agrees with the GLA's statement (at paragraph 2.67) that a decrease in the level of need from 2 million to 1.5 million is '*a significant reduction*.' It is also a reduction that should, appropriately, be celebrated, as it indicates that the necessary infrastructure is being put in place. However, it is also entirely appropriate for the Applicant to identify where there are causes for concern. This matter is addressed further from **Paragraph 5.3.20** below.

[5] London Plan Waste Forecasts and Apportionments: Task 1 – GLA Waste Arisings Model Critical Friend Review, March 2017, and Task 3 – Strategic Waste Data, May 2017. Both reports are used and referenced in the LWSA.

5.2.12 Paragraph 2.57 of the GLA's **Deadline 4 Final Report** (**REP4-024**), closes this section of the GLA's Deadline 4 Submission (**REP4-024**). The Applicant is unclear as to how it has 'misconstrued' the findings of the draft London Plan or London Environment Strategy. As has been made clear in numerous submissions, most recently in the **Section 2** and **Figure 1** of **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014),** The Applicant has very simply, and consistently, relied upon the draft London Plan and London Environment Strategy to demonstrate the remaining need (of c.900,000 tonnes) for new residual waste treatment capacity.

5.2.13 Appendix 2a to the GLA's Post Hearing Written Summary of Oral Submissions (**REP3-038**) cannot be relied upon, as has been shown in the **Appendix A** to **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** it contains a number of miscalculations and fails to apply GLA policy appropriately or reasonably.

5.3 WR4 London's Waste Capacity

5.3.1 At paragraph 2.58 of the GLA's **Deadline 4 Final Report** (**REP4-024**), the GLA states that it disagrees with the analysis presented at **Paragraphs 2.1.129** to **2.1.157** of the **Applicant's responses to Written Representations (8.02.14, REP3-022).** It is difficult to understand what it is that the GLA is disagreeing with.

5.3.2 As stated at **Paragraph 2.1.129** of the **Applicant's responses to Written Representations (8.02.14, REP3-022)** the GLA has not provided its modelling. As identified above (see **Paragraph 5.2.10**) there is some text provided in the public domain about elements of the modelling that has been done, but the original modelling is not available for either of the draft London Plan or the London Environment Strategy. The Applicant is consequently not able to replicate the analysis undertaken by the GLA and so test the calculations. As stated in 5.2.13 above, Appendix 2a to the GLA's Post Hearing Written Summary of Oral Submissions (**REP3-038**) cannot be relied upon.

5.3.3 **Paragraphs 2.1.131** and **2.1.132** of the **Applicant's responses to Written Representations (8.02.14, REP3-022)** simply shows how the Applicant has used the same assumptions as the GLA. Whilst **Paragraphs 2.1.133** to **2.1.138** of the **Applicant's responses to Written Representations (8.02.14, REP3-022)** are simply corrections to the GLA's understanding of the Applicant's assessment.

5.3.4 At paragraph 2.60 of the GLA's **Deadline 4 Final Report** (**REP4-024**), the GLA asserts that the Applicant has undertaken a flawed analysis in relation to household waste, local authority collected waste (LACW) and C&I waste. The Applicant disagrees. Each of these elements are very carefully explained and considered in the **London Waste Strategy Assessment (Annex A** of **The Project and its Benefits Report (7.2, APP-103)).**

5.3.5 Further, this point is explained in **Paragraphs 2.1.134** to **2.1.136** of **the Applicant's responses to Written Representations (8.02.14, REP3-022)**, confirming that household waste arisings are updated to reflect actual LACW in 2016/17, with non-household waste arisings consequently subtracted from the C&I element. No other change is made to the GLA's forecast arisings. The Applicant's assessment is clear and transparent, with all of the calculations laid out. It is a wholly reliable analysis.

5.3.6 At paragraph 2.61 of the GLA's **Deadline 4 Final Report** (**REP4-024**), the GLA asserts that Table 2 of its Written Representations does '*encompass the totality of LACW*'. This may be its intention, but it is not strictly true. Table 2 refers to the GLA's forecast household waste and forecast C&I waste arisings. It is simply an assumption that the GLA holds, but which is not explained or justified anywhere, that the C&I waste forecast will incorporate the non-household wastes that make up the remainder of the LACW. The tonnages presented in Table 2 of the GLA Written Representations do not present actual waste arisings as recorded in 2016/17.

5.3.7 **Paragraphs 2.1.141** and **2.1.142** of the **Applicant's responses to Written Representations (8.02.14, REP3-022)** are simply statements of fact; the tonnages referred to by the GLA do not appear in either of the policy documents, and the Applicant cannot replicate them. The GLA has not provided any clarity for them. **Paragraphs 2.1.143** to **2.1.145** of the **Applicant's responses to Written Representations (8.02.14, REP3-022)** again provides corrections to the GLA's understanding of the Applicant's assessment.

5.3.8 At paragraph 2.62 of the GLA's **Deadline 4 Final Report** (**REP4-024**), the GLA again refers to the proportion of C&I waste that would be combustible. The Applicant has responded to this point in some detail at **Section A.2** of **Appendix A** to the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-104)** which demonstrates that the evidence relied upon by the GLA, the 2009 Defra C&I Waste Survey, is not reflective of commercial and industrial activities undertaken in London. As confirmed at **Paragraph A.3.6** of **Appendix A** to the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)**, the Applicant refers to NPS EN-1 to further demonstrate that this point is neither relevant nor important. Even if the GLA's assumption that only 80% of C&I waste would be appropriate for combustion, the **London Waste Strategy Assessment (Annex A** of **The Project and its Benefits Report (7.2, APP-103))** demonstrates there would still remain approximately 700,000 tonnes of residual wastes generated in London that should be diverted from landfill. As shown graphically at **Figure 1** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4,014)** there remains a greater level of need than the nominal throughput proposed for REP.

5.3.9 Contrary to the assertion made by the GLA, this is not a key point of divergence, and as set out in **Appendix A** to the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** the

analysis presented in Appendix 2a to the GLA's Post Hearing Written Summary of Oral Submissions (see **REP3-038**), is flawed. **Table A.3** of **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** shows that if the GLA's assumptions are applied and calculated correctly, then the divergence between its own forecasts for future residual waste treatment capacity and the Applicant's are substantially reduced. Importantly, the difference between the GLA's own forecasts for new waste treatment capacity and the nominal throughput of REP are not so far apart. This is shown in **Table 5.1**.

Table 5.1: Table A.3 of Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014) showing the GLA's assumptions calculated correctly

Description	2026 (Mt)	2036 (Mt)	Table A.3 row reference	row
Incorporating both the GLA's assumption that only 80% of C&I waste is combustible and that a further 10% of mass loss should be recognised				
Residual waste processible via EfW	2.7	2.5	H	a
Indigenous EfW capacity	2.2	2.2	I	b
Resultant indigenous capacity gap	0.5	0.3	J	c
REP ERF nominal throughput	0.7	0.7		d
Difference	-0.2	-0.4		e
Incorporating the GLA's assumption that only 80% of C&I waste is combustible				
Residual waste processible via EfW	3.0	2.8	H	g
Indigenous EfW capacity	2.2	2.2	I	h
Resultant indigenous capacity gap	0.8	0.6	J	i
REP ERF nominal throughput	0.7	0.7		j
Difference	0.1	-0.1		k

5.3.10 It is important to note that the Applicant does not agree with either of the GLA's assumptions that only 80% of C&I waste is suitable for combustion or that a further 10% mass loss should be included in the analysis. **Table 5.1** contains these assumptions simply to show the GLA's analysis in full, but correctly calculated.

5.3.11 However, **Table 5.1** clearly demonstrates that, even applying all of the assumptions that the GLA adds to its analysis (the 80% combustibility of C&I waste assumption is only mentioned in the London Environment Strategy, not the draft London Plan; whilst the additional 10% due to mass loss assumption is only raised at Deadline 3) when correctly calculated there remains a need for new residual waste treatment capacity. Importantly, and relevantly, the nominal throughput for REP is not so very different from the GLA's calculations.

5.3.12 At paragraph 2.64 of the GLA's **Deadline 4 Final Report** (**REP4-024**), the GLA criticises the Tolvik findings referenced by the Applicant. At **Paragraphs 2.1.147** to **2.1.150** of the **Applicant's responses to Written Representations (8.02.14, REP3-022)**, the Applicant is simply clarifying that the Tolvik findings extend beyond the '*low tonnage case*' relied upon by the GLA and that, in their report, Tolvik '*expects that the Central scenario will be the one around which the most likely set of outcomes through to 2025 will result*.' (section 5.1, page 11). The other scenarios considered by Tolvik do assume lower recycling rates than the Circular Economy (CE) recycling targets, but the reduction is limited, dropping only to 61.5% at 2025. The GLA is also correct to identify that the Tolvik report uses different assumptions in relation to the delivery of future EfW capacity, concluding (on page 8) that there is '*considerable uncertainty in the projections of additional EfW capacity – but in all cases the potential effects of any additional EfW projects on the market will be delayed until at least 2022.*'

5.3.13 In short, the Applicant is ensuring the full extent of the GLA's reliance on the '*low tonnage case*' is fully understood as this scenario requires: 65% recycling by 2025, increasing to 70% by 2035; the highest assumption in relation to reduction in average household waste per household; the highest assumption in relation to the delivery of both resource efficiency measures and new capacity; and the substantial continuation of refuse derived fuel (RDF) export. The GLA's reliance on the '*low tonnage case*' is not an example of good practice, it is an example of an approach that seeks to constrain the planning for and development of necessary infrastructure. It is an approach that allows no flexibility in future outcomes. As the Tolvik report concludes (on page 24):

'*Consider, for example, if there was a "zero landfill" policy across London and the South East in which no Residual Waste is to be landfilled by 2025 (similar to the current Greater London Authority's policy of working towards not sending any biodegradable waste to landfill by 2026). In the Central scenario 4.7* [million tonnes] *of EfW capacity over and above that current operational in London and the South East would need to be available. Whilst some of this capacity could potentially continue to be met by RDF export to Europe, any shortfall would need to be through the construction of new EfWs in London*

and the South East. The modelling in the Low Tonnage scenario assumes a maximum of 2.06 [million tonnes] *of "Additional" EfW capacity by 2025 – less than half that required for a "zero landfill" scenario – putting into context* [the] *deliverability of such a solution.*'

5.3.14 At paragraph 2.65 and 2.66 of the GLA's **Deadline 4 Final Report** (**REP4-024**), the GLA criticises the use the Applicant makes of the 400,000 tonnes of RDF presented by the GLA in Chart 3 of its Written Representation (see **REP2-071**). In preparing its response to the GLA's Written Representation, the Applicant had relied upon the information presented by the GLA, i.e. that the CIWM Presidential Report 2018 identified that there would be 400,000 tonnes of RDF requiring a final destination at 2030. Having now read the CIWM Presidential Report 2018, the Applicant can see that this was an error. Not least, at no point in that report is there any specific reference to 400,000 tonnes of RDF at 2030; the GLA should explain what it is referring to within Chart 3 of its Written Representation.

5.3.15 Further, the Applicant considers that there are many elements of the CIWM Presidential Report 2018 that should be clarified before any reliance is placed on it. Not least, the CIWM Presidential Report 2018:

- Does not reference any of its source data, and none of the charts are replicable;
- Mixes its terminology by variously making references to residual waste, RDF, Solid Recovered Fuel (SRF), and other, however only RDF, generally classified through the specific waste codes of 19 12 10 and 19 12 12 can legally be exported;
- Includes Mechanical Biological Treatment (MBT) within its capacity assumptions, whilst this is useful infrastructure it does not provide an end destination for either residual waste or RDF and is potentially overstating operational capacity by over 3 million tonnes[6];
- Is unclear about the amount of capacity provided by co-incineration, in 2017 there was 1.3 million tonnes of co-incineration capacity permitted, which took nearly 800,000 tonnes of wastes, but only 280,000 tonnes of RDF; and
- Includes facilities that the report author (SLR Consulting) considers to be of medium or high likelihood of being developed, but which are not yet in construction. These facilities are not named, may include MBT and cannot be checked. In any event this approach goes further than that advocated in NPS EN-1.

[6] The Residual Waste Treatment Infrastructure Project List, prepared by the Waste Infrastructure Delivery Programme and published on 29 March 2019 identifies (at 31 December 2016) nearly 20 Mt of operational residual waste treatment infrastructure including: 3.3 Mt of MBT producing RDF and a further 0.8 Mt of MBT producing reduced biodegradable content for final disposal to landfill. It identifies 15.5 Mt tonnes of EfW. https://data.gov.uk/dataset/b99f22a0-e716-44bf-bff2-a12da2562e4f/waste-infrastructure-delivery-programme-widp-residual-waste-treatment-infrastructure-project-list-ipl [26.07.2019@13:50]

5.3.16 In the context of these uncertainties, the Applicant notes that the CIWM Presidential Report 2018 presents a potential range of future RDF export, from 0 tonnes up to nearly 7 million tonnes, with c.3 million tonnes at 2030 presented as the mid-point (page 54). One of the conclusions made in relation to the report's UK projections is that '… *the combined impact* [of] *recycling and domestic EfW build out on RDF exports is likely to be complex and vary over time … over this timescale, the theoretical residual waste feedstock remains in excess of EU demand (taking the 3.5Mt exported in 2016 as a proxy for this demand).* …' (page 55).

5.3.17 Most tellingly, page 51 of the CIWM Presidential Report 2018 opens with:

'Sections above demonstrate that the RDF market is subject to a range of influences, each of which are individually subject to a high degree of uncertainty – In this context, it is not possible to project the exact future scale of RDF exports with confidence.'

5.3.18 The GLA has misrepresented the conclusion of the CIWM Presidential Report 2018, placing a level of certainty upon it that was never intended.

5.3.19 Further, the GLA's submissions continue to show that it ignores the bespoke assessment that has been prepared by the Applicant. The **London Waste Strategy Assessment (Annex A** of **The Project and its Benefits Report (7.2, APP-103))** is specific to London and wholly incorporates the GLA's key policy priorities, including waste reduction over time; 65% municipal waste recycling; and achieving net self-sufficiency. As confirmed in **Section 2** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** there remains a need for c.900,000 tonnes of new residual waste treatment infrastructure within London, even when the GLA's challenging waste reduction and recycling targets are met.

South East Capacity Requirements

5.3.20 In response to the GLA's submissions at paragraphs 2.67 to 2.71, the Applicant responded in relation to Kent, Essex, Hertfordshire and Suffolk in **Appendix B (Table F.11**) of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014).** In summary:

- Kent - Early Partial Review of the Kent Mineral and Waste local Plan 2013 – 30

  The Applicant assumes there is no capacity gap or deficit within Kent. This is considered to be a fair assumption on the basis of a detailed review of the work undertaken by Kent County Council, in which the Applicant notes:

  a. a shortfall in the LACW arisings forecast and future residual waste management demand, potentially leading up to an additional 130,000 tonnes of residual LACW that should be diverted from landfill;

b. substantial elements of C&I waste potentially not accounted for, resulting in an additional 28,000 to 141,000 tonnes of residual C&I wastes to be diverted from landfill; and

c. 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.

- Essex - Essex and Southend-on-Sea Waste Local Plan, adopted July 2017

  The Applicant retains the identified capacity gap of 200,000 tonnes. This is considered to be a fair assumption on the basis that:

  a. Policy 1 of the Essex and Southend-on-Sea Waste Local Plan identifies up to 200,000 tpa need for '*the further management of non-hazardous residual waste*'. The May 2018 Capacity Gap Update referred to by the GLA, references '*around 200,000 tpa of stabilised residual waste … which may either be disposed of to landfill or used as a Refuse Derived Fuel (RDF) in appropriately consented combustion plants in the UK or abroad.'* (section 2.5.4*)* This material is wholly suitable for REP; and

  b. 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.

- Hertfordshire - Waste Local Plan Review Draft Capacity Gap Report for Initial Consultation

  The Applicant **has** updated in Appendix B (Table F.11) of the Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014) the assumed residual waste tonnage in Hertfordshire to 154,000 tonnes, the figure quoted by the GLA.

- Suffolk - The Suffolk Minerals & Waste Local Plan, Suffolk Waste Study, April 2018

  The Applicant retains the identified capacity gap of 500,000 tonnes. This is considered to be a fair assumption on the basis that:

  a. 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; and

b. further, the Applicant considers 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 bulk up wastes prior to transportation) but cannot be relied upon to treat wastes.

5.3.21 In relation to Surrey and Norfolk, which the GLA now also focusses on, these too have been updated, in **Appendix B** to **Applicant's responses to Written Representations (8.02.14, REP4-014)**.

- Surrey – Surrey Waste Local Plan, Draft Plan, December 2017

  The Applicant **has** updated in **Appendix B** (**Table F.11**) of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** the assumed residual waste tonnage in Surrey to 150,000 tonnes, which is comparable to the 148,000 tonnes quoted by the GLA.

- Norfolk - Annual Monitoring Report Waste Data 2017-18, May 2019

  The Applicant has updated in **Appendix B** (**Table F.11**) of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** the assumed residual waste tonnage in Norfolk to 600,000 tonnes.

  The GLA provides the paragraph on page 20 fully and the Applicant does not dispute the potential for some of that capacity to be provided through recycling. However, the first sentence quoted '*Therefore, there remains a need for nearly 608,000 tpa additional recovery (residual waste treatment) infrastructure capacity over the plan period in accordance with policy CS4'* is entirely accurate and indicates the scale of need in that county.

5.3.22 The Applicant disagrees with the GLA's conclusion at paragraph 2.71 of the GLA's **Deadline 4 Final Report** (**REP4-024**). The Applicant has quoted directly from the other Local Plan documents, with the exception of Kent, where serious concerns are held on the accuracy of the need assessment work that has been undertaken. However, even here, the Applicant has not inserted its own forecasts, but has simply identified no capacity gap or need. This is considered an entirely reasonable solution.

5.3.23 It is entirely incorrect for the GLA to refer to the Applicant's presentation of other Local Plan documents as '*highly misleading*' (in paragraph 2.71 of the GLA's **Deadline 4 Final Report** (**REP4-024**)). Whilst the GLA may not agree with the references made by the Applicant to the information presented by the other local authorities, the Applicant has been entirely transparent in its presentation of that data and been clear about where concerns are held.

5.4 WR4 Consequences of Overcapacity

5.4.1 Paragraphs 2.72 and 2.73 of the GLA's **Deadline 4 Final Report** (**REP4-024**), do nothing to promote the GLA's assertion that REP would be a stranded asset. The Applicant has addressed this point in some detail from **Paragraph 2.1.158** of the **Applicant's responses to Written Representations (8.02.14, REP4-014)**. Further responses in regard to the waste capacity needs of other authorities beyond London is set out above (in **Section 5.3**). In any event, reference to the capacity needs of authorities across the South East provides relevant context only. As has been consistently demonstrated by the Applicant, in the **LWSA (Annex A** of **The Project and its Benefits Report (7.2, APP-103))** and most recently in the summary illustration at **Figure 1** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014),** the amount of residual waste generated within London is more than enough for REP.

5.4.2 At paragraph 2.73 (and earlier at 2.31) of the GLA's **Deadline 4 Final Report** (**REP4-024**), the GLA asserts that importing waste from outside of London would affect its ability to achieve net self-sufficiency, which '*is dependent on London facilities managing waste produced in London, with only small amounts coming from outside London*.' This is a new point being raised by the GLA and one that does not sit easily alongside the substantial tonnage of waste that is being exported from London.

5.4.3 It is simply neither necessary nor appropriate to have a requirement seeking to limit the source of waste for REP. It is not required through policy and there is no demonstrated adverse environmental impact from the transportation of waste that cannot be otherwise more appropriately controlled. However, despite that the Applicant has demonstrated that REP will not disadvantage the waste hierarchy, it is content to include a requirement in relation to the maintenance of the waste hierarchy. This is set out in the **Applicant's response to comments on the draft Development Consent Order (8.02.54)** and in the revised **dDCO (3.1, Rev 3)**.

5.5 WR4 Absence of Pre-Treatment

5.5.1 A requirement for a pre-treatment facility is neither necessary nor appropriate. As set out at **Section 2** of the **Applicants response to Written Representations** (**8.02.14, REP3-022**) there is no policy or legislative requirement for the Proposed Development to incorporate a pre-treatment facility. Not least, as set out at **Section 3** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** demonstrates that REP is at the right scale and right level of the waste

hierarchy. It is, of itself, one of the key elements of waste management infrastructure required within London, to enable the waste hierarchy to be delivered within London. **Section 3** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** also sets out the range of measures that are already in place, providing the appropriate tools with which to ensure delivery of the waste hierarchy.

6 WR5: Waste Transfer Impacts

6.1 Introduction

6.1.1 This section responds to paragraphs 2.76 to 2.84 (WR5 Waste Transfer Impacts) of 'Section 2 – Applicant's Response to Written Representations' of the GLA's **Deadline 4 Final Report (REP4-024).**

6.1.2 GLA and TfL have raised the following topics at paragraphs 2.76 to 2.84:

- Assessment of Environmental Effects and Waste Transfer Station (WTS) Capacity; and
- Commitment to River Transport.

6.1.3 The above matters are addressed in order below.

6.2 WR5 Assessment of Environmental Effects and WTS Capacity

6.2.1 **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 rationale for its assumptions relating to the transfer of waste. That response sets out 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. A 100% by river scenario has also been assessed. No significant effects were identified. The 25% by road assumes that waste material not transported by river to the ERF is delivered to REP directly from contracts across London, Kent and Essex. The distribution of those origins is set out at **Plate 6.2** of **Chapter 6 Transport** of the **ES** (**6.1, REP2-017**). The Applicant therefore has given appropriate consideration to outer London and beyond in its assessment of impacts.

6.2.2 Consideration of methods of transport *to* the WTSs is not necessary as each of these has already been granted planning and Environmental Permit consents which have considered the impacts of transporting waste to them as set out further below.

6.2.3 As explained in **Section 3.2.2** of **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)**, the scope of the assessment was agreed with LBB as Highway Authority and TfL as set out in **Table 6.6** of **Chapter 6 Transport** of the **Environmental Statement** (**ES) (6.1, REP2-017).**

6.2.4 The riparian WTS at Smugglers Way, Cringle Dock, Walbrook Wharf, Northumberland Wharf and the Port of Tilbury 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. The permitted capacities of each of these WTS are publicly available, however for absolute clarity, they are outline in **Table 6.1** below.

Table 6.1: Waste Transfer Station permitted capacities

Waste Transfer Stations	**Tonnes per Annum (tpa) (million)** **Note: Lowest permitted throughput under planning or permitting**	**Annual Throughput (tpa) (million)** **Note: Based 3 Year Average (Tpa 2016 - 2018) (m)**	**Surplus (tpa) (million)**
Smugglers Way- Wandsworth	0.732	0.207	+0.525
Cringle Dock – Battersea	0.308	0.282	+0.026
Walbrook Wharf- City of London	0.175	0.055	+0.12
Northumberland Wharf – Tower Hamlets	0.175	0.124	+0.051
Existing WTSs Sub Total	**1.390**	**0.668**	**+0.722**
Port of Tilbury (site permitted but not operational)	0.075	n/a	+0.075
Existing + Permitted WTSs Total	**1.465**	**n/a**	**+0.797**

6.3 WR5 Commitment to River Transport

6.3.1 As stated throughout its submissions, the Applicant is wholly committed to REP being primarily a river fed facility. Having invested heavily in its existing marine operations, including: physical infrastructure; plant and machinery; and a highly trained marine workforce, there is no commercial imperative for the Applicant to seek to operate by transporting a high proportion of the waste material by road.

6.3.2 This commitment has been further demonstrated in an amendment made to Requirement 14 of the **dDCO** (**3.1, Rev 3**) which now commits to a tonnage cap of 240,000 tpa being transported to the facility by road (as proposed by the "**GLA Commentary on Applicant's response to ExA's first Written Questions" (REP3-043)** at Deadline 3). That commitment is secured through **Requirement 14** within the updated **dDCO** submitted at Deadline 5 (**3.1, Rev 3**).

6.3.3 It is important however to note that the Applicant does not agree with the assumptions and assertions made by the GLA within its response. At paragraphs 2.79 to 2.84 of the GLA's **Deadline 4 Final Report** (**REP4-024**), the GLA presents a rebuttal of the method of estimating the potential movement of waste by road to the ERF at the REP site.

6.3.4 Within **Chapter 6 Transport** of the **ES** (**6.1, REP2-017**) and **Appendix B.1** the **Transport Assessment** to the **ES** (**6.3, APP-066**) the working assumption for the movement of waste material by road is 7 tonnes per load. That assumption reflects a typical load for a large refuse collection vehicle at typical density. That assumption was used as a robust case to inform assessment of traffic effects on the operation of the local road network for the tested reasonable worst case scenarios of 100% by road and the nominal scenario of 25% by road.

6.3.5 The road based movement of operational waste to the ERF at REP would be a mix of direct transportation of waste material from roadside collections in refuse collection vehicles (with circa 7 tonne payloads) and other Commercial and Industrial waste which might be by large bulk carriers. The assumptions within the transport planning assessments therefore represent an appropriately robust scenario for the predicted road based operations for REP.

6.3.6 The current river operation at RRRF focuses on the import of waste material by sealed containers with approximately 20 tonnes per container. Those are then transported efficiently in barges along the River Thames to the jetty at RRRF.

6.3.7 The calculations for the theoretical scenario provided by the GLA at paragraph 2.82 include the assumption that all road transportation of waste material would be to the ERF in 22 tonne loads, deriving an annual tonnage of 722,700 tpa. This is not appropriate as it does not allow for the 40,000 tpa operation of the Anaerobic Digestion facility, which the Applicant has assessed would require:

a. 15 HCVs per day of waste material at 7 tonnes per load (over 260 days); and

b. 2 HCVs per day of waste material at 20 tonnes per load (over 365 days).

6.3.8 That Anaerobic Digestion facility operation would use approximately 4,603 HCVs per annum, leaving approximately 28,247 HCV per annum for other waste material transportation by road – assuming a cap of 90 HCVs per day for waste material to the ERF and Anaerobic Digestion facility.

6.3.9 The maximum theoretical quantum of material to be transported to the ERF by road within that vehicle movement cap would therefore be:

a. 197,732 tpa at a consistent 7 tonnes per load (28,247 HCVs x 7 tonnes); or

b. 564,948 tpa at a consistent 20 tonnes per load (28,247 HCVs x 20 tonnes).

6.3.10 The ERF at REP has a nominal operating tonnage of 655,000 tpa and a maximum operating throughput of 805,920 tpa. The REP site would not achieve the necessary throughput of waste by road using all 20 tonne loads (i.e. 564,948 tpa) and so would also need to bring waste in by an alternative means – in this case via the river. It would be totally inefficient for the Applicant to operate a fleet of tugs and barges for such a small percentage of waste by river. There is therefore no justification not to maximise the efficient use of river-based transportation in which the Applicant has invested.

7 WR6: Air Quality Impacts

7.1 Introduction

7.1.1 This section responds to paragraphs 2.85 to 2.95 (WR6 Air Quality) of 'Section 2 – Applicant's Response to Written Representations' of the GLA's **Deadline 4 Final Report (REP4-024).**

7.1.2 GLA has raised the following topics at paragraphs 2.85 to 2.95:

- Conflict with National Policy; and
- Outcomes of Assessment.

7.1.3 The above matters are addressed in order below.

7.2 WR6 Conflict with National Policy

7.2.1 Further information on predicted impacts at residential receptor locations has been provided in **Section 6.5** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)**. As shown in the submission, there are no exceedances of the NO_2 standard at any of the modelled receptor locations as a result of emissions from the ERF. The submission also addresses all locations where the GLA have stated that residential receptors have been omitted and all impacts are negligible.

7.2.2 The Applicant disagrees with the GLAs assertion that workplaces are relevant locations for long term exposure. The GLA quotes guidance from LAQM.TG(16) but omits **Box 1.1** which is shown below.

7.2.3 From **Box 1.1** of Defra guidance LAQM.TG(16), it is clear that the objectives apply where people are likely to be exposed for the averaging period of the objective. That it is to say, where people are likely to be present for long periods of time the annual average objective applies, where-as where people are likely to be present for shorter periods of time the 24-hour, 8-hour or 1-hour mean objectives apply. In the case of workplaces, personal exposure is less than 24 hours per day and therefore there would not be exposure over an annual average period.

7.2.4 Whilst neither the National Planning Policy Framework nor the relevant NPS's on Energy Infrastructure suggest any restrictions on what should be considered a relevant receptor, these locations need to be chosen on the basis of whether people are likely to be present for the relevant averaging period of the objective. It is not appropriate to assess the effects of long term (annual average) exposure to pollution at locations where people would not be exposed for that length of time (i.e. workplaces).

7.2.5 In this regard, the inclusion of 'workplaces' in the online planning guidance should be interpreted as meaning assessing impacts and effects in relation to the length of exposure, i.e. against the short-term objectives, not the long term

exposure. As shown in **Table 7.34** of **Chapter 7 – Air Quality** of the **ES (6.1, REP2-019)**, all of the predicted short-term concentrations from the ERF at the point of maximum concentration are insignificant. The impacts at workplaces as a result of emissions from the ERF are therefore insignificant.

Box 1.1 – Examples of Where the Air Quality Objectives Should Apply

Averaging Period	Objectives should apply at:	Objectives should generally not apply at:
Annual mean	All locations where members of the public might be regularly exposed. Building façades of residential properties, schools, hospitals, care homes etc.	Building façades of offices or other places of work where members of the public do not have regular access. Hotels, unless people live there as their permanent residence. Gardens of residential properties. Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.
24-hour mean and 8-hour mean	All locations where the annual mean objective would apply, together with hotels. Gardens of residential properties[10].	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.
1-hour mean	All locations where the annual mean and: 24 and 8-hour mean objectives apply. Kerbside sites (for example, pavements of busy shopping streets). Those parts of car parks, bus stations and railway stations etc. which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more. Any outdoor locations where members of the public might reasonably expected to spend one hour or longer.	Kerbside sites where the public would not be expected to have regular access.
15-min mean	All locations where members of the public might reasonably be exposed for a period of 15 minutes or longer.	

7.3 WR6 Outcomes of Assessment

7.3.1 The Applicant disagrees with the GLA that the response is baseless and the assessment is inadequate. The Applicant has since provided further information on the impact of the Proposed Development within the London Riverside Opportunity Areas and at higher elevations at Deadline 4 of the Examination. At **Section 6.5** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)**, the Applicant shows, as was anticipated, that the development will not have a significant impact on either long-term or short-term pollutant concentrations at ground level or elevated receptor locations within existing or proposed development areas.

7.3.2 Furthermore, the comments made by the GLA at paragraph 2.94 of its **Deadline 4 Final Report (REP4-024)** are now incorrect. The Applicant reiterates that an assessment of the impact of development traffic at the residential property on the east side of the A206 Queens Road has been undertaken and the findings have been provided at Deadline 4 of the Examination. The Applicant has set out in detail in **Table D.8** of **Appendix D** of the **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** the methodology adopted to assess potential impacts and confirms that the modelled NO_2 concentration at this receptor location has been determined using the same approach as presented in **Chapter 7 – Air Quality** of the **ES (6.1, REP2-019)** (i.e the same Emission Factor Toolkit and verification process). In summary, the predicted 2024 'Do Something' NO2 concentration at this receptor location is 42.0 µg/m3 with an increase of 0.1 µg/m3 (0.25% of the objective) when compared to the 2024 'Do Minimum' scenario. As such, the impact at this receptor location described as 'negligible'.

8 WR7: Traffic

8.1 Introduction

8.1.1 This section responds to paragraphs 2.96 to 2.105 (WR7 Traffic) of 'Section 2 – Applicant's Response to Written Representations' of the GLA's **Deadline 4 Final Report (REP4-024)**.

8.1.2 TfL have raised the following topics at paragraphs 2.96 to 2.105:

- Car Parking (Construction Phase);
- Construction Traffic;
- Outline CTMP;
- Construction Traffic (Network Modelling);
- Electrical Connection Construction Impacts; and
- Effect on Bus Services.

8.1.3 The above matters are addressed in order below.

8.2 WR7 Car Parking (Construction Phase)

8.2.1 The Applicant notes that TfL welcomes the Applicant's commitment to cap on-site vehicle parking within the Main Temporary Construction Compound. This commitment is captured in **Paragraphs 5.3.1** and **5.3.4** of the revised **Outline Construction Traffic Management Plan** (**CTMP**) which was submitted at Deadline 2 (**6.3, REP2-064**), and is retained within the **Outline CTMP** submitted at Deadline 5 (**6.3, Appendix L to B.1, Rev 4**) which is secured by **Requirement 13** of the **dDCO** (**3.1, Rev 3**). This point of agreement is captured with the **draft SoCG** between the Applicant and TfL **(8.01.10)**, which has been submitted at Deadline 5.

8.3 WR7 Construction Traffic

8.3.1 Evidence provided at the time of submission and supplementary evidence provided during the Examination has concentrated on the operation of the junctions on (A2016) Picardy Manorway, (A2016/A206) Erith Roundabout and (A206) James Watt Way junctions, responding to points raised by TfL during scoping and engagement prior to the Examination. TfL initially were interested in the effects on general traffic and had at that time not raised specific matters relating to local bus service operations. It has only been through the Examination process that TfL has specifically raised points relating to bus service operations and the wider Strategic Road Network on A206 in LBB – including the junctions of Colyers Lane, Bridge Road, Parkside Road, Howbury Lane and Crayford Way. The Applicant has provided a robust assessment of the transport related effects on the road network of the

construction and operation of REP as contained with **Chapter 6 Transport** of the **ES (6.1, Rev1, REP2-017)** and **Appendix B.1** the **Transport Assessment** to the **ES (6.3, APP-066)**. That assessment includes the modelling of junctions within the network, where the percentage change in traffic flow is deemed to be significant i.e. at the junctions of Picardy Manorway with Eastern Way/Yarnton Way, Norman Road, and Anderson Way/Bronze Age Way.

8.3.2 The construction of the Electrical Connection will not generate a significant change in the level of traffic flow (with de minimis plant, materials, equipment and workforce vehicle movements).

8.3.3 The Applicant does not dispute that there will be an interface between the selected Electrical Connection corridor and local bus services at the points specified at paragraph 2.98 of GLA's **Deadline 4 Final Report (REP4-024)**. However, the Applicant has proposed, in the **Outline CTMP** submitted to the Examination at Deadline 5 (**6.3, Appendix L to B.1, Rev 4**), a suitable management methodology and proportionate mitigation to minimise the effects for this interface between local bus services and the street works. That document refers to determining, in consultation with the highway authorities, and TfL for streets within LBB: the final alignment of the cable route within the corridor; the extent and timings of the works and the programme for those works; management around bus stops and laybys; and exploring whether there are appropriate and practicable benefits to working out of peak periods. That method of mitigation would reflect current bus information at the time of preparing the finalised CTMPs, as secured by **Requirement 13** of the **dDCO (3.1, Rev 3)**.

8.4 WR7 Outline CTMP

8.4.1 The Applicant notes that TfL welcomes the commitment by the Applicant through a finalised CTMP to operate a Vehicle Bookings Management System during construction of REP and other mitigation measures, described within the **Outline CTMP (6.3, REP3-010)** and contained with the revised **Outline CTMP** (**6.3, Appendix L to B.1, Rev 4**).

8.4.2 These points of agreement will be captured within the **draft SoCG (8.01.11)** between the parties submitted at Deadline 5.

8.5 WR7 Construction Traffic – Network Modelling

8.5.1 The Applicant acknowledges that TfL has confirmed that area-wide micro-simulation modelling would not be sought. As set out at paragraph 8.3.2, the Applicant has proposed, in the **Outline CTMP** submitted to the Examination at Deadline 5 (**6.3, Appendix L to B.1, Rev 4**), a suitable management methodology and proportionate mitigation to minimise the effects for this interface between local bus services and the street works. The construction of the Electrical Connection does not require the assessment of the effects of those construction works on the operation of the road network. The construction works will move along the corridor and have temporary effects on

the road network. Evidence provided at Deadline 3 at **Appendix G** of the **Applicant's Response to Relevant Representation (8.02.03, REP2-054)** indicates that the road network would continue to operate within theoretical capacity outside the network peak periods during the construction works. Robust transport modelling of the temporary and transient effects during the peak periods would be complex and would not necessarily reliably represent the impacts on the network or inform further management or mitigation than that which has already been committed to by the Applicant and UKPN.

8.6 WR7 Electrical Connection Construction Impacts

8.6.1 The GLA's points at paragraphs 2.102 is a reiteration of the comments made at paragraphs 2.97 and 2.98 and paragraphs 2.100 and 2.101. The Applicant responds to those points at **Section 8.3** and **8.5** of this report (**8.02.46**).

8.6.2 As set out at paragraph 8.3.2, the Applicant has proposed, in the **Outline CTMP** submitted to the Examination at Deadline 5 (**6.3, Appendix L to B.1, Rev 4**), a suitable management methodology and proportionate mitigation to minimise the effects for this interface between local bus services and the street works. The method will not include traffic modelling to assess impacts. Assessment of impacts has been carried out as part of the ES and is before the Examining Authority. The Applicant commits to refining the alignment of the Electrical Connection during the detailed design as part of the management methodology to seek to minimise impacts on traffic – such as using carriageway where the traffic flows are lightest and considering the timing of sections of the works. Outside of network peak periods delays to buses would be minimal, when there would be sufficient capacity within the network at the point of the road works. Physical mitigation to the road network, which would have to change as the road works relocate, might help to reduce delays to buses during the works but is not appropriate for the proposed temporary nature. Adding further buses to the existing bus services could help to maintain headway during the disrupted periods during the day but would not reduce journey times.

8.7 WR7 Effect on Bus Services

8.7.1 At paragraphs 2.103 to 2.105 of the GLA's **Deadline 4 Final Report (REP4-024),** the GLA repeats its view that financial contributions should be made to TfL to cover any additional bus services and diversions occurring during the construction of the Electrical Connection.

8.7.2 As previously stated, 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. Therefore, there is no claim against the Applicant or indeed UKPN, who would be carrying out the works.

8.7.3 As set out above, the Applicant has included a suitable management methodology and proportionate mitigation in the updated **Outline CTMP** submitted to the Examination at Deadline 5 (**6.3, Appendix L to B.1, Rev 4**), to minimise the effects for this interface between local bus services and the

street works. The Applicant continues to maintain that financial contributions for the temporary disruption to local bus service, or for additional services or buses which TfL or the bus operator, are not necessary during the construction works for the Electrical Connection, and maintains that there is no need for a section 106 agreement. The Applicant and UKPN will engage with TfL and LBB (for sections of Public Highway within Bexley) to explore opportunities to minimise the effects on local bus services through refinements in the location of the Electrical Connection within the corridor; to seek times of less disruption for the construction works; and identify appropriate methods which could help to reduce delays to bus services at key points on the network.

9 Response to GLA's Response to London Borough of Bexley's Written Representation

9.1 Introduction

9.1.1 This section responds to paragraphs 2.107 to 2.111 of 'Section 2 – London Borough of Bexley (LBB) Written Representations' of the GLA's **Deadline 4 Final Report (REP4-024).**

9.1.2 GLA has raised the following topics at paragraphs 2.107 to 2.111:

- Need and Capacity; and
- Biodiversity.

9.1.3 The above matters are addressed in order below.

9.2 Need and Capacity

9.2.1 At paragraph 2.107 of the GLA's **Deadline 4 Final Report (REP4-024)**, the GLA criticises the Applicant's reference to residual waste treatment capacity requirements within authorities across the south east of England. The reference made (at **Paragraph 2.3.8** of the **Applicant's Response to Written Representations (8.02.14, REP3-022)**) is entirely accurate; **The Project and its Benefits Report (7.2, APP-103)** does identify this level of need to be approximately two million tonnes. However, as the GLA has correctly identified, this level of need has subsequently been reviewed by the Applicant to incorporate the relevant authorities' own updates, and a revised need of at least 1.5 million tonnes is instead identified in the south east of England. As is explained in the **Applicant's Response to Written Representations (from Paragraph 2.1.157 (8.02.14, REP3-022))** and from **Paragraph 5.3.20** above, a revised need of at least 1.5 million tonnes is considered by the Applicant to be an appropriate figure.

9.2.2 The Applicant agrees with the GLA at paragraph 2.108, it is important to take a balanced view in evaluating risks. The Applicant has consistently demonstrated, not least through: the **London Waste Strategy Assessment (Annex A** of **The Project and its Benefits Report (7.2, APP-103));** the summary illustration at **Figure 1** of **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)**; and above at **Paragraph 5.3.9** and **Table 5.1**, that there is negligible risk that REP will disadvantage recycling rates.

9.2.3 The Applicant's assessment is not predicated on any assumed failure of recycling policy. The Applicant's assessment has always assumed that London Plan priority policies of waste minimisation, increased recycling and net self-sufficiency will be achieved, and this results in a need for c.900,000 tonnes of residual wastes (just within London) to be diverted from disposal to landfill.

9.2.4 In response to the GLA's paragraph 2.109, the Applicant confirms that **Paragraph 2.3.12** of the **Applicant's Response to Written Representations (8.02.14, REP3-022)** is a summary of the Applicant's case that has been made consistently from submission of the DCO Application. The content of **Paragraph 2.3.12** of the **Applicant's Response to Written Representations (8.02.14, REP3-022)** are not new 'claims' made by the Applicant at Deadline 3. The Applicant has responded to the GLA's criticisms (made at paragraph 2.57 to 2.70 of its Deadline 4 Submissions) above, at **Section 5** of this document. In short:

- The Applicant is entirely baffled as to how it has 'misconstrued' the findings of the draft London Plan or London Environment Strategy. As has been made clear in numerous submissions, most recently in the **Section 2** and **Figure 1** of **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** the Applicant has very simply, and consistently, relied upon the draft London Plan and London Environment Strategy to demonstrate the remaining need (of c.900,000 tonnes) for new residual waste treatment capacity.

- Appendix 2a to the GLA's Post Hearing Written Summary of Oral Submissions cannot be relied upon, as has been shown in the **Appendix A** to **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** it contains a number of miscalculations and fails to apply GLA policy appropriately or reasonably.

- Contrary to assertions made by the GLA, the application of its additional assumptions is not a key point of divergence. **Table A.3** of **Applicant's response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)** shows that if the GLA's assumptions are applied and calculated correctly, then the divergence between its own forecasts for future residual waste treatment capacity and the Applicant's are substantially reduced. Importantly, the difference between the GLA's own forecasts for new waste treatment capacity and the nominal throughput of REP are not so far apart. This is shown above, in **Table 5.1**.

9.3 Biodiversity – Areas of Contention and Further Mitigation

9.3.1 At paragraph 2.111 of the GLA's **Deadline 4 Final Report (REP4-024)**, the GLA submits that that the Biodiversity Accounting Report contains no detail in relation to potential sites for biodiversity compensation and considers that without this detail, it is not possible to ascertain whether the residual impacts on biodiversity would be adequately mitigated or compensated. **Requirement 5** of the **dDCO (3.1, Rev 3)** submitted at Deadline 5 requires that a biodiversity and landscape mitigation strategy is to be submitted and agreed with the relevant planning authority. That strategy must include the results of the Defra biodiversity off-setting metric together with the off-setting value required and the nature of such off-setting. Further, it will include the mechanism for securing the off-setting value and (where appropriate and necessary) any long term management and monitoring commitments in respect of the off-setting. The final amount of offsetting required to compensate for the loss of

biodiversity associated with the Proposed Development can not be confirmed until the detailed design stage of the process and will be included in the Biodiversity and Landscape Strategy. In advance of final design, the Applicant has commissioned the Environment Bank to commence a site selection process to determine what sites that may be suitable for biodiversity offsetting within close vicinity to the Proposed Development. The site selection process is outlined in **Section 3** of the **Biodiversity Offset Delivery Framework** (**8.02.25, REP3-031**) and initially involves a site search within a selected target area, exploring existing registered sites that may potentially be available for offsetting. The Applicant has selected the London Borough of Bexley (LBB) as the initial target area to ensure the offsetting requirement is delivered within the closest vicinity to the Proposed Development.

9.3.2 Details on the site selection process can be found in **Update on Environment Bank Site Selection Progress (8.02.53)** submitted at Deadline 5. The Applicant and the EB have been liaising with potential offset providers and intend to submit a list of suitable sites for consideration at Deadline 6 within the Environment Bank Site Selection for Biodiversity Offsetting Report.

10 Response to GLA's Comments on Response to GLA/TFL Local Impact Report

10.1 Introduction

10.1.1 This section responds to paragraphs 3.3 to 3.9 of 'Section 3 - Applicant's Response to the GLA's and TFL's Local Impact Report' of the GLA's **Deadline 4 Final Report (REP4-024).**

10.1.2 GLA and TfL have raised the following topics at paragraphs 3.3 to 3.9:

- Transport;
- Air Quality; and
- DCO Requirements.

10.1.3 The above matters are addressed in order below.

10.2 Table 5 Transport

10.2.1 Paragraphs 3.3 and 3.4 of the GLA's **Deadline 4 Final Report (REP4-024),** respond to amendments made to **Requirement 14** of the **dDCO** (**3.1, REP3-003**) as submitted at Deadline 3. That section reports that it is the GLA's view that "*the figure of 75% waste by river..is appropriate, reasonable and achievable*". The GLA then reviews two points of detail: a point raised by LBB on the availability of local residential waste to be imported to REP; and the use of different types of vehicle to transport waste to REP.

10.2.2 As outlined in **Paragraph 1.4.3** of the **Applicant's Response to London Borough of Bexley Deadline 3 Submission (8.02.36)** the ERF element of REP will be able to serve the residual waste needs of commercial and industrial and household waste producers. Whilst RRRF serves the needs of LBB's LACW, there is a significant amount of commercial waste generated within the local area which requires treatment. REP will help recover value from this waste, moving it up the waste hierarchy and avoiding the need for landfill. C&I waste located in the more immediate surrounding area to REP, where it would not be efficient to divert via a river-based transfer station, would be more efficiently transported to site directly by road, avoiding likely treatment at more distant facilities.

10.2.3 To demonstrate the Applicant's commitment to the transport of waste by river, the Applicant proposes a cap on the tonnage of waste material being imported to REP by road at 240,000 tpa (derived within the **GLA Commentary on Applicant's response to ExA's first Written Questions (REP3-043)** at section 6.0.2). The cap is established through a cumulative commitment for waste material of 40,000 tpa to the Anaerobic Digestion facility + 204,400tpa to the ERF (80 HCVs at 7 tonne loads over 365 days). That commitment during normal operations is secured through **Requirement 14** within the

updated **dDCO** (**3.1, Rev 3**) submitted at Deadline 5. The exception is the scenario where the facilities operate under a jetty outage, where the vehicle caps are set out at **Requirement 14 clause (3)** within the updated **dDCO** (**3.1, Rev 3**).

10.2.4 At **Section 6.3** of this report (**8.02.46**), the Applicant sets out its commitment to transporting waste material to REP by river, having invested in infrastructure and workforce and having no commercial imperative to move substantive amounts of material by road. The GLA at paragraph 3.4 (second bullet point) expresses concern that the Applicant would seek to import a high proportion of the total waste material to REP by road by using numerous small vehicles (below 7.5 tonnes Gross Vehicle Weight) or to use large bulk carriers to import a much larger proportion of the waste material to the ERF.

10.2.5 The Applicant's commitment to a 240,000 tpa cap on the tonnage of waste material to be transported by road to REP responds to the GLA without the need to constrain the development to the type of vehicles transporting waste material to REP.

10.2.6 The Applicant sets out at **Section 6.3** of this report (**8.02.46**), why it is not necessary or appropriate to seek a restriction as to the type or size of vehicle attending REP. The Applicant further sets out why it is appropriate to proposed a cap of 90 HCVs per day for the transportation of waste to REP for the ERF and the Anaerobic Digestion facility during normal operations rather than the GLA proposal for a cap of 80 HCVs per day.

10.3 Table 6 Air Quality

10.3.1 With regard to the comments made on 4.1.1c of the London Environment Strategy in the LIR Summary Reference (Paragraph) 9.20 in Table 6 of the **Applicant's response to the Local Impact Report by Greater London Authority** (**8.02.15**, **REP3-023**), even if site suitability is extended to incorporate the location of a site by dint of its impact on the environment, the Applicant considers that the site is suitable for its proposed use as an Energy Park. **Chapter 7 – Air Quality** of the **ES (6.1, REP2-019)** has demonstrated that the Energy Park has no significant effects on local air quality. The site is therefore suitable for its proposed use and the development is consistent with proposed Policy 4.1.1c.

10.4 Table 7 DCO Requirements

10.4.1 Responses to comments on the dDCO from the GLA, as well as other interested parties, are contained in a single submission document, the **Applicant's response to comments on the draft Development Consent Order** (**8.02.54**) submitted at Deadline 5.

11 Draft Development Consent Order (Rev 2)

11.1.1 Responses to comments on the dDCO from the GLA, as well as other interested parties, are contained in a single submission document, the **Applicant's response to comments on the draft Development Consent Order (dDCO)** (**8.02.54**) submitted at Deadline 5.

11.1.2 An updated **dDCO** has been submitted by the Applicant at Deadline 5 (**3.1, Rev 3**).

12 Comments on Other Documents Submitted by the Applicant

12.1 Introduction

12.1.1 This section responds to paragraphs 5.1 to 5.15 of 'Section 5 - Other Documents submitted by the Application at Deadline 3' of the GLA's **Deadline 4 Final Report (REP4-024)**.

12.1.2 GLA and TfL have provided comments on the following documents in Section 5 of the GLA's **Deadline 4 Final Report (REP4-024)**;

- Statement of Reasons (**4.1, REP2-008**);
- Biodiversity Offset Delivery Framework (**8.02.25; REP3-031**);
- Post Hearing Note on Public Health and Evidence (**8.02.27; REP3-033**); and
- Temporary Jetty Outage Review (**8.02.31; REP3-036**).

12.1.3 The comments made with regards to the above documents are addressed in order below.

12.2 Document 4.1 (Rev 1) Statement of Reasons

12.2.1 The Applicant notes the comments made in relation to the Statement of Reasons, and the Applicant's explanation of optimising existing river transport infrastructure that is already established for waste and material delivery and export.

12.2.2 The calculations set out in Section 2 of the GLA's **Deadline 4 Final Report (REP4-024)** (WR5 Commitment to river transport) have been responded to in **Section 6.3** of this report. As stated throughout its submissions, the Applicant is wholly committed to REP being primarily a river fed facility. Having invested heavily in its existing marine operations, including: physical infrastructure; plant and machinery; and a highly trained marine workforce, there is no commercial imperative for the Applicant to seek to operate by transporting a high proportion of the waste material by road. It would be wholly inefficient for the Applicant to operate a fleet of tugs and barges for only a very small percentage of waste to be brought to REP by river. There is therefore no justification not to maximise the efficient use of river-based transportation in which the Applicant has invested.

12.2.3 Furthermore, the commitment to river transport has been further demonstrated by a commitment to a tonnage cap of 240,000 tpa being transported to the facility by road (as proposed by the "**GLA Commentary on Applicant's response to ExA's first Written Questions" (REP3-043)** at Deadline 3).

That commitment is secured through **Requirement 14** within the updated **dDCO** submitted at Deadline 5 (**3.1, Rev 3**).

12.2.4 The Applicant therefore disagrees with the assertion that REP will make only a limited contribution to future optimisation of river transport infrastructure.

12.2.5 The Applicant notes that the GLA re-iterates its comment relating to capacity of the WTS which will service REP. The Applicant has responded to the GLA's detailed comments on this (from Section 2 of the GLA's **Deadline 4 Final Report (REP4-024)** (WR5 Commitment to river transport)) in **Section 6.2** of this report (**8.02.46**).

12.2.6 The Applicant's response sets out, in **Table 6.1**, the surplus permitted tonnages at each WTS, and reconfirms that the WTSs already have the necessary existing planning and Environmental Permit consents, with sufficient capacity to accept the waste required by REP.

12.3 Document 8.02.25 Biodiversity Offset Delivery Framework

12.3.1 The Applicant notes and welcomes that the GLA confirms it has no issues with the offsetting approach proposed. As detailed in **Section 9.3** of this response, whilst the final amount of offsetting required to compensate for the loss of biodiversity associated with the Proposed Development cannot be confirmed until the detailed design stage of the process, the Applicant has commissioned the Environment Bank to commence a site selection process to determine what sites that may be suitable for biodiversity offsetting within close vicinity to the Proposed Development.

12.3.2 Details on the site selection process can be found in the **Update on Environment Bank Site Selection Progress (8.02.53)** submitted at Deadline 5. The Applicant and the EB have been liaising with potential offset providers and intend to submit a list of suitable sites for consideration at Deadline 6 within the Environment Bank Site Selection for Biodiversity Offsetting Report.

12.3.3 **Requirement 5** of the **dDCO** submitted at Deadline 5 (**3.1, Rev 3**) requires that that a biodiversity and landscape mitigation strategy is to be submitted and agreed with the relevant planning authority. That strategy must include the results of the Defra biodiversity off-setting metric together with the off-setting value required and the nature of such off-setting. Further, it will include the mechanism for securing the off-setting value and (where appropriate and necessary) any long-term management and monitoring commitments in respect of the off-setting. Therefore the GLA can be confident that adequate mitigation/compensation will be provided as is secured in the dDCO.

12.4 Document 8.02.27 Post Hearing Note on Public Health and Evidence

12.4.1 Paragraphs 5.6 to 5.11 of the GLA's **Deadline 4 Final Report (REP4-024)** have focussed on the scientific papers prepared by the Small Area Health Statistics Unit (SAHSU) and commissioned by Public Health England, as described in **Section 2.2** of the **Post Hearing Note on Public Health and**

Evidence (8.02.27, REP3-033), submitted at Deadline 3. The GLA's comments are misleading.

12.4.2 In Paragraph 5.7 of its submission **(REP4-024)**, the GLA notes that the paper by Ghosh *et a*l focussed on a range of specific impacts but did not consider wider health effects. The scientific paper was never intended to consider wider health effects, as the purpose of the paper was specifically stated as follows: "*The aim of this study was to investigate at the national scale possible health effects associated with (i) MWI emissions of particulate matter ≤10 μm in diameter (PM10) as a proxy for MWI emissions more generally, and (ii) living near a MWI, in relation to fetal growth, stillbirth, infant mortality and other birth outcomes.*" It is unclear why the GLA considers that a scientific paper with this aim should consider wider health effects.

12.4.3 The GLA refers to "*the well-evidenced life-long risks of elevated exposure to NO2 or indeed any other long term health impacts associated with any of the pollutants emitted from the REP.*" The GLA has presented no evidence to support the implication that REP would have adverse health effects. In making this reference, the GLA appears to have ignored:

a. Public Health England's well known statement RCE-13 "*The Impact on Health of Emissions to Air from Municipal Waste Incinerators*", quoted in **Post Hearing Note on Public Health and Evidence (8.02.27, REP3-033)**;

b. The detailed air quality assessment submitted with the application, **Chapter 7 Air Quality** of the **ES (6.1, REP2-019)**;

c. The detailed health impact assessment submitted with the application, **Appendix K.1 Health Impact Assessment** of the **ES (6.3, APP-094)**; and

d. **Appendix C.3 Human Health Risk Assessment (HHRA)** of the **ES (6.3, REP2-040**).

12.4.4 In paragraph 5.8 of its submission, the GLA takes the paper by Freni-Sterrantino *et al*, which was a detailed quasi-experimental time series study of the effect of the opening of new ERFs on infant mortality rates, but decides that the most important point from this paper is that it shows that ERFs release a small amount of PM2.5. We are not sure why the GLA has chosen to ignore the actual conclusion of the paper – "*we did not find an association between the opening of a new MWI and changes in infant mortality trends or sex ratio at birth for 10 and 4 km buffers, using distance as proxy of exposure, after taking into account temporal trends in comparator areas and potential confounding factors*" – given that this research was specifically carried out to investigate this point.

12.4.5 Further, the GLA asserts that any increase in PM2.5 emissions may be unacceptable. The Applicant notes that any development which leads to traffic (i.e. essentially any development) would lead to an increase in PM2.5 emissions and that the GLA's position would appear to oppose any

development in London at all. The impact of emissions of PM2.5 is considered in **Paragraph 7.9.23** of **Chapter 7 Air Quality** of the **ES (6.1, REP2-019)** and is found to be negligible.

12.4.6 In paragraph 5.9 of its submission, the GLA criticises the Applicant for failing to mention the more recent paper from the same research group (see Appendix 5 of the GLA Deadline 4 Submission Documents (**REP4-029**). Before commenting on the paper, the Applicant notes two areas where the GLA has been misleading.

a. The GLA's reference to the paper is incorrect. The GLA has implied that the authors are Freni-Sterrantino and Ghosh whereas the lead author is Parkes and Freni-Sterrantino is not named as an author. The correct reference to the paper is Parkes et al[7].

b. The paper was published at 00:01 on Friday 21 June 2019. Deadline 3 was 18 June 2019. **Post Hearing Note on Public Health and Evidence (8.02.27, REP3-033**) was submitted at Deadline 3. We are unsure why the GLA expected the Applicant to include a reference to a paper which was published after the deadline and so consider that this is an unjustified and misleading slight on the Applicant.

12.4.7 The GLA's characterisation of the paper's conclusions is also misleading. The objective of the paper was as follows: "*To conduct a national investigation into the risk of congenital anomalies in babies born to mothers living within 10 km of an MWI associated with: i) modelled concentrations of PM10 as a proxy for MWI emissions more generally and; ii) proximity of residential postcode to nearest MWI, in areas in England and Scotland that are covered by a congenital anomaly register.*" Under objective (i), which related congenital anomalies to modelled concentrations and so would be considered the more representative approach, the study found no association, as the GLA reports. Under objective (ii), there was a small excess risk, but the paper's authors note that this may be due to residual confounding.

12.4.8 The researchers issued a statement[8] on the Imperial College website which takes account of the full body of work, not just this latest paper. This is included as **Appendix A** of this document. The Applicant notes the following extracts.

a. *"Professor Anna Hansell, Director of the Centre for Environmental Health and Sustainability at the University of Leicester, who previously led the work while at Imperial College London, added: "Taken together, this large body of work reinforces the current advice from Public Health England – that while it's not possible to rule out all impacts on public health, modern*

[7] Parkes B, Hansell A.L., Ghosh R.E, Douglas P., Fecht D., Wellesley D., Kurinczuk J.J., Rankin J., de Hoogh K., Fuller G.W, Elliot P., and Toledano M.B. "Risk of congenital anomalies near municipal waste incinerators in England and Scotland: Retrospective population-based cohort study". Environment International (Parkes et al).

[8] https://www.imperial.ac.uk/news/191653/major-study-finds-conclusive-links-health/

and well-regulated incinerators are likely to have a very small, or even undetectable, impact on people living nearby."

b. *"Professor Mireille Toledano, Chair in Perinatal and Paediatric Environmental Epidemiology at Imperial, said: "In these studies we found a small increase in risk for children living within 10 km of an MWI being born with a heart defect, or a genital anomaly affecting boys, but did not find an association with the very low levels of particulates emitted. This increase with proximity to an incinerator may not be related directly to emissions from the MWIs. It is important to consider other potential factors such as the increased pollution from industrial traffic in the areas around MWIs or the specific population mix that lives in those areas."*

12.4.9 Given these statements, we do not agree that the latest paper undermines Public Health England's advice.

12.4.10 In paragraphs 5.10 and 5.11 of its **Deadline 4 Final Report (REP4-024)**, the GLA attempts to undermine the significance of the work carried out by the Small Area Health Statistics Unit (SAHSU) by noting that it only considered adverse reproductive and infant health outcomes. The work was originally commissioned by Public Health England in response to comments by opponents of ERFs about adverse reproductive and infant health outcomes. Public Health England did not consider that further research into other health impacts was necessary because the evidence is already clear. As mentioned previously, the air quality and health impacts of REP have been considered comprehensively in other documents.

12.5 Document 8.02.31 Temporary Jetty Outage Review

12.5.1 Paragraphs 5.12 to 5.15 the GLA's **Deadline 4 Final Report (REP4-024)** considers the scenario of a jetty outage with both REP and RRRF operating at full capacity with 300 HCVs delivering waste material to each operation per day. Due to associated restrictions the maximum hourly import of material during the network peak hour would be 20 HCVs to REP and 20 HCVs to RRRF (a cumulative total of 80 HCV movements - 40 HCVs in and 40 HCVs out). These figures are provided at **Table 3.1** of the **Temporary Jetty Outage Review** submitted at Deadline 3 (**8.02.31, REP3-036**).

12.5.2 The supplementary evidence and the appended outputs for the sensitivity traffic modelling (at **Appendix B** - **Construction Phase Sensitivity Test** of the **Temporary Jetty Outage Review** (**8.02.31, REP3-036**)) demonstrates that the local Strategic Road Network would continue to operate within theoretical capacity with additional traffic significantly in excess of the 80 HCV movements associated with the movement of waste material to REP and RRRF.

12.5.3 **Chapter 6 Transport** of the **ES (6.1, REP2-017)** and **Appendix B.1, the Transport Assessment** of the **ES (6.3, APP-066)** present an assessment of the reasonable worst case scenario of 100% by road for REP, which the Applicant considers is a robust worst case. The 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).** That scenario is, however, supplemented by the further evidence provided at Deadline 3, adding to the robustness of the assessment of a jetty outage scenario.

12.5.4 The ES is based on a reasonable worst case approach, which is the accepted basis for assessing effects under a Rochdale Envelope approach. The ES accordingly considered a 100% by road scenario (in respect of a 'reasonable worst case' by road scenario) in combination with baseline figures for RRRF.

12.5.5 In the 8 years of operation there has never been a jetty outage at the existing RRRF and such an outage would be considered very unlikely and an exceptional event. The jetty outage scenario where both REP and RRRF operate at their full consented temporary operations – as assessed in the **Temporary Jetty Outage Review (Simultaneous Operations Riverside Resource Recovery Facility and Riverside Energy Park)** (**8.02.31**, **REP3-036**) - does not therefore form part of the EIA as it is not a 'reasonable worst case' during operation.

12.5.6 The Applicant has however provided sufficient evidence in the **Temporary Jetty Outage Review** (**8.02.31, REP3-036**), to demonstrate that the local road network would operate within capacity if REP and RRRF were to operate simultaneously during a jetty outage i.e. 300 HCVs per day generated by RRRF and REP simultaneously.

13 Third Party Submissions

13.1 Introduction

13.1.1 This section responds to paragraphs 6.1 to 6.15 of 'Section 6 - Third Party Submissions' of the GLA's **Deadline 4 Final Report (REP4-024)**.

13.1.2 GLA and TfL have provided comments on the following Third Party Submissions:

- LBB Deadline 3 Submission (**REP3-047**); and
- WRWA Written Summary of Oral Submission (**REP3-051**).

13.1.3 The above documents are addressed in order below.

13.2 London Borough of Bexley Deadline 3 Submission

Requirement for a Waste Cap

13.2.1 As set out in the Applicant's response to **London Borough of Bexley Deadline 3 Submission** (**8.02.36, REP4-015**), it is the potential effects arising from the reasonable worst-case assessments which are the appropriate measurements and, where appropriate, the basis of controls for limiting any potential effects on the environment. With controls on those potential effects in the dDCO, any control on the overall waste throughput is superfluous.

13.2.2 The Applicant has amended the dDCO to include Requirements on noise, air quality emissions from the ERF, air quality emissions from the Anaerobic Digestion plant with abatement technology, air quality monitoring, fuel type, and phasing on the construction and commissioning of Work No. 1. By having these restrictions, the development will not exceed the parameters assessed in the Environmental Statement, which accords with the LBB's reasoning that *"the development must not exceed the limitations set out and assessed within the Environmental Impact Assessment."*

13.2.3 In addition, National Policy Statement EN-3 at paragraph 2.5.13 makes it clear that throughput volume in itself is not a factor in decision making, as there are no specific minimum or maximum fuel throughput limits for different technologies or levels of electricity generation, rather it is the effects that should be controlled. The Applicant's approach therefore accords with national policy.

13.2.4 As set out in paragraph 1.2.9 of the Applicant's response to **London Borough of Bexley Deadline 3 Submission** (**8.02.36, REP4-015**), there are numerous development consent orders which do not include a throughput cap. The Applicant's response to **London Borough of Bexley Deadline 3 Submission** (**8.02.36, REP4-015**) submitted at Deadline 4 provides further explanation of why a cap of throughput of waste is not necessary.

Justification for Air Quality Monitoring

13.2.5 Regarding Air Quality monitoring, the Applicant has inserted a new Requirement into the dDCO which provides for the Applicant to prepare an air quality monitoring strategy, which must also meet the requirements of any air quality monitoring condition on the Environmental Permit for REP. The strategy is to be submitted to the Environment Agency for approval – it is not reasonable or justifiable to expect the Applicant to prepare two strategies to two different bodies.

13.2.6 It should also be noted that the air quality contribution that the operator of RRRF pays to the LBB is not under the RRRF planning permission or secured through a section 106 agreement, rather the payment arose out of a condition on the RRRF Environmental Permit and is secure via a contract between the LBB and the operator of RRRF (not under the Town and Country Planning Act 1990).

13.2.7 This just supports what the Applicant has repeatedly said, the Environment Agency will require the Applicant to provide for continuous air quality monitoring and the Applicant cannot be put in a position of having two different sets of conditions on monitoring - they need to align.

13.2.8 In relation to the information published by Defra on the damage costs, please refer to section 1.3 of the Applicant's response to **London Borough of Bexley Deadline 3 Submission** (**8.02.36, REP4-015**).

Cap on Transport Movement (Section 4)

13.2.9 The GLA has highlighted in paragraphs 6.9 - 6.11 that LBB seeks a DCO Requirement to limit waste brought to the Proposed Development via road. The Applicant provided a response to this in **Section 1.4** of the **Applicant's response to London Borough of Bexley Deadline 3 Submission** (**REP4-015**).

13.2.10 Further responses to comments on the dDCO from the GLA, as well as other interested parties, are contained in a single submission document, the **Applicant's response to comments on the draft Development Consent Order (8.02.54)**, submitted at Deadline 5.

13.3 WRWA Written Summary of Oral Submission

13.3.1 In paragraphs 6.12 to 6.15 of its submission, the GLA reproduces a small selection of points raised by WRWA but does not present any further arguments or evidence. The Applicant has responded to the WRWA, and the points repeated by the GLA, in **Table 3.2** and **Paragraphs 4.3.2** and **4.6.4** of the **Applicants response to Western Riverside Waste Authority Deadline 3 Submission (8.02.37, REP4-016)**.

13.3.2 The GLA notes WRWA's comment at Paragraph 65 of WWRA's **Deadline 3 Submission - 1. Written Summary of Oral Submissions made at the**

Compulsory Acquisition Hearing on 6 and 7 June 2019 (REP3-051), in which the WRWA stated that "*It does not appear from the Applicants assessment that there will be capacity for both the proposed development and the RRRF to support a local Combined Heat and Power ('CHP') scheme. A CHP scheme can only be provided at one or other of the facilities, or partially by both.*" The Applicant has never stated that this is the case and has already responded to this point in **Paragraph 8.1.22** of the **Applicants response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)**. The **Combined Heat and Power Assessment (5.4, APP-035)** did not specifically appraise heat export opportunities independently for RRRF, since this was not the purpose of the assessment and was not required by the relevant guidance, the EA's "*CHP Ready Guidance for Combustion and Energy from Waste Power Plants*", February 2013. **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. In addition, the WRWA's statement was clearly caveated and was not supported by any independent evidence base.

13.3.3 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. 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.

13.3.4 The Applicant has responded to the claimed "high-level" nature of the heat demand assessment methodology within both the **Combined Heat and Power Assessment (5.4, APP-035)** and the **Combined Heat and Power Supplementary Report (5.4.1, REP2-012)** in **Table C.3** of **Appendix C** of the **Applicants response to Greater London Authority Deadline 3 Submission (8.02.35, REP4-014)**, and how this accords with relevant policy and guidance.

14 Statement of Common Ground

14.1.1 Throughout the pre-application, post submission and Examination phases of the DCO Application, the Applicant has made continued efforts to engage with the GLA about the Proposed Development and has sought to develop a Statement of Common Ground (SOCG) between the parties.

14.1.2 Engagement has included a series of letters, meetings, discussions and site visits to the existing RRRF. Further details are included in the **Consultation Report** and associated appendices (**5.1, APP-019-APP-032**) submitted as part of the DCO Application.

14.1.3 A summary of the progression of the draft SOCG between the Applicant and GLA is provided below:

- 31st January 2019 – the Applicant issued a draft version of the SOCG to the GLA prior to their meeting on 1st February 2019;
- 13th February 2019 – GLA requested a refined draft version of the SOCG to include *"factual matters – these being the relevant national and London plan policies"*;
- 4th March 2019 – the Applicant issued Revision 1 of the draft SOCG to the GLA;
- 29th March 2019 – GLA provided comments on the waste and energy sections of Revision 1 of the draft SOCG;
- 2nd April 2019 – the Applicant issued Revision 2 of the draft SOCG to the GLA;
- 8th May 2019 – GLA provided comments on the waste and energy sections of Revision 2 of the draft SOCG; and
- 17th May 2019 – GLA provided comments on the other technical sections of Revision 2 of the draft SOCG.

14.1.4 Despite receiving comments on 8th and 17th May 2019 from the GLA on Revision 2 of the draft SOCG, the comments received were not constructive in moving the SOCG forward. Rather, the Applicant received a series of comments simply stating: *"not agreed"*.

14.1.5 The Applicant has prepared a revised draft of the SOCG (Revision 3) which will be issued to the GLA in advance of a meeting which is scheduled between the parties for late August. The Applicant welcomes constructive comments from the GLA on the latest draft of the SOCG ahead of the scheduled meeting on 21st August 2019.

Appendix A Imperial College London Study

Imperial College London

Major study finds no conclusive links to health effects from waste incinerators

by Ryan O'Hare
21 June 2019

Researchers have found no link between exposure to emissions from municipal waste incinerators (MWIs) and infant deaths or reduced foetal growth.

However, they show living closer to the incinerators themselves is associated with a very small increase in the risk of some birth defects, compared to the general population.

But whether this is directly related to the incinerator or not remains unclear.

The findings come from the largest and most comprehensive analysis to date of the effects of municipal waste incinerators (MWIs) on public health in the UK.

> The findings on birth defects are inconclusive, but our study design means we cannot rule out that living closer to an incinerator in itself may slightly increase the risk of some specific defects
>
> ***– Professor Paul Elliott***
> *Imperial College London*

MWIs are used to burn waste that is not recycled, composted or sent to landfill and can include materials such as paper, plastic, wood and metal.

While MWI emissions are governed by EU regulations, public concern remains around their potential impact on public health and scientific studies to date have been inconsistent or inconclusive.

The analysis, led by a team at Imperial College London and funded by Public Health England and the Scottish Government, looked at MWIs at 22 sites across the UK between 2003 and 2010.

Researchers from the UK Small Area Health Statistics Unit (SAHSU) at Imperial first analysed concentrations of fine particles called PM10 (particulate matter measuring 10 micrometres or less in diameter) emitted from the chimneys of the incinerators as waste is burned.

Effects of small particles

Computer models generated from the data showed how these particles spread over a 10 km radius around 22 MWIs in England, Scotland and Wales.

The models show that MWIs added very little to the existing background levels of PM10 at ground level – with existing PM10 concentrations at ground level on average 100 to 10,000 times higher than levels emitted by the chimneys (Environment Science & Technology, 2017).

Using these models, the team then investigated potential links between concentrations of PM10 emitted by MWIs and any increased risk of

adverse birth outcomes.

In an earlier study (*Environment International*, 2018), they found that analysis of records covering more than one million births in England, Scotland and Wales revealed no evidence of a link between small particles emitted by the incinerators and adverse birth outcomes such as effects on birthweight, premature birth, infant death, or stillbirth, for children born within 10 km of MWIs in Great Britain.

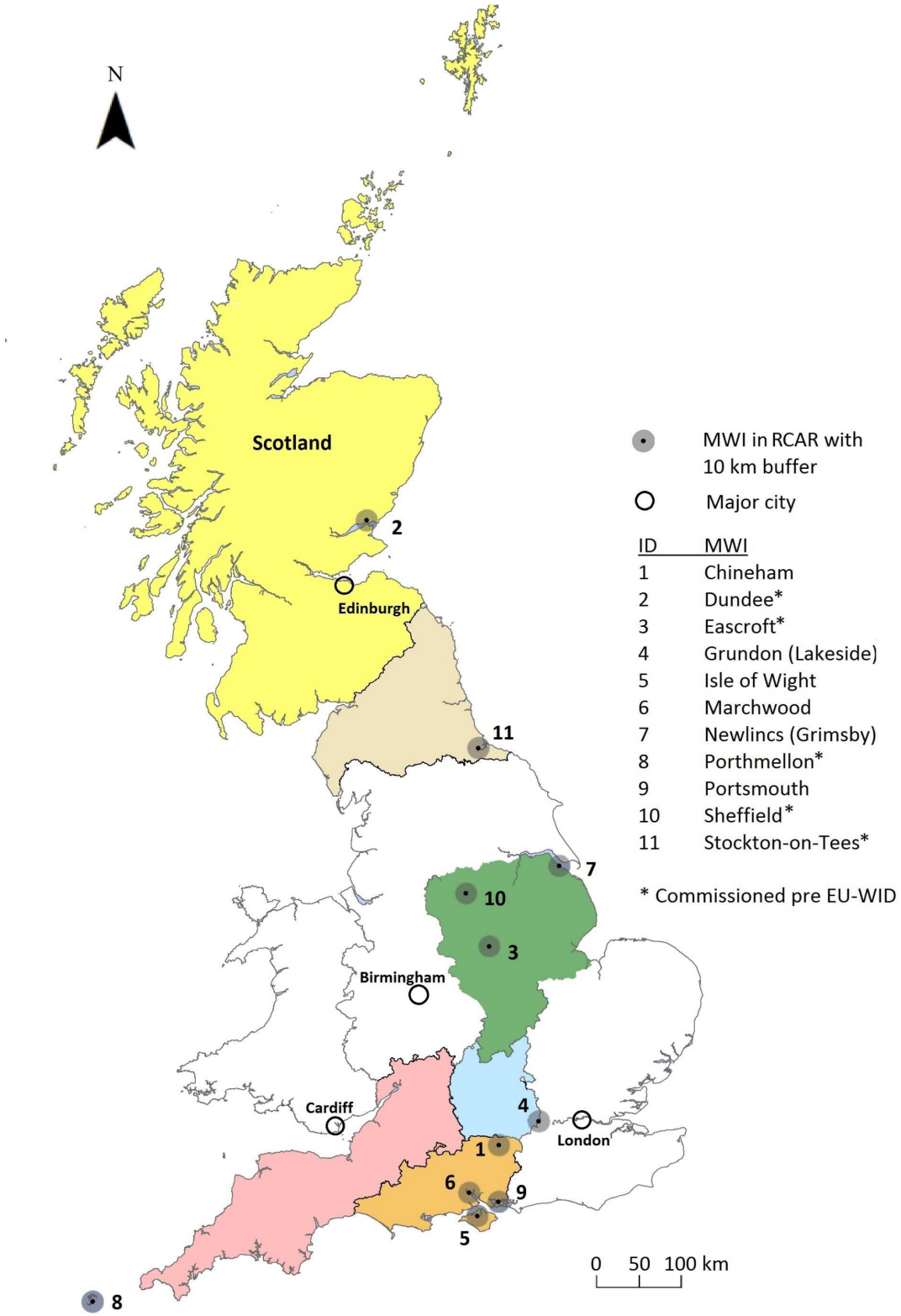
> We found a small increase in risk for children living within 10km of an MWI being born with a heart defect, or a genital anomaly affecting boys
>
> ***– Professor Mireille Toledano***
> *Imperial College London*

The team's latest findings, published in the journal *Environment International*, looked at occurrence of birth defects within 10 km of a subset of 10 incinerators in England and Scotland between 2003 and 2010.

In their analysis, the team used health data on more than 5000 cases of birth defects among over 200,000 births, still births and terminations in England and Scotland.

They found no association between birth defects and the modelled concentrations of PM10 emitted by MWIs, but there was a small increase in the risk of two birth defects among those living closer to MWIs – specifically congenital heart defects and hypospadias (affecting the male genitalia – where the opening of the urethra is not at the top of the penis). These birth defects typically require surgery but are rarely life-threatening.

In the UK, congenital heart defects affect approximately 5.3 in 1000 births and 1.9 per 1000 males are born with hypospadias (Source: NCARDRS 2016*).



The team's latest findings looked at occurrence of birth defects within 10 km of a subset of 10 incinerators in England and Scotland between 2003 and 2010. Grundon (Lakeside) was excluded due to insufficient data on birth outcomes. *(Credit: Parkes et al. 2019)*

Excess risk

In terms of excess risk, the team estimates that the associated increase in risk for these two birth defects could be around 0.6 cases per 1,000 total births for congenital heart defects and 0.6 cases per 1,000 male births for hypospadias within 10 km of an incinerator.

Professor Paul Elliott, Director of the UK Small Area Health Statistics Unit (SAHSU) said: "Based on the available data, our findings showing that there is no significant increased risk of infant death, stillbirth, preterm birth or effects on birthweight from municipal waste incinerators are reassuring.

"The findings on birth defects are inconclusive, but our study design means we cannot rule out that living closer to an incinerator in itself may slightly increase the risk of some specific defects – although the reasons for this are unclear."

Professor Mireille Toledano, Chair in Perinatal and Paediatric Environmental Epidemiology at Imperial, said: "In these studies we found a small increase in risk for children living within 10 km of an MWI being born with a heart defect, or a genital anomaly affecting boys, but did not find an association with the very low levels of particulates emitted.

The researchers explain they cannot rule out a link between the increased incidence of the birth defects and the activities of the MWIs, such as increased industrial road traffic or other pollutants. (*Credit: Shutterstock*)

"This increase with proximity to an incinerator may not be related directly to emissions from the MWIs. It is important to consider other potential factors such as the increased pollution from industrial traffic in the areas around MWIs or the specific population mix that lives in those areas."

Professor Anna Hansell, Director of the Centre for Environmental Health and Sustainability at the University of Leicester, who previously led the work while at Imperial College London, added: "Taken together, this large body of work reinforces the current advice from Public Health England – that while it's not possible to rule out all impacts on public health, modern and well-regulated incinerators are likely to have a very small, or even undetectable, impact on people living nearby."

> While it's not possible to rule out all impacts on public health, modern and well-regulated incinerators are likely to have a very small, or even undetectable, impact on people living nearby
>
> ***– Professor Anna Hansell***
> *University of Leicester*

The team explains that while the results of the emissions studies are reassuring, they cannot rule out a link between the increased incidence of the two birth defects and the activities of the MWIs.

They add that while they adjusted their results for socioeconomic and ethnic status, these may still influence birth outcomes findings. Poorer families may be living closer to MWIs due to lower housing or living costs in industrial areas, and their exposure to industrial road traffic or other pollutants may be increased.

The researchers highlight that their findings are limited by a number of factors. Also, they did not have measurements (for the hundreds of thousands of individual births considered) of metals or chemical compounds such as polychlorinated biphenyls (PCBs) and dioxins, but used PM10 concentrations as a proxy for exposure to MWI emissions – as has been used in other incinerator studies.

They add that ongoing review of evidence is needed to explore links further, as well as ongoing surveillance of incinerators in the UK to monitor any potential long-term impacts on public health.

The research was funded by Public Health England and the Scottish Government, with support from the Medical Research Council and the National Institute for Health Research.

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(i) 'Risk of congenital anomalies near municipal waste incinerators in England and Scotland: retrospective population-based cohort study' by Brandon Parkes et al. is published in Environment International DOI: 10.1016/j.envint.2019.05.039

(ii) 'Fetal growth, stillbirth, infant mortality and other birth outcomes near UK municipal waste incinerators; retrospective population-based cohort and case-control study' by Rebecca Ghosh et al. is published in Environment International DOI: 10.1016/j.envint.2018.10.060 https://www.sciencedirect.com/science/article/pii/S0160412018316398

(iii) 'Estimating Particulate Exposure from Modern Municipal Waste Incinerators in Great Britain' by Philippa Douglas et al. is published in Environment Science & Technology DOI: 10.1021/acs.est.6b06478 https://pubs.acs.org/doi/abs/10.1021/acs.est.6b06478

The Imperial team has also published a further four papers from their study on MWIs:

(iv) 'Bayesian spatial modelling for quasi-experimental designs: An interrupted time series study of the opening of Municipal Waste Incinerators in relation to infant mortality and sex ratio' by Anna Freni-Sterrantino et al. is published in Environment International DOI: 10.1016/j.envint.2019.04.009 https://www.sciencedirect.com/science/article/pii/S0160412018326060

(v) Using metal ratios to detect emissions from municipal waste incinerators in ambient air pollution data by Font et al., 2015
https://www.sciencedirect.com/science/article/pii/S1352231015300753

(vi) Waste incineration and adverse birth and neonatal outcomes: a systematic review by Ashworth et al., 2014
https://www.sciencedirect.com/science/article/pii/S0160412014001147

(vii) Comparative assessment of particulate air pollution exposure from municipal solid waste incinerator emissions by Ashworth et al., 2013
https://www.taylorfrancis.com/books/e/9781315366074/chapters/10.1201/9781315366074-13

Birth outcome data were taken from multiple sources, including the Office for National Statistics, NHS Wales' Informatics Service (NWIS)/ Health Solutions Wales (HSW), the Information Services Division (ISD) Scotland, Department of Health, and the British and Irish Network of Congenital Anomaly Researchers (BINOCAR) and constituent regional congenital anomaly registers.

*NCARDRS 2016 – 'National Congenital Anomaly and Rare Disease Registration Service: Congenital anomaly statistics 2016 – tables'
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/749734
/Congenital_anomaly_statistics_2016_data_tables.pdf

The 10 incinerators in the births defects study were: Chineham, Hampshire; Dundee, Scotland; Eastcroft, Nottinghamshire; Isle of Wight; Marchwood, Hampshire; Grimsby, Lincolnshire; Porthmellon, Scilly Isles; Portsmouth, Hampshire; Sheffield, South Yorkshire; Stockton-on-Tees, County Durham.

Supporters

Public Health England

Reporter

Ryan O'Hare
Communications and Public Affairs
CONTACT DETAILS

TAGS: Global-challenges-Health-and-wellbeing, Strategy-collaboration, Pollution, Public-health, School-of-Public-Health, Child-health, 4IR
See more tags

Appendix B Meeting minutes from Bexley District Heating Partnership Board meetings

MINUTES OF MEETING

Project	**Bexley District Heating**
Subject	**Partnership Board Meeting**
Date	**29/05/2018**
Location	**Cory RRR**
Meeting no.	**01**
Taken by	**Oliver Pitchers**
Participants	**Paul Moore (London Borough of Bexley)** **Richard Williams (LBB)** **Alex Csicsek (LBB)** **Peter North (Greater London Authority)** **Maria Yashchanka (Royal Borough of Greenwich)** **Andy Pike (Cory)** **Hugo Buchanan (Peabody Homes)** **Lucy Padfield (Ramboll)** **Oliver Pitchers (Ramboll)** **Ryan Barker (Fitchner)** **Howard Mapperley (Inventa Partners)** **Gideon Davenport (Inventa Partners)**
Absent	**Matthew Lyons (Orbit Homes)**
Copy to	**Graham Ward (LBB)**
Next meeting	**TBC**

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Agenda

1. **London Borough of Bexley: Project Drivers**
2. **Cory: Opportunities & Future Plans**
3. **GLA: London's Strategic Position**
4. **Peabody: Plans for Bexley**
5. **Orbit Homes: Role within Bexley**
6. **Royal Borough of Greenwich: Drivers**
7. **Additional Parties**
8. **Summary & Next Steps**
9. **Summary of Actions**

Ref Bexley District Heating: Partnership Board Meeting 01

1. London Borough of Bexley: Project Drivers

LBB's key project drivers were set out as follows:

- Delivery of affordable low-carbon heat: a 'local dividend'.
- Displacement of new localised combustion plant for energy generation/delivery.
- Derivation of a viable commercial case, befitting all parties.
- Delivery of future-proofed infrastructure.
- Interest in the viability of private wire.

2. Cory: Opportunities & Future Plans

2.1 *Key Drivers*

Cory's key project drivers were set out as follows:

- Access to low-carbon incentives offered for plant operation in cogeneration mode.
- To meet Mayoral targets to enable tendering for further local authorities waste streams.
- Cory are committed to capex to their boundary and would consider investment options in heat transfer company (extending involvement beyond site boundary).

2.2 *Key Risk*

Cory's key project risks were set out as follows:

- Heat demand guarantees
- Funding of heat delivery pipework
- No risks to their current operations or performance were raised

2.3 *Key Time-bound Milestones*

Cory's key project milestones were set out as follows:

- With plant heat offtake ready, timing of project realisation felt to be driven more by demand than supply.
- Cory plan to expand and complete new Energy Park by 2024, at which point an additional 30MW of heat will be available for export.

3. GLA: London's Strategic Position

3.1 *GLA Drivers*

The GLA's key project drivers were set out as follows:

- The Bexley DH scheme has been identified as one of the Mayor's "Signature Projects", having the potential to deliver low-carbon infrastructure spanning 2 London Boroughs.
- The Mayor's new Environment Strategy sets out vision for zero-carbon London by 2050 and is likely to be published in approx. 1 month.
- Strategy calls for utilisation of local heat sources and the displacement over time of gas-fired CHP use, as associated carbon benefits reduce due to decarbonising of grid electricity.
- Further drivers exist for the recovery and use of low-temperature heat and the use of thermal storage, to reduce distribution losses and increase operational flexibility.
- The project may also prove eligible for under the Mayor's Housing Infrastructure Fund (HIF).
- The project could also be eligible for funding support from the Mayor's Energy Efficiency Fund.

3.2 *GLA Risk*

The GLA's key project risks were set out as follows:

- Non-progression of the project due to lack of Stakeholder buy-in or of commercial viability.

3.3 *GLA Time-bound Milestones*

The GLA's key project milestones were set out as follows:

- With the GLA's DEEP framework in place until September 2019, funding is now being sought for a subsequent programme which would offer support to the strategy and potentially setting up of project-specific heat network delivery bodies.
- Though not a GLA programme, BEIS' Heat Network Investment Programme (HNIP) is expected to open for applications during late 2018.

4. Peabody: Plans for Bexley

4.1 *Peabody Drivers*

Peabody's key project drivers were set out as follows:

- Peabody aim to deliver 21,000 net additional homes across the Boroughs of Bexley and Greenwich within the next 30 years.
- This delivery will include new build-out and redevelopment but little in the way of refurbishment of existing housing stock.
- Approximately 3,000 of these will comprise new housing within Bexley.

4.2 *Peabody Risk*

Peabody's key project risks were set out as follows:

- Non-delivery of heat network and requirement to re-evaluate local energy generation and provision options. Impact on Planning Applications/Permissions.
- Security and resilience of heat supply.
- Peabody have already decided electricity supply should be via a white label provider rather than private wire, to enable resident choice.

4.3 *Peabody Time-bound Milestones*

Peabody's key project milestones were set out as follows:

- Build-out programmes exist for a range of locations and are at various stages of development (some detailed and some conceptual).
- Construction is now underway on the Southmere Village site as the first phase of housing delivery in Thamesmead & Abbey Wood.

5. Orbit Homes: Role within Bexley

Though not represented at the meeting, LBB provided the following information on the role of Orbit homes in delivering new housing within the Borough:

- Orbit Homes are the largest land owner in the area surrounding Bexley station.
- A meeting is being sought by Bexley with Orbit and other major land owners in the Belvedere area to better understand future plans for housing provision.

6. Royal Borough of Greenwich: Drivers

Key drivers for Greenwich were confirmed as aligning with those of the other stakeholders, namely the delivery of new housing and provision of affordable, low-carbon energy. The housing stock that could potentially be supplied by the heat network in RBG would be a mix of existing and new build. The GLA emphasised the strategic importance of supplying this stock, and beyond, as well as the heat loads identified in LBB. RBG were asked to consider the DH potential impact on their housing programme.

7. Additional Parties

LBB recently met with Thames Water (Richard Hill) in relation to the securing of wayleaves across their land for the purposes of routing new UKPN infrastructure.

8. Summary & Next Steps

- Study Work Package 1 to gather and consider widest range of project options and extents, refining/funnelling these down to an initial scheme for development.
- Work Package 2 will focus on the refinement and techno-economic assessment of delivering initial scheme.
- LBB requires the study outputs to demonstrate an outline business case for the initial scheme, including preparation of information suitable to support a bit to HNIP.
- Further work, subsequent to this study, will be required in order to consider further commercial, financial and legal aspects of a full business case. It was agreed that a meeting is held to review this at the start of Work Package 2.

9. Summary of Actions

- Request relevant data and details from Peabody to inform Work Package 1 work [***Ramboll***]
- Request relevant data and details from LBB to inform Work Package 1 work [***Ramboll***]
- Request relevant data and details from Orbit to inform Work Package 1 work [***Ramboll***]
- Request relevant data and details from RBG to inform Work Package 1 work [***Ramboll***]
- Confirm opportunity area's shortlisting for Mayor's Housing Infrastructure Fund [***GLA***]
- Emerging information from early economic modelling to be shared (when appropriate) with Cory and Inventa Partners [***Ramboll***]
- Arrange date for next Partnership Board meeting, following completion of study Work Package 1 [***Ramboll***]

RAMBOLL ENERGY

MINUTES OF MEETING

Project name
Project no.

Subject	**Partnership Board Meeting 2**
Meeting date	**09/01/2019**
Location	**LBB Civic Centre**
Participants	**Graham Ward (London Borough of Bexley)** **Richard Williams (LBB)** **Peter North (Greater London Authority)** **Alex Hobley (GLA)** **Andy Pike (Cory)** **Hugo Buchanan (Peabody Homes)** **Lucy Padfield (Ramboll)** **Oliver Pitchers (Ramboll)** **Howard Mapperley (Inventa Partners)**
Meeting no.	**2**

Agenda

1. **Head Demand Assessment**
2. **Heat Supply**
3. **Carbon Savings Counterfactual**
4. **Soft Market Testing**

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1 Head Demand Assessment

- OPITC to check on previous Resi figures provided by Peabody (uplift vs total) and confer with Hugo to confirm correct figures in use.
- OPITC to follow up with Richard at LBB on further granularity for Erith development.
- Graham at LBB to contact Orbit Homes seeking further engagement (likely OPITC to re-present WP1 findings to Orbit representative).

2 Heat Supply

- OPITC to contact Andy of Cory to arrange initial review sessions around:
  - Heat offtake technical arrangements and costs.
  - Bulk heat sale commercial modelling.

3 Carbon Savings Counterfactual

- LPADF to liaise with Peter/Alex at GLA to arrange a working session to define appropriate counterfactual case for CO2 emissions calcs.

4 Soft Market Testing

- OPITC/LPADF to compile contacts and share a shortlist of potential ESCo/O&M partners for LBB to approach.