

# Riverside Energy Park

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## Applicant responses to Relevant Representations

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## 0 Introduction

- 0.1.1 On 16 November 2018, Cory Environmental Holdings Limited (the Applicant) submitted an application (the Application) to the Secretary of State for a development consent order in respect of the Riverside Energy Park (REP). The Application was accepted for examination on 14 December 2018 and the examination commenced on 10 April 2019 (the Examination).
- 0.1.2 For defined terms, please refer to the Project Glossary (1.6, APP-006).
- 0.1.3 This document, submitted for Deadline 2 of the Examination, contains the Applicant's responses to Relevant Representations (RR) submitted to the Secretary of State by the deadline of 12 February 2019 (as notified under section 56(4) of the Planning Act 2008).
- 0.1.4 A total of 88 RRs were submitted, many of which raised the same or similar themes, particularly from the public and businesses. Accordingly, this document has been structured to provide a response to the identified theme rather than to the individual Interested Party/Respondent. For ease of reference, Table 1.1 identifies the identified themes and the RR to which it relates (note that not all RRs are included in this table as some RRs have been responded to individually – see further below). Chapter 2 of this document contains the themed responses, which are grouped as follows:
- Air Quality; Air Quality (Health); Hazardous Materials; Odour;
  - Biodiversity;
  - Ground Conditions;
  - Need for the scheme;
  - Noise & Vibration;
  - Public Consultation;
  - Safety;
  - Socio-economics;
  - Traffic & Transport (Construction);
  - Traffic & Transport (Operational);
  - Townscape and Visual Impacts; and
  - Carbon

0.1.5 Where specific issues have been raised, rather than a general theme, the Applicant has responded to that Interested Party/Respondent. The following individual responses are provided in this document:

0.1.6 Individual responses to Local Authorities (Chapter 3);

0.1.7 Individual responses to Statutory Organisations (Chapter 4);

0.1.8 Individual responses to Non-statutory Organisations (Chapter 5); and

0.1.9 Individual member of the public / business (Chapter 6).

# 1 Theme Responses

Table 1.1: Table of Theme Responses

Respondent	Relevant Rep Reference	TR-001 Air Quality TR-002 Air Quality (Health) TR-012 Hazardous Materials TR-015 Odour	TR-003 Terrestrial Biodiversity	TR-009 Ground Conditions	TR-013 Need for the scheme	TR-014 Noise and Vibration	TR-016 Public Consultation	TR-018 Safety	TR-019 Socio-economics	TR-022 Traffic and Transport (construction)	TR-023 Traffic and Transport (operation)	TR-024 Townscape and Visual Impacts	TR-025 Carbon
Ethna Cooke	RR-007	✓	✓		✓	✓				✓			
Friends of Crossness Nature	RR-009	✓	✓	✓		✓			✓			✓	
Barry Roffey	RR-010	✓	✓		✓								
Christopher Smith	RR-011		✓		✓				✓				
Donna Zimmer	RR-012	✓	✓		✓							✓	
Martin Watts	RR-013				✓								
Robert Davies	RR-014	✓	✓						✓				



Riverside Energy Park  
Applicant Responses to Relevant Representations

Respondent	Relevant Rep Reference	TR-001 Air Quality TR-002 Air Quality (Health) TR-012 Hazardous Materials TR-015 Odour	TR-003 Terrestrial Biodiversity	TR-009 Ground Conditions	TR-013 Need for the scheme	TR-014 Noise and Vibration	TR-016 Public Consultation	TR-018 Safety	TR-019 Socio-economics	TR-022 Traffic and Transport (construction)	TR-023 Traffic and Transport (operation)	TR-024 Townscape and Visual Impacts	TR-025 Carbon
Dr Lesley Catchpowle	RR-015	✓	✓						✓				
Ruth Wild	RR-016	✓	✓		✓	✓				✓	✓		
David Sorrell	RR-017	✓	✓		✓								
Graeme Mitchell	RR-018		✓		✓								
Laurence Pinturault Ep Tuft	RR-019	✓	✓	✓	✓	✓				✓		✓	
Mr T. J. Minns	RR-020	✓	✓	✓		✓					✓		
Richard P Winston	RR-021	✓	✓		✓				✓				
Daniel Bell	RR-022	✓	✓		✓		✓		✓			✓	
Barbara Fairbairn	RR-023	✓	✓									✓	
Dr Susan Mitchell	RR-024	✓	✓	✓	✓	✓			✓			✓	

Riverside Energy Park

Applicant Responses to Relevant Representations

Respondent	Relevant Rep Reference	TR-001 Air Quality TR-002 Air Quality (Health) TR-012 Hazardous Materials TR-015 Odour	TR-003 Terrestrial Biodiversity	TR-009 Ground Conditions	TR-013 Need for the scheme	TR-014 Noise and Vibration	TR-016 Public Consultation	TR-018 Safety	TR-019 Socio-economics	TR-022 Traffic and Transport (construction)	TR-023 Traffic and Transport (operation)	TR-024 Townscape and Visual Impacts	TR-025 Carbon
Ralph Todd	RR-025		✓		✓	✓						✓	
Ann Turvey	RR-026	✓	✓			✓			✓	✓	✓		
Andrew Thompson	RR-030	✓	✓			✓				✓	✓	✓	
David Putson (Councillor)	RR-031	✓	✓		✓								✓
Richard Hamblin	RR-032	✓											
Graham William Parry	RR-035	✓	✓										
Linda Farnsworth	RR-037	✓											
Mrs D Khoti	RR-038	✓											
Natasha Agius	RR-039	✓											
Ricky Schembri MBE	RR-040	✓											

Riverside Energy Park  
Applicant Responses to Relevant Representations

Respondent	Relevant Rep Reference	TR-001 Air Quality TR-002 Air Quality (Health) TR-012 Hazardous Materials TR-015 Odour	TR-003 Terrestrial Biodiversity	TR-009 Ground Conditions	TR-013 Need for the scheme	TR-014 Noise and Vibration	TR-016 Public Consultation	TR-018 Safety	TR-019 Socio-economics	TR-022 Traffic and Transport (construction)	TR-023 Traffic and Transport (operation)	TR-024 Townscape and Visual Impacts	TR-025 Carbon
Bernard Leahy	RR-044		↙		↙								
Gaynor Hillier	RR-046	↙											
Jonathan Rooks	RR-048		↙		↙					↙	↙		
Michael Hill	RR-051	↙							↙				
Gill Coombs	RR-056	↙		↙									
Mrs Margaret J White	RR-057	↙			↙			↙		↙	↙		
Heidi Barnes	RR-058	↙	↙			↙			↙				
Francesca Sanna	RR-062	↙	↙		↙	↙			↙	↙	↙		
Anthony Sims	RR-069	↙	↙		↙				↙	↙	↙		
Catherine Bradshaw	RR-070	↙	↙		↙	↙				↙			

Riverside Energy Park  
Applicant Responses to Relevant Representations

Respondent	Relevant Rep Reference	TR-001 Air Quality TR-002 Air Quality (Health) TR-012 Hazardous Materials TR-015 Odour	TR-003 Terrestrial Biodiversity	TR-009 Ground Conditions	TR-013 Need for the scheme	TR-014 Noise and Vibration	TR-016 Public Consultation	TR-018 Safety	TR-019 Socio-economics	TR-022 Traffic and Transport (construction)	TR-023 Traffic and Transport (operation)	TR-024 Townscape and Visual Impacts	TR-025 Carbon
Chris Rose	RR-071		↙		↙							↙	
Derek Key	RR-073	✓	↙										
James Butler	RR-076		↙		↙								
Karen Goldsmith	RR-077	✓	↙	↙		↙			↙	↙	↙	↙	
Karen Sutton	RR-078	✓	↙		↙	↙			↙	↙		↙	
Mark Appleby	RR-081		↙										
Tara Lucas	RR-085	✓	↙	↙	↙	↙			↙	↙			

## 1.1 Air Quality (TR-001)

### Summary of Theme:

- 1.1.1 A total of 35 relevant representations make reference to potential air quality effects from the Proposed Development. These range from general comments on potential negative effects on air quality in the local area to specific comments regarding health. Table 1.1 provides a summary of respondents and aspects raised.

Table 1.2 – Summary of Representations

RR Ref:	Respondent	Issue
RR-007	Ethna Cooke	Pollution levels generally and potential air quality impacts from burning hazardous material during operation
RR-009	Friends of Crossness Nature Reserve	Air quality generally
RR-010	Barry Roffey	Cumulative local air quality impacts
RR-012	Donna Zimmer	Pollution generally
RR-014	Robert Davies	Health needs of local people visiting Crossness Nature Reserve
RR-015	Dr Lesley Catchpowle	Health impacts from the burning of waste during operation. Potential air quality impacts from burning hazardous material during operation
RR-016	Ruth Wild	Pollution generally
RR-017	David Sorrell	Pollution generally during operation
RR-019	Laurence Pinturault Ep Tuft	Pollution generally and potential air quality impacts from burning hazardous material during operation
RR-020	Mr T. J. Minns	Cumulative local air quality impacts and Noxious gases from burning waste during operation
RR-021	Richard P Winston	Health impacts to users of Thames Marshes
RR-022	Daniel Bell	Pollution generally

RR Ref:	Respondent	Issue
RR-023	Barbara Fairbairn	Comments on health in relation to asthma cases
RR-024	Dr Susan Mitchell	Air quality impacts from burning hazardous material during operation
RR-026	Ann Turvey	Air quality impacts on Crossness Nature Reserve
RR-030	Andrew Thompson	Health impacts related to the release of microfine particulates during operation Burning of hazardous materials during operation
RR-031	David Putson (Councillor)	Health impacts related to ultra-fine particulates during operation
RR-032	Richard Hamblin	Health impacts related to micro particles
RR-035	Graham William Parry	Air quality impacts in Rainham during operation Pollution impacts on Rainham Marshes and the SSSI of the Ingrebourne Valley during operation
RR-037	Linda Farnsworth	Air quality impacts in Rainham during operation
RR-038	Mrs D Khoti	Air quality impacts in Rainham during operation Odour during operation
RR-039	Natasha Agius	Air quality and health impacts generally
RR-040	Ricky Schembri MBE	Pollution generally Increased odour effects in combination with effects other industrial areas during operation
RR-046	Gaynor Hillier	Potential health impacts Increased odour effects in combination with odour effects from RRRF
RR-051	Michael Hill	Air quality impacts in Erith

RR Ref:	Respondent	Issue
RR-056	Gill Coombs	Potential health impacts, including; cancer, neurological damage, disrupting reproductive systems, thyroid systems from exposure to dust (during construction) and dioxin (during operation)
RR-057	Mrs Margaret J White	Harm to public health from burning of hazardous substances during operation – particularly affecting those with COPD Pollution from operational traffic, specifically NO2
RR-058	Heidi Barnes	Air pollution from vehicles and Odour generally during operation
RR-062	Francesca Sanna	Air pollution from increased river and traffic on local roads during construction and operation Air quality and health impacts from of hazardous materials during operation
RR-069	Anthony Sims	Air pollution from local traffic during operation
RR-070	Catherine Bradshaw	Pollution generally
RR-073	Derek Key	Pollution generally
RR-077	Karen Goldsmith	Air pollution generally
RR-078	Karen Sutton	Air quality impacts (specifically nitrates and sulphur emissions) on human health and open spaces (Crossness Nature Reserve, Rainham and Thurrock Marshes) during operation
RR-085	Tara Lucas	Pollution generally

**Response – Air Quality (TR-001):**

**Introduction**

1.1.2 An air quality assessment accompanies the DCO Application and is presented in **Chapter 7 Air Quality** of the **Environmental Statement (ES) (6.1, APP-044)**.

- 1.1.3 A further report providing an update to the status of the Environmental Permit Application and the modern abatement technology being proposed for the ERF element of REP within the EP application has also been prepared and submitted at Deadline 2. This report confirms the Applicant's intention to use Selective Catalytic Reduction (SCR) technology which would reduce NOx levels significantly compared to the levels reported in the ES.

### **Construction Phase**

#### *General*

- 1.1.4 The findings of the air quality assessment, are summarised in **Table 7.37** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** which shows that there will be no likely significant residual air quality effects on human or ecological receptors as a result of the construction of the Proposed Development, when considered either in isolation or in combination with other planned developments.
- 1.1.5 This conclusion assumes that a number of mitigation measures designed to further limit potential air quality effects arising during the construction phase are included in **paragraphs 4.3.1-4.3.4** of the **Outline Code of Construction Practice (CoCP) (7.5, Rev 1)**. Measures include wheel washing, damping of stockpiles and sheeting materials, adherence to guidance such as the London Mayor's Supplementary Planning Guidance (SPG) on controlling dust, recording and making available a log of any complaints and covering of vehicles entering and leaving the site. The CoCP is secured via Requirement 11 at **Schedule 2** to the **Draft DCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority is in substantial accordance with the **Outline CoCP (7.5, Rev 1)** submitted with the application.

#### *Air Quality and Biodiversity*

- 1.1.6 **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** and **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** consider potential dust generation effects, arising from the construction of the Proposed Development, upon designated areas adjacent to the REP site, including Crossness LNR, Belvedere Dykes SINC, River Thames and Tidal Tributaries SINC, and Erith Marshes SINC.
- 1.1.7 **Table 7.37** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** and **paragraph 11.9.2** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** set out the assessment findings which are of no significant effects. Further detail is provided in the relevant representation response relating to biodiversity issues (TR-003).

#### *Air Quality – Erith*

- 1.1.8 **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** presents the assessment of the potential effects arising from construction of the Proposed Development on air quality at relevant receptor locations in Erith, in the London Borough of Bexley. **Table 7.29** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** lists the following



receptors within Erith which have been considered in the assessment: R23 5 Corinthian Road, R24 24 South Road and R25 41 Guild Road.

- 1.1.9 **Paragraph 7.9.59 of Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** reports the assessment findings that there will be no significant effects on human or ecological receptors as a result of the construction of the Proposed Development, when considered either in isolation or in combination with other planned developments.

#### *Dust Impacts*

- 1.1.10 In terms of potential effects from construction dust, this has been assessed and is reported in **paragraphs 7.9.1-7.9.11 of Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**. It is anticipated that dust will be controlled through standard mitigation measures described in the **Outline CoCP (7.5, Rev 1)**. Measures include wheel washing, damping of stockpiles and sheeting materials, adherence to guidance such as the London Mayor's Supplementary Planning Guidance (SPG) on controlling dust, recording and making available a log of any complaints and covering of vehicles entering and leaving the site. The CoCP is secured via Requirement 11 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority is in substantial accordance with the **Outline CoCP (7.5, Rev 1)** submitted with the application.

#### *Transport Emissions*

- 1.1.11 It is acknowledged that there will be additional transport movements associated with construction of the Proposed Development, however, as stated in **paragraph 7.9.12 of Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**, given the number of anticipated additional movements, compared to existing background traffic levels, these are not anticipated to give rise to any likely significant effects.

### **Operational Phase**

#### *General*

- 1.1.12 **Paragraph 7.13.2 of Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** reports the findings of the assessment that there will be no likely significant air quality effects on human or ecological receptors as a result of the operation of the Proposed Development, when considered either in isolation or in combination with other planned developments.
- 1.1.13 A further report providing an update to the status of the Environmental Permit Application and to provide an update on the abatement technology being proposed for the ERF element of REP within the EP application has also been prepared and submitted at Deadline 2. This report confirms the Applicant's intention to use Selective Catalytic Reduction (SCR) technology which would reduce NO<sub>x</sub> levels significantly compared to the levels reported in the ES.

#### *Air Quality and Biodiversity*

1.1.14 **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** and **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** consider the potential air quality effects, arising from the operation of the Proposed Development, upon designated areas and habitats surrounding the REP site, including the Inner Thames Marshes Site of Special Scientific Interest (SSSI)/Rainham Marshes Local Nature reserve, and Ingrebourne Marshes SSSI.

1.1.15 **Table 7.37** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** and **paragraph 11.9.23** of **Chapter 11 Terrestrial Biodiversity** of the **ES 6.1, Rev 1)** report the assessment findings that there will be no significant effects. Further detail is provided in the relevant representation response relating to biodiversity issues (TR-003).

*Air Quality – Rainham*

1.1.16 **Paragraphs 7.9.20-7.9.44** of **Chapter 7 Air Quality** of the **ES (PINS Reference 6.1, Rev 1)** present the assessment of the potential effects of emissions from the Energy Recovery Facility (ERF) at identified relevant receptor locations in the study area, including Rainham, in the London Borough of Havering. **Tables 7.23 to 7.26** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** list the local authority monitoring locations (of which 'HV1' is located in Rainham) which have been used to inform the assessment. The assessment identifies the following receptors in Rainham: R4 Wennington Road; R6 Wennington Road/Anglesey Drive; R18, Capstan Road and R22 Rainham Village Children's Centre.

1.1.17 As set out in **paragraphs 7.9.42-7.9.44** of **Chapter 7 Air Quality** of the **ES (PINS 6.1, Rev 1)**, the assessment also considers the potential air quality effects, arising from the operation of REP, upon designated areas in Rainham, namely Inner Thames Marshes Site of Special Scientific Interest (SSSI)/Rainham Marshes (SSSI/Local Nature Reserve (LNR)).

1.1.18 The assessment findings show that negligible and insignificant air quality effects are anticipated on human or ecological receptors in Rainham as a result of the operation of the Proposed Development, when considered either in isolation or in combination with other planned developments.

*Air Quality – Erith*

1.1.19 **Paragraphs 7.9.20-7.9.44** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** present the assessment of the potential effects of emissions from the ERF at identified relevant receptor locations in the study area, including locations in Erith, in the London Borough of Bexley. **Table 7.29** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** lists the following receptors in Erith which have been considered in the assessment, namely: R23 5 Corinthian Road, R24 24 South Road and R25 41 Guild Road.

1.1.20 The assessment findings report that no likely significant air quality effects are anticipated in Erith on human or ecological receptors as a result of the operation of

the Proposed Development, when considered either in isolation or in combination with other planned developments.

*Transport Emissions*

1.1.21 **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** presents the assessment of potential effects of emissions from additional operational traffic, both river and road traffic, associated with the Proposed Development.

1.1.22 **Paragraph 7.9.13** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** reports the assessment of the potential effects, on local air quality, of road traffic associated with the Proposed Development. The predicted concentrations of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are presented in **Appendix C.1 Traffic Modelling** of the **ES (6.2, Rev 1)**. The assessment findings show that the magnitude of impact is negligible at all locations and road traffic impacts are therefore considered not significant.

1.1.23 **Paragraphs 7.9.14 to 7.9.19** of **Chapter 7 Air Quality (6.1, Rev 1)** report the assessment of the potential effects, on local air quality, of river vessel movements associated with REP. As part of the assessment, the maximum point of exposure for sensitive receptors, such as residential properties, was taken to be 90m from the vessel, due to the width of the river along a typical river journey. Most freight vessels travel close to the middle of the river during their transit, due to factors such as tides and bridge height restrictions. A distance of approx. 90m is therefore considered worst case of the distance from the middle of the river to the quayside in the western reaches of central London in the vicinity of Smugglers Way Wharf, Wandsworth. However, the river widens as it passes through central London and is more than 500m wide at both the REP site and Tilbury Docks. Therefore, any potential increase in annual mean NO<sub>2</sub> (Nitrogen Dioxide) concentrations for residential properties or other sensitive receptors at locations of relevant exposure would be negligible. The assessment shows that, in all cases, any increase would be imperceptible and the effect on air quality is not significant.

*Emissions from RRRF*

1.1.24 The Applicant's existing RRRF has been operating within its legal emission limits since becoming operational in 2011. As will be the case with REP, the operation of RRRF is subject to stringent emissions limits set by an Environmental Permit granted by the Environment Agency. In addition, emission filters and other control mechanisms are incorporated within the design of the facility to ensure that all emissions are controlled to be within the emission limits set out in the permit. The Applicant can confirm that there is no smoke emitted from the exhaust stacks of RRRF. However, water vapour plumes are visible at times.

**Decommissioning Phase**

1.1.25 No comments specifically relating to the decommissioning phase were received.

## Response – Air Quality – Health (TR-002):

### Construction Phase

#### *General*

- 1.1.26 **Table 7.37** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** reports the assessment findings that there will be no likely significant air quality effects on human health as a result of the construction of the Proposed Development, when considered either in isolation or in combination with other planned developments.
- 1.1.27 A **Health Impact Assessment (HIA)** accompanies the DCO Application and is presented at **Appendix K.1** of the **ES (6.2, APP-093)**. The assessment shows that no likely significant adverse effects on human health are anticipated during the construction of the Proposed Development.

### Operational Phase

#### *General*

- 1.1.28 A **Human Health Risk Assessment (HHRA)** accompanies the air quality assessment and is presented in **Appendix C.3** of the **ES (6.3, Rev 1)**. The HHRA considers the potential effects on human health arising from long-term exposure to dioxins and furans, dioxin-like polychlorinated biphenyls (PCBs) and trace metals emitted from the proposed ERF at REP. **Paragraphs 3.6.1-3.6.4** of **Appendix C.3 HHRA** of the **ES (6.3, Rev 1)** and **paragraph 7.9.41** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** conclude that no likely significant effects are anticipated in relation to long term exposure to dioxins and furans, dioxin-like PCBs and trace metals.
- 1.1.29 **Table 7.34** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** provides the maximum ground level concentrations of nitrogen, sulphur dioxide and particulates within the study area. The assessment of potential effects on human receptors from these pollutants is presented in **paragraphs 7.9.21 – 7.9.32** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**.
- 1.1.30 **Paragraph 7.13.2** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** reports the assessment findings that there would be no likely significant effects on human receptors.
- 1.1.31 Furthermore, **paragraph 21.1.3** of **Appendix K.1 HIA** of the **ES (6.2, APP-093)** concludes that no likely significant adverse effects on human health are anticipated during the operation of the Proposed Development. The assessment findings are that there may be some long-term beneficial effects on surrounding communities and vulnerable groups (such as those in social housing) associated with the provision of a secure energy supply (see **paragraph 21.1.4** of **Appendix K.1 HIA** of the **ES (6.2, APP-093)**).

*Comments on health in relation to asthma cases, cancer, neurological damage, disrupting reproductive systems, thyroid systems, COPD*

1.1.32 **Paragraphs 3.5.5-3.5.12 of Appendix C.3 HHRA of the ES (6.2, Rev 1)**, consider the likely carcinogenic and non-carcinogenic effects of the emissions from REP on human health. As stated in **paragraph 7.9.40 of Chapter 7 Air Quality of the ES (6.1, Rev 1)**, an individual with maximum exposure is not subject to a significant carcinogenic risk or non-carcinogenic hazard, arising from exposure via both inhalation and the ingestion of foods. Therefore, it is considered that there will be no likely significant effects anticipated in relation to long term exposure to emissions from REP on human health.

*Health needs of local people visiting open spaces*

1.1.33 **Sections 9 and 14 of the HIA presented at Appendix K.1 of the ES (6.2, APP-093)** consider the potential health impacts on access to assets, such as footpaths, (including those through the Crossness Nature Reserve) on local residents and community service users. Paragraph 21.1.3 of the **HIA presented at Appendix K.1 of the ES (6.2, APP-093)** reports the assessment findings that no likely significant adverse effects on human health are anticipated during the operation of the Proposed Development. This conclusion takes account of the air quality assessment in **Chapter 7 Air Quality of the ES (6.1, Rev 1)** which includes potential effects of nitrous oxides and sulphur dioxide.

**Decommissioning Phase**

1.1.34 No comments specifically relating to the decommissioning phase were received.

**Response – Hazardous Materials/Fumes from Burning Waste (TR-012):**

**Construction Phase**

1.1.35 No comments specifically relating to the construction phase were received.

**Operational Phase**

1.1.36 Emissions from the ERF have been subject to mathematical modelling to predict how the pollutants from the ERF will disperse in the atmosphere (see **paragraphs 7.5.33-7.5.51 of Chapter 7 Air Quality of the ES (6.1, Rev 1)**). The results of the modelling are that, as a result of the Proposed Development, there will be no exceedances of threshold levels set for the protection of human health. As such, it can also be confirmed that there would be no 'noxious gases' released by the Proposed Development. The potential effects of emissions from the ERF have also been considered in conjunction with other potential local emission sources including road traffic, and emissions from the RRRF and Crossness Sewage Sludge Incinerator. **Paragraph 7.9.63 of Chapter 7 Air Quality of the ES (6.1, Rev 1)** concludes that no exceedances of relevant threshold levels are predicted, and no likely significant effects are anticipated.

1.1.37 The modelling of emissions from the combustion of biogas from the Anaerobic Digestion facility reveals that potential effects are restricted to the immediate vicinity of REP. **Paragraphs 7.9.45-7.9.47 of Chapter 7 Air Quality of the ES (6.1, Rev 1)**

conclude that there would be no likely significant effects arising from the emissions from the Anaerobic Digestion facility.

1.1.38 The Proposed Development will be regulated by the Environment Agency under the terms of an Environmental Permit and it will only treat waste that is suitable to be treated in the facility. Appropriate control mechanisms will be in place to screen the suitability of the waste streams entering the facility. Emissions from the facility will be subject to strict emissions monitoring to ensure compliance with the emission limits imposed by the Environment Agency.

1.1.39 A further report providing an update to the status of the Environmental Permit Application and the abatement technology being proposed for the ERF element of REP within the EP application has also been prepared and submitted at Deadline 2. This report confirms the Applicant's intention to use Selective Catalytic Reduction (SCR) technology which would reduce NO<sub>x</sub> levels significantly compared to the levels reported in the ES.

1.1.40 Furthermore, **paragraphs 3.6.1-3.6.4** of the **HHRA** presented in **Appendix C.3** of the **ES (6.2, Rev 1)** conclude that no likely significant effects are anticipated in relation to long term exposure to dioxins and furans, dioxin-like PCBs and trace metals.

#### **Decommissioning Phase**

1.1.41 No comments specifically relating to the decommissioning phase were received.

#### **Response – Air Quality – Odour (TR-015):**

##### **Introduction**

1.1.42 Potential odour impacts have been assessed and are reported in **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**.

##### **Construction Phase**

1.1.43 No comments specifically relating to the construction phase were received.

##### **Operational Phase**

###### *General*

1.1.44 With regard to the operation of REP, no likely significant effects from odour are predicted, based on the assessment findings reported in **paragraph 7.9.94** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**.

1.1.45 As described in **Paragraphs 7.9.48-7.9.49** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**, all areas receiving or handling waste at REP will operate under 'negative air pressure' which ensures that air is drawn into the facility when doors are opened to accept deliveries. The air drawn into the facility would be used as combustion air, with odorous compounds being burnt.

1.1.46 Waste will be delivered in closed ISO containers, sheeted in bulk container vehicles or enclosed refused collection vehicles, as explained in **paragraph 7.9.49 of Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**. The Applicant confirms that similar measures are in place at the existing RRRF and no odour complaints have been received since RRRF became operational in 2011.

1.1.47 REP would not therefore contribute to worsening odour from industrial areas.

1.1.48 Individuals who detect air borne odour are advised to report this to their local Environmental Health Officer so that the source can be identified and appropriate action taken.

*Potential odour impacts from RRRF*

1.1.49 RRRF has a negative air pressure system in the Tipping Hall with air then fed into the combustion process. No odour complaints have been received at RRRF since it became operational in 2011.

1.1.50 The Applicant advises individual to report any experiences of odour to the Environmental Health Officer at the London Borough of Bexley so the source can be identified and action taken.

**Decommissioning Phase**

1.1.51 No comments specifically relating to the decommissioning phase were received.

**Conclusions**

1.1.52 A total of 35 relevant representations make reference to potential air quality impacts associated with the construction and operation of the Proposed Development. Out of the 35 relevant representations, 12 of these relate to potential effects on human health, 7 relate to the potential effects from burning hazardous waste and 4 relate to potential odour impacts.

1.1.53 An assessment of the likely significant effects of the Proposed Development with respect to air quality is presented in **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** An assessment of the potential effects of the Proposed Development on terrestrial biodiversity is presented in **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** and potential effects on human health are presented in **Appendix K.1 HIA** of the **ES (6.2, APP-093)**.

1.1.54 Appropriate mitigation measures will be put in place to ensure that any residual effects are limited as far as practicable. These measures are contained within the **Outline CoCP (7.5, Rv 1)**. The CoCP is secured via required 11 at **Schedule 2** of the **Draft DCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority is in substantial accordance with the **Outline CoCP (7.5, Rev 1)** submitted with the DCO application.

- 1.1.55 These assessments show that there would be negligible residual effects arising from the construction, operation or decommissioning of the Proposed Development in relation to local air quality levels, odour, burning of waste and air quality effects on human health and terrestrial biodiversity.
- 1.1.56 A further report providing an update to the status of the Environmental Permit Application and the abatement technology being proposed for the ERF element of REP within the EP application has also been prepared and submitted at Deadline 2. This report confirms the Applicant's intention to use Selective Catalytic Reduction (SCR) technology which would reduce NO<sub>x</sub> levels significantly compared to the levels reported in the ES.



## 1.2 Terrestrial Biodiversity (TR-003)

### Summary of Theme

- 1.2.1 A total of 34 relevant representations make reference to potential effects on terrestrial biodiversity. These include concerns over particular species and habitats (e.g. Crossness Nature Reserve), potential effects from stack emissions and effects on the general biodiversity of the surrounding area. See Table 1.1 below for a summary of respondents and issues raised.
- 1.2.2 This response deals with potential effects in relation to terrestrial biodiversity. Other potential effects to receptors are dealt with in responses TR01 – TR24.

Table 1.3 – Summary of Representations

RR Ref:	Respondent	Issue
RR-007	Ethna Cooke	Detrimental impact on sensitive habitat.
RR-009	Friends of Crossness Nature Reserve	Soil/water contamination effect to water voles. Shading and lighting impacts on rare flora and fauna Noise and vehicle disturbance to roosting and feeding wetland birds on Thames foreshore, West Paddock and Crossness Nature Reserve. Visual intrusion, encroachment from building into rare Thames Marshes.
RR-010	Barry Roffey	Crossness Nature Reserve. Proposed site home to endangered species - Skylark & Little Ringed Plover.  Impacts to Barn Owl and Water Vole.
RR-011	Christopher Smith	Impacts to Crossness Nature Reserve, loss of habitat for breeding Skylarks and Ringed Plover, as well as butterflies, insects and small mammals which provide a food source for raptors.
RR-012	Donna Zimmer	Biodiversity and wildlife generally.
RR-014	Robert Davies	Breeding birds and Endangered List. Little Ringer Plover, skylarks, Cettis

RR Ref:	Respondent	Issue
		Warblers, Corn Buntins, water vole, peregrine falcons, buzzards, barn owls, marsh harriers, snipe.
RR-015	Dr Lesley Catchpowle	Wildlife and local environment generally.
RR-016	Ruth Wild	Impact to sensitive habitat from construction, birds, insects, traffic movements, pollution, light levels and noise.
RR-017	David Sorrell	Thames Marshes and Crossness Nature Reserve
RR-018	Graeme Mitchell	Crossness Nature Reserve generally.
RR-019	Laurence Pinturault Ep Tuft	Sensitive habitat impacts from, construction, traffic movements, pollution, light levels, noise. Biodiversity specifically Water Voles. Shading and lighting on rare flora and fauna. Noise and Vehicle disturbance to on site and adjacent roosting and feeding wetland birds.
RR-020	Mr T. J. Minns	Vehicular disturbance to Crossness Nature Reserve. Increased traffic vibration, disturbing adults during breeding, pollution from rubbish and spillages.
RR-021	Richard P Winston	Crossness Nature Reserve, birds, mammals, insects.
RR-022	Daniel Bell	Effects to water vole, skylark and slow worm, Crossness Nature Reserve, Birds, mammals, reptiles Marshes and Thames Riverbank.
RR-023	Barbara Fairbairn	Wildlife generally.
RR-024	Dr Susan Mitchell	Noise and vehicle disturbance to roosting and feeding birds, shading and lighting, soil/water contamination to water voles. Effects to Thames Foreshore and West Paddock.
RR-025	Ralph Todd	Noise and light pollution to

RR Ref:	Respondent	Issue
		Crossness Nature Reserve and rare wildlife.
RR-026	Ann Turvey	Direct impact to land provided by Thames Water, traffic, light, air quality, noise, shading of rare flora and fauna. Disturbance to roosting and feeding birds on the local nature reserve and the Thames. Impacts to rare Marsh Thames.
RR-030	Andrew Thompson	Impacts to local Nature Reserve, noise, light and construction waste/mess. Noise, light and traffic.
RR-031	David Putson (Councillor)	Artificial lighting on birds and other wildlife.
RR-035	Graham William Parry	Air quality impact to the environment - particularly Rainham Marshes and SSSI at Ingrebourne Valley.
RR-044	Bernard Leahy	General disturbance to wildlife.
RR-048	Jonathan Rooks	Impact on conservation of the Thames Marshes and its wildlife.
RR-058	Heidi Barnes	Impact to species. Noise, light and air pollution.
RR-062	Francesca Sanna	Loss of habitat. Light pollution.
RR-069	Anthony Sims	Impact to habitat. Shading. Accidental spill, pollution, noise, impacts to quiet grazing marsh south of the river for birds and other wildlife.
RR-070	Catherine Bradshaw	Impact to sensitive habitat from direct build, traffic, pollution, light levels and noise.
RR-071	Chris Rose	Shading on adjacent reedbed, adding to existing light pollution.
RR-073	Derek Key	Loss of habitat.
RR-076	James Butler	Impacts to species at Crossness Nature Reserve.
RR-077	Karen Goldsmith	Impact on ecology of the local area and wider environment. Loss of open space, loss of habitat, increased traffic, increased

RR Ref:	Respondent	Issue
		pollution, possible contamination of soil/water, noise and disturbance. Increased traffic, air pollution, shading, light pollution, water contamination.
RR-078	Karen Sutton	Air quality impacts to Crossness, Rainham and Thurrock Marshes. Water Voles, Barn Owls, Kestrels, red and amber listed bird species, a rare assemblage of aquatic and terrestrial invertebrates including Britain's rarest bumblebee: the Shrill Carder Bee. Shading, lighting, potential soil and water contamination. noise and vehicle disturbance.
RR-081	Mark Appleby	Impact to Crossness Nature Reserve.
RR-085	Tara Lucas	Impact to sensitive habitat, directly during construction and in terms of traffic, pollution, light levels and noise.

**Response:**

**Introduction**

- 1.2.3 A terrestrial biodiversity assessment has been undertaken to accompany the DCO Application and is presented in **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**.
- 1.2.4 As stated at **paragraphs 11.12.2-11.12.4** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**, no likely residual significant effects are anticipated on terrestrial biodiversity receptors as a result of construction, operation or decommissioning of the Proposed Development, when considered either in isolation or in combination with other planned developments.

**Construction Phase**

*Potential effects on Crossness Local Nature Reserve*

- 1.2.5 Potential effects on the Crossness Local Nature Reserve (LNR) have been assessed and are reported in **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**.

- 1.2.6 The footprints of the REP Site, Main Temporary Construction Compound and works within the consented Data Centre site do not directly affect the Crossness LNR. Table 1 of the **Outline Biodiversity and Landscape Mitigation Strategy (OMBLMS) (7.6, APP-107)** sets out measures which will be used during construction to avoid or mitigate indirect effects such as those from noise, visual disturbance, dust and pollution. The **OBLMS** is secured via Requirement 5 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final BLMS, submitted to and approved by the local authority, be in substantial accordance with the OBLMS submitted with the application **(3.1, Rev 1)**.
- 1.2.7 The potential effects of different Electrical Connection route options have been assessed and are reported in paragraphs **11.9.38-11.9.60, Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**. The Applicant can confirm that following further technical design work and investigations carried out by the Applicant and UK Power Networks, the Applicant is removing the Election Connection route option (part of route option 1A) that had been proposed through Crossness LNR. The removal of the Electrical Connection route option through the Crossness LNR is confirmed in the Applicant's submission to the Examination at Deadline 2 and the updated **Land Plans (2.1, Rev 1)** and **Works Plans (2.2, Rev 1)** submitted into the Examination at Deadline 2. Therefore, effects within **paragraphs 11.9.41 and 11.9.42, Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** relevant to the Crossness LNR will not occur.
- 1.2.8 Effects arising from traffic movements, such as noise disturbance and dust may take place during the construction works for the Proposed Development. However, with the appropriate mitigation in place (considering issues such as timing of works and good practice construction methods), these are not anticipated to occur and are assessed as being not significant, see **Chapter 11 Terrestrial Biodiversity, Paragraph 11.9.2** of the **ES (6.1, Rev 1)**. Furthermore, in respect of noise impacts on breeding birds during construction (which would include noise related to transport), **Paragraphs 11.9.10 and 11.9.11** of the **ES** confirm that construction will generally not take place at night and no night-time increases are anticipated. Whilst elevated noise levels generally may cause some displacement of breeding birds, the effect was assessed as Not Significant.
- 1.2.9 The Proposed Development will not give rise to any permanent effects to Crossness LNR, although there is potential for temporary effects from disturbance of habitats during construction to Erith Marshes SINC during construction. Measures to avoid or mitigate potential construction effects within these areas are set out in **Table 1** of the **OBLMS (7.6, APP-107)**. The OBLMS also sets out how habitats within the Crossness LNR and the key species and species groups they support, such as bats, water vole and breeding birds, will be protected during the construction phase.
- 1.2.10 **Paragraph 11.9.2** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** states that, following mitigation, the conservation objectives (and therefore viability) of Crossness LNR would not be undermined and effects from the Proposed Development would therefore be Not Significant.

*Direct impacts to habitat from the proposed development*

- 1.2.11 **Chapter 11 Terrestrial Biodiversity, paragraphs 11.7.8 and 11.7.10** of the **ES (6.1, Rev 1)** describe the central/western part of the REP site, the Main Temporary Construction Compound and consented Data Centre site as containing areas of Open Mosaic Habitat. As **Paragraph 11.9.3 to 11.9.6** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** explains, the proposed construction work will result in the permanent loss or temporarily disturbance to these areas, the loss will be compensated through the provision of a habitat compensation package which may include an area of open mosaic habitat on the flood bank, as well as a financial contribution to be made to facilitate off-site biodiversity enhancements, set out **Chapter 11 Terrestrial Biodiversity, paragraph 11.11.1** of the **ES (6.1, Rev 1)**, together with **Table 1** and **paragraph 5.1.2** of the **OBLMS (7.6, APP-107)**. The OBLMS is secured via Requirement 5 at **Schedule 2** to the **Draft DCO (3.1, Rev 1)**, which requires that the final BLMS submitted to and approved by the local authority is in substantial accordance with the OBLMS submitted with the application.
- 1.2.12 A biodiversity metric calculation is being developed with the Environment Bank (an independent organisation with a proven track record in the implementation of biodiversity offset solutions) to enable the calculation of the extent of compensation required to offset the habitat loss described in **paragraph 1.1.11** of this response. The final biodiversity metric (ensuring biodiversity net gain) is provided for via the OBLMS, which is secured via Requirement 5 at **Schedule 2** to the **Draft DCO (3.1, Rev 1)**. This requires that the final BLMS submitted to and approved by the local authority is in substantial accordance with the OBLMS submitted with the application.
- 1.2.13 An assessment of effects to areas of habitat potentially affected by the construction of the Proposed Development, including at the REP Site and along the Electrical Connection Route, are reported in out **Chapter 11 Terrestrial Biodiversity, paragraphs 11.9.3 – 11.9.6, 11.9.29 and 11.9.47 – 11.9.49** of the **ES (6.1, Rev 1)**. However, as explained in **paragraph 1.1.7** of this response, the Electrical Connection route through the Crossness LNR is no longer being progressed. Therefore, effects within **paragraphs 11.9.41 and 11.9.42, Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** relevant to the Crossness LNR will not occur.
- 1.2.14 After consideration of the mitigation provided and set out in **Tables 1 and 3** of the **OBLMS (7.6, APP-107)**, no significant effects to Terrestrial Biodiversity are identified.

*Impacts to habitats from traffic, pollution and spills, light and noise*

- 1.2.15 There is the potential for effects on habitat arising from traffic movements during the construction works for the Proposed Development, as set out in **Paragraph 11.9.2** of the **ES**. The OBLMS sets out protection and appropriate working measures which will be employed during construction and decommissioning to protect the habitats and therefore effects are assessed as being Not Significant, see **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.2** of the **ES (6.1, Rev 1)**.

1.2.16 Tables 1 and 3 of the **OBLMS (7.6, APP-107)** establish the principles and measures to minimise effects to designated areas (through consideration of noise, lighting, pollution, fencing off working areas and installation of silt fencing), habitats (through financial contributions to the Environment Bank) and species arising from potential spillages or leaks during construction. The OBLMS is secured via Requirement 5 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final BLMS submitted to and approved by the local authority is in substantial accordance with the OBLMS submitted with the application.

1.2.17 Potential effects arising from noise and light would have the potential to affect species such as breeding birds and foraging or commuting bats, as set out in **Paragraphs 11.9.7 and 11.9.10-11.9.11** of the **ES**. After consideration of mitigation measures set out in the **OBLMS** and paragraph 4.4.3 of the **Outline CoCP (7.5, Rev 1)**, including working in line with the recommendations of BS 5228 (for example, quiet working methods and acoustic screening), and paragraph 4.7.3 of the **Outline CoCP (7.5, Rev 1)**, including appropriate working measures to be adopted to protect habitats and species from lighting, no significant effects from lighting or noise are anticipated to arise for either habitats or species, as set out in **Paragraphs 11.9.7 and 11.9.10-11.9.11** of the **ES**. The CoCP is secured via Requirement 11 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority is in substantial accordance with the **Outline CoCP (7.5, Rev 1)** submitted with the application.

*Encroachment into the Thames Marshes and the potential for driving species away*

1.2.18 No permanent effects on coastal and floodplain grazing marshes have been identified, see **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.48** of the **ES (6.1, Rev 1)**. Temporary effects may occur during the installation of the Electrical Connection within Erith Marshes SINC and Dartford Marshes LWS, however as a result of significant reductions to the Application Boundary, the potential spatial extent of such effects is now very limited. No significant effects have been identified and, as such, it is not considered that species supported by these habitats would be permanently displaced from these habitats.

*Litter and debris from construction operations*

1.2.19 The **Outline Code of Construction Practice (CoCP) (7.5, Rev 1)** acts as a framework upon which a final CoCP will be provided for each part of the works. The CoCP is secured via Requirement 11 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority is in substantial accordance with the Outline CoCP submitted with the application. Paragraph 3.1.1 of the **Outline CoCP (7.5, Rev 1)** identifies good practice measures, including site hoardings and the provision of a wheel washing facility, as well as providing a procedure for members of the public to make comments/complaints (paragraph 2.8.1 of the **Outline CoCP (7.5, Rev 1)**). It is considered that that these measures will prevent debris and litter arising and therefore prevent potential adverse effects on habitats.

- 1.2.20 *Potential effects on notable bird species including skylark, little ringed plover, Cetti's warbler, corn bunting, peregrine falcon, buzzard, barn owl, marsh harrier, snipe, kestrel, other red and amber listed bird species*
- 1.2.21 Breeding and wintering bird surveys were undertaken at the REP site and surrounding area in 2018. Both Skylark and Cetti's warbler were identified. It has been noted, through consultation, that there are kestrels breeding within fields to the west of Norman Road. Snipe were identified in the winter survey but at very low numbers with a peak count of two. It is understood that little ringed plover has historically been recorded within the REP Site, however it was not recorded during the 2018 survey work. The 2018 survey work found no evidence of corn bunting, buzzards or marsh harrier.
- 1.2.22 Peregrine falcons were observed flying over the REP site on occasion, with the tall structure of the existing Riverside Resource Recovery Facility (RRRF) building providing potential hunting perches and possible nesting opportunities for this species. **Chapter 11 Terrestrial Biodiversity, Paragraphs 11.9.11, 11.9.19, 11.9.34, 11.9.51, 11.9.58** of the ES (6.1, Rev 1) report no likely significant effects to important ecological receptors in respect of ornithology.
- 1.2.23 Permanent and temporary effects can occur to habitats of breeding birds through loss of habitats used by breeding birds, direct killing or injury of birds, damage/destruction of active nests, and noise and visual disturbance. However **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.8** of the ES (6.1, Rev 1) reports that suitable alternative habitat is present adjacent to such areas and standard measures to avoid adverse construction effects would be adopted (such as vegetation clearance outside of the nesting season, or inspection of vegetation to be cleared, use of screens providing physical barriers, good site construction practice, avoidance of noisy activities when passage and wintering birds are present), are included in Tables 1 and 3 of the **OBLMS (7.6, APP-107)**. The OBLMS is secured via Requirement 5 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final BLMS submitted to and approved by the local authority is in substantial accordance with the OBLMS submitted with the application.
- 1.2.24 **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.9** of the ES (6.1, Rev 1) reports that, prior to construction, a licenced barn owl surveyor would inspect the barn owl box within the REP site and, if appropriate, would relocate the box to a suitable location nearby where it would not be subject to construction disturbance.
- 1.2.25 **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.11** of the ES (6.1, Rev 1) reports that, given the abundance of alternative habitats in the surrounding area and the temporary nature of the potential effects, effects on breeding birds during the construction phase are not significant.
- 1.2.26 Effects from noise and visual disturbance could occur to wintering birds using the intertidal areas adjacent to the REP site during construction. However, these areas were surveyed and found to be unexceptional in terms of numbers and the variety of water birds supported. There was no evidence that these areas are of particular value over and above similar sections of shoreline in the area. The potential



adverse noise effects on wintering birds in these areas during construction were assessed and are reported in **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.19 (6.1, Rev 1)** as being not significant.

- 1.2.27 Measures are set out in the **OBLMS (7.6, APP-107)** will seek to ensure that there will be no significant effects on breeding and wintering birds as a result of construction of the Electrical Connection route.

*Potential lighting impacts to the migration of birds and light sensitive species*

- 1.2.28 No likely significant effects to light sensitive species from lighting impacts have been identified during the construction stage (**Paragraph 11.9.7 of Chapter 11 Terrestrial Biodiversity of the ES (6.1, Rev 1)**). Given the Proposed Development is not located near to key bird migration areas (such as coastal headlands), along with existing background light levels in the area, construction lighting is unlikely to affect the migration of birds. Paragraph 4.11 of the **Outline CoCP (7.5, Rev 1)** includes measures to control the potential effects arising from construction lighting. The CoCP is secured via Requirement 11 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority be in substantial accordance with the Outline CoCP submitted with the application.

*Representations in relation to vibration impacts*

- 1.2.29 As per section 4.3 of the Scoping Opinion (**Appendix A.1 of the ES, (6.3, APP-062)**) the Secretary of State was content to scope out potential operational vibration impacts from REP. Vibration effects have been scoped out of consideration in Chapter 8 and Chapter 11 as the vibration effects are predicted to be so low and therefore were considered unlikely to have significant effects on important species. The purpose of Scoping is to focus the assessment work on those issues which have the potential to cause significant effects.

*Aquatic and terrestrial invertebrates, including the Shril Carder Bee*

- 1.2.30 **Chapter 11 Terrestrial Biodiversity, paragraph 11.7.32** of the **ES (6.1, Rev 1)** reports that a range of aquatic and terrestrial invertebrate species were recorded on site, including Shril Carder Bee.
- 1.2.31 **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.13** of the **ES (6.1, Rev 1)** reports that, during construction, the loss of or temporary disturbance to habitats of value to invertebrates will be compensated through a financial contribution to the Environment Bank, secured by legal agreement for a contribution towards the enhancement of habitats outside the Application Boundary, as explained above. As a result, no significant effects to aquatic and terrestrial invertebrates are identified at the construction phase.

*Representations in relation to slow worms*

1.2.32 **Chapter 11 Terrestrial Biodiversity, Paragraph 11.7.28 of ES (6.1, Rev 1)** reports a low population of slow worm within the area surveyed, however none were present at the REP site. Tables 1 and 3 of the **OBLMS (7.6, APP-107)** include a list of measures to avoid potential effects on reptiles arising from construction activities (detailed method statement) which, following their implementation, would result in no significant effects (see **Paragraph 11.9.14 of Chapter 11 Terrestrial Biodiversity the ES (6.1, Rev 1)**). The OBLMS is secured via Requirement 5 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final BLMS submitted to and approved by the local authority is in substantial accordance with the OBLMS submitted with the application.

*Representations in relation to contamination and pollution impacts to water voles, with subsequent impacts to raptors.*

1.2.33 As stated in **Table 1** of the the **OBLMS** and **Paragraph 4.7.3 of the Outline CoCP (7.5, Rev 1)**, and **Paragraph 11.9.15 of ES Chapter 11 Terrestrial Biodiversity (6.1, Rev 1)**, any potential direct effects on water voles during construction of REP would be avoided through ensuring a 5m offset of all construction work from ditches which support water vole, or through trapping and temporarily relocating any water voles present to a suitable receptor site, returning them to the ditches following installation of the Electrical Connection.

1.2.34 As a result of recent significant reductions to the Application Boundary, and the removal of the Electrical Connection Route option through Crossness LNR, there will no longer be any requirement to trap and relocate water voles from the working area.

1.2.35 The CoCP is secured via requirement 11 at Schedule 2 to the **draft DCO (6.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority is in substantial accordance with the Outline CoCP submitted with the application.

1.2.36 The **OBLMS** is secured via requirement 5 at Schedule 2 to the **draft DCO (3.1, Rev 1)**, which requires that the final **BLMS** submitted to and approved by the local authority is in substantial accordance with the **OBLMS** submitted with the application. Therefore, it is considered that there would be no residual significant effect on water vole populations arising from construction of the Electrical Connection, as stated in paragraph 11.9.15 of **Chapter 11 of the ES (6.1, Rev 1)**.

### **Operational Phase**

*Potential effects on Crossness Local Nature Reserve*

1.2.37 Potential operational effects from REP, such as those from emissions, have been assessed and are reported in paragraphs **11.9.21 – 11.9.37 of Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**. Emissions of nitrogen from the Anaerobic Digestion Plant could affect a small area of the Crossness LNR, however habitats in this area are not of high botanical diversity and predicted effects through nitrogen deposition have been assessed as Not Significant.

1.2.38 Potential effects on Crossness LNR arising from shading from the Main REP Building were assessed and are reported in ES Chapter 11, paragraph 11.9.26 which notes that marginal areas of the Crossness LNR would be subject to some shading and, whilst there is potential for minor changes to botanical assemblage in these areas as a result of shading, due to the location, extent and duration of the shading, it is considered unlikely. Shading effects to the Crossness LNR are considered to be Not Significant. The Applicant has submitted a **Design Principles (DP) (7.4, APP-105)** which seeks, through DP 1.04, to minimise the massing and scale of the facility as far as reasonably practicable. Requirement 2 at the Schedule 2 of the **Draft DCO (3.1, Rev 1)** requires the details of the layout, scale and external appearance of the main REP building to be submitted for approval by the local planning authority. Requirement 2(2) requires that the details to be submitted for approval must be in accordance with the design principles.

*Impacts to habitat from the proposed development including traffic, pollutions, light and noise*

1.2.39 **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.27** of the ES (**PINS Reference Rev 1**) includes an assessment of the potential operational effects of exterior lighting required for REP on habitat (see Section 11.9, **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**). The **Outline Lighting Strategy (6.3, APP-096)** sets out, through DP 5.01, 5.02 and 5.04, the approach to lighting design prepared in consultation with an ecologist, in accordance with industry guidance in relation to mitigating lighting effects to wildlife, to ensure effects to designated areas from light spill are avoided or minimised. The operational lighting strategy is secured via Requirement 15 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that no part of Work Nos 1, 2, 3, 4, 5 and 6 may commence until a written scheme for the management of operational external artificial light emissions for that part has been submitted to and approved by the relevant planning authority. Although full details of lighting are not yet available, as the Applicant has committed to ensuring the lighting will be compliant with industry standards in relation to mitigating lighting effects to wildlife, no significant lighting effects to habitats are identified.

1.2.40 Operational noise in relation to effects on species using habitats surrounding the REP site, has been assessed and is reported at **Chapter 11, Terrestrial Biodiversity, paragraph 11.9.34 (6.1, Rev 1)**. Given the very small increases in noise levels from existing baseline levels no significant effects have been identified.

1.2.41 Potential changes to habitats as a result of emissions from the stack during operation are reported **Chapter 11 Terrestrial Biodiversity, paragraphs 11.9.21 – 11.9.25** of the **ES (PINS Refence Rev 1)**. Changes to habitats could occur as a result of emissions from the stack. In line with standard guidance, the modelling of air quality effects to biodiversity receptors has focused on habitats within designated areas. No air quality modelling has been undertaken of air quality effects to habitats located outside designated areas. No significant effects to any designated areas from air quality have been identified through the modelling work,

therefore it is considered reasonable to conclude that effects to habitats outside designated areas will also be Not Significant.

- 1.2.42 Traffic movements would be along established roads, and therefore direct impacts to habitat from traffic movements are not anticipated to occur.

*Loss of openness*

- 1.2.43 The existing REP site includes elements such as: private vehicle circulation areas; a jetty access ramp; parking; open container storage; contractor maintenance; an electrical substation and associated landscape/habitat areas. The only permanent loss of openness on the REP site would arise through the introduction of the Main REP Building. Potential effects on townscape and visual receptors are identified in **Chapter 9 Townscape and Visual Impact Assessment (TVIA)** of the **ES (6.1, Rev 1)**, in which Table 9.8 identified some significant residual effects in close proximity to the Proposed Development, such effects would need to be weighed against its wider benefits. The **Design Principles (7.4, APP-105)** which is secured through Requirement 2 at Schedule 2 to the **Draft DCO (3.1, Rev 1)** requires the Main REP Building to be designed with a stepped form (DP 1.02), to be appropriate to its location adjacent to the River Thames and RRRF (DP 1.03) and its composition and massing to be designed to mitigate visual impacts where practicable and appropriate, in particular from the Crossness Conservation Area, the Thames Path and Lesnes Abbey (DP 1.04).

*Air quality effects on Rainham and Thurrock Marshes*

- 1.2.44 **Chapter 7 Air Quality** of the **ES (6.1, APP-044)** and **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** consider the potential air quality effects, arising from the operation of REP, upon designated areas surrounding the REP site. The assessment followed industry standards in relation to assessing air quality impacts to designated areas. Due to the modelled rates of deposition to designated areas **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.23** of the **ES (6.1, Rev 1)** reports no significant effects.

*Potential effects on notable bird species including skylark, little ringed plover, Cetti's warbler, corn bunting, peregrine falcon, buzzard, barn owl, marsh harrier, snipe, kestrel, other red and amber listed bird species*

- 1.2.45 Information on the assemblage of birds recorded during breeding and wintering bird surveys undertaken at the REP site and surrounding area in 2018 is set out in paragraphs 1.1.20 and 1.1.21 above. The potential for incorporating a nesting platform for the peregrines within the Proposed Development is discussed in Table 2 of the **OBLMS (PINS Reference APP-107)**. The **OBLMS** is secured via Requirement 5 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final BLMS submitted to and approved by the local authority is in substantial accordance with the OBLMS submitted with the application. **Chapter 11 Terrestrial Biodiversity, paragraphs 11.9.11, 11.9.19, 11.9.34, 11.9.51, 11.9.58** of the **ES (6.1, Rev 1)** report no residual likely significant effects to important ecological receptors in respect of ornithology.

1.2.46 During operation, potential effects on wintering birds are considered to be low, arising primarily from increased river movements using the existing jetty. However, **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.32** of the **ES (6.1, Rev 1)** reports that it is considered likely that birds are already habituated to such movements and that the potential for birds to be significantly affected is very low. Operational noise effects from the Proposed Development were assessed and are reported in **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.34** of the **ES (6.1, Rev 1)** as being not significant.

*Potential lighting impacts to the migration of birds and light sensitive species*

1.2.47 **Chapter 11 Terrestrial Biodiversity, paragraphs 11.9.27 and 11.9.35** of the **ES (6.1, Rev 1)** report the assessment of the potential operational effects of exterior lighting required for REP on light sensitive receptors. The **Outline Lighting Strategy (6.3, APP-096)** establishes lighting design objectives which seek to minimise the potential effects of obtrusive light to within guideline levels. No significant lighting effects to birds have been identified. The operational lighting strategy is secured via Requirement 15 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that no part of Work Nos 1, 2, 3, 4, 5 and 6 may commence until a written scheme for the management of operational external artificial light emissions for that part has been submitted to and approved by the relevant planning authority. No significant lighting effects to habitats have been identified.

*Representations in relation to vibration impacts*

1.2.48 Potential effects arising from operational vibration were scoped out of the noise and vibration assessment by the Secretary of State at **Section 4.3** of the **Scoping Opinion (6.3, APP-062)**.

*Aquatic and terrestrial invertebrates, including the Shril Carder Bee*

1.2.49 **Chapter 11 Terrestrial Biodiversity, paragraph 11.7.32** of the **ES (6.1, Rev 1)** reports that a range of aquatic and terrestrial invertebrate species were recorded on site, including Shril Carder Bee.

1.2.50 **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.37** of the **ES (6.1, Rev 1)** reports that during operation, potential effects on invertebrates could arise from pollution incidents, however as the site will be managed in accordance with measures set out in the environmental permit, pollution incidents are considered unlikely.

*Representations in relation to slow worms*

1.2.51 **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.37** of the **ES (6.1, Rev 1)** reports that operational effects on reptiles could occur during the operational phase arising from pollution incidents or unplanned events, however, as explained above, the REP site will be managed in accordance with an Environmental Permit and pollution incidents are *considered unlikely*.

*Shading to fauna*

- 1.2.52 **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.30** of the **ES (6.1, Rev 1)** reports that potential effects on passage (spring/autumn) or over-wintering water bird species could occur in the form of displacement from overshadowing. However, the assessment identifies that areas immediately adjacent to the REP site are not of particular value to water birds over other similar sections in the local area. The assessment identifies that the risk of significant disturbance to water birds is low and that overall effects to overwintering birds will be not significant (paragraph 11.9.34, **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**).
- 1.2.53 **Section 11.9.26** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** discusses the potential effects to designated areas, in particular Crossness LNR from shading from the REP building. In response to concerns raised in relation to this issue, the Applicant has undertaken further detailed assessment as presented in **Report on Shading effects to Crossness Local Nature Reserve (LNR) (8.02.10)**. The assessment has demonstrated that due to the location, extent and duration of the shading, significant changes to habitats within the Crossness LNR, and species which they support are unlikely. The assessment supports the conclusion of the ES that effects will be not significant.

*Representations in relation to contamination and pollution impacts to water voles, with subsequent impacts to raptors.*

- 1.2.54 Operational activities will not affect habitats which support water voles and so potential operational effects on water voles are limited to the potential for unplanned incidents such as pollution spills. The REP site would be managed in accordance with stringent measures set out in the Environmental Permit, such that the risk of pollution incidents is absolutely minimised and strict response plans are put in place in the unlikely event that an incident occurs.

**Decommissioning Phase**

- 1.2.55 **Paragraph 11.13.8** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** reports that any potential effects on terrestrial biodiversity during the decommissioning phase are considered to be of a similar level to those during the construction phase. However, no comments specifically relating to the decommissioning phase were received.

**Conclusions**

- 1.2.56 A total of 34 relevant representations make reference to potential effects on terrestrial biodiversity.
- 1.2.57 An assessment of potential effects on terrestrial biodiversity (habitats and species) is presented in **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** which is informed by the findings of the assessments presented in **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** and **Chapter 8 Noise and Vibration** of the **ES (6.1, Rev 1)**.

- 1.2.58 The assessments have shown that there would be no residual likely significant effects arising from construction, operation or decommissioning of the Proposed Development in relation to terrestrial biodiversity.
- 1.2.59 Following technical design work and investigations carried out by the Applicant and UK Power Networks, the removal of the Electrical Connection route option through the Crossness LNR is confirmed in the Applicant's submission to the Examination at Deadline 2.
- 1.2.60 Appropriate mitigation measures would be put in place to ensure that any effects are limited as far as practicable. These measures are contained within the **CoCP (7.5, Rev 1)** and the **OBLMS (7.6, APP-107)**. Compensation for loss of habitats will be provided by the provision of a habitat compensation package which may include an area of open mosaic habitat on the flood bank, as well as a financial contribution to be made to facilitate off-site biodiversity enhancements.
- 1.2.61 The **CoCP** is secured via requirement 11 at **Schedule 2** to the **draft DCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority is in substantial accordance with the Outline CoCP submitted with the application.
- 1.2.62 The **OBLMS** is secured via requirement 5 at Schedule 2 to the **draft DCO (3.1, Rev 1)**, which requires that the final BLMS submitted to and approved by the local authority is in substantial accordance with the OBLMS submitted with the application.

### 1.3 Ground Conditions (TR-009)

#### Summary of Theme:

- 1.3.1 A total of five relevant representations make reference to possible ground pollution or soil / water contamination. Three of these relate specifically to potential effects on water voles. Table 1.3 below provides a summary of the list of respondents and aspects raised.

Table 1.4: Summary of Representations

RR Ref:	Respondent	Summary of Representation
RR-019	Laurence Pinturault Ep Tuft	Soil/water contamination especially in relation to water voles
RR-020	Mr T. J. Minns	Contamination from leaked liquids into the soil and water system
RR-024	Dr Susan Mitchell	Soil/water contamination especially in relation to water voles
RR-077	Karen Goldsmith	Risk of soil and water contamination
RR-085	Tara Lucas	Pollution generally

#### Response:

##### Introduction

###### *General*

- 1.3.2 An assessment of potential effects on and from ground conditions, including contamination and pollution, is presented in **Chapter 13 Ground Conditions** of the **Environmental Statement (ES) (6.1, Rev 1)**. Potential effects of the Proposed Development on waterbodies through pollution are presented in **Chapter 12 Hydrology, Flood Risk and Water Resources** of the ES (6.1, Rev 1) and potential effects on water voles are presented in **Chapter 11 Terrestrial Biodiversity** of the ES (6.1, Rev 1).
- 1.3.3 A site investigation using on site boreholes and laboratory analysis of soil and ground water samples was undertaken to characterise the site conditions and determine potential effects from contamination. The assessment findings are reported in **Technical Appendices I.2 Phase 2 Ground Conditions Assessment (2018a)** of the ES (6.3; APP-093) and summarised in **Table 13.15** of **Chapter 13 Ground Conditions** of the ES (6.1; Rev 1).

###### *Water Voles*

- 1.3.4 **Section 11.9** of **Chapter 11 Terrestrial Biodiversity** of the ES (6.1, Rev 1) reports the findings of an assessment of the potential effects of the Proposed Development on water voles.



- 1.3.5 Paragraph 11.7.33 of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** reports that water vole surveys were undertaken in mid-April to mid-June 2018 and July to September 2018 in accordance with current guidance (i.e. Water Vole Mitigation Handbook, The Mammal Society Mitigation Guidance Series, 2016).
- 1.3.6 These surveys confirmed the presence of this species within Crossness LNR, and within the boundary ditches of the REP site, the Main Temporary Construction Compound, and the Data Centre site.

### **Construction Phase**

#### *General*

- 1.3.7 **Paragraph 13.1.1** of **Chapter 13 Ground Conditions** of the **ES (6.1, Rev 1)** reports that there will be no significant effects to human or ecological receptors as a result of pollution or contamination arising during the construction phase. This is on the basis that relevant investigation, monitoring and assessment work is undertaken prior to commencement of construction, including protocols and specific personal protection measures included in the final Code of Construction Practice (CoCP). The CoCP is secured via Requirement 11 at **Schedule 2** to the **Draft DCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority is in substantial accordance with the Outline CoCP submitted with the application.
- 1.3.8 A number of mitigation measures, designed to limit potential effects from pollution incidents from the Proposed Development during construction are included in **paragraph 4.9.10** of the **Outline CoCP (7.5, Rev 1)**. These mitigation measures include:
- Best practice working methods to prevent both water pollution and adverse impacts upon the surface water drainage regime;
  - Siting stockpiles away from watercourses;
  - Refuelling on areas of hardstanding only, away from watercourses and surface water drains; and
  - Where necessary, installing construction site drainage to intercept and control run-off from worked areas.
- 1.3.9 **Paragraphs 13.9.19-13.9.22** of **Chapter 13 Ground Conditions** of the **ES (6.1, Rev 1)** conclude that there would be no likely significant effects from construction of the Electrical Connection on ground conditions.
- 1.3.10 Regarding the impacts from the installation of the Electrical Connection through Crossness LNR, the Applicant can confirm that following further technical design work carried out by the Applicant and UK Power Networks, the Applicant is removing the Election Connection route option through Crossness LNR. Accordingly, the Electrical Connection will not directly impact the Crossness LNR

and the impacts of this route option as reported in the ES are therefore no longer relevant. The removal of the Electrical Connection route option through the Crossness LNR is confirmed in the Applicant's submission to the Examination at Deadline 2 and the updated Land Plans (Revision 1) and Works Plans (Revision 1) submitted into the Examination at Deadline 2 do not contain this route option.

#### *Water Voles*

- 1.3.11 **Paragraph 4.7.3** of the **Outline CoCP (7.5, Rev 1)**, and paragraph 11.9.15 of **Chapter 11 Terrestrial Biodiversity** of the ES (**6.1, Rev 1**), state that any potential direct effects on water voles during construction of REP would be avoided through ensuring a 5m offset of all construction work from ditches which support water vole. The CoCP is secured via Requirement 11 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority is in substantial accordance with the Outline CoCP submitted with the application.
- 1.3.12 Regarding the Crossness LNR, as stated in the Introduction section above, the Electrical Connection route option through the Crossness LNR has now been removed from the Application.

#### **Operation**

##### *General*

- 1.3.13 During operation, the REP site would be managed in accordance with measures set out in the Environmental Permit (EP) (which is determined by the Environment Agency in a separate process) which include adherence to environmental risk assessments, site condition assessments and emergency spill response plans. Therefore, through the commitments made in the EP, pollution incidents would be mitigated as far as reasonably practical.

##### *Water Voles*

- 1.3.14 Potential operational effects on water voles are unlikely and are limited to the potential for unplanned incidents such as pollution spills. The REP site would be managed in accordance with stringent measures set out in the Environmental Permit, such that the risk of pollution incidents is absolutely minimised and strict response plans are put in place in the unlikely event that an incident occurs, as per **paragraph 11.9.37** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**.

##### *Decommissioning*

- 1.3.15 No comments specifically relating to the decommissioning phase were received.

### Conclusions:

- 1.3.16 A total of five relevant representations make reference to possible ground pollution or soil / water contamination. Three of these relate specifically to potential effects on water voles.
- 1.3.17 An assessment of potential effects on and from ground conditions, including contamination and pollution, is presented in **Chapter 13 Ground Conditions** of the Environmental Statement (ES) (**6.1, Rev 1**). Potential effects of the Proposed Development on waterbodies through pollution are presented in **Chapter 12 Hydrology, Flood Risk and Water Resources** of the ES (**6.1, Rev 1**) and potential effects on water voles are presented in **Chapter 11 Terrestrial Biodiversity** of the ES (**6.1, Rev 1**).
- 1.3.18 These assessments show that there would be no residual likely significant effects arising from construction, operation or decommissioning of the Proposed Development in relation to pollution, ground conditions or pollution effects on populations of water voles.
- 1.3.19 Appropriate mitigation measures would be put in place to ensure that any effects are limited as far as practicable. These measures are contained within the **Outline CoCP (7.5, Rev 1)**.
- 1.3.20 The CoCP is secured via Requirement 11 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority is in substantial accordance with the Outline CoCP submitted with the application.
- 1.3.21 Regarding the Crossness LNR, as stated in the Introduction section above, the Electrical Connection route option through the Crossness LNR has now been removed from the Application.

## 1.4 Need for the scheme (TR-013)

### Summary of Theme:

- 1.4.1 A number of relevant representations question the need for the Proposed Development, particularly the Energy Recovery Facility (ERF) component of the Proposed Development. Some of these questions relate to meeting the principles of the waste hierarchy, whilst others raise more general questions over the need for new waste management facilities in the London Borough of Bexley (LBB).

Table 1.5: Summary of Representations

RR Ref:	Respondent	Aspect
RR-007	Ethna Cooke	Need for the scheme  Waste hierarchy & impact on recycling rates
RR-010	Barry Roffey	Need for the scheme  Waste hierarchy & impact on recycling rates
RR-011	Christopher Smith	Need for the Proposed Development in the London Borough of Bexley
RR-012	Donna Zimmer	Waste hierarchy & impact on recycling rates
RR-013	Martin Watts	Need for the Proposed Development in the London Borough of Bexley
RR-016	Ruth Wild	Waste hierarchy & impact on recycling rates  Need for the Proposed Development in the London Borough of Bexley
RR-017	David Sorrell	Need for the scheme  Waste hierarchy & impact on recycling rates
RR-018	Graeme Mitchell	Need for the scheme  Waste hierarchy & impact on recycling rates
RR-019	Laurence Pinturault Ep Tuft	Need for the scheme  Waste hierarchy & impact on recycling rates

RR-021	Richard P Winston	Waste hierarchy & impact on recycling rates
RR-022	Daniel Bell	Waste hierarchy & impact on recycling rates
RR-024	Dr Susan Mitchell	Waste hierarchy & impact on recycling rates
RR-025	Ralph Todd	Need for the Proposed Development in the London Borough of Bexley
RR-031	David Putson (Councillor)	Waste hierarchy & impact on recycling rates
RR-044	Bernard Leahy	Waste hierarchy & impact on recycling rates
RR-048	Jonathan Rooks	Waste hierarchy & impact on recycling rates
RR-057	Mrs Margaret J White	Need for the Proposed Development in the London Borough of Bexley
RR-062	Francesca Sanna	Waste hierarchy & impact on recycling rates
RR-069	Anthony Sims	Waste hierarchy & impact on recycling rates
RR-070	Catherine Bradshaw	Need for the scheme  Waste hierarchy & impact on recycling rates
RR-071	Chris Rose	Waste hierarchy & impact on recycling rates
RR-076	James Butler	Waste hierarchy & impact on recycling rates
RR-078	Karen Sutton	Need for the Proposed Development in the London Borough of Bexley  Waste hierarchy & impact on recycling rates
RR-085	Tara Lucas	Need for the Proposed Development in the London Borough of Bexley  Waste hierarchy & impact on recycling rates

**Response:**

**Need for the Scheme**

1.4.2 Section 104(3) of the Planning Act 2008 provides that the application must be decided in accordance with any relevant National Policy Statements (NPSs), except

to the extent that one or more of subsections (4) to (8) applies. These exceptions include being in breach of international obligations, being in breach of any duty imposed on the Secretary of State, being unlawful by virtue of any enactment and the adverse impact of the proposed development outweighing the benefits.

1.4.3 In the case of the Application, the relevant NPSs are:

- the Overarching Energy NPS, EN-1;
- The Renewable Energy Infrastructure NPS, EN-3; and
- The Electricity Networks Infrastructure NPS, EN-5.

1.4.4 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 (NPS EN-1, paragraph 3.1.3). NPS EN-1 covers Energy from Waste electricity generation (see section 3.4) and NPS EN-3 specifically sets out the national policy for Energy from Waste (see section 2.5). Indeed, paragraph 2.1.2 of NPS EN-3 is explicit, "the [Government] should act on the basis that the need for infrastructure covered by this NPS has been demonstrated."

1.4.5 Paragraph 3.1.3 of NPS EN-1 goes on to state that the scale and urgency of the identified need is as described for each of them in Part 3. For Energy from Waste, which is classed as renewable electricity generation, that need is "urgent" (paragraph 3.4.3).

1.4.6 Accordingly, the choice of technology by the Applicant, being predominantly Energy from Waste, is not an issue that can be addressed in the Examination as the NPSs have identified an urgent need for that type of infrastructure. However, the following are matters for the Examination:

- whether the Proposed Development is in accordance with the waste hierarchy; and
- the balancing exercise between the benefits of the Proposed Development and its adverse impacts, as per section 104 of the Planning Act 2008. In carrying out this balancing exercise, the Secretary of State is to consider the Proposed Development's contribution to meeting the need for energy infrastructure (NPS EN-1, paragraph 4.1.3). Paragraph 3.1.4 of NPS EN-1 states that substantial weight should be given to the contribution that projects would make towards satisfying the identified need, but the precise amount or category of weight within the floor set of "substantial" should be proportionate to the anticipated extent of a project's actual contribution (NPS EN-1, paragraph 3.2.3).

### **The Waste Hierarchy & Impact on Recycling**

1.4.7 Regarding the waste hierarchy, the Proposed Development treats residual waste at the appropriate level of the waste hierarchy. REP supports both regional and local waste management needs. In spite of the welcome improvements made in the prevention, re-use and recycling of waste within London, over two million tonnes of

non-recyclable waste is currently sent to landfill or shipped overseas. As demonstrated in **The Project and its Benefits Report (PBR) (7.2, APP-103)**, London has a clear waste infrastructure capacity gap which urgently needs investment, particularly as only 2 out of the 11 active landfill sites where London's residual waste is currently sent for disposal will be operational after 2025. REP will help London transition to a low-carbon and self-sufficient city providing an appropriate alternative to treat London's waste which remains after recycling. This provides a substantial and reliable alternative to waste being sent to landfill or shipped overseas.

- 1.4.8 The ERF component of REP will not prevent recycling or hinder local recycling rates. Data gathered by WRAP and published in Table 1 in its Gate Fee Report 2018<sup>1</sup> clearly shows that the median gate fees at material recycling facilities and organic waste treatment facilities (e.g. anaerobic digestion facilities), which are preferred in the waste hierarchy, are significantly lower than gate fees at energy from waste plant and landfill facilities. To note, the median gate fees for recycling facilities and organic waste treatment facilities are also consistently lower than energy recovery or disposal each year. Waste management follows the most cost-effective solution, therefore the ERF component at REP will not hinder progress in that regard. Furthermore, WRAP's Gate Fee Report 2018 also shows that the median anaerobic digestion gate fee for England continues to decline. Therefore, REP will support the drive to move waste further up the waste hierarchy by preventing residual waste going to landfill and work alongside the Mayor's recycling targets and policy aspirations.
- 1.4.9 REP will include an Anaerobic Digestion facility which will accept green and food waste. Anaerobic digestion has been recognised as one of the best methods for food recycling and will therefore help contribute towards the target of zero biodegradable or recyclable waste being sent to landfill. It will also help contribute towards the Mayor's 2030 municipal recycling targets and provide an 'in borough' Anaerobic Digestion solution for the London Borough of Bexley, reducing carbon intensive transport arising from current operations. Outputs from the Anaerobic Digestion facility may also be used as a fuel in the ERF to generate electricity or transferred off-site for use as a fertiliser/soil conditioner.
- 1.4.10 As such, both the ERF and Anaerobic Digestion facility within REP will support the waste hierarchy in London, providing for both food and green wastes and residual wastes arising in the locality, supporting the goals of NPS EN-1. Further details are provided in **The Project and its Benefits Report (7.2; APP-103)** and the **Supplementary Report to the Project and its Benefits Report (7.2.1)**.
- 1.4.11 Regarding the Proposed Development's actual contribution to the identified urgent need, the Proposed Development will produce up to 96MW of electricity from Energy from Waste, solar panels, battery storage and anaerobic digestion. REP would bring forward the installation of new residual waste treatment capacity with

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<sup>1</sup> Gate Fees Report 2018 – Comparing the costs of alternative waste treatment options, WRAP  
[http://www.wrap.org.uk/sites/files/wrap/WRAP%20Gate%20Fees%202018\\_exec+extended%20summary%20report\\_FINAL.pdf](http://www.wrap.org.uk/sites/files/wrap/WRAP%20Gate%20Fees%202018_exec+extended%20summary%20report_FINAL.pdf)

increased efficiency over older technology. Such a development is wholly supported by the **Waste Strategy for England 'Our Waste, our Resources: a Strategy for England'** ('WRS 2018) as well as being a type of infrastructure that is needed and identified in both NPS EN-1 and NPS EN-3. As reported in **Paragraph 1.4.9** of the **Project and its Benefits Report (7.2, APP-103)**, REP will deliver a positive carbon outcome. As technology improvements are integrated into energy from waste facilities, modern plants are able to operate more efficiently and minimise emissions. As older existing energy generating technology reaches the end of its operational lifetime (such as those outlined in **paragraph 2.1.11** of the **Supplementary Report to the Project and its Benefits Report (7.2.1)**), new technology such as the Proposed Development is well suited to displace these obsolete facilities, as well as higher carbon generating facilities such as coal fired power plants. In addition, both the ERF and Anaerobic Digestion elements of REP move waste up the waste hierarchy, which mean they provide benefits over and above simply providing more electricity generation. Substantial weight at the upper end of the floor limit of "substantial" should therefore be applied to the Proposed Development in the balancing exercise of benefits versus adverse effects.

#### **Need for the Proposed Development in the London Borough of Bexley**

- 1.4.12 The Applicant considers the location of REP to be highly suitable for this type of development, optimising the use of an existing site and the associated jetty and wider River Thames. In deciding upon the location for REP, the Applicant has had regard to factors such as those described in Section 2.5 of NPS EN-3 which sets out factors influencing site selection in relation to 'Biomass and Waste Combustion' facilities. Furthermore, as per **paragraph 5.2.6** of **Chapter 5, Alternatives Considered** of the **ES (6.1, Rev 1)**, given that the Applicant owns the majority of the freehold of the REP site circa 85% with a further 9% currently under lease), along with the proximity of associated road and jetty links with the River Thames (and associated network of riparian Waste Transfer Stations in London), the location was considered ideally suited for the Proposed Development. REP can be developed without significant adverse effects on the environment or local community in Bexley.
- 1.4.13 The Anaerobic Digestion element of REP provides a facility to effectively and efficiently manage food waste arising from both the London Borough of Bexley and the local area. National Waste Policy - 'Our Waste, Our Resources: A Strategy for England' (WRS 2018) is promoting an increase in, and potential mandatory, food waste collection. With this, plus London Policy driving a significant increase in recycling and composting rates, the Applicant sees an increasing opportunity for infrastructure to manage food waste.
- 1.4.14 As such, REP will not only play a significant part in addressing London's residual waste management infrastructure shortfall but can also provide an in-borough solution for the London Borough of Bexley which currently sends its food and green waste out of the borough to be processed.



## 1.5 Noise and Vibration (TR-014)

### Summary of Theme:

1.5.1 A total of 15 relevant representations make reference to potential noise effects arising from the Proposed Development. Some of these comments relate to potential noise effects on biodiversity, and from increased traffic movements, whereas others raise more general concerns over potential noise disturbance.

1.5.2 See Table 1.5 below for a summary of respondents and issues raised.

Table 1.5: Summary of Representations

RR Ref	Respondent	Issue
RR-007	Ethna Cooke	Potential effects on sensitive habitats during construction
RR-016	Ruth Wild	Potential effects on sensitive habitats during construction
RR-019	Laurence Pinturault Ep Tuft	Noise effects on sensitive habitat
RR-020	TJ Minns	Potential effects to species (young) in Crossness Local Nature Reserve (LNR)
RR-024	Susan Mitchell	Noise disturbance to roosting and feeding wetland birds on both the Thames foreshore and the West Paddock within the reserve and adjacent to the proposed site
RR-025	Ralph Todd	Noise pollution of nearby Crossness LNR and rare wildlife
RR-026	Ann Turvey	Noise impacts on Crossness LNR
RR-030	Andrew Thompson	Noise impacts on Crossness LNR
RR-030	Andrew Thompson	Potential effects on sensitive habitats during construction  Ongoing noise disturbance during operation
RR-058	Heidi Barnes	Ongoing noise disturbance during operation
RR-062	Francesca Sanna	Increased noise levels from traffic
RR-070	Catherine Bradshaw	Potential noise effects on sensitive habitats
RR-077	Karen Goldsmith	Potential effects on sensitive habitats during construction
RR-078	Karen Sutton	Noise impacts on Crossness LNR
RR-085	Tara Lucas	Noise impacts on Crossness LNR

## Response:

### General

- 1.5.3 A noise assessment has been undertaken as part of the Environmental Impact Assessment (EIA) and is presented in **Chapter 8 Noise and Vibration** of the **Environmental Statement (ES) (6.1; APP-045)**.
- 1.5.4 The nearest noise sensitive 'receptors' (NSR), which are the locations used to measure and predict noise levels to assess the proposals during construction, operation and decommissioning of the project, were identified and agreed with the London Borough of Bexley's (LBB) Environmental Health Officer and include the closest residential properties to the south of the Proposed Development. These receptors include Hackney House apartments (approximately 760 m south east of the nearest boundary or the REP site) and Jutland House apartments (approximately 860 m south east of the nearest boundary of the REP site), both of which are in close proximity to the junction of Norman Road and Picardy Manorway in Belvedere. The third NSR is represented by dwellings along St. Thomas Road (approximately 1,000 m south east from the nearest boundary of the REP site) in Belvedere.
- 1.5.5 **Section 11.9** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** presents an assessment of potential likely significant noise effects on biodiversity receptors (species or habitats that are potentially affected by changes in noise levels) from construction, operation and decommissioning of the Proposed Development.
- 1.5.6 Existing noise levels have been monitored and predicted levels were modelled for a representative location within Crossness Local Nature Reserve (LNR) with respect to likely noise levels during construction and operation, to indicate how noise might affect protected species, in particular breeding birds.
- 1.5.7 An assessment of potential likely significant noise effects from increases in traffic is presented in **Section 8.9, Chapter 8 Noise and Vibration** of the **ES (6.1, APP-045)**.

### Construction Phase

#### *Noise effects on residential receptors*

- 1.5.8 **Paragraphs 8.9.4-8.9.16** of **Chapter 8 Noise and Vibration** of the **ES (6.1, APP-045)** present the assessment of potential effects of construction noise from the main REP site on nearest sensitive residential receptors. The assessment concludes at **paragraph 8.9.11** that at distances of 500 m from the REP site, noise levels would result in a negligible effect. The nearest dwellings to REP are over 500 m from the REP site and therefore any effects would be negligible.
- 1.5.9 **Paragraphs 8.9.37-8.9.44** of **Chapter 8 Noise and Vibration** of the **ES (6.1, APP-045)** present the assessment of potential construction noise effects on nearest

sensitive receptors as a result of construction of the electrical connection. Paragraph 8.9.43 concludes that any effects are considered to be negligible and not significant. Furthermore, it should be noted that the impact would be temporary, typically 5-7 days per 200 m section of electrical connection route.

*Noise effects on habitats (including the Crossness LNR) and species*

1.5.10 **Table 11.7 of Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** presents the assessment of potential construction noise effects on biodiversity receptors.

1.5.11 **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.11** of the **ES (6.1, Rev 1)** concludes that the elevated noise levels may cause some displacement of breeding birds in the vicinity of the REP site during construction. However, given the abundance of alternative habitats in the surrounding area, and the temporary nature of the potential effect, the effects to the identified breeding bird assemblage (species inhabiting a particular area or habitat type) is assessed to be Not Significant.

1.5.12 In relation to potential construction noise effects on other species, after consideration of mitigation measures set out in **paragraph 4.4.3** of the **Outline CoCP (7.5, Rev 1)**, including working in line with the recommendations of BS 5228 (for example, quiet working methods and acoustic screening as noted below) no significant effects from noise are anticipated to arise for either habitats or species. The CoCP is secured via Requirement 11 at **Schedule 2** to the **Draft DCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority is in substantial accordance with the **Outline CoCP (7.5, Rev 1)** submitted with the application.

1.5.13 Although assessed as Not Significant, it is envisaged that noise effects during construction can be further mitigated through several measures including:

- Ensuring the use of quiet working methods and the most suitable plant where reasonably practicable;
- Screening construction plant (i.e. by installing acoustic screens/enclosures) to reduce noise which cannot be reduced by increasing the distance between the noise source and the receptor;
- Orienting fixed and mobile plant equipment that is known to emit noise strongly in one direction so that the noise is directed away from dwellings or sensitive receptors, where possible; and
- Closing 'acoustic' (noise) covers to engines when they are in use or idling.

1.5.14 Further detail is provided in **Section 8.8 of Chapter 8 Noise and Vibration** of the **ES (6.1, APP-045)**.

1.5.15 These measures will be secured and implemented through a **Code of Construction Practice (CoCP)**, an outline of which has been prepared to

accompany the DCO Application (**7.5, Rev 1**). The CoCP is required to be prepared under Requirement 11 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final CoCP, submitted to and approved by the local authority, has to be substantially in accordance with the Outline CoCP submitted with the application.

1.5.16 In addition to the identified mitigation measures, the Applicant can confirm that following further technical design work carried out by the Applicant and UK Power Networks, the Applicant is removing the Election Connection route option (part of route option 1) through Crossness LNR. The removal of the Electrical Connection route option through the Crossness LNR is confirmed in the Applicant's submission to the Examination at Deadline 2 and the updated Land Plans (**2.1, Rev 1**) and Works Plans (**2.2, Rev 1**) submitted into the Examination at Deadline 2. This will further reduce noise effects to habitats (including the Crossness LNR) and species as far as reasonably practicable.

*Increased noise from traffic*

1.5.17 **Chapter 8 Noise and Vibration, paragraphs 8.9.1-8.9.3** of the **ES (6.1, APP-045)** provide an assessment of construction traffic noise.

1.5.18 Construction traffic noise has been assessed by considering the short-term increase in traffic flows during construction works following the principles set out in industry standard guidance: Calculation of Road Traffic Noise (CRTN) and the Design Manual for Roads and Bridges (DMRB), Volume 11, Section 3, Part 7.

1.5.19 The impact from road traffic noise, including an assumed percentage of Heavy Goods Vehicles (% HGVs), on the 'noise climate' (being the level of noise that already exists) of the surrounding area is based on the change in noise levels at NSRs due to a change in the volume of road traffic generated by the Proposed Development.

1.5.20 The assessment considers the traffic flows in the year 2022 for both the baseline scenario (i.e. without development) and the scenario with construction traffic, because 2022 is the year when the most construction journeys are predicted to occur. Noise levels for both these scenarios have been calculated in accordance with the principles of CRTN and DMRB. The difference between the two scenarios has then been used to assess the potential impacts.

1.5.21 Based on the review of noise levels, there is unlikely to be an increase in road traffic flows that would result in a change in noise levels above more than 1 decibel (dB). In view of the guidance set out in the DMRB, this increase of less than 1 dB would result in a negligible increase in noise levels and is therefore not a significant effect.

**Operation**

*Plant noise during operation on residential receptors*

- 1.5.22 An assessment of the proposed operating plant at REP has been undertaken in accordance with British Standard (BS) 4142:2014 to determine the likely noise impact on the NSRs.
- 1.5.23 The nearest NSRs include Hackney House apartments (approximately 760 m south east of the nearest boundary or the REP site) and Jutland House apartments (approximately 860 m south east of the nearest boundary of the REP site), both of which are in close proximity to the junction of Norman Road and Picardy Manorway in Belvedere. The third NSR is represented by dwellings along St. Thomas Road (approximately 1,000 m south east from the nearest boundary of the REP site) in Belvedere.
- 1.5.24 **Table 8.15 of Chapter 8 Noise and Vibration** of the **ES (6.1, APP-045)** presents the results of the BS 4142 assessment at each of the NSRs.
- 1.5.25 **Paragraph 8.9.28 of Chapter 8 Noise and Vibration** of the **ES (6.1, APP-045)** concludes that in considering the results of the numerical assessment, noise emission levels from REP are likely to be at least 5 dB below the background sound levels during daytime and night-time operation. As per **Table 8.5 of Chapter 8 Noise and Vibration** of the **ES (6.1, APP-045)** this level is therefore below the No Observable Effects Level (NOEL), meaning that noise would not be discernible at the nearest sensitive receptors.
- 1.5.26 Based upon this, the effects from operational noise from REP are considered to be Negligible and Not Significant. The resulting noise impact would also be within the threshold agreed with LBB and its Environmental Health Officer, as noted in **Table 8.2 of Chapter 8 Noise and Vibration** of the **ES (6.1, APP-045)**.

*Noise effects on habitats (including the Crossness LNR) and species*

- 1.5.27 **Tables 11.9 and 11.10 of Chapter 11 Terrestrial Biodiversity** of the **ES (PINS Reference Rev 1)** presents the results of the operational noise assessment on three separate biodiversity receptors. The results show minor increases against background levels of 3 dB during daytime operation and 6 dB during night-time operation.
- 1.5.28 **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.34 and Tables 11.9-11.10** of the **ES (6.1, Rev 1)** confirms that none of the predicted noise increases are above 70 dB which could result in a high response effect from species. The 70 dB threshold has been taken from the Institute of Estuarine & Coastal Studies<sup>2</sup>. Given that the noise levels will stay in a similar range to the existing 'baseline' (background levels), no likely significant effects are predicted.

*Increased noise from traffic movements*

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<sup>2</sup> Institute of Estuarine & Coastal Studies (2009) Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance. University of Hull.

- 1.5.29 Traffic noise predictions have been carried out to determine the change in traffic noise levels. The predicted changes in noise level were assessed at NSRs along road links where development traffic is to likely to be routed. The extent of the road links considered in the acoustic assessment of traffic movements aligned with road links identified in Table 6.4 and Table 6.11 of **Chapter 6 Transport** of the ES (**6.1, Rev 1**).
- 1.5.30 The assessment is based on a reasonable worst case scenario where all waste would be delivered to the site by road. In reality, this is unlikely to be the case, as the Proposed Development would seek to maximise the use of river transportation.
- 1.5.31 As per DMRB guidance, a change of 3 dB is accepted as the threshold of human perception of a change in noise levels in the long term (paragraph 8.5.35 of **Chapter 8 Noise and Vibration** of the ES (**6.1, APP-045**)). Paragraph 8.9.34 of **Chapter 8 Noise and Vibration** of the ES (**6.1, APP-045**) concludes that, based on the potential impacts being predicted to be below 3 dB, operational road traffic impacts are likely to be Negligible and are therefore not a significant effect.

#### **Decommissioning**

- 1.5.32 No comments specifically relating to the decommissioning phase were received. However, the Applicant can confirm that assessments have shown no likely significant effects from noise as a result of decommissioning of the Proposed Development.

#### **Conclusions**

- 1.5.33 A number of relevant representations raise comments over potential noise and vibration impacts arising from the Proposed Development. Some of these concerns relate to potential noise and vibration effects on biodiversity, whereas others raise more general concerns over potential noise disturbance.
- 1.5.34 The assessments presented in **Chapter 8 Noise and Vibration** and **Chapter 11 Biodiversity** of the ES (**6.1, Rev 1**) conclude that there are no likely significant effects arising from increased noise levels during construction, operation or decommissioning of the Proposed Development on human or ecological receptors or noise related to increases in traffic flows.

## 1.6 Public Consultation (TR-016)

### Summary of Theme:

- 1.6.1 One Relevant Representation refers to a lack of information being available to make a reasoned judgement about the Proposed Development.
- 1.6.2 This is summarised below in Table 1.6.

Table 1.6: Summary of Representations

RR-022	Daniel Bell	Transparency of information provided during public consultation events

### Response:

- 1.6.3 The Applicant has carried out thorough and detailed pre-application consultation with stakeholders including the local community, as described in the **Consultation Report (5.1, APP-019)** and summarised in **Section 1.7 of Chapter 1 Introduction of the ES (6.1, APP-038)**. This is evidenced by the application acceptance process as well as the non-statutory and statutory consultation exercise which the Proposed Development has passed through.
- 1.6.4 In relation to the consultation exercise, this comprised both non-statutory and statutory elements. As described in **Section 3 of the Consultation Report (5.1, APP-019)** the Applicant sought to inform and engage with a range of stakeholders from an early stage initially through non-statutory engagement. Early notification of the Applicant's intention to develop REP was published on the Cory Riverside Energy website on 1st February 2018 (**Appendix C.21 of the Consultation Report (5.1, APP-019)**) which stated that: *"..plans to build an integrated, low-carbon energy park...including waste energy recovery [bold added for emphasis], anaerobic digestion, solar panels, and battery storage..."*.
- 1.6.5 RR-022 suggests that the consultation material did not make clear that a second incinerator was being proposed however, the consultation material displayed at the non-statutory and statutory public exhibitions (see **Appendices D.2 and I.4 of the Consultation Report (5.1, APP-019)**) explicitly stated that:
- 1.6.6 *"Our proposed integrated Energy Park includes:*
- ***an Energy Recovery Facility, which processes non-recyclable waste and generates electricity, heat and recyclable ash [bold added for emphasis]***
  - Battery Storage, to store electricity and release it when it is needed most

- Anaerobic Digestion, for local food and green waste, from which we can generate compressed natural gas to power vehicles or even more electricity in addition to a certified fertiliser for improving agricultural land
- Solar Panels, to harness electricity from the sun
- Combined Heat and Power infrastructure on our site, which will enable the heat generated at the Energy Park to be supplied via a potential district heating network to c. 10,500 local homes and businesses“.

1.6.7 A dedicated information board (exhibition panel 7 in **Appendices D.2** and **I.4** of the **Consultation Report (5.1, APP-019)**) provided further details about the ERF element of REP, which stated: “...using the same high performing and proven combustion technology as our existing facility [RRRF]”.

1.6.8 Further, the information provided in the PEIR Non-Technical Summary (NTS) (see **Appendix G.2** of the **Consultation Report (5.1, APP-019)**) during the statutory consultation stated:

*“The Proposed Development is made up of a number of integrated energy generating components and would comprise:*

- ***An Energy Recovery Facility (ERF) [bold added for emphasis];***
- An Anaerobic Digestion facility;
- A Solar Photovoltaic Installation;
- Battery Storage; and
- Enabling infrastructure for Combined Heat and Power to the site boundary to provide for a potential future district heating pipe connection.”

1.6.9 The Applicant therefore does not accept that it was not clear on the face of the consultation materials and information made publicly available that an ERF (incinerator) was being proposed, as suggested in RR-022.

1.6.10 RR-022 asserts that information available during the public consultation was not adequate for consultees to make a reasoned judgement regarding the Proposed Development.

1.6.11 As set out in **Section 7.4** of the **Consultation Report (5.1, APP-019)**, the Applicant undertook statutory (section 47) consultation between 18 June and 30 July 2018 to give local people and stakeholders the opportunity to review further details about the Proposed Development, ask questions of the project team and provide feedback. During this phase of consultation, the Applicant presented preliminary environmental information relating to the environmental impact assessment (EIA) in a Preliminary Environmental Information Report (PEIR) (available at <https://riversideenergypark.com/consultation/materials>), which was available at the section 47 public exhibitions, at Upper Belvedere Community Library, Dartford



Library, LB Bexley Civic Offices and on the project website: [www.riversideenergypark.com/](http://www.riversideenergypark.com/). **Appendix I.4** of the **Consultation Report (5.1, APP-019)** provide copies of the information panels displayed at the statutory public exhibitions.

- 1.6.12 Paragraph 93 of the Department for Communities and Local Government (DCLG) (2015) Planning Act 2008: Guidance on the pre-application process ('the PA 2008 DCLG pre-application guidance') requires that *"For the pre-application consultation process, applicants are advised to include sufficient preliminary environmental information to enable consultees to develop an informed view of the project"*. **Annex 1** of the **Consultation Report (5.1, APP-019)** sets out how the Applicant has complied with the PA 2008 DCLG pre-application guidance; as described in that Annex the PEIR was produced in the same format as the ES and provided as much baseline information and preliminary findings of assessments as were available at the time, in order to ensure a meaningful pre-application consultation and detailed responses could be formulated by consultees.
- 1.6.13 The Applicant therefore considers that sufficient information was provided to allow consultees to make a reasoned judgement in relation to the Proposed Development, in accordance with paragraph 93 of the DCLG pre-application guidance.
- 1.6.14 RR-022 suggests that referring to the Proposed Development as an 'Energy Park' is misleading. The term Energy Park was carefully selected by the Applicant to reflect the integrated and multi-technology nature of the Proposed Development. The Applicant has sought to include complimentary renewable energy generation technologies in its proposals in order to maximise the energy generation potential of the site and deliver a scheme which responds to multiple national policies and the unequivocal need for low carbon / renewable energy generation in the UK.
- 1.6.15 As part of the acceptance process for the DCO application, section 55(4) of the Planning Act 2008, as amended, requires the Secretary of State to have regard to any Adequacy of Consultation representation (AoC) received from a local authority consultee. The AoC responses for the Proposed Development are available on the Planning Inspectorate website: (<https://infrastructure.planninginspectorate.gov.uk/projects/london/riverside-energy-park/?ipcsection=docs&stage=2&filter1=Adequacy+of+Consultation+Representation>). No concerns regarding the adequacy of consultation were raised by those authorities which responded, comprising: Thurrock Council; RB Greenwich; LB Bexley; LB Lewisham; Kent County Council; Gravesham Borough Council; East Sussex County Council; LB Tower Hamlets; Dartford Borough Council; Brentwood Borough Council; 'Be First' on behalf of LB Barking and Dagenham; and the Greater London Authority.

## Conclusions

- 1.6.16 One Relevant Representation questioned the transparency of consultation on the Proposed Development and suggests that the consultation materials did not make clear what was proposed.

- 1.6.17 The Applicant has undertaken thorough pre-application consultation including with statutory bodies and members of the public, providing detailed information on the proposals at each stage, including detailed preliminary environmental information at the statutory consultation stage.
- 1.6.18 The Applicant considers, as demonstrated in the extracts above, that the proposal of a second ERF (incinerator) as part of the Energy Park development was clear from the outset and on the face of all consultation documents. The Applicant also considers that adequate information was provided during consultation to enable all consultees to develop informed views of the project.
- 1.6.19 The AoC responses for the Proposed Development raised no concerns regarding the adequacy of consultation by those authorities which responded, which further demonstrates that transparent and adequate consultation was undertaken.

## 1.7 Safety (TR-018)

### Summary of Theme:

- 1.7.1 One Relevant Representation – (RR-057) raises the matter of safety of the Proposed Development, specifically in terms of fire or explosion risks.

Table 1.7: Summary of Representations

RR-057	Mrs Margaret J White	Fire and explosion risk, coupled with existing surrounding development, relative to capacity of local fire services

### Response:

- 1.7.2 Whilst the Relevant Representation (RR) is not specific, the respondent refers to 3 facilities in close proximity and it has therefore been assumed that the RR is primarily intended to relate to operational phase risks.

### Operation

- 1.7.3 The Respondent refers to three facilities within 5 km of Belvedere. As the Applicant is only aware of two existing facilities (Riverside Resource Recovery Facility – RRRF) and the Crossness Sewage Treatment Facility, the Proposed Development is assumed to be the third facility referred to.
- 1.7.4 It is noted that similar ERF facilities have an excellent safety record and a high standard of fire prevention and firefighting measures. For example, there have been no serious fires or explosion incidents at the existing RRRF whilst in operation. **Section 3.9 of Chapter 3 Project and Site Description** of the **ES (6.1, Rev 1)** addresses the potential issue of fire and explosion risk at REP.
- 1.7.5 As with RRRF, fire and explosion risk will be controlled at REP by adhering to the latest Codes of Practice and guidance. **Paragraph 3.9.1 of Chapter 3 Project and Site Description** of the **ES (6.1, Rev 1)** states that “...a full Hazard and Operational Study will be undertaken throughout the design phase of the project and REP will be designed, constructed, and operated in compliance with the current issues of:
- *BS 9999: Code of practice for fire safety in the design, management and use of buildings;*
  - *NFPA 850: Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations; and*
  - *WASTE 28: Reducing fire risk at waste management sites.”*

- 1.7.6 Avoiding and minimising fire risk involves good design and operational procedures (identified through **paragraph 3.9.1 Project and Site Description** of the **ES (6.1, Rev 1)**) to ensure that the risk of fire and explosion is limited as far as reasonably practicable. These measures are readily visible in the existing Riverside Resource Recovery Facility, including within the waste bunker e.g. by the use of water cannons.
- 1.7.7 In addition to the Hazard and Operational Study, the operational plant will be subject to an Environmental Permit (EP) which is required to be obtained from the Environment Agency. The EP includes a detailed Fire Prevention Plan, which mitigates against the risk of fire at the operational REP site, as far as reasonably practicable.
- 1.7.8 The Fire Prevention Plan has three main objectives, as follows:
- minimise the likelihood of a fire happening;
  - aim for a fire to be extinguished within 4 hours; and
  - minimise the spread of fire within the site and to neighbouring sites (which would include consideration of the surrounding buildings set out in the respondent's RR).
- 1.7.9 The Environment Agency will not grant an EP unless the Fire Prevention Plan sets out clearly how these objectives will be met.
- 1.7.10 The EP application for the Proposed Development, including the Fire Prevention Plan, has recently been the subject of a formal consultation process with statutory and non-statutory bodies and members of the public and no comments have been received.
- 1.7.11 The Proposed Development is also subject to Building Regulations, relevant insurance requirements and other statutory controls which address matters of fire safety and seek to ensure that the fire risk at a facility, and its potential interaction with others, are addressed and appropriately controlled. The London Fire Brigade responded to statutory s56 consultation on the REP application in its letter to the Applicant dated 28th January 2019 and raised no matters of concern in relation to fire or explosion safety, subject to:
- “An undertaking should be given that, access for fire appliances as required by Part B5 of the current Building Regulations Approved Document and adequate water supplies for firefighting purposes, will be provided.*
- This is without prejudice to any requirements or recommendations that may be made by the Authority under the Regulatory Reform (Fire Safety) Order 2005/Petroleum (Consolidation) Act 1928, the local authority or the Health and Safety Executive”.*
- 1.7.12 The Applicant can confirm that the requests made by the London Fire Brigade will be adhered to.

### **Decommissioning**

1.7.13 No comments specifically identifying the decommissioning phase were received.

### **Conclusions**

1.7.14 One relevant representation made reference to matters of safety (fire and explosion).

1.7.15 Various measures and procedures are required to be put in place to address fire and explosion risk and are secured in both the **Draft DCO (3.1, Rev 1)** and the separate EP application. Obligations are placed on the Applicant through Building Regulations and relevant insurance requirements are provided for.

1.7.16 The London Fire Brigade is satisfied, subject to access for fire appliances and adequate water supplies for firefighting purposes, which the Applicant has undertaken to provide, that there are no matters of concern.

## 1.8 Socio-economics (TR- 019)

### Summary of Theme:

- 1.8.1 A total of 10 Relevant Representations commented in relation to the potential for impacts on socio-economics, wellbeing and amenity as a result of the Proposed Development. These included comments relating to the potential loss of amenity space and effects on public and educational visitors to Crossness Local Nature Reserve (LNR). See **Table 1.8** below for a summary of respondents and issues raised.

Table 1.8: Summary of Representations

RR Ref	Respondent	Issue Aspect
RR-011	Christopher Smith	Loss of educational and recreational opportunity at Crossness LNR
RR-014	Robert Davies	Loss of educational and recreational opportunity at Crossness LNR
RR-015	Dr Lesley Catchpowle	Comment that demographics of the area will result in the public having little power to oppose the Proposed Development
RR-021	Richard P. Winston	Loss of recreational opportunity and enjoyment of Crossness LNR
RR-022	Daniel Bell	Loss of recreational opportunity and enjoyment of Crossness LNR
RR-024	Dr Susan Mitchell	Hinderance to public and educational visitors due to footpath closures from installation of electrical connection.
RR-058	Heidi Barnes	Loss of recreational / leisure opportunities
RR-069	Anthony Sims	Loss of educational opportunities and community at Crossness Nature Reserve
RR-078	Karen Sutton	Impact to community benefit (including education) of Crossness Nature Reserve. Comment about undermining an area which has received funding and community involvement.
RR-85	Tara Lucas	Reduction in quality of life for local residents

## Response:

### General

- 1.8.2 **Chapter 14 Socio-economics** of the **ES (6.1, APP-051)** provides an assessment of the likely significant socio-economic effects of the Proposed Development and concludes that there are no residual likely significant effects.
- 1.8.3 A Health Impact Assessment (HIA) was undertaken and accompanies the DCO application, this is presented in **Appendix K.1** of the **ES (6.1, APP-094)**. This considers potential effects of the Proposed Development on wellbeing, including on Crossness LNR and concludes that there are no residual likely significant effects.
- 1.8.4 In accordance with the **EIA Scoping Opinion** (issued by the Secretary of State, January 2018) (**PINS Reference APP-062**), the effects of tourism and recreation are sufficiently addressed elsewhere in the ES and therefore do not need to be specifically addressed in **Chapter 14 Socio-economics** of the **ES (6.1; Rev 1)**.
- 1.8.5 Potential effects on Crossness LNR in terms of biodiversity, noise, pollution, lighting, and visual effects are summarised in theme responses TR-001, TR-003, TR-014 and TR-024 to Relevant Representations.
- 1.8.6 Regarding the impacts from the installation of the Electrical Connection through Crossness LNR, the Applicant can confirm that following further technical design work carried out by the Applicant and UK Power Networks, the Applicant is removing the Electrical Connection route option through Crossness LNR. Accordingly, the Electrical Connection will not directly impact the Crossness LNR and the impacts of this route option as reported in the ES are therefore no longer relevant. The removal of the Electrical Connection route option through the Crossness LNR is confirmed in the Applicant's submission to the Examination at Deadline 2 and the updated Land Plans (Revision 1) and Works Plans (Revision 1) submitted into the Examination at Deadline 2 do not contain this route option.
- 1.8.7 Other than visual effects as described in TR-024, no likely significant residual effects on Crossness LNR have been identified.

### *Demographics and consultation*

- 1.8.8 The demographic make-up of the area surrounding the Proposed Development is characterised in **Section 14.7** of **Chapter 14 Socio-economics** of the **ES (6.1, Rev 1)**. The proportion of economically active people within the local area of the Proposed Development is slightly higher than in England as a whole (**Table 14.8** of **Chapter 14 Socio-economics** of the **ES (APP-051)**). **Table 14.10** of **Chapter 14 Socio-economics** of the **ES (6.3, Rev 1)** shows that the occupational profile of the local area is comparative to England as a whole. As shown in **Table 14.13**, educational attainment within the local area, wider area and wider region study areas is broadly comparable to that of England as a whole.

1.8.9 The Applicant consulted openly and widely on the Proposed Development through a number of media and has been clear on how people can respond, whether they oppose or support the Proposed Development. Further detail is provided in the themed response to Public Consultation (TR-016).

### **Construction**

#### *Educational and recreational opportunities at Crossness LNR*

1.8.10 **Chapter 11 Terrestrial Biodiversity, paragraph 11.9.1** of the **ES (6.1, Rev 1)** confirms that the footprint of the REP Site and Main Temporary Construction Compound does not affect Crossness LNR in terms of direct land take.

1.8.11 As identified in paragraph above, the Electrical Connection route option through Crossness LNR has been removed, therefore impacts of this route option as reported in the ES are no longer relevant.

1.8.12 **Section 14.2** of the **Health Impact Assessment (6.3, APP-094)** concludes that although there may be construction effects which may reduce the recreational quality of areas surrounding the REP site, it is set within an existing strategic industrial area, with a character of industrial development based around the river, and embedded mitigation would take account of any sensitive adjacent land uses and existing townscape character. As a result, it is considered that users will be attuned to the existing industrial setting and be unlikely to be deterred from using these recreational spaces.

1.8.13 The Crossness LNR would not be closed, nor adversely affected during construction and therefore would still be open to visitors for educational and recreational use, as is currently the case. **Section 11.9** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** confirms no likely significant residual effects on terrestrial biodiversity aspects of Crossness LNR. Therefore, it is considered that residents and visitors will still be able to benefit from the educational opportunities afforded by the species and habitats present there.

### **Operation**

#### *Educational and recreational opportunities at Crossness LNR*

1.8.14 As identified in paragraph above, the Electrical Connection route option through Crossness LNR has been removed, therefore impacts of this route option as reported in the ES are no longer relevant.

1.8.15 **Section 11.9** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** reports no likely significant residual effects on Crossness LNR. Therefore, it is considered that there is unlikely to be a loss of educational opportunities and residents and visitors will still be able to benefit from the educational opportunities afforded by the species and habitats present there.



- 1.8.16 **Section 14.2** of the **Health Impact Assessment (6.1, APP-094)** and **section 9.9 of Chapter 9 TVIA** of the **ES (6.1 APP-046)** conclude it is likely that views from outdoor recreational areas such as the Crossness LNR, Thames Path, National Cycle Route 1, as well as other PRowS and accessible open space immediately surrounding REP, may change during the operational phase, which may reduce the visual amenity and recreational quality of these areas. However, the REP site is set within an existing strategic industrial area, with a character of industrial development based around the river, and embedded mitigation would take account of any sensitive adjacent land uses and existing townscape character. As a result, it is considered unlikely that there would be a loss of recreational opportunities. It is therefore considered unlikely that users will be deterred from using these recreational spaces.
- 1.8.17 The assessment findings are that, although there may be adverse effects on visual amenity, the character of the surrounding area means that these impacts are unlikely to give rise to any significant effects to wellbeing.

### **Conclusions**

- 1.8.18 Several Relevant Representations question the potential for impacts on socio-economics and wellbeing and amenity as a result of the Proposed Development. These include potential loss of amenity space and effects on public and educational visitors to Crossness Local Nature Reserve (LNR).
- 1.8.19 With the exception of visual receptors, no likely significant effects have been identified on Crossness LNR during construction or operation of the Proposed Development. It is considered that users are unlikely to be deterred from using Crossness LNR and therefore loss of recreational and educational opportunities is unlikely.
- 1.8.20 The assessment findings are that, although there may be adverse effects on visual amenity, the character of the surrounding area means that these impacts are unlikely to give rise to any significant effects to wellbeing.
- 1.8.21 There are therefore anticipated to be no significant effects on enjoyment or education opportunities offered by Crossness LNR.

## 1.9 Source of Waste (TR-20)

### Summary of Theme:

A number of relevant representations raise matters in relation to the source of waste for the Proposed Development.

### Response:

- 1.9.1 REP is a 100% commercially funded venture and is not tied to long term local authority contracts.
- 1.9.2 Therefore, the definite origin of waste for disposal at REP cannot be confirmed at this time. However, REP's location within the capital means that it is likely to receive waste from across London. As noted in paragraph 4.1.7 of **Appendix K.4 Operational Waste Statement** of the **ES (7.2; APP-097)**, the majority of residual waste arriving at REP will arrive from one of the Applicant's feeder riparian waste transfer stations. The Applicant operates a network of riparian transfer stations along the River Thames (Smugglers Way- Wandsworth, Cringle Dock – Battersea, Walbrook Wharf- City of London and Northumberland Wharf – Tower Hamlets). The Applicant also has permission for an additional waste transfer station facility at the Port of Tilbury adjacent to the Incinerator Bottom Ash (IBA) processing facility. These facilities have the capacity (under existing permits and permissions) to handle the residual waste that would be transported to REP for recovery.
- 1.9.3 REP will therefore support London's policy aspiration for net self-sufficiency and help overcome the infrastructure gap with no public funding support or subsidy.
- 1.9.4 Whilst the ERF within REP is being promoted to take waste from within London, there is no justification for it to be limited to the capital, especially given its location and the river logistics network that can support it. As set out in the **Project and Its Benefits Report (7.2, APP-103)**, there is an identified need for approximately 2 million tonnes of residual waste management capacity across the waste planning authorities adjacent to London. Therefore, the ERF element of REP will be a suitable and reliable alternative to help treat London and the South East's waste which remains after recycling, helping to ensure that less waste is sent to landfill or shipped overseas, as well as help support Policy 7.26 of the adopted London Plan, Policy SI9 and SI15 of the Draft London Plan and Policy CS15 of LBB's Core Strategy through the use of the River Thames.

## 1.11 Construction Traffic (TR-022)

### Summary of Theme

1.11.1 A total of 12 relevant representations make reference to potential effects from construction traffic. These include comments relating to potential effects to sensitive habitat for biodiversity, impacts on local residents and impacts on the road network resulting from increased traffic movements during the construction stage. Comments relating to effects from Operational Traffic are addressed in a separate response (TR-023). **Table 1.9** provides a summary of respondents and aspects raised.

Table 1.9: Summary of Representation

RR-007	Ethna Cooke	Impact on sensitive habitat through increase in traffic during the construction phase
RR-016	Ruth Wild	Impact on sensitive habitat through increase in traffic during the construction phase
RR-026	Ann Turvey	Increased traffic from the proposed development on the Crossness Local Nature Reserve (LNR)
RR-030	Andrew Thompson	Impacts to the road network during Electrical Connection installation
RR-048	Jonathan Rooks	Environmental impacts on local residents due to construction
RR-057	Mrs Margaret J White	Increase in delays due to installation of the Electrical Connection
RR-062	Francesca Sanna	Increase in traffic leading to disruption of communities during the construction phase
RR-069	Anthony Sims	Worsening of local traffic during the construction phase
RR-070	Catherine Bradshaw	Impact on sensitive habitat through increase in traffic during the construction phase
RR-077	Karen Goldsmith	Increased construction traffic
RR-078	Karen Sutton	Impact on sensitive habitat through vehicle disturbance during the construction phase
RR-085	Tara Lucas	Impact on sensitive habitat through increase in traffic during the construction phase

## Response:

### Introduction

#### *General*

- 1.11.2 A traffic and transport assessment accompanies the DCO Application and is presented in **Chapter 6 Transport** of the **Environmental Statement (ES) (6.1, Rev 1)**.
- 1.11.3 **Paragraph 6.9.13** of **Chapter 6 Transport** of the **ES (6.1, Rev 1)** reports that there would be one junction with predicted temporary significant adverse construction effects in relation to driver delay (based on the worst case analysis). However, mitigation measures in the outline Construction Traffic Management Plan (CTMP) which is secured via Requirement 13 at Schedule 2 to the **Draft DCO (3.1, Rev 1)** and which requires the CTMP to be in substantial accordance with the **Outline CTMP** submitted with the application (**6.1 Rev 1**), reduces this effect to not significant. As stated in **paragraph 6.13.3** of **Chapter 6 Transport** of the **ES (6.1, Rev 1)** no residual likely significant effects are anticipated from the construction of the Proposed Development.

### Construction Phase

#### *Potential effects to sensitive habitat (including Crossness Nature Reserve) from increased construction traffic*

- 1.11.4 Potential effects to sensitive habitat from construction traffic could occur indirectly from increased air quality or noise impacts. In terms of indirect air quality effects from increased construction traffic movements, **paragraph 7.9.12** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** reports there will be significantly fewer vehicle movements relating to the construction phase than during operation, and therefore effects will not be more significant than those identified within the operational phase. **Paragraph 7.9.13** of **Chapter 7 Air Quality** of the **ES (PINS Reference APP-044)** reports the assessment of air quality effects from operational transport movements. The assessment reports negligible effects which are not significant. It is therefore concluded that air quality effects to sensitive habitat for biodiversity from construction movements would not be significant.
- 1.11.5 **Paragraphs 8.9.1-8.9.3** of **Chapter 8 Noise and Vibration** of the **ES (6.1, APP-045)** report the assessment of construction traffic noise.
- 1.11.6 Based on the review of noise levels, there is unlikely to be an increase in road traffic flows that would result in a change in noise levels above more than 1 decibel (dB). Following the guidance set out in the Design Manual for Roads and Bridges (DMRB), this increase of 1dB is considered to be a negligible increase in noise levels and is therefore not significant.
- 1.11.7 **Table 11.8** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** reports predicted construction noise levels of 57 and 68 decibels (dB) for two locations

(relating to Crossness LNR as identified in **paragraph 11.9.10** in **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**). Paragraph 11.9.19 of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** reports that as predicted construction noise would remain below 70 dB, effects to Terrestrial Biodiversity would not be significant. No transport related noise increases are identified that would breach the 70 dB threshold, and therefore no significant noise effects from construction traffic are considered likely to Terrestrial Biodiversity.

- 1.11.8 It is therefore considered that significant effects to sensitive habitat from increased construction traffic are unlikely.

*Potential impact to residents and the road network (including driver delay) during installation of the Electrical Connection.*

- 1.11.9 The assessment of the installation of the Electrical Connection is presented in **paragraphs 6.9.61 – 6.9.89** of **Chapter 6 Transport** of the **ES (6.1, 3.1)**. The assessment reports that there would be no significant effects (including effects to driver delay) from the installation of the Electrical Connection other than temporary severance of bus service nos. 229, 469 and school services nos. 602 and 669. **Chapter 6 Transport** of the **ES (6.1, Rev 1)** reports that these effects would vary from minor adverse to potentially major adverse. However, since the submission of the DCO, the route options for the Electrical Connection have been refined and route 2A is no longer being progressed, removing the potential for effect to these services within Erith. There would be an effect to these services where they cross the Strategic Road Network, along the Bronze Age Way and Queens Road. **Paragraph 6.9.67** of **Chapter 6 Transport** of the **ES (6.1, Rev 1)** states that due to the nature of the proposed works, for example the length of road works sections, the extent of these potential effects is not currently fully known. Measures to mitigate effects from the construction of the electrical connection would be detailed as part of the Construction Traffic Management Plan (CTMP), an outline of which was provided with the Application **Outline CTMP (Appendix L of Appendix B.1 Transport Assessment** to the **ES (6.2, Rev 1)**. The **outline CTMP** comprises complementary elements of logistics planning but also incorporates the available information relating to how workforce traffic would be managed at each stage of construction, helping to minimise the impact of the construction period. Compliance with the CTMP, which is to be in substantial accordance with the submitted Outline CTMP, is secured (for each part of construction) via Requirement 13 at Schedule 2 to the **Draft DCO (PINS Reference Rev 1)**. With the inclusion of mitigation measures, effects from the installation of the Electrical Connection would be not significant.

*Potential Impact on local residents from construction traffic*

- 1.11.10 The potential effects on local residents arising from the installation of the Electrical Connection (in terms of severance to local bus services) is addressed in paragraph 1.1.9 of this response.
- 1.11.11 The assessment of potential construction effects of the REP Site and Main Temporary Construction Compounds on local residents (in terms of severance,

- pedestrian delay and amenity and pedestrian fear and intimidation) is reported in **paragraphs 6.9.2–6.9.8, 6.9.16–6.9.21 and 6.9.22–6.9.26 of Chapter 6 Transport of the ES (6.1, Rev 1)**. The assessment findings are that construction effects would not be significant.
- 1.11.12 To further reduce the effects from the construction phase, a number of mitigation measures (which include safety and environmental standards; designated routes; delivery scheduling and monitoring; use of holding, consolidating and vehicle call off areas; freight by water/rail; design for manufacture and assembling off-site; reuse of material on site; smart procurement; collaboration amongst other sites in the area and a workforce travel plan) are included in **Section 9 of the Outline CTMP (Appendix L of Appendix B.1 Transport Assessment to the ES (6.3, Rev 1))**. The CTMP is secured via Requirement 13 at **Schedule 2 to the Draft DCO (3.1, Rev 1)**, which requires the CTMP to be substantially in accordance with the Outline CTMP (**PINS Reference APP-066**).
- 1.11.13 **Paragraph 7.9.12 of Chapter 7 Air Quality of the ES (6.1, Rev 1)**, acknowledges the increase in traffic movements associated with the construction of the Proposed Development, however the assessment finds that potential effects in terms of air quality are not significant.
- 1.11.14 **Paragraphs 8.9.1-8.9.3 of Chapter 8 Noise and Vibration of the ES (6.1, Rev 1)** report the assessment of construction traffic noise. Construction traffic noise has been assessed by considering the short-term increase in traffic flows during construction works. This method follows the principles set out in the government's Calculation of Road Traffic Noise (CRTN) and the DMRB, Volume 11, Section 3, Part 7.
- 1.11.15 The potential impact from road traffic noise, which includes an assumed percentage of Heavy Goods Vehicles (% HGVs), on the 'noise climate' (being the type and level of noise that already exists) of the surrounding area, is based on the change in noise levels at Noise Sensitive Receptors (the locations where measurements and predicted noise level assessments are undertaken) due to a change in the volume of road traffic generated by the Proposed Development.
- 1.11.16 The assessment considers the traffic flows in the year 2022 for both the baseline scenario (i.e. without development) and the scenario with construction traffic, because 2022 is the year when the most construction journeys are predicted to occur and therefore represents the reasonable worst case. Noise levels for both these scenarios have been calculated in accordance with the principles set out in CRTN. The difference between the two scenarios has then been used to assess the potential impacts.
- 1.11.17 Based on the review of noise levels, there is unlikely to be an increase in road traffic flows that would result in a change in noise levels above more than 1 decibel (dB). Following the guidance set out in the DMRB, this increase of 1dB is considered to be a negligible increase in noise levels and is therefore not significant.

*Potential Impact on local road network from construction traffic*

- 1.11.18 The assessment of construction effects of the REP Site and Main Temporary Construction Compounds on the local road network (in terms of driver delay and accidents and road safety) is reported in paragraphs 6.9.9 – 6.9.15 and **6.9.27 – 6.9.31** of **Chapter 6 Transport** of the **ES (6.1, Rev 1)**. The assessment findings are that temporary construction effects would not be significant with the exception of a moderate adverse effect on the A206/A2016/Bexley Road Roundabout.
- 1.11.19 To reduce the identified potential effects during the construction phase, a number of mitigation measures are included in **Section 9** of the **Outline CTMP (6.3, Rev 1)**. These measures include safety and environmental standards; designated routes; delivery scheduling and monitoring; use of holding, consolidating and vehicle call off areas; freight by water/rail; design for manufacture and assembling off-site; reuse of material on site; smart procurement; collaboration amongst other sites in the area and a workforce travel plan. The CTMP is secured via Requirement 13 at Schedule 2 to the **Draft DCO (3.1, Rev 1)** which requires the CTMP to be substantially in accordance with the **Outline CTMP (6.3, Rev 1)**.

**Conclusions:**

- 1.11.20 A total of 12 relevant representations make reference to possible effects from construction traffic relating to ecological habitat, local residents and the local road network.
- 1.11.21 An assessment of potential construction transport effects is presented in **ES Chapter 6 Transport (6.1, Rev 1)**, with related assessments in **Chapter 7 Air Quality (6.1, Rev 1)**, **Chapter 8 Noise (6.1, Rev 1)** and **Chapter 11 Terrestrial Biodiversity (6.1, Rev 1)**.
- 1.11.22 These assessments show that there would be no residual likely significant effects arising from construction traffic.
- 1.11.23 Appropriate mitigation measures would be put in place to ensure that potential effects are limited as far as practicable. These measures are contained within the **Outline CTMP (6.3, Rev 1)**, which is secured via Requirement 13 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**.

**1.12 Operational Road and River Transportation (TR-023)**

**Summary of Theme:**

- 1.12.1 A total of 9 relevant representations make reference to operational road and river transportation. These include comments relating to potential impact on local residents and congestion on the road network and the river network from increased movements delivering waste during the operation of REP. Comments relating to effects of Construction Traffic are addressed in a separate response (TR-022). Table 1.10 provides a summary of respondents and matters raised.

**Table 1.10: Summary of Representation**

RR Ref:	Respondent	Issue
RR-016	Ruth Wild	Impact on sensitive habitat through increase in traffic during operation
RR-020	Mr T Minns	Operational vehicle movement adjacent to the Crossness Nature Reserve, and vibration effect on species
RR-026	Ann Turvey	Increased traffic from the proposed development on the Crossness Nature Reserve
RR-030	Andrew Thompson	Increase in operational traffic, especially on Norman Road
RR-048	Jonathan Rooks	Environmental impacts on local residents due to transport of waste during operation
RR-057	Mrs Margaret J White	Increase in traffic movements in already congested areas during operation
RR-062	Francesca Sanna	Increase in traffic during operation leading to disruption to communities
RR-069	Anthony Sims	Worsening of local traffic during operation
RR-077	Karen Goldsmith	Increased operational traffic on both the river and road network

**Response:**

**Introduction**

*General*

1.12.2 A traffic and transport assessment accompanies the DCO Application and is presented in **Chapter 6 Transport** of the **Environmental Statement (ES) (6.3, Rev 1)**.

1.12.3 As stated in **paragraphs 6.9.32 – 6.9.60** and **6.13.3** and **6.13.4** of **Chapter 6 Transport** of the **ES (6.1, Rev 1)**, no likely residual significant traffic and transport effects are anticipated from the operation of the Proposed Development when considering both the 100% waste delivery by road scenario, and the 'nominal' scenario of 25% of waste being delivered by road. The assessment in the ES considers both scenarios and identifies the 'worst case' scenario to provide a robust assessment approach., when considered either in isolation or in combination with other planned developments .



### **Operational Phase**

*Potential effects to sensitive habitat from increased operational traffic (including vibration)*

- 1.12.4 Direct effects on habitat from operational traffic movements are not anticipated to occur as there is no direct land take required during the operation of REP. Potential indirect effects relating to air quality, noise and vibration are reported in **paragraph 7.9.13** and **7.5.89** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**, and **paragraph 8.9.34** of **Chapter 8 Noise and Vibration** of the **ES (6.1, APP-045)**. These assessments all find that no significant effects are likely to arise from operational traffic.

*Potential effects to local residents of increased operational traffic (including transport of waste)*

- 1.12.5 The assessment of potential operational effects of the Proposed Development on the local community, in terms of severance, pedestrian delay and amenity and pedestrian fear and intimidation, is reported in **paragraphs 6.9.32-6.9.38, 6.9.43-6.9.47** and **6.9.48-6.9.52 Chapter 6 Traffic** of the **ES (6.1, Rev 1)**. The assessment finds that the potential effects of operational traffic would not be significant. This is based on a worst case 100% by road scenario when in reality, the River Thames will be utilised for the majority of operational movements.
- 1.12.6 To seek to minimise potential effects of traffic during the operational phase, a number of mitigation measures are set out in **Section 6** of the **Operational Worker Travel Plan (6.3, Rev 1)** which is secured via Requirement 14 at **Schedule 2** to the **Draft DCO (3.1, Rev 1)**. Such measures including encouraging cycling, walking and use of public transport, sustainable car use and raising the awareness and benefits of sustainable travel to encourage non-car modes of travel amongst the workforce for REP.
- 1.12.7 Operational air quality effects, including those relating to operational traffic, are reported in **paragraphs 7.9.13–7.9.19** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** and are not significant.
- 1.12.8 Noise predictions for operational traffic have been carried out to determine the potential change in traffic noise levels arising from operation of the Proposed Development. The predicted changes in noise level were assessed at Noise Sensitive Receptors (the locations where measurements and predicted noise levels to assess the proposals are undertaken) along road links where operational traffic is likely to be routed, as agreed with relevant consultees.
- 1.12.9 **Paragraph 8.9.34** of **Chapter 8 Noise and Vibration** of the **ES (6.1, Rev 1)** concludes that, based on the potential impacts being predicted to be below 3 dB (as referenced within the Design Manual for Roads and Bridges (DMRB) (Highways Agency 2011)), operational road traffic impacts are likely to be negligible and are therefore not a significant effect.

*Potential impact (worsening) on local road network (including Norman Road) from operational traffic*

- 1.12.10 The assessment of potential operational effects of the Proposed Development on the local road network (in terms of driver delay and accidents and road safety) is reported in paragraphs 6.9.39 – 6.9.42 and 6.9.53 of **Chapter 6 Traffic** of the **ES (6.1, Rev 1)**. The assessment findings are that operational effects would be not significant.
- 1.12.11 To seek to minimise potential effects of traffic during the operational phase, a number of mitigation measures are set out in **Section 6** of the **Outline Operational Worker Travel Plan** (Appendix M to the Transport Assessment, Appendix B.1 to the ES) (**6.3, APP-066**) which is secured via Requirement 14 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**. Such measures include encouraging cycling, walking and use of public transport, sustainable car use and raising the awareness and benefits of sustainable travel to encourage non-car modes of travel amongst the workforce for REP.

*Potential impact on River Thames network from operational vessel movements*

- 1.12.12 The assessment of the potential effects on the level of service and safety for vessels on the River Thames is presented in the **Navigational Risk Assessment (NRA)**, Appendix B.2 of **Chapter 6 Transport** of the **ES (6.1, Rev 1)**.
- 1.12.13 The NRA reports at paragraph 7.3, that the additional vessel movements from the operation of the Proposed Development would have a negligible effect on navigational safety of the River Thames.

**Conclusions**

- 1.12.14 A total of nine relevant representations make reference to possible effects from operational traffic, relating to potential effects to habitat, local residents, the local road network and the river network.
- 1.12.15 An assessment of potential operational transport effects is presented in Environmental Statement (ES) **Chapter 6 Transport (6.1, Rev 1)**, with related assessments in **Chapter 7 Air Quality (6.1, Rev 1)** and **Chapter 8 Noise (6.1, Rev 1)**. The assessment considers a 100% by road 'reasonable worst case' operational scenario, however it is expected that REP would normally operate under a 75% by river and 25% by road 'nominal' scenario thereby reducing effects from the reasonable worst case.
- 1.12.16 These assessments show that there would be no residual likely significant effects arising from operational road or river traffic.
- 1.12.17 Appropriate mitigation measures would be put in place to ensure that effects are limited as far as practicable. These measures are set out in the **Outline Operational Worker Travel Plan** (Appendix M to the Transport Assessment,

Appendix B.1 to the ES) (6.3, APP-066) which is secured via Requirement 14 at Schedule 2 to the Draft DCO (3.1, Rev 1).

### 1.13 TVIA (TR-024)

#### Summary of Theme:

1.13.1 A total of 10 respondents refer to potential effects on townscape and visual amenity as a result of the Proposed Development. Some responses relate to potential visual effects and intrusion on Crossness Local Nature Reserve (LNR) and Thames Marshes whereas others relate to the potential cumulative effects with other existing and committed developments.

1.13.2 Table 1.11 provides a summary of respondents and aspects raised.

Table 1.11: Summary of Representations

RR Ref	Respondent	Aspect
RR-012	Donna Zimmer	Visual intrusion in relation to Crossness Nature Reserve
RR-019	Laurence Pinturault Ep Tuft	Visual intrusion of REP in relation to Thames Marshes
RR-022	Daniel Bell	Visual impact of REP on users of Thames Path and Crossness Nature Reserve
RR-023	Barbara Fairbairn	Positioning of EfW plant – fourth within 5 miles of Belvedere
RR-024	Dr Susan Mitchell	Visual intrusion of REP in relation to Thames Marshes
RR-025	Ralph Todd	Visual intrusion in relation to Crossness Nature Reserve
RR-030	Andrew Thompson	Impact on Crossness Nature Reserve during the construction phase
RR-071	Chris Rose	Cumulative visual

RR Ref	Respondent	Aspect
		effects of REP and data centre on Crossness Nature Reserve
RR-077	Karen Goldsmith	Visual impact of another industrial structure on the River Thames
RR-078	Karen Sutton	Visual intrusion of REP in relation to users of Crossness Nature Reserve

**Response:**

**General**

- 1.13.3 A townscape and visual impacts assessment (TVIA) has been prepared to accompany the DCO Application and is presented in **Chapter 9 TVIA** of the **Environmental Statement (ES) (6.1, Rev 1)**.
- 1.13.4 The TVIA presents the assessment of potential likely significant effects of the Proposed Development on the townscape features and character of the Application Site, and the townscape character of the study area. It also provides an assessment of potential effects on people's views and visual amenity arising from the construction, operation and decommissioning of the Proposed Development. The proposed view locations for the TVIA were discussed and agreed with stakeholders, including the London Borough of Bexley, as part of the assessment process.
- 1.13.5 From the majority of townscape and visual receptors assessed, construction related effects would be minor or negligible, and therefore not significant, as summarised in Table 9.5 of **Chapter 9 Townscape and Visual Impacts Assessment (TVIA)** of the **ES (6.1, Rev 1)**.
- 1.13.6 A **Design and Access Statement (DAS) (7.3, APP-104)** was submitted with the DCO Application identifying the design evolution of the REP site and the Main REP Building. Design principles have been established as presented in the Design Principles document submitted with the DCO Application (**7.4, APP-105**), and secured in Requirement 2(2) of the draft Development Consent Order (dDCO) (**3.1, Rev 1**).

### **Construction Phase**

#### *Effects on Crossness Local Nature Reserve (LNR)*

- 1.13.7 **Table 9.8** in **Chapter 9 TVIA** of the **ES (6.1, Rev 1)** summarises the predicted residual townscape and visual effects of construction of the Proposed Development on Crossness LNR.
- 1.13.8 Visual receptors at viewpoints 2 and 3 were selected for the visual effects assessment as they are representative of people's views when using public rights of way (PRoW) within the Crossness LNR. These were selected in accordance with relevant guidance and following a site visit to collect baseline photography. The visual effects upon these visual receptors during the construction phase would be of limited duration and would not necessarily all occur at the same time. In addition, the REP site and Main Temporary Construction Compounds are located within a diverse industrial and urban area, adjacent to existing large-scale industrial buildings, so construction activity would not be completely discordant with the character of or activities in this area. The visual effects on people's views from Viewpoints 2 and 3 within Crossness LNR have been assessed as being Moderate Adverse levels of significance of effect, and therefore Significant during construction, however these effects are temporary in nature.
- 1.13.9 Townscape receptors assessed in the TVIA include 'Designated Public Open Space and Landscapes and scrubland habitats', which includes the Crossness LNR. **Chapter 9 TVIA** of the **ES (6.1, Rev 1)** assessed that during construction there would be temporary disturbance to the Crossness LNR as a result of Route 1 of the Electrical Connection Works. Although adverse in nature, the effect would be temporary and of a Minor level of significance that would be Not Significant. However, the Applicant can confirm that following further technical design work carried out by the Applicant and UK Power Networks, the Applicant is removing the Election Connection route option 1 through Crossness LNR. The removal of the Electrical Connection route option through the Crossness LNR is confirmed in the Applicant's submission to the Examination at Deadline 2 and the updated Land Plans (Revision 1) and Works Plans (Revision 1) submitted into the Examination at Deadline 2.

#### *Effects on the Thames Marshes*

- 1.13.10 **Table 9.8** in **Chapter 9 TVIA** of the **ES (6.1, Rev 1)** summarises the predicted residual effects during the construction phase of the Proposed Development. Effects on people's views from viewpoint 15, a bridleway located within the Western Thames Marshes landscape character area, which arise as a result of the Proposed Development, were assessed as being of a Negligible level of significance, and therefore Not Significant.
- 1.13.11 The Western Thames Marshes landscape character area is a townscape receptor for the proposed Electrical Route, and is assessed as being subject to temporary disturbance in the character of road corridors as a result of road digging for the

Electrical Connection works. However, the change, although Adverse, would be of a Negligible level of significance of effect, and therefore Not Significant.

*Effects on the Thames Path*

1.13.12 **Table 9.8** in **Chapter 9 TVIA** of the ES (**6.1, Rev 1**) summarises the predicted residual townscape and visual effects of construction of the Proposed Development on the Thames Path.

1.13.13 The visual receptors of SA1 - East and SA1 – West represent people's views when travelling along the Thames Path. Effects upon people's views from the Thames Path during the construction phase would be of limited duration and the predicted residual temporary visual effects would not necessarily all occur at the same time. In addition, the REP site and Main Temporary Construction Compounds are located in a diverse industrial and urban area, adjacent to existing large-scale industrial buildings, so construction activity would not be completely discordant with the appearance, character of or activities in this area. The visual effects on people's views from the Thames Path have been assessed as Moderate Adverse and therefore Significant during construction, however these effects are temporary in nature.

1.13.14 Effects on the Thames Path as a townscape receptor, are considered as part of the receptor: 'Long distance paths, London and National Cycle Routes, Public Rights of Way'. During construction, the effect would be Adverse and of a Minor level of significance, that is Not Significant; arising because the character of a small section of the recreational route would temporarily change through intervisibility with the construction works.

**Cumulative effects**

1.13.15 Other Developments which have the potential to give rise to likely significant townscape and visual cumulative effects when considered alongside the Proposed Development are identified in Appendix A.4 **Cumulative Assessment - Matrix** of the ES (**6.3, APP-065**) and their location is shown on **Environmental Statement Figures, Figure 9.10 Cumulative TVIA: Cumulative Developments Location Plan** of the ES (**6.2, APP-057**) along with available information on their potential height. The methodology used for the Cumulative Townscape and Visual Effects Assessment (CTVEA) is set out in Appendix E.1 **Townscape and Visual Impact Assessment Methodology of the ES (6.3, APP-072)**.

1.13.16 **Paragraph 9.10.7** of **Chapter 9 TVIA** of the ES (**6.1, Rev 1**) summarises potential cumulative townscape effects upon the existing scale, grain and massing of the urban area. Sites 008 (Data Centre), 0014 (Savills bus depot, ind. & offices); and 0012 (TRE Belvedere Industrial) are 'Other Developments' which would give rise to an increase in the scale and massing of development in the area. These cumulative developments and their construction footprints are smaller than REP, and therefore on balance it is considered that there would be an Adverse effect that is of a Minor level of significance and therefore would be Not Significant.

- 1.13.17 **Paragraph 9.10.13 Chapter 9 TVIA** of the **ES (6.1, Rev 1)** summarises the potential cumulative visual effects on people's views from Public Rights of Way at Crossness LNR.
- 1.13.18 Committed development including Savills bus depot, ind. & offices, Data Centre, and TRE Belvedere Industrial includes large scale industrial buildings / offices of between 20 and 30 m in height. In the context of these committed developments, the addition of the Proposed Development would result in an additional large scale development close to Crossness LNR and therefore is assessed as leading to temporary Adverse cumulative visual effects on people's views from PRow at Crossness LNR during construction, which are of Moderate levels of significance and therefore Significant; as with the Proposed Development when considered in isolation.

### **Operation**

#### *Effects on Crossness LNR*

- 1.13.19 **Table 9.8 in Chapter 9 TVIA** of the **ES (6.1, Rev 1)** summarises the potential townscape and visual effects of the Proposed Development during operation on Crossness LNR.
- 1.13.20 Visual receptors at viewpoints 2 and 3 were selected for the visual effects assessment as they are representative of people's views when using public rights of way (PRow) within the Crossness LNR. Although Moderate, and therefore Significant, adverse visual effects are identified upon people's views from these locations, the REP site is within an existing industrial area, with a character of industrial development based around the river and embedded mitigation would seek to take account of adjacent land uses and existing townscape character. The buildings and stack would be seen in the context of other industrial buildings, other existing vertical elements such as wind turbines and other stacks and would be seen as a new feature.
- 1.13.21 A **DAS (7.3, APP-104)** accompanies the DCO Application and describes the design evolution of the REP site and the Main REP Building. As a result of the process set out in the DAS, a stepped roof design was selected which will seek to ensure that the visual impact of the Main REP Building on Crossness LNR is minimised from the outset of the detailed design process. The stepped design allows the maximum height of the Main REP Building to be reduced to the lowest level reasonably practicable and minimises the building massing required to accommodate the internal equipment and facilities.
- 1.13.22 A **Design Principles** document accompanies the DCO Application (**7.4, APP-105**), secured by Requirement 2(2) included in the **dDCO (3.1, Rev 1)** which ensures that the beneficial outcome from the stepped design is further enhanced by a commitment to minimise massing and locate the Main REP Building as far from Crossness LNR as reasonably practicable. This represents the embedded mitigation in respect of minimising visual intrusion and lighting effects on the reserve.



1.13.23 Townscape receptors assessed in the TVIA include 'Designated Public Open Space and Landscapes and scrubland habitats', which includes the Crossness LNR. The TVIA assessed that at operation there would be loss of connectivity between the designated marshland and the River Thames. The townscape effect upon Designated Public Open Space and Landscapes and Scrubland habitats, would be adverse and of a Moderate level of significance that would be Significant.

*Visual effects on Thames Marshes*

1.13.24 **Table 9.8** in **Chapter 9 TVIA** of the **ES (6.1, Rev 1)** summarises the predicted residual effects of operation of the Proposed Development.

1.13.25 Effects on people's views from viewpoint 15, a bridleway located within the Western Thames Marshes landscape character area, which arise as a result of the Proposed Development, were assessed as adverse, and of a Negligible level of significance, which is Not Significant.

*Effects on the Thames Path*

1.13.26 **Table 9.8** in **Chapter 9 TVIA** of the **ES (6.1, Rev 1)** summarises the predicted residual effects of operation of the Proposed Development on the Thames Path.

1.13.27 The visual receptors of SA1 - East and SA1 – West represent people's views when travelling along the Thames Path. Although adverse, and of Moderate levels of significance, and therefore Significant, visual effects are identified, the REP site is within an existing industrial area, with a character of industrial development based around the river and embedded mitigation would seek to take account of adjacent land uses and existing townscape character. The buildings and stack would be seen in the context of other industrial buildings, other existing vertical elements such as wind turbines and other stacks.

*Cumulative effects*

1.13.28 **Paragraph 9.10.7** of **Chapter 9 TVIA** of the **ES (6.1, Rev 1)** summarises potential cumulative townscape effects upon the existing scale, grain and massing of the urban area. Sites 008 (Data Centre), 0014 (Savills bus depot, ind. & offices); and 0012 (TRE Belvedere Industrial) are 'Other Developments' which would give rise to an intensification of existing land uses and increase in the scale and massing of buildings in the area.

1.13.29 These cumulative developments and their construction footprints are smaller than REP, and therefore on balance it is considered that there would be an Adverse effect that is of a Minor level of significance and therefore would be Not Significant.

1.13.30 Paragraph 9.10.13 **Chapter 9 TVIA** of the **ES (6.1, Rev 1)** summarises the potential cumulative visual effects on people's views from PRoW at Crossness LNR.

1.13.31 Committed development including Savills bus depot, ind. & offices, Data Centre, and TRE Belvedere Industrial includes large scale industrial buildings / offices of between 20 and 30 m in height. These committed developments will intensify the existing land use and increase the size and scale of built form in this area. REP will be an additional development, close to the Crossness LNR, larger in scale, mass, and height, giving more enclosure and restriction of views; but with a more distinctive roofline of the tall stack bringing interest and a focal point to the skyline. In the context of these committed developments, at operation the addition of the Proposed Development will give rise to an adverse cumulative visual effect which is of a Moderate level of significance, and therefore is Significant.

*Location of REP*

1.13.32 It is noted that one representation refers to the number of ERF within 5 miles of Belvedere, and the Proposed Development would be the fourth within that area.

1.13.33 The Applicant notes that the only other existing ERF in the 5 mile area is the existing Riverside Resource Recovery Facility (RRRF), and therefore it is unclear which facilities the Representation is referring to. However, the Applicant confirms that, where operational, any such industrial developments have been taken into account in considering the baseline conditions for the assessments which have been carried out. In relation to committed developments, these have been included in the cumulative assessments where appropriate.

1.13.34 The location of REP has been determined and selected following consideration of a number of factors which are set out in Paragraph 5.2.6 of **Chapter 5 Alternatives Considered** of the **ES (6.1, Rev 1)** and include:

- it is located adjacent to the existing RRRF and therefore would have access to shared services;
- it would have access to the existing purpose-built jetty and the River Thames network beyond, allowing easy delivery and removal of products;
- it has existing road access to the road network via Norman Road;
- there is adequate footprint to accommodate the required REP plant and equipment; and
- it was considered to be at a sufficient distance from sensitive residential receptors to limit potential impacts (e.g. in terms of noise), as RRRF is a similar development which operates highly successfully.

1.13.35 In addition, the Applicant has prepared a **Project and its Benefits Report (PBR) (7.2, APP-103)** to accompany the DCO Application. The **PBR (7.2, APP-103)** explains how REP will deliver the demonstrated need for major energy generating infrastructure, provide investment in sustainable waste management and a range of societal benefits. It also provides an assessment, using a range of scenarios based on different waste forecasts and recycling and recovery policies within London,

which demonstrates that there is a clear and urgent need for additional residual waste management capacity see **The Project and its Benefits Report (PBR) (7.2, APP-103)**.

### Conclusions

- 1.13.36 A number of representations have been received which relate to potential visual effects of the Proposed Development. These relate to visual effects and intrusion on Crossness Local Nature Reserve (LNR) (assessed as being Moderate, adverse and therefore Significant) and Thames Marshes (Negligible and Not Significant) and the potential cumulative effects with other existing and committed developments with both significant and not significant effects reported.
- 1.13.37 The potential beneficial and adverse effects from the Proposed Development would need to be weighed against its wider benefits, such as meeting the national demand for new renewable/low carbon electricity supply and storage as set out in NPS EN-1. The **Planning Statement (7.1, APP-102)** provides a conclusion on the wider planning balance of the Proposed Development. **Paragraph 6.4.4** of the **Planning Statement (7.1, APP-102)** reports that the benefits of the Proposed Development, notably the contribution to meeting the urgent national need for renewable/low carbon energy supply and the demonstrated need for new waste infrastructure in London and South East England, outweigh the limited adverse effects. Paragraph 6.4.6 reports that the Proposed Development would contribute materially towards meeting the urgent national need for renewable/low carbon electricity supply.

## 1.14 Carbon (TR-025)

### Summary of Theme:

1.14.1 One Relevant Representation makes reference to carbon usage of the Proposed Development.

1.14.2 This is summarised below in Table 1.12.

Table 1.12: Summary of Representations

RR Ref	Respondent	Aspect
RR-031	David Putson (Councillor)	Comment over inconsistent use of 'low carbon', 'carbon neutral' and 'carbon negative' at a public consultation event

### Response:

1.14.3 **Paragraph 1.4.2 of The Project and its Benefits Report (7.2, APP-103)** confirms that the energy recovered through the Energy Recovery Facility (ERF) element of Riverside Energy Park (REP) is renewable/Low Carbon.

1.14.4 As a development that incorporates a number of elements to generate low carbon/renewable energy and to secure energy supply (comprising the ERF, solar panels, anaerobic digestion and battery storage), REP contributes to meeting both the UK's energy demands and key policy priorities.

1.14.5 **The Project and its Benefits Report (7.2, APP-103)** sets out REP's contribution to supplying low carbon and renewable energy, which are firmly supported by NPS policy. In particular, Part 2.5 of NPS EN-3 addresses biomass and waste combustion facilities. In the opening paragraphs, NPS EN-3 recognises the 'increasingly important role' that such plants will have in meeting the UK's energy needs, including renewable energy commitments. Paragraph 2.5.3 confirms that NPS-EN-3 applies to combustion generating stations that use waste as fuel whether or not that fuel is renewable.

1.14.6 In the design and composition of the Proposed Development, the Applicant has sought to maximise complementary renewable energy generating capacity to supplement the low carbon energy generation from the ERF. Up to 1.2 MWe of renewable energy could be generated by the solar panels, however this will be dependent upon the final building form and the best technology available at the time of construction.

1.14.7 Further information relating to how REP meets the requirements of national climate change driven policy priorities is set out in the **Planning Statement (7.1, APP-102)**.

- 1.14.8 The Applicant considered the climate change benefits of REP in **Appendix K.2** to the **Environmental Statement (ES) (6.3; APP-095)**. In that appendix, the Applicant referred to a peer-reviewed carbon assessment for the existing Energy Recovery Facility (ERF) (referred to as Riverside Resource Recovery Facility (RRRF)) and stated that the benefit of the ERF element of REP would be similar to or greater than the benefit of RRRF.
- 1.14.9 Since acceptance of the DCO Application, the Applicant has undertaken a Carbon Assessment to specifically assess the carbon benefits of the ERF element of REP. The **Carbon Assessment (8.02.08)** has been submitted to the Examining Authority (ExA) as part of the Applicant's Deadline 2 submission.
- 1.14.10 The purpose of this assessment is to compare the relative carbon impact of processing residual waste in the REP ERF compared to sending the same waste to landfill. The carbon benefits of the other elements of REP (i.e. the anaerobic digestion facility and the solar panels) are not considered in the assessment as they are already considered in **Appendix K.2** of the **ES (6.3, APP-095)** and have not been specifically disputed in any Relevant Representations made.
- 1.14.11 The Carbon Assessment concludes that the base case for the assessment shows that the benefit of the REP ERF compared to landfill is about 137,000 tonnes of CO<sub>2</sub>-equivalent per year, or about 229 kg CO<sub>2</sub>e per tonne of waste processed. This has been based on the following key assumptions.
- a. The residual waste for the REP ERF has the same composition as the residual waste currently being supplied to RRRF.
  - b. Electricity generated by REP (or landfill gas engines) displaces electricity generated from gas-fired power stations.
  - c. The landfill site in the comparison scenario is a typical large UK landfill site.
- 1.14.12 If heat is exported, this benefit increases to 157,000 t CO<sub>2</sub>e or 263 kg CO<sub>2</sub>e per tonne of waste processed.
- 1.14.13 The assessment has considered the sensitivity of the assessment to changes in waste composition, changes in landfill gas recovery rates and changes in the source of displaced electricity. In all cases, the REP ERF continues to have a benefit over landfill.

## Conclusions

- 1.14.14 ERF's are a low carbon source of energy, i.e. the carbon emissions from energy generation from these facilities are lower than from energy generation from conventional power sources such as fossil fuels. The Application for REP confirms that the energy recovered through the ERF element of REP is Low Carbon.
- 1.14.15 Following the **Carbon Assessment (8.02.08)** which has been undertaken to address concerns raised relating to the carbon usage of the Proposed Development

in Relevant Representations, the Applicant highlights that the Proposed Development when compared to the current alternative waste disposal route (landfill) has a carbon benefit and would in that respect be considered to be 'carbon negative' compared with existing conditions.

## 2 Local Authorities

### 2.1 London Borough of Tower Hamlets (RR-047)

#### Summary of Representation:

- 2.1.1 The London Borough of Tower Hamlets (LBTH) submitted a Relevant Representation (RR) to the Planning Inspectorate on 5<sup>th</sup> February 2019. The RR is as follows:

*'London Borough of Tower Hamlets (LBTH) has concerns over the effect of the Proposed Development on air quality, with particular regard to the air quality effect arising from the increase in river freight vessels, as a result of the Proposed Development.'*

#### The Response:

- 2.1.2 The Applicant highlights that discussions with LBTH have taken place and remain on-going with respect to their RR and establishing a Statement of Common Ground (SoCG). The discussions held to date have informed this response to their RR.
- 2.1.3 The Applicant has attempted to progress a SoCG with LBTH. However due to the limited nature of their concerns, at this time, LBTH have indicated that they are not receptive to preparing a SoCG. It is noted that the Planning Inspectorate has not requested that a SoCG is prepared between the Applicant and LBTH.

#### **Air Quality effects from increase in river freight vessels**

- 2.1.4 **Table 7.37 of Chapter 7 Air Quality of the Environmental Statement (ES) (6.1, Rev 1)** submitted to accompany the draft Development Consent Order (dDCO) Application reports that no likely significant air quality effects are anticipated on human or ecological receptors as a result of the construction, operation (including from increased road and river movements) or decommissioning of the Proposed Development, either in isolation or in combination with other planned developments.
- 2.1.5 **Paragraphs 7.9.14 to 7.9.19 of Chapter 7 Air Quality of the ES (6.1, Rev 1)** provides an assessment on the potential air quality effects of operational river vessel movements associated with the Proposed Development on local air quality. The assessment is informed by a **Navigational Risk Assessment (NRA) (6.3, APP-067)** which, as explained in **Paragraph 3.8 of the NRA (6.3, APP-067)**, assumes all waste would be transported to REP by river and not by road. The assessments within the NRA were undertaken on the basis of three scenarios, firstly maximising waste transfer from Smugglers Way (explained in **Paragraph 3.11 of the NRA (6.3, APP-067)**), secondly transferring a larger proportion of waste to Tilbury whilst doubling the transfer from Smugglers Wharf (explained in **Paragraph 3.12 of the NRA (6.3, APP-067)**) and thirdly introducing waste transfer from Barking Creek (explained in Paragraph 3.13 of the **NRA (6.3, APP-067)**).

- Paragraph 7.1 (Point 2)** of the **NRA (6.3, APP-067)** demonstrates that under the assessed scenarios, the operation of REP would increase the number of tug and tow movements. Between the three NRA Scenarios, this would give rise to only one additional movement to Tilbury and could result in one additional movement through Central London to Smugglers Wharf or one additional movement to Barking Creek per day and any associated movements of ash to Tilbury.
- 2.1.6 The assessment in **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** covers the likely routes that the barges would take from Wandsworth Reach to Tilbury Docks, including Barking Creek. As part of the assessment, as explained in **Paragraph 7.9.15** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**, the minimum point of exposure for sensitive receptors, such as residential properties, was estimated to be 90 m from the vessel, due to the width of the River Thames along a typical river journey, although most freight vessels travel close to the middle of the river during their transit, due to factors such as tides and bridge height restrictions. Residential properties are located more than 90 m from both the REP site and Tilbury Docks and therefore any potential increase in annual mean NO<sub>2</sub> concentrations at locations of relevant exposure will be less than this. The assessment shows that in all cases the increases are imperceptible and the impact to air quality is not significant (**Paragraph 7.9.19** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**).
- 2.1.7 As reported in **Paragraph 7.11.2** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**, whilst the effects of emissions from river traffic are considered to be not significant, measures to reduce emissions from the current fleet of tugs are being investigated by the Applicant. These include the use of bio fuels/synthetic fuels, retrofitting additional scrubber technology and optimising operational practices to increase efficiency. Any tugs acquired in the future would, as a minimum, be required to comply with relevant marine emissions standards and legislation applying at that time. However, the Applicant's preference is to adopt hybrid technology for any new tugs subject to operational viability and regulatory approval.
- 2.1.8 In summary, the ES adequately assesses the effects of the Proposed Development on Air Quality, including effects arising from an increase in river freight movements. No significant effects are identified.



## **2.2 Be First on behalf of London Borough of Barking and Dagenham (RR-059)**

### **Summary of Representation:**

2.2.1 The London Borough of Barking and Dagenham (LBBB) submitted a Relevant Representation (RR) to the Planning Inspectorate on 11<sup>th</sup> February 2019. The following provides a summary of their RR:

- LBBB confirms it has no objections to the Proposed Development, having considered its potential impact in respect of visual impact, air quality and noise.

### **The Response:**

2.2.2 The Applicant welcomes LBBB's Relevant Representation.

2.2.3 The Applicant is progressing a Statement of Common Ground (SoCG) with LBBB. A draft SoCG was submitted to LBBB on 23<sup>rd</sup> April 2019. The Applicant is of the opinion that, through ongoing dialogue with LBBB, a SoCG will be achieved in due course.

## 2.3 London Borough of Havering (RR-064)

### Summary of Representation:

2.3.1 The London Borough of Havering (LBH) submitted a Relevant Representation (RR) to the Planning Inspectorate on 11<sup>th</sup> February 2019. The RR raises several questions about the Proposed Development, which can be summarised as follows:

- LBH in principle supports the air quality assessment methodology, however request information on the model's performance that includes measures such as Root Mean Square Error (RMSE) in Appendix C.1 Traffic Modelling;
- Further explanation and clarification of the impacts to the Hornchurch Cutting Site of Special Scientific Interest (SSSI) and inclusion of the Hornchurch Cutting site within the DCO assessment; and
- Further assessment through detailed modelling and identification of mitigation measures to reduce emissions which lead to acid deposition at the Inner Thames Marshes, Rainham Marshes and Ingrebourne Marshes.

### The Response:

2.3.2 The Applicant highlights that discussions with LBH have taken place and remain ongoing with respect to their RR and establishing a Statement of Common Ground. A copy of the email correspondence between the Applicant and the LBH is attached to this response. The discussions held to date inform this response to their RR.

### **Additional information relating to model performance within Appendix C.1, Traffic Modelling**

2.3.3 The following provides a detailed overview of information as provided to LBH by email on 26<sup>th</sup> March 2019.

*In terms of the road traffic modelling, for the Preliminary Environmental Information Report (PEIR) the model was verified against 2016 monitoring data and two monitoring points were used; HAV50 and HV1. For the ES, the model verification was updated to 2017, but the data capture for HAV50 in 2017 was only 50% and so it was excluded from the model verification process. If it were included, the verification factor would have been slightly lower than 2.8781 used in the modelling and therefore would have resulted in slightly lower predicted concentrations but would not have made a substantive difference to results or conclusions of the assessment.*

*In terms of other monitoring sites which could have been used; HAV3 is a background site, HAV49 is a roadside site but close to a very quiet residential road and so not suitable for verification and it only had 42% data capture, HAV56 is located next to a busy bus stop and only had 25% data capture and therefore not suitable, and HAV 46 only had 33% data capture and so was also unsuitable.*

*Whilst annualised data could have been used for model verification this would have added a degree of uncertainty to the results due to the annualisation process and this additional uncertainty can't be quantified. As only one monitoring point was used for the model verification, the RMSE is 1.0, as the predicted concentration at the model verification point exactly matches the monitoring concentration. It should also be recognised that the model verification factor (2.8781) is relatively high, this means that the relative contribution of road traffic emissions is magnified compared to the background concentrations. With a lower verification factor, the development contribution would be lower. In terms of the predicted annual mean NO<sub>2</sub> concentrations with the development in place, the highest predicted concentration is 31.7µg/m<sup>3</sup> at R19, but the development contribution at this location is effectively zero. The highest predicted development contribution to annual mean NO<sub>2</sub> concentrations is 0.20µg/m<sup>3</sup> which is a negligible impact. At the vast majority of the modelled receptor locations, the development contribution is effectively zero.*

- 2.3.4 During on going discussions, LBH replied and agreed that due to the low data capture of Havering's diffusion tube sites in 2017, verification against them would not be recommended. They requested confirmation as to whether the use of any sites or other local diffusion tubes were examined for verification purposes. On 23<sup>rd</sup> April, the Applicant responded with the following:

*Use of other nearby sites in the area of the Proposed Development were evaluated for verification purposes. Other automatic monitoring sites are either background or suburban sites and therefore not suitable for model verification. The London Borough of Bexley (LBB) do not use diffusion tubes. Whilst the London Borough of Barking and Dagenham (LBBD) do use diffusion tubes, they only have sites in the north of the borough which is considered to be too far from the study area to be relevant.*

*As the traffic model is only relevant to these boroughs and given the location of other monitoring sites in relation to the modelled area, verifying based on monitoring in a borough outside of these would increase uncertainty due to the widening gap between the assessment area and the verification site.*

- 2.3.5 No response further response from LBH has been received on the matter.

**Further explanation and clarification of impacts to Hornchurch Cutting Site of Special Scientific Interest**

- 2.3.6 **Paragraph 7.7.17 of Chapter 7 Air Quality of the ES (6.1, Rev 1)** states that sites designated for their geological features are not included within the assessment as they are not sensitive to acid or nitrogen deposition. Only those sites with biological features which may be susceptible to air pollution are included within the assessment.
- 2.3.7 LBH confirmed by email on 9<sup>th</sup> April 2019 that this response addressed their comments in paragraphs 5 and 6 of their RR and therefore Hornchurch Cutting site is not and will not be included within the DCO assessment.

**Further assessment through detailed modelling and identification of mitigation measures to reduce emissions which lead to acid deposition at the Inner Thames Marshes, Rainham Marshes and Ingrebourne Marshes**

2.3.8 The following provides a detailed overview of information was provided to LBH by email on 26<sup>th</sup> March 2019.

*The assessment criteria for considering impacts on terrestrial biodiversity receptors is set out in **Paragraphs 7.5.63 to 7.5.65 of Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**. **Paragraph 7.5.64** describes the method for determining Predicted Environmental Concentration (PEC). Where the PEC is above the critical level or load and the development contribution is above 1%, then the development contribution is potentially significant and requires further evaluation as to the significance of the potential impact. For ammonia and acid deposition, the PECs do not exceed the critical level or load respectively, and therefore the development is not considered to have a significant impact on terrestrial biodiversity receptors. The assessment criteria used in the assessment are consistent with the guidance provided by the Environment Agency (<https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit#screen-out-pecs-from-detailed-modelling>). In accordance with the EA guidance, the threshold of 70% of the PEC is used to determine where detailed modelling is necessary, not as a judgement as to whether the impact is significant or not.*

*The ecological implications of the predicted pollutant concentrations are considered in **Paragraphs 11.9.21 to 11.9.25 of Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**. However, as noted in **Paragraph 7.9.43 of Chapter 7 Air Quality of the ES (6.1, Rev 1)**, whilst the increase in NO<sub>x</sub> concentrations is above 1%, the impact of NO<sub>x</sub> stems from the resulting nitrogen deposition. For Inner Thames Marshes/Rainham Marshes, the maximum predicted increase in nitrogen deposition is less than 1% of the critical load and therefore not significant.*

*For the DCO application, the NO<sub>x</sub> emission rates are based on applying selective non-catalytic reduction (SNCR) for NO<sub>x</sub> abatement which results in an emission concentration of 120 mg/Nm<sup>3</sup>. The Environmental Permit application for the facility has been applied for on the basis of selective catalytic reduction (SCR) abatement which will further reduce the NO<sub>x</sub> emission to 75 mg/Nm<sup>3</sup>, i.e. a reduction of 37.5% over that modelled in the DCO. Whilst the DCO application needs to be considered on the basis of the information presented in the ES, the actual impact of the facility in terms of NO<sub>x</sub> concentrations and resulting nitrogen deposition will be proportionally lower than that shown in DCO application. In addition, the impacts have been predicted using the Rochdale Envelope building layout (i.e. assuming maximum building footprint and height) where-as the actual building form will be somewhat smaller and stepped (**Figure 7.1 Modelled Buildings** of the **ES (6.2, APP-056)**). The effect of this in improving dispersion and reducing maximum ground level concentrations is illustrated in **Table C.2.4. in Appendix C2 Stack Modelling** of the **ES (6.3, APP-069)**. There will therefore also be a reduction in NO<sub>x</sub> concentrations and nitrogen and acid deposition at Inner Thames Marshes/Rainham Marshes as a result of the building configuration that will be*

*constructed compared to that assessed in the ES, resulting in less building downwash effects.*

2.3.9 LBH confirmed by email on 9<sup>th</sup> April 2019 that their concerns regarding acid deposition had been addressed.

2.3.10 On 23<sup>rd</sup> April 2019, in relation to Ammonia the Applicant also confirmed that detailed modelling had been undertaken in accordance with guidance from the Environment Agency.

2.3.11 On 9<sup>th</sup> April 2019, in relation to Nitrogen Oxides LBH requested updated modelling figures based on SCR technology and use of stepped buildings. On 23<sup>rd</sup> April 2019 the Applicant responded with the following:

*The maximum predicted NO<sub>x</sub> concentration at Inner Thames Marshes/Rainham Marshes and Ingrebourne Marshes with the stepped building configuration is 0.75 and 0.52 µg/m<sup>3</sup> respectively. Applying the reduction afforded by SCR reduces the PCs to 0.47 and 0.33 µg/m<sup>3</sup> respectively. These are 1.6% and 1.1% of critical level respectively. The PECs would be 41.4 and 33.9 µg/m<sup>3</sup> respectively, with the vast majority of the PEC being as a result of the existing baseline concentration. As noted in our original response, the implications of the predicted changes in NO<sub>x</sub> concentrations and nitrogen and acid deposition have been considered in **Chapter 11 Terrestrial Biodiversity (6.1, Rev 1)** of the **ES** and it has been concluded that no significant effects would occur.*

2.3.12 The Applicant also provided LBH with a copy of the **Environmental Permit and Air Quality Note (8.02.06)**.

2.3.13 No response further response from LBH has been received on the matter.

Attached copy of email chain

**From:** Christina Zervou <[Christina.Zervou@havering.gov.uk](mailto:Christina.Zervou@havering.gov.uk)>  
**Sent:** 02 May 2019 11:36  
**To:** Natalie Maletras <[nmaletras@peterbrett.com](mailto:nmaletras@peterbrett.com)>  
**Cc:** Claire Sorrin <[csorrin@peterbrett.com](mailto:csorrin@peterbrett.com)>; Rob Gully <[rgully@peterbrett.com](mailto:rgully@peterbrett.com)>; Richard Wilkinson <[Richard.Wilkinson@coryenergy.com](mailto:Richard.Wilkinson@coryenergy.com)>; Devon Christensen <[Devon.Christensen@coryenergy.com](mailto:Devon.Christensen@coryenergy.com)>; Chris Leach <[cleach@peterbrett.com](mailto:cleach@peterbrett.com)>; Jonny Murphy <[jmurphy@peterbrett.com](mailto:jmurphy@peterbrett.com)>; James Liebetrau [oneSource] <[James.Liebetrau@oneSource.co.uk](mailto:James.Liebetrau@oneSource.co.uk)>; Flo Kirk-Lloyd <[fkirk-lloyd@peterbrett.com](mailto:fkirk-lloyd@peterbrett.com)>  
**Subject:** RE: Riverside Energy Park

Dear Natalie,

Thank you for providing this additional information.

I am currently not in a position to provide further comments, as the Council is consolidating its position and will be making appropriate representation to PINS.

Kind Regards

Christina

**Christina Zervou | Senior Public Protection Officer (Environmental Protection)**

London Borough of Havering | Public Protection  
Town Hall, Main Road, Romford, RM1 3BB

☎ 01708 432775

✉ [christina.zervou@haverling.gov.uk](mailto:christina.zervou@haverling.gov.uk)

🌐 [www.haverling.gov.uk](http://www.haverling.gov.uk)

📧 *text relay* 18001 01708 432777

**From:** Natalie Malettras [<mailto:nmalettras@peterbrett.com>]

**Sent:** 23 April 2019 08:27

**To:** Christina Zervou

**Cc:** Claire Sorrin; Rob Gully; Richard Wilkinson; Devon Christensen; Chris Leach; Jonny Murphy; James Liebetrau [oneSource]; Flo Kirk-Lloyd

**Subject:** RE: Riverside Energy Park

Christina

I hope you had a good Easter break.

Please find below responses (in red) to your remaining queries. I also attach a technical note which provides an update on the Environmental Permit and the NOx abatement technology which is being proposed by the Applicant.

Hopefully all your remaining queries have now been answered. If you are able to confirm this asap that would be wonderful.

Many thanks again for your positive engagement.

Natalie Malettras

**Natalie Malettras**

Senior Associate

**From:** Christina Zervou <[Christina.Zervou@haverling.gov.uk](mailto:Christina.Zervou@haverling.gov.uk)>

**Sent:** 09 April 2019 13:51

**To:** Natalie Malettras <[nmalettras@peterbrett.com](mailto:nmalettras@peterbrett.com)>

**Cc:** Claire Sorrin <[csorrin@peterbrett.com](mailto:csorrin@peterbrett.com)>; Rob Gully <[rgully@peterbrett.com](mailto:rgully@peterbrett.com)>;

Richard Wilkinson <[Richard.Wilkinson@coryenergy.com](mailto:Richard.Wilkinson@coryenergy.com)>; Devon Christensen <[Devon.Christensen@coryenergy.com](mailto:Devon.Christensen@coryenergy.com)>; Chris Leach <[cleach@peterbrett.com](mailto:cleach@peterbrett.com)>; Jonny Murphy <[jmurphy@peterbrett.com](mailto:jmurphy@peterbrett.com)>; James Liebetrau [oneSource] <[James.Liebetrau@oneSource.co.uk](mailto:James.Liebetrau@oneSource.co.uk)>; Flo Kirk-Lloyd <[fkirk-lloyd@peterbrett.com](mailto:fkirk-lloyd@peterbrett.com)>

**Subject:** RE: Riverside Energy Park

Dear Natalie,

Thank you for the additional information and apologies for the delay in getting back to you.

Following review of your responses below, we would like to comment as follows:

Poor air quality is major issue for Havering, as the whole of Havering has been designated an Air Quality Management Area. Air quality in Rainham is also poor due to its industrial land use. It must therefore be ensured that the proposed development will not only marginally meet the environmental standards under legislation, but it must endeavour to maintain the best possible air quality in an already heavily polluted area. This should be done by taking a proactive approach and installing improved abatement techniques in order to reduce harmful emissions to an absolute minimum. With regard to the outstanding points raised in our representation, in particular, please see our comments below:

We agree that due to the low data capture of Havering's diffusion tube sites in 2017, verification against them would not be recommended. In Table 7.23 of the ES there are a number of local automatic monitoring stations located near the proposed REP. Could you please confirm whether the use of any of these sites (except Havering's HV1) or other local diffusion tube sites was examined for verification purposes and, if so, why these were not used? **We evaluated the use of other sites in the area for verification purposes. The other automatic monitoring sites in the area are background or suburban sites and therefore not suitable for model verification. Bexley do not use diffusion tubes. Barking and Dagenham use diffusion tubes, but only have sites in the north of the borough which is considered to be too far from the study area to be relevant. As the traffic model only covers these boroughs, and given the location of other monitoring sites in relation to the modelled area, verifying based on monitoring in a borough outside of these would increase uncertainty due to the widening gap between the assessment area and the verification site.**

**5, 6.** We confirm that your response addresses our comments in paragraphs 5, 6.

**7.**

*Acid deposition:* We confirm that this outstanding point has been addressed.

*Ammonia:* Given that the long term PC is greater than 1% and the PEC is greater than 70% of the long-term environmental standard, detailed modelling is required,

in line with the EA guidance. Please confirm that this will be carried out. **We can confirm that all of the predicted concentrations presented in the ES are as a result of detailed modelling in line with EA guidance.**

*Nitrogen oxides (NO<sub>x</sub>):* Although the environmental standards for nitrogen deposition are met, there is a specific environmental standard for NO<sub>x</sub>, which is currently not met. On the basis of the proposed scenario below (i.e. SCR abatement in place and use of stepped buildings), please provide the updated modelled figures of the PC, PEC. **The maximum predicted NO<sub>x</sub> concentration at Inner Thames Marshes/Rainham Marshes and Ingrebourne Marshes with the stepped building configuration is 0.75 and 0.52 µg/m<sup>3</sup> respectively. Applying the reduction afforded by SCR reduces the PCs to 0.47 and 0.33 µg/m<sup>3</sup> respectively. These are 1.6% and 1.1% of critical level respectively. The PECs would be 41.4 and 33.9 µg/m<sup>3</sup> respectively, with the vast majority of the PEC being as a result of the existing baseline concentration. As noted in our original response, the implications of the predicted changes in NO<sub>x</sub> concentrations and nitrogen and acid deposition have been considered in Chapter 11 of the ES and it has been concluded that no significant effects would occur.**

Kind Regards

Christina

**Christina Zervou | Senior Public Protection Officer (Environmental Protection)**

London Borough of Havering | Public Protection  
Town Hall, Main Road, Romford, RM1 3BB

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**From:** Natalie Maletras [<mailto:nmaletras@peterbrett.com>]

**Sent:** 26 March 2019 17:59

**To:** Christina Zervou

**Cc:** Claire Sorrin; Rob Gully; Richard Wilkinson; Devon Christensen; Chris Leach; Jonny Murphy; James Liebetrau [oneSource]; Flo Kirk-Lloyd

**Subject:** Riverside Energy Park

Dear Christina,



Thank you for your time on the call on 20<sup>th</sup> March. As promised, to confirm our discussions, we have reviewed the specific outstanding points raised in your relevant representation and provided responses below. It would be great if you could confirm if these responses satisfy your outstanding queries. I will get in touch with James separately to discuss how best to progress the SOCG.

In terms of the road traffic modelling, for the PEIR the model was verified against 2016 monitoring data and two monitoring points were used; HAV50 and HV1. For the ES, the model verification was updated to 2017, but the data capture for HAV50 in 2017 was only 50% and so it was excluded from the model verification process. If it were included, the verification factor would have been slightly lower than 2.8781 used in the modelling and therefore would have resulted in slightly lower predicted concentrations, but wouldn't have made a substantive difference to results or conclusions of the assessment. In terms of other monitoring sites which could have been used; HAV3 is a background site, HAV49 is a roadside site but close to a very quiet residential road and so not suitable for verification and it only had 42% data capture, HAV56 is located next to a busy bus stop and only had 25% data capture and therefore not suitable, and HAV 46 only had 33% data capture and so was also unsuitable. Whilst annualised data could have been used for model verification this would have added a degree of uncertainty to the results due to the annualisation process and this additional uncertainty can't be quantified. As only one monitoring point was used for the model verification, the RMSE is 1.0, as the predicted concentration at the model verification point exactly matches the monitoring concentration. It should also be recognised that the model verification factor (2.8781) is relatively high, this means that the relative contribution of road traffic emissions is magnified compared to the background concentrations. With a lower verification factor, the development contribution would be lower. In terms of the predicted annual mean NO<sub>2</sub> concentrations with the development in place, the highest predicted concentration is 31.7µg/m<sup>3</sup> at R19, but the development contribution at this location is effectively zero. The highest predicted development contribution to annual mean NO<sub>2</sub> concentrations is 0.20µg/m<sup>3</sup> which is a negligible impact. At the vast majority of the modelled receptor locations, the development contribution is effectively zero.

5.6. As noted in paragraph 7.7.17 of the ES chapter, sites which are designated for their geological features are not included in the assessment as they are not sensitive to acid or nitrogen deposition. Only those sites with biological features that may be susceptible to air pollution are included in the assessment.

The assessment criteria for considering impacts on terrestrial biodiversity receptors is set out in paragraphs 7.5.63 to 7.5.65 of chapter 7 of the ES (APP-044). 7.5.64 describes the method for determining Predicted Environmental Concentration (PEC). Where the PEC is above the critical level or load and the development contribution is above 1%, then the development contribution is potentially significant and requires further evaluation as to the significance of the potential impact. For ammonia and acid deposition, the PECs do not exceed the critical level or load respectively, and therefore the development is not considered

to have a significant impact on terrestrial biodiversity receptors. The assessment criteria used in the assessment are consistent with the guidance provided by the Environment Agency (<https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit#screen-out-pecs-from-detailed-modelling>). In accordance with the EA guidance, the threshold of 70% of the PEC is used to determine where detailed modelling is necessary, not as a judgement as to whether the impact is significant or not.

The ecological implications of the predicted pollutant concentrations are considered in Chapter 11. However, as noted in paragraph 7.9.43 of chapter 7, whilst the increase in NO<sub>x</sub> concentrations is above 1%, the impact of NO<sub>x</sub> stems from the resulting nitrogen deposition. For Inner Thames Marshes/Rainham Marshes, the maximum predicted increase in nitrogen deposition is less than 1% of the critical load and therefore not significant.

As discussed on our recent call, for the DCO application the NO<sub>x</sub> emission rates are based on applying selective non-catalytic reduction (SNCR) for NO<sub>x</sub> abatement which results in an emission concentration of 120 mg/Nm<sup>3</sup>. The Environmental Permit application for the facility has been applied for on the basis of selective catalytic reduction (SCR) abatement which will further reduce the NO<sub>x</sub> emission to 75 mg/Nm<sup>3</sup>, i.e. a reduction of 37.5% over that modelled in the DCO. Whilst the DCO application needs to be considered on the basis of the information presented in the ES, the actual impact of the facility in terms of NO<sub>x</sub> concentrations and resulting nitrogen deposition will be proportionally lower than that shown in DCO application. In addition, the impacts have been predicted using the Rochdale Envelope building layout (i.e. assuming maximum building footprint and height) where-as the actual building form will be somewhat smaller and stepped (Figure 7.1 of the ES (APP-056)). The effect of this in improving dispersion and reducing maximum ground level concentrations is illustrated in Table C.2.4. in Appendix C2 of the ES (APP-069). There will therefore also be a reduction in NO<sub>x</sub> concentrations and nitrogen and acid deposition at Inner Thames Marshes/Rainham Marshes as a result of the building configuration that will be constructed compared to that assessed in the ES, resulting in less building downwash effects.

We look forward to hearing from you soon

Kind regards,

Natalie  
**Natalie Maletras**  
Senior Associate

## **2.4 Dartford Borough Council (RR-072)**

- 2.4.1 The Applicant and the Respondent have been actively discussing a Statement of Common Ground. A final draft Statement of Common Ground has been submitted at Deadline 2 (**8.01.02**).

## 2.5 Greater London Authority (RR-075)

### Summary of Representation:

- 2.5.1 The Applicant notes that the GLA's Relevant Representation ('RR') refers to the initial consultation response made by the Mayor dated 30 July 2018. The Applicant has previously replied to the points made by the Mayor in his initial response, which can be found at **Appendix J of the Consultation Report (5.1, APP-030)**. The Applicant does not intend to repeat that reply.
- 2.5.2 The Applicant has sought ongoing consultation with the GLA across a number of relevant matters. At the meeting held on 1 February 2019, the GLA confirmed that it is focussing on three items, which are also those addressed in its RR, being:
- Waste capacity need and the Proposed Development's consistency with national policy;
  - Energy and heat demand; and
  - Air quality.

### Response:

- 2.5.3 Throughout the development and post submission of the Application, the Applicant has made continued efforts to engage with the GLA and to develop a SOCG. The Applicant has been unable to reach agreement on a SOCG with the GLA for submission to Deadline 2.

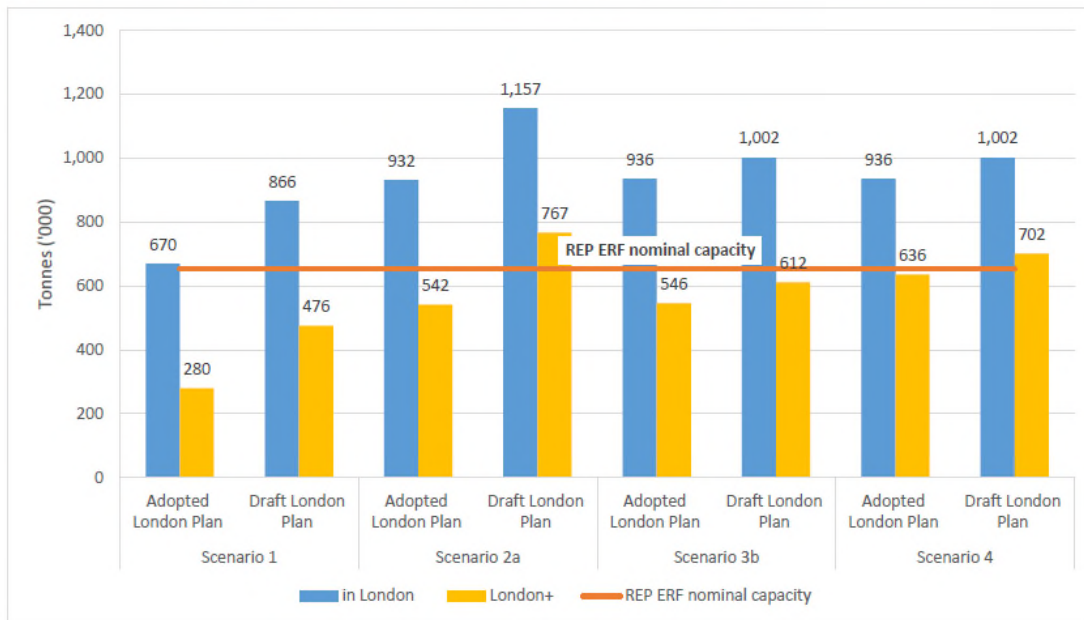
### Waste capacity need and the Proposed Development's consistency with national policy

- 2.5.4 The GLA presents no evidence to justify or explain the assertion that new residual waste treatment capacity is not required within London, made within its RR.
- 2.5.5 By contrast, the Applicant has submitted a comprehensive assessment following the approach presented at paragraphs 2.5.66 to 2.5.69 of NPS EN-3 and addressing the policy test consequently set out at paragraph 2.5.70. This is demonstrated within the London Waste Strategy Assessment (the 'LWSA'), **Annex A of The Project and its Benefits Report (the 'PBR') (7.2, APP-103)**.
- 2.5.6 The LWSA is undertaken using data and policy priorities from the adopted London Plan, the draft London Plan and from the London Environment Strategy. The LWSA concludes that even in the most conservative assessment, using the lowest waste arisings and the aspirational policy expectations regarding waste management, at least one third of the nominal throughput of the capacity of REP (principally the Energy Recovery Facility, the 'ERF') is required to sustainably manage London's residual waste. A more realistic level of need, calculated through using actual waste arisings and applying recycling objectives of the London Environment Strategy, demonstrates that all, if not more of that nominal throughput

will be required if London is going to achieve self-sufficiency and diversion from landfill targets. This is readily demonstrated by Figure 6.1 of the LWSA, reproduced below which examines residual waste treatment capacity need against a range of recycling and projected tonnage assumptions set out in the London Plan, Draft New London Plan and London Environment Strategy .

- 2.5.7 The LWSA demonstrates that REP is appropriately sized to make a beneficial contribution to London achieving its policy goals of being a zero carbon city and sustainably managing its own residual wastes. In addition, the LWSA identifies c.2 million tonnes of residual wastes in from authorities in the South East that should also be diverted from landfill.
- 2.5.8 In any event, policy is clear that the role of planning is not to limit the amount of new energy generation capacity, particularly when that provides a supply of renewable/low carbon power. As is made clear at **Section 2.2** of the **PBR (7.2, APP-103)**, the NPS sets no cap on the amount of new generation capacity that should be delivered, not least at paragraph 3.3.24 the Government confirms that it is not its intention to ‘set targets or limits on any new generating infrastructure to be consented in accordance with the energy NPSs. It is not the IPC’s role to deliver specific amounts of generating capacity for each technology type’.

Figure 6.1: Scenarios 1, 2a, 3b and 4 of the London Waste Strategy Assessment, at 2026



- 2.5.9 The GLA’s RR then asserts that the ERF would not be in compliance with national policy and will fail to effectively implement the waste hierarchy. Again, the GLA’s assertions are not demonstrated, they are simply a position statement. The LWSA has been undertaken using the data and policy aspirations from the development plan documents prepared by the GLA, and has incorporated the London Environment Strategy. Even relying upon those documents, which the Applicant considers to underestimate future arisings and overestimate recycling capacity, the

LWSA demonstrates that there remains a need for the ERF. In policy terms, the Applicant demonstrates that the ERF will not disadvantage recycling and therefore it is in compliance with Part 3.4 of NPS EN-1.

2.5.10 **Section 4.2** of the **PBR (7.2, APP-103)** references data gathered by WRAP in its annual Gate Fee Report, which consistently shows that gate fees at recycling facilities and organic waste treatment facilities, which are preferred in the waste hierarchy, are significantly lower than gate fees at energy from waste and landfill facilities. It is fundamental commercial logic that waste producers will seek out the most cost-effective method of waste treatment, consequently preferring recycling over recovery. In practical terms, the Applicant demonstrates that the ERF will not disadvantage recycling.

2.5.11 REP, and the ERF, is demonstrated by the Applicant to be wholly in line with the waste hierarchy and national policy priorities of action on climate change through increased energy generation, particularly from renewable/low carbon sources, delivering potential for heat, and reduced waste to landfill.

2.5.12 The **Supplementary Report to the Project and its Benefits Report (7.2.1)** has considered the newly published Resources and Waste Strategy, December 2018, and the GLA's RR on this point is not considered further here, except to correct an inconsistency with that RR. The second quote set out in the GLA's RR "*significant additional residual waste energy recovery capacity...would not necessarily be needed*" is not in the Resources and Waste Strategy, but in the evidence Annex. Further, it is anyway not a complete quote, which reads:

*"...significant additional residual waste energy recovery capacity such as incineration or advanced conversion technologies – above that already operating or planned to 2020 – would not necessarily be needed to meet an ambition of no more than 10%, Municipal Solid Waste (MSW) to landfill by 2035, if a 65% MSW recycling rate is achieved by that same year. The analysis assumes refuse derived fuel (RDF) exports remain at current levels. However, if energy recovery continues to provide a better environmental alternative to landfill, more investment to reduce tonnages of MSW to landfill further would deliver environmental benefits"*

2.5.13 The full quote shows the full context of the Government's thinking and that it recognises the environmental benefits of energy from waste. In any event, the policy set out in the Resources and Waste Strategy, is to encourage greater private investment in new, modern, efficient energy recovery plant. As demonstrated in the **Supplementary Report to the Project and its Benefits Report (7.2.1)**, that is exactly what REP is delivering. The final quote set out in the GLA's RR, that "*no new EFW capacity would be needed*", does not exist. A clear rebuttal from Tolvik Consulting Ltd, the consultancy that prepared that industry report, is provided at Appendix A to the **Supplementary Report to the Project and its Benefits Report (7.2.1)**.

2.5.14 REP, as a nationally significant infrastructure project, is in line with national policy and provides the resilience and flexibility required to ensure that London can become the sustainable city it wants to be, at no cost to the tax payer.

### CHP / Heat

- 2.5.15 The Applicant rejects the GLA's assertion that "*there is insufficient foreseeable heat demand in the local area for the proposed REP EFW to operate as an effective combined heat and power (CHP) plant*". The **CHP Assessment (5.4, APP-035)** submitted in support of the DCO application contains a comprehensive heat demand assessment undertaken in accordance with the methodology outlined in the Environment Agency CHP-Ready Guidance. Based on the results of the National Heat Map, a total demand of approximately 8,300 GWh/annum exists across a registered 534,734 addresses within 10 km of the Proposed Development. Owing to the high heat density around the REP site, heat networks are deemed by the Mayor of London to provide a competitive solution for supplying heat to buildings and consumers. REP therefore falls within an identified Heat Network Priority Area.
- 2.5.16 Following screening of consumers which cannot be viably be connected due to local *infrastructure*, topology and technical incompatibility, two key heat network options have been identified.
- 2.5.17 Based on a *comparatively* conservative assumption of proposed residential dwellings substantially located to the west of the REP site (those for which proposals were in the public domain at the time of drafting the **CHP Assessment (5.4, APP-035)**), Option 1 would comprise supply of heat to these developments via a low temperature heat network. Based on indicative build out profiles, the total demand was estimated at 114 GWh/annum. Accounting for the anticipated heat demand profile and allowing for some level of thermal storage, peak loads align with the level of heat available from REP. Development ambitions for the region are significantly greater than the conservative numbers proposed in the original assessment. Up to 20,000 dwellings and commercial properties are proposed as part of a Thamesmead regeneration programme. When accounting for the entirety of the proposed development volume, there is a surplus of heat demand which could not be satisfied by REP exclusively.
- 2.5.18 Option 2 would comprise connection of businesses located to the south and east of the REP site along Burt's Wharf. An estimated total heat demand of 291 GWh/annum has been identified following screening of buildings which would be unviable to *connect*. The heat demand requirements of individual businesses, and whether the REP ERF could supply the heat grade required, would need to be explored further. However, there appears to be an abundance of heat demand in relatively close proximity to the REP site, which could be supplied by hot water or steam from REP and offset carbon emissions.
- 2.5.19 *Option 1* was presented in the **CHP Assessment (5.4, APP-035)** as the preferred solution for delivering a heat network in the region with the associated benefits of reducing heat losses, supporting economic growth and regeneration and providing social benefits.
- 2.5.20 The surplus heat demand captured under Option 2 should not be overlooked. Should heat export to consumers identified within Option 1 not materialise, the

Applicant intends to engage further with key businesses identified within the **CHP Assessment (5.4, APP-035)**. Of interest would be Archer Daniels Midland, a rapeseed oil refinery, which is suitably located on the south bank of the River Thames, approximately 1.8 km from the Proposed Development. This site alone has an estimated heat demand of 213 GWh/annum, as specified by BEIS UK CHP Development Map tool.

2.5.21 The GLA asserts that “*The applicant’s study focuses on a heat supply from the proposed EFW plant and ignores the fact that the existing adjacent Cory Riverside Resource Recovery (RRR) EFW facility could meet the feasible heat demand*”. **Section 6.9** of the **CHP Assessment (5.4, APP-035)** explores viability of connecting additional heat sources to a network and highlights the existing RRRF as a key contributor, including installed technical provisions for heat supply and work undertaken by the Applicant in modifying the plant to expedite heat export opportunities. The availability and thermal export capacity of RRRF is broadly equivalent to that of the proposed REP ERF. As discussed in the preceding sections, there is a significant volume of existing and proposed local heat demand which would require heat supply from both REP and RRRF to be satisfied more comprehensively and for the benefits of renewable/low carbon heat provision to be maximised.

2.5.22 The results of Phase 1 of the Thamesmead and Belvedere study feasibility study<sup>3</sup>, referred to in the GLA’s RR, indicate that opportunities exist to connect 15,200 new homes over the next 20 years, assuming a “realistic” scenario, although it has become evident that this level of growth is overly conservative. Attention is drawn to a recent announcement<sup>4</sup> that Lendlease has been selected as preferred bidder for the 11,500 home Thamesmead Waterfront development, which is being progressed by LBB’s development partner for the Thamesmead and Abbey Wood area of the Borough, Peabody. This scheme is not fully accounted for in the Phase 1 feasibility study. Industrial heat demand in the Burt’s Wharf area also appears to be under represented, and the study’s authors intend to obtain energy consumption data for the largest industrial sites as part of its Phase 2 study. A finalised version of the Phase 2 study is due to be issued imminently.

2.5.23 Regarding the GLA’s dispute of the projected performance of the proposed Facility against the Mayor’s Carbon Intensity Floor (CIF) policy, the Applicant maintains that the Proposed Development would be compliant with the target outlined in the Adopted and Draft London Plans and the London Environment Strategy across all operational scenarios. The Applicant has provided a detailed explanation of the progression of discussions and calculations in respect of CIF performance in the **Combined Heat and Power Supplementary Report (5.4.1)** and these are repeated below for reference.

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<sup>3</sup> Thamesmead and Belvedere Heat Network Feasibility Study: Work Package 1, London Borough of Bexley, December 2018

<sup>4</sup> <http://www.constructionenquirer.com/2019/02/15/lendlease-wins-8bn-thamesmead-development/>



2.5.24 Within the original CIF assessment, set out in **Section 4.3** of the **CHP Assessment (5.4, APP-035)**, the results were presented on both a gross calorific value (GCV) and a net calorific value (NCV) basis. The GLA’s environmental advisory consultant has confirmed that the ready reckoner calculates the energy content of the waste using NCV and as such results are presented on a NCV basis henceforth.

2.5.25 Since the original assessment was undertaken, a number of updated ready reckoners have been released by the GLA. Versions released in October 2011 and November 2018 have been formally published but the April 2019 extracts (two of which were issued to the Applicant) have not. The Applicant has been agreeable in complying with the GLA’s requests to recalculate carbon performance using updated versions of its ready reckoner, beyond those formally published and adopted within relevant policy.

2.5.26 The results for the assessment have been extracted from the various ready reckoners and are presented in Table 2-1. The November 2018 and April 2019 versions do not easily allow for the inclusion of the anaerobic digestion facility and so these only include the ERF.

Table 2-1: Comparison of Carbon Intensity Floor results (gCO<sub>2</sub>e/kWh)

Load case	Ready reckoner version		
	October 2011 (formally published)	November 2018 (formally published)	April 2019 <sup>1</sup> (not formally published)
33 MW heat export (to district heating and Anaerobic Digestion facility)	283	368	323
30 MW heat export (to district heating)	290	368	329
3 MW heat export to Anaerobic Digestion facility	380	375	394
No heat export	393	375	400

<sup>1</sup>A version of the forthcoming Emissions Performance Standard ready reckoner “*London GHG EPS Ready Reckoner v2 Issued to Cory*”.

2.5.27 The results demonstrate that REP will comply with the requirements<sup>5</sup> of the CIF in all load cases and using any of the ready reckoner versions issued.

2.5.28 Irrespective of the positive results under even the power only (non-CHP) scenario, the Applicant has put in place a number of demonstrable steps in order to realise heat export from REP.

<sup>5</sup> dLP Policy SI8D/3 – ‘Facilities generating energy from waste will need to meet, or demonstrate that steps are in place to meet, a minimum performance of 400g or CO<sub>2</sub> equivalent per kilowatt hour of electricity produced.’

2.5.29 The Applicant is making significant steps, at its own cost, in establishing and maintaining momentum in the heat network development process via the Bexley District Heating Partnership Board. The Partnership Board is attended by representatives from the London Borough of Bexley (LBB), the London Borough of Greenwich (LBG), the Greater London Authority (GLA), housing developers Peabody and Orbit Homes, and the Applicant, and was established in 2018 with the ambition of establishing a collective approach to the development of a heat network in the locality. The Applicant has expressed its intention to supply renewable/low carbon heat for residents and commercial developments through the provision of a low temperature heat network.

2.5.30 Through the Partnership Board the Applicant has engaged with Peabody, LBB's development partner for the Thamesmead and Abbey Wood area of the Borough. Peabody has recognised and welcomes the Applicant's approach in respect of these efforts, as detailed in a letter of support (dated 17th April 2019), which states: *"We [Peabody] write in support of the effort and commitment shown by Cory Riverside Energy in seeking to progress the development of a Combined Heat and Power (CHP) district heating network to serve Belvedere, Thamesmead and other neighbouring areas...Cory have attended all Partnership Board meetings and has played an integral role in progressing the development of a CHP heat network scheme...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."*

2.5.31 REP meets, and exceeds, both national and local standards for positive carbon outcomes while providing a decentralised, secure, flexible energy source for London.

#### Air Quality

2.5.32 The GLA states that the geographical scope and magnitude of the impacts on air quality is not in accordance with the London Plan or the draft London Plan air quality policies. The Applicant is uncertain what is meant by this.

2.5.33 The geographical scope of the assessment is set out in **Section 7.5 of Chapter 7 Air Quality of the Environmental Statement (ES) (6.1, Rev 1)** and corresponds to where there is the potential for significant effects to occur from the Proposed Development. The results of the modelling of emissions from the Proposed Development shows that at the modelled receptor locations, the impacts of emissions from REP are Negligible in terms of NO<sub>2</sub> and PM<sub>2.5</sub> concentrations (see **Tables C.2.2.9 and C.2.2.11 of Appendix C.2 of the ES Appendices (6.3, Rev 1)**). There are no predicted exceedances of air quality strategy objectives when the contribution from REP is added to baseline pollutant concentrations. The development would not lead to exceedances of EU Limit Values or delay compliance of the London Zone.

2.5.34 There are only two pollutants (arsenic and nickel) where the impacts are predicted to be non-negligible at a small number of the modelled receptor locations. In these cases, there are no exceedances of relevant assessment levels and all non-

negligible impacts are minor adverse at worst. In accordance with the Institute of Air Quality Management (IAQM) assessment criteria set out in **Table 7.21 of Chapter 7 Air Quality of the ES (6.1, Rev 1)**, these are not significant impacts and overall, the emissions do not lead to significant effects. The Applicant would therefore seek to understand how the magnitude of the impacts are considered to be substantial and not in accordance with the London Plan or draft London Plan, or how compliance with legal EU limit values would be delayed.

2.5.35 The results set out in **Table 7.34 of Chapter 7 Air Quality of the ES (6.1, Rev 1)** are reported for the location of the maximum ground level concentrations anywhere within the receptor grid. For annual mean concentrations, and as shown in **Figures 7.5 to 7.7 of the ES Figures (6.2, APP-056)**, the location of maximum ground level concentration is within the river and not at locations where there would be relevant exposure. **Table 7.34 of Chapter 7 Air Quality of the ES (6.1, Rev 1)**, is used to identify the pollutants where the process contribution is not negligible at the point of maximum predicted concentration. For those pollutants where this is the case, the text below the table discusses the process contribution and predicted environmental concentrations at receptor locations (with the results provided in the appendix). The significance of the impacts is judged at the receptor locations, and takes into account both the process contribution and the predicted environmental concentration in line with **Table 7.21 of Chapter 7 Air Quality of the ES (6.1, Rev 1)**, for annual average impacts.

2.5.36 Furthermore, as detailed in the **Environmental Permit and Air Quality Note (8.02.06)**, submitted for Deadline 2, the Applicant is proposing the installation of the NOx abatement technology of Selective Catalytic Reduction (SCR). The proposed SCR will result in significantly lower NOx emissions than were applied in the air quality assessment reported in **Chapter 7 Air Quality of the ES (6.1, Rev 1)**.

2.5.37 The Applicant understands the general sensitivity of air quality impacts within Greater London. Taking this into consideration, within the Environmental Permit (EP) application, the Applicant has proposed to commit and invest in the 'lowest' emission limit within the EP application for any conventional ERF within London or the UK. This will be secured in the EP.

## **2.6 Kent County Council (RR-079)**

- 2.6.1 The Applicant and the Respondent have been actively discussing a Statement of Common Ground. A final draft Statement of Common Ground has been submitted at Deadline 2.

## 2.7 Royal Borough of Greenwich (RR-084)

### Summary of Representation:

2.7.1 The Royal Borough of Greenwich (RBG) submitted a Relevant Representation (RR) to the Planning Inspectorate on 12<sup>th</sup> February 2019. The following provides a summary of their RR.

#### Air Quality

2.7.2 As the proposed activities fall within an Air Quality Management Area (AQMA) for pollutants produced by waste incineration processes, further assessment detail is required. Appropriate mitigation will be required to control such emissions.

2.7.3 An appropriate planning condition may be necessary at the approval stage of the application in relation to operational practice optimisation and reducing emissions from the current fleet of tugs. Uncertainty in operational emissions predicted as negligible have been noted.

2.7.4 However, RGB is satisfied that air quality impacts associated with the operation of the Proposed Development will be negligible if appropriate mitigation measures are ensured.

#### Noise

2.7.5 RGB is satisfied that noise emissions from the Proposed Development will not cause disturbance to the closest receptor if appropriate mitigation measures as delineated paragraph 8.13.1-8.13.6 of the ES are adopted.

#### Transport and highways

2.7.6 RBG wish to reinforce the commitment by the applicant to use the River Thames to transport the majority of material and any deviation from this would severely affect the highway network, and that a suitable construction management plan is to be agreed with neighbouring authorities not just London Borough of Bexley.

### The Response:

2.7.7 With respect to Air Quality, the **Environmental Permit and Air Quality Note (8.02.06)** explains in more detail the Applicant's mitigation commitment in the Environmental Permit application to the use of modern low emission abatement technology. This investment in mitigation will provide one of the 'lowest' emission limits within an EP application for any conventional ERF within London or the UK.

2.7.8 As stated by RBG, the Applicant is continuing to investigate options to reduce emissions from their current fleet of tugs. **Paragraph 7.11.2 of Chapter 7 Air Quality** of the **Environmental Statement (ES) (6.1, Rev 1)** concludes the effects of emissions from river traffic are not considered significant and therefore additional requirements relating to this are not considered necessary.

- 2.7.9 The Applicant welcomes RBG's Relevant Representation relating to noise. **Section 4.4** of the **Outline Code of Construction Practice (7.5, Rev 1)** details the proposed mitigation measures relating to noise. This mitigation is secured through **Requirement 11 of Schedule 2 of the dDCO (3.1, Rev 1)**.
- 2.7.10 In respect to transport and highways, the Applicant intends to maximise the use of the river and its existing infrastructure and fleet of barges to operate REP. The EIA tested different operational scenarios for waste transport comprising a 100% by road (worst case) scenario as well as a 100% by river scenario. No significant effects on traffic were identified for either scenario. Furthermore, TfL has submitted its relevant representation and no objection has been raised in relation to operational road movements. The updated Development Consent Order (Revision 1) includes a new requirement, Requirement 14 in Schedule 2, which restricts the number of two-way vehicle movements made by heavy commercial vehicles delivering waste to the ERF during the operational period to a maximum of 90 vehicles in and 90 vehicles out per day, save in circumstances where there is a jetty outage or where the vehicle movements are below the maximum number permitted by condition 28 of planning permission reference 16/02167/FUL.
- 2.7.11 **Requirement 13 of Schedule 2 of the dDCO (3.1, Rev 1)** Requires that a Construction Traffic Management Plan (CTMP) is submitted to the relevant local planning authorities (London Borough of Bexley and Dartford Borough Council) for consultation and agreement prior to commencement of the Proposed Development (or part thereof). **Requirement 13 of Schedule 2 of the dDCO (3.1, Rev 1)** requires the CTMP to be substantially in accordance with the **Outline CTMP (6.3; Rev 1)** submitted as part of the Application. As part of this process, the relevant local planning authorities may consult neighbouring authorities including the Royal Borough of Greenwich.
- 2.7.12 The Applicant is progressing a Statement of Common Ground (SoCG) with RBG. A draft SoCG was submitted to RBG on 18<sup>th</sup> March 2019 and at the time of writing this response, is still being reviewed by the Authority. The Applicant is of the opinion that, through ongoing dialogue with RBG, a SoCG will be achieved in due course.

## **2.8 London Borough of Bexley**

- 2.8.1 The London Borough of Bexley (LBB) submitted a Relevant Representation (RR) to the Planning Inspectorate on 12th February 2019.
- 2.8.2 There has been extensive engagement between the Applicant and LBB on the matters noted in LBB's RR since its submission, with detailed consideration of the issues raised. In particular, many of the matters raised by the LBB on the draft Development Consent Order (dDCO) are reflected in amendments to the **dDCO** submitted at Deadline 2 **(3.1; Rev 1)**.
- 2.8.3 As discussions between the parties are still on-going, and the issues of concern to LBB continue to be narrowed down, the Applicant considered that it would be most helpful if the Examination was provided with an update on those matters once those discussions have been progressed further in meetings to take place over the next few days. These discussions will ultimately be captured in the Statement of Common Ground (SoCG) being worked towards by the two parties. However, in order to assist the Examination, a draft of a table with commentary from both the Applicant and LBB on each of the issues raised will be submitted by the Applicant prior to the Issue Specific Hearings. A final form of that table will be appended to the SoCG, once it has been agreed between the parties.

## 3 Statutory Organisations

### 3.1 The Coal Authority (RR-003)

#### Representation:

- 3.1.1 I have checked the information held by the Coal Authority and can confirm that the proposed development site (as per Figure 1.1 Rev 0) is located outside of the defined coalfield.
- 3.1.2 Accordingly, I can confirm that the Coal Authority has no comments or observations to make on this proposal.
- 3.1.3 In the spirit of efficiency of resources and proportionality, it will not be necessary for you to consult the Coal Authority at any future stages of the Project. This letter can be used as evidence for the legal and procedural consultation requirements.

#### Response

- 3.1.4 The Applicant acknowledges the Respondent's comments thanks the Respondent for its submission.



## 3.2 East London Waste Authority (RR-034)

### Summary of Representation:

- 3.2.1 The East London Waste Authority (ELWA) submitted a Relevant Representation (RR) to the Planning Inspectorate on 04 February 2019. The RR raises several questions about the Proposed Development, which can be summarised as follows:
- The need for residual waste management capacity in London relative to policy in the Draft New London Plan (DNLP) and the London Environment Strategy (LES);
  - Carbon Intensity Floor, specifically in relation to the proposed approach to meeting heat demand;
  - River infrastructure capacity; and
  - The origin of waste and the environmental impacts relating to transport.
- 3.2.2 ELWA is a statutory Waste Disposal Authority (WDA), responsible for the disposal of municipal waste collected in East London by the London Boroughs (LB) of Barking & Dagenham, Havering, Newham and Redbridge. It is not responsible for commercial waste collections or disposal within these boroughs. Separate RRs have been made by LB Barking & Dagenham (offering no objection) and the LB Havering (requesting clarification on certain air quality matters). No RRs were received from either LB Newham or LB Redbridge.

### Response

#### **Compliance with Policy and the Need for Residual Waste Management Capacity**

- 3.2.3 The Respondent states that the application appears to be at odds with the DNLP and the LES.
- 3.2.4 **Sections 5.2 and 5.3** of the **Planning Statement (7.1, APP-102)** clearly demonstrates how the Proposed Development is compliant with regional planning policy and guidance (including the DNLP and the LES). In assessing compliance with regional policy, the Applicant has also liaised with the Greater London Authority throughout the development of the DCO Application (see the **Consultation Report** and its associated appendices for further details, **5.1, APP-019 to APP-032**).
- 3.2.5 The DNLP does not state that *'no new energy recovery facilities are required in London for the treatment of residual waste, beyond the planned facilities at Beddington Lane and Edmonton'* (as suggested by the Respondent). Rather paragraph 9.7.3A of the suggested changes to the DNLP states that *"modelling suggests that if London achieves the reduction and recycling set out, above, it will have sufficient Energy from Waste capacity to manage London's non-recyclable municipal waste"*. The Applicant has made representations to the DNLP

Examination challenging this statement and questioning the robustness of the evidence base on which it is based.

- 3.2.6 The Applicant has submitted a comprehensive assessment of both commercial and local authority collected residual waste management capacity requirement in **The London Waste Strategy Assessment ('LWSA')**, Annex A of the **Project and its Benefits Report ('PBR') (7.2, APP-103)**. The **LWSA** reviews the Mayor's LES and incorporated the targets, along with the adopted and draft London Plans, in the various scenarios assessed for different waste forecasts and recycling and recovery policies within London. **Paragraph 6.1.3** of the **LWSA**, concludes that even in the most conservative assessment, using the lowest waste arisings and the aspirational policy expectations regarding waste management, REP is required to sustainably manage London's residual waste.
- 3.2.7 As demonstrated in **Paragraphs 4.2.20 to 4.2.46** of the **PBR (7.2, APP-103)**, the Applicant does not solely cite *Residual Waste in London and the South East: Where is it going to go?* ("the Tolvik Report") as the primary evidence base. Rather the Applicant considers the context discussed in the Tolvik Report and uses it in combination with the findings of the **LWSA** (Annex A of **7.2, APP-103**). **Paragraphs 4.2.20 to 4.2.26** of the **PBR (7.2, APP-103)** demonstrate that the **LWSA** (Annex A of **7.2, APP-103**) is not only reliant upon the data presented within the London Plans (the DNLP and the existing London Plan) and the LES, but also considers the 'real-world' context of waste management in London and the South East set out in the Tolvik Report. As such, differences between these documents have been acknowledged and assessed in the **LWSA (Annex A of 7.2, APP-103)**.
- 3.2.8 The LES (on page 112) recognises the extent of the challenges that need to be overcome in order to achieve the Mayor's aspirational recycling targets, particularly in the context of the severe financial austerity measures facing London Boroughs. However, information provided in the **LWSA (7.2, APP-103)** and the Tolvik Report indicate that even if the Mayor's recycling aspirations are met in full, London and the South East would produce sufficient residual waste to exceed REP's operational requirements.

#### **Carbon Intensity Floor & Heat Demand**

- 3.2.9 The Respondent states that REP will need to achieve the carbon intensity floor (CIF) set out in the LES and considers that the additional heat offtake from REP is not necessary to provide a backup to the heat available from Cory's existing facility, known as Riverside Resource Recovery Facility (RRRF).
- 3.2.10 An update to the **Combined Heat and Power (CHP) Assessment (5.4, APP-035)** has been prepared to report the Applicant's progress in working with LB Bexley and the Peabody Estate (amongst others) in exploring options for the export of heat from both REP and RRRF. This updated **CHP Supplementary Report (5.4.1)** confirms:
- REP responds directly to the outcomes sought through the National Policy Statements EN-1 and EN-3 by being designed at the outset as CHP Enabled

and will therefore be fully capable of exporting heat from the commencement of operations, with all required on-site infrastructure in place;

- There is sufficient heat demand within the locality to accommodate the heat produced from REP & RRRF;
- REP achieves the required value for the CIF when operating in electricity-only mode, confirming that the REP complies with relevant London policies; and
- The Applicant has implemented, and will continue to implement, demonstrable steps to secure heat export, as required by London policy.

### **River Infrastructure Capacity**

3.2.11 As confirmed by the Respondent, the Mayor of London supports the use of the River Thames for commercial traffic, particularly where this reduces road congestion.

3.2.12 The Applicant has a long history as a river-based logistics company and therefore a proven track record and expertise in river logistics. It also has an imperative to maximise the use of the river to transport waste. The Applicant operates a network of riparian transfer stations along the River Thames (Smugglers Way- Wandsworth, Cringle Dock – Battersea, Walbrook Wharf- City of London and Northumberland Wharf – Tower Hamlets). The Applicant also has permission for an additional waste transfer station facility at the Port of Tilbury near the Incinerator Bottom Ash (IBA) processing facility. These facilities have the capacity (under existing permits and permissions) to handle the residual waste that would be transported to REP for recovery.

3.2.13 As set out in **Paragraphs 3.3.72 to 3.3.74 of Chapter 3 Project and Site Description of the Environmental Statement (ES) (6.1, Rev 1)**, the transportation of waste would predominately be undertaken via the existing jetty. All of the export of IBA from the ERF would be via the jetty. The existing jetty has sufficient availability and capacity without modification to support the proposed throughput to REP and continued use by RRRF. The existing jetty at the Application Site has consent to operate on a 24-hour basis, 7 days a week but the jetty only operates on a single day time shift at present to handle waste. The increase in throughput from REP would move the jetty to a 24/7 operation in line with its planning permission. REP would increase the throughput at the jetty up to a maximum of 805,920 tonnes per annum (likely 'nominal' throughput increase of 655,000 tonnes per annum), in addition to the existing transportation of waste to supply RRRF (c. 678,000 tonnes per annum by river to RRRF in 2018).

3.2.14 On this basis, the maximum combined throughput of waste for REP and RRRF would therefore be 1,468,000 tonnes per annum, for which there is sufficient throughput capacity.

### **Origin of waste and the environmental impacts relating to transport**

- 3.2.15 REP is a 100% commercially funded venture and is not tied to long term local authority contracts. Therefore, the definite origin of waste for disposal at REP cannot be confirmed at this time. However, REP's location within the capital means that it is likely to receive waste from across London. As noted in **Paragraph 4.1.7 of Appendix K.4 Operational Waste Statement** of the ES (6.3, APP-097), the majority of residual waste arriving at REP will arrive from one of the Applicant's feeder riparian waste transfer stations. REP will therefore support London's policy aspiration for net self-sufficiency and help overcome the current infrastructure gap in waste disposal facilities.
- 3.2.16 Whilst the ERF within REP is being promoted to take waste from within London, there is no justification for it to be limited to the capital, particularly given its location and the comprehensive and established river logistics network that can support it. As set out in the **PBR (7.2, APP-103)**, there is an identified need for approximately 2 million tonnes of residual waste management capacity across the waste planning authorities adjacent to London. The ERF element of REP will be a suitable and reliable alternative to help treat London and the South East's waste which remains after recycling, helping to ensure that less waste is sent to landfill or shipped overseas.
- 3.2.17 The environmental impacts of the additional movements on both the Thames and the road network have been considered within the ES. Paragraph 3.3.72 of **Chapter 3 Project and Site Description** of the ES (6.1, APP-040) and Table 6.6 of **Chapter 6 Transport** of the ES (6.1, APP-043) summarise the three parameters considered in the ES which broadly reflect different modal split assumptions.
- 3.2.18 A 100% by road 'reasonable worst case' assessment and a 100% by river 'reasonable worst case' assessment for the operational phase have been undertaken. The 100% by road and river scenarios seek to ensure that REP has the necessary commercial flexibility to operate efficiently and effectively, even though the likelihood is that the majority of waste will be transported by river. **Paragraph 6.13.4 of Chapter 6 Transport** of the ES (6.1, APP-043) reports that there will be no significant effects from the 100% by road scenario and **Paragraph 7.3 of Appendix B.2 Navigation Risk Assessment** of the ES (6.3, APP-067) concludes that the Proposed Development would have negligible effects upon navigational safety on the River Thames.
- 3.2.19 The Applicant's existing RRRF receives most of its waste predominantly by river (c. 678,000 tonnes per annum by river in 2018). The maximum consented throughput of RRRF is 785,000 tonnes per annum. It is expected that REP would typically operate on a similar basis in terms of river and road transportation but as stated above there needs to be flexibility. The Applicant proposes a restriction on heavy commercial vehicles delivering waste to the ERF, and this restriction has been included in the **draft Development Consent Order (dDCO)** submitted at Deadline 2 (3.1, Rev 1).

- 3.2.20 **Paragraphs 7.9.14 to 7.9.19 of Chapter 7 Air Quality of the ES (6.1, Rev 1)** report the assessment of the potential effects, on local air quality, of river vessel movements associated with REP. As part of the assessment, the minimum point of exposure for sensitive receptors, such as residential properties, was estimated to be 90 m from the vessel, due to the width of the river along a typical river journey. Most freight vessels travel close to the middle of the river during their transit, due to factors such as tides and bridge height restrictions. Circa 90 m is representative of the distance from the middle of the river to quayside in the western reaches of central London in the vicinity of Smugglers Way wharf, Wandsworth. However, the river widens significantly through central London and is more than 500 m wide at both the REP site and Tilbury Docks. Therefore, any potential increase in annual mean NO<sub>2</sub> (Nitrogen Dioxide) concentrations to residential properties at locations of relevant exposure would be negligible.
- 3.2.21 The assessment shows that, in all cases, any increase would be imperceptible and the effect on air quality is not significant.

### 3.3 Knights Solicitors on behalf of S Wernick & Sons (Holdings) Limited (RR-041)

#### Summary of Relevant Representation:

S Wernick & Sons (Holdings) Limited ("WERNI") opposes the application for development consent for the following reasons:

- 3.3.1 Cory seeks to acquire permanently 4,678m<sup>2</sup> of land owned freehold by WERNI.
- 3.3.2 The Book of Reference fails to identify Wernick Event Hire Limited ("WEHL") as an occupier.
- 3.3.3 Cory seeks to compulsorily acquire rights over land, take temporary possession of land and extinguish or override existing rights over land. The Respondent considers this land to be fundamental to WEHL's operation and commercially valuable due to the scarceness of the asset class in the locality.
- 3.3.4 The Respondent notes the relevant tests for compulsory acquisition and states:

*"Cory has not demonstrated that all reasonable alternatives to compulsory acquisition of WERNI's land have been explored, its proposed interference with WERNI's rights does not meet the tests set out and compulsory acquisition of WERNI's interests is not justified having regard to Article 1 of the First Protocol to the ECHR. The same goes for WEHL. Cory's conduct has breached paragraphs 24-30 of the Guidance: see the 12 December 2018 letter from their solicitors (Knights). The letter draws attention to other of Cory's failings."*
- 3.3.5 Additionally, the Respondent challenges the statements made in the Application documents for the Riverside Energy Park Order in respect of consultation and negotiations relating to the acquisition of WERNI's land interests.

#### Response to representation:

- 3.3.6 The **Book of Reference (4.3, Rev 1)** submitted at Deadline 2 has been updated to include WEHL as an occupier of plot 02/05.
- 3.3.7 The Applicant does not accept the assertion that plot 02/05 is of an asset class which is scarce in South-east London/North-west Kent. This assertion is also made by SAS Depot Limited in its Relevant Representation (RR-028) in respect of plot 02/06 and WEHL in its Relevant Representation (RR-042) in respect of plot 02/05). WERNI, WEHL and SAS Depot Limited are advised by the same advisers. In any event, Ardent, the Applicant's advisors in respect of land, has carried out a review of available sites similar to plot 02/05, being the plot the subject of the WERNI and WEHL Relevant Representations, and has identified various sites within the South-east London/North-west Kent areas that are currently available and which are comparable to plot 02/05. Ardent, as professional land advisers, does not accept that plot 02/05 is unique and that WEHL can only operate from that plot.

- 3.3.8 The nature of WEHL's business (the occupier of plot 02/05) is an event company providing temporary portable accommodation to businesses running events across the country. WEHL occupies a number of sites, believed to be owned by WERNI, including plot 02/05 and another site predominantly serving the South of the country. WERNI owns other sites for its businesses across the country including one in Dartford. The Applicant understands WEHL wishes to retain a site in South-east London and North West Kent. The Applicant understands that WEHL requires a site of approximately, the same size as plot 02/05 (0.48 ha) that includes an open yard that can be used for the storage of event hire cabins that can be loaded onto vehicles by mobile crane. Based on an external assessment of the site on 12 March 2018, the business utilises an industrial piece of land with concrete hardstanding and utilises a small warehouse with a Gross External Area of approximately c.229m<sup>2</sup>. This type of business, therefore, requires a 0.48 ha open yard site within South-east London that is suitable for storage, car parking and a small office block. These requirements do not make plot 02/05 unique.
- 3.3.9 The Applicant contends that the Examining Authority can be satisfied that the compulsory acquisition of the interests of WERNI and WEHL meets the requirements of Section 122 of the Planning Act 2008 as well as the guidance *Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land*. **Section 6.5** and **Appendix A** of the **Statement of Reasons (4.1, Rev 1)** explains why there is a compelling case in the public interest for the Order Land to be compulsorily acquired, with plot 02/05 being land that REP will be built upon, forming part of the access road and tipping hall to the anaerobic digestion plant and the energy for waste plant. Plot 02/05 is clearly required for that part of REP that is classed as the Nationally Significant Infrastructure Project (NSIP) (work numbers 1 and 2) as well as that part of REP that is classed as Associated Development (work numbers 3, 4, 5 and 6).
- 3.3.10 The Overarching National Policy Statement for Energy (NPS EN-1) makes clear the reliance on the market to bring forward new facilities. REP is an industry funded, NSIP, delivering on all relevant aspects of national and local policy. The need for the Proposed Development has been established in the **Project and its Benefits Report (7.2, APP-103)** and is underpinned by National Policy Statement for Renewable Energy Infrastructure (NPS EN-3) (particularly paragraph 2.5.2) which explicitly recognises that the recovery of energy from the combustion of waste is likely to play an increasingly important role meeting the UK's energy and renewable energy needs. As such, the benefits in the public interest, which are anticipated to arise from the Proposed Development, are of national significance and would, accordingly, be on a scale outweighing the individual private loss suffered by parties whose interests in land would be interfered with in order to enable the delivery of the Proposed Development. The proposed acquisition of land is legitimate, necessary and proportionate.
- 3.3.11 Regarding alternatives, the REP site, of which plot 02/05 forms part, is being promoted by the Applicant given:

- the REP site means that the Applicant can directly use existing river transport infrastructure that is already in use for waste delivery and the collection of the subsequently recovered secondary materials. This is a result of the REP site being adjacent to the Riverside Resource Recovery Facility ("RRRF"). No other site can provide this advantage and use of river infrastructure;
- the REP site enables the Applicant to optimise a location that is already in a low carbon and waste management use, including the ability to share infrastructure with RRRF, thereby significantly reducing the footprint of REP and ultimately compulsory acquisition of land required for a facility the size of REP. No other site can provide this advantage of shared infrastructure;
- the REP site is a brownfield site that is adequate to accommodate REP;
- the availability of a suitable electrical connection within the vicinity of the REP site;
- the good potential for district heating; and
- the REP site's location is such that there are virtually no significant adverse effects on the sensitive residential and environmental receptors.

3.3.12 The Applicant is seeking to acquire all land interests by agreement where possible, thereby seeking to avoid the compulsory acquisition of land interests. WERNI and WEHL have the same representation, common directors and have been addressed at the same time. Negotiations with WERNI and WEHL to date are set out in **Appendix B** to the **Statement of Reasons (4.1, Rev 1)** submitted at Deadline 2. These are also set out below, for ease of reference, and clearly demonstrate that the Applicant has been seeking to reach agreement with WERNI and WEHL thereby seeking to avoid the need to compulsory acquire the interests of WERNI and WEHL.

3.3.13 Land negotiations and current status:

29.09.17	The Applicant emailed WERNI/WEHL opening up dialogue regarding the possibility of purchasing WERNI/WEHL's site at Norman Road Belvedere (the 'Site') or a possible land swap within the South-East London area.
29.09.17	WERNI/WEHL email to Applicant confirming willingness to consider potential land acquisition options and providing suitable dates to discuss.
29.09.17	Applicant correspondence to WERNI/WEHL confirming availability to discuss Site options.
04.10.17	WERNI/WEHL emailed the Applicant chasing contact re possible dates to discuss the Site options.
04.10.17	The Applicant emailed WERNI/WEHL regarding discussions of potential Site options.



10.10.17	Meeting held with the Applicant and WERNI/WEHL – commercial discussions regarding the potential purchase of the Site and land swap options.
16.01.18	The Applicant emailed WERNI/WEHL providing details of potential alternative sites and provided available dates for a further meeting to discuss.
20.02.18	The Applicant emailed WERNI/WEHL to notify Mr Wernick that the Applicant had visited the Former Transport Yard at Sandpit Road. The Applicant confirmed it would place an offer for the freehold purchase of the site by the 15th March 2018. The Applicant requested access to WERNI/WEHL's Site for a non-intrusive survey.
22.02.18	Mr Wernick confirmed the Site would be vacated by Friday March 2nd whilst work is undertaken on the Site. Confirming the Applicant can access the Site at this time.
20.03.18	Applicant offer submitted on the 16th of March 2018 for the Transport Yard, Sandpit Road. Asking for a final offer based on a series of terms.
27.03.18	Revised bid submitted for the Former Transport Yard, Sandpit Road for a potential land swap of part with WERNI/WEHL.
16.05.18	Issue of formal Request For Information cover letter pack to WERNI (as registered owner) explaining the Proposed Development and seeking information from WERNI.
21.06.18	The Applicant received s42 response and notification from WERNI of its intention to seek legal and valuation advice before responding further to the consultation invitation.
21.06.18	Correspondence with WERNI with regard to the fees undertaking.
21.06.18	Response to issued s42 Documentation.
02.07.18	Response to WERNI's email received on the 21st of June 2018. Confirming the Applicant's on-going investigation into an alternative site for a land swap.
08.08.18	The Applicant received notification of advisor appointments to WERNI/WEHL.
14.08.18	The Applicant met with WERNI/WEHL on site to discuss the proposed developments and site requirements, in the context of any potential future relocation.
04.09.18	Applicant correspondence to agree scope for fee undertakings for WERNI/WEHL
10.10.18	Meeting held between the Applicant and WERNI/WEHL- commercial discussions.
21.11.18	Applicant, discloses copy of formal Red Book Valuation of the Site and puts forward options for determination purchase price for all parties.
21.11.18	WERNI/WEHL notify the Applicant that it will oppose the DCO application.
22.11.18	Applicant correspondence to WERNI/WEHL regarding undertaking for valuation of land.

22.11.18	Correspondence from WERNI/WEHL to Applicant
23.11.18	The Applicant detailed proposal for instructions and undertakings to WERNI/WEHL
23.11.18	The Applicant confirms undertaking to WERNI/WEHL for representation and provision off formal valuation to be disclosed.
26.11.18	WERNI/WEHL correspondence to Applicant confirming undertakings sufficient.
26.11.18	Applicant correspondence to WERNI/WEHL providing details on the DCO process.
26.11.18	WERNI/WEHL confirm to Applicant it will formally oppose application for development consent.
26.11.18	Applicant requests of WERNI/WEHL that representative correspondence in respect of other sites is addressed separately.
26.11.18	The Applicant seeks disclosure of WERNI/WEHL Site valuation.
27.11.18	WERNI/WEHL correspondence to Applicant re representative correspondence.
27.11.18	Applicant correspondence to WERNI/WEHL
28.11.18	WERNI/WEHL correspondence to Applicant – acknowledgement.
03.12.18	WERNI/WEHL correspondence to Applicant regarding Site valuation.
07.12.18	Correspondence from WERNI/WEHL to Applicant regarding the DCO process.
07.12.18	Further correspondence from Applicant to WERNI/WEHL regarding undertakings.
14.12.18	Applicant sends commercial offer letter to WERNI/WEHL.
18.12.18	Email from the Applicant to WERNI/WEHL confirming that PINS had accepted the Applicant's application on 14 December 2018; confirming that a copy of the Applicant's application had been sent to WERNI/WEHL that day on a USB drive; and providing a copy of the link to the PINS website (containing a further copy of the application documents submitted to PINS).
20.12.18	WERNI/WEHL correspondence acknowledging receipt of letter sent 14.12.18 and confirming that WERNI/WEHL's availability was limited until 10 January 2019.
21.12.18	WERNI/WEHL request clarification on the divergences between the ES and the PEIR.
22.12.18	Applicant confirms it will prepare an explanatory note re the changes made between the ES and the PEIR.
24.12.18	WERNI/WEHL acknowledge confirmation.
24.12.18	The Applicant formally explains that the ES now includes the full Environmental Statement, whereas the PIER included the preliminary assessment results only and explaining that the examination timetable will be issued by the Examining Authority under a Rule 6 letter.
31.12.18	Confirmation that WERNI/WEHL were commencing work on Relevant

	Representation.
31.12.18	WERNI/WEHL confirm intention to register as 'Interested Parties'; downloading a copy of the application from the PINS website; and that they were instructing Counsel.
31.12.18	Applicant confirms a copy of the application was provided when two USB drives were sent to WERNI/WEHL (registered post) on 18 December 2018.
02.01.19	Notice documentation issued.
12.01.19	Applicant writes to WERNI/WEHL providing a copy of the explanatory note on the differences between the PIER and the ES; confirming that this explanatory note does not form part of the application and is provided on a 'Legally Privileged' basis only to assist in the context of the land discussions only.
14.01.19	WERNI/WEHL acknowledging receipt of the 'Legally Privileged' explanatory note and confirming that it was shared with Counsel to inform the drafting of their Relevant Representations.
16.01.19	Applicant requests a further meeting.
18.01.19	WERNI/WEHL confirms not ready to meet but accepts the fee undertakings provided.
07.02.19	Applicant formally reiterates options to value the Site and chasing for a meeting date.
22.03.19	WERNI/WEHL provide commercial response to the Applicant on Site value.
27.03.19	Applicants requests non-intrusive survey access and meeting on 05.04.19. Access to the Site subsequently confirmed.
28.03.19	Applicant seeks formal valuation from WERNI/WEHL and chases meeting requested for 05.04.19
29.03.19	Applicant carried out Site inspection.
01.04.19	WERNI/WEHL refuses to provide formal valuation but confirms meeting 05.04.19
03.04.19	Applicant confirms meeting on 05.04.19 and seeks copy of valuation as per the undertaking given.
05.04.19	Meeting held between WERNI/WEHL and the Applicant – Commercial discussions.
11.04.19	Applicant seeks to confirm dates for a further follow-up meeting.
15.04.19	Meeting date confirmed.
17.04.19	Meeting location confirmed.
29.04.19	Meeting held between WERNI/WEHL and the Applicant – Commercial discussions.
02.05.19	Telephone conference between WERNI/WEHL and the Applicant – Commercial discussions.
07.05.19	Applicant provides revised commercial offer to purchase the Site.
10.05.19	WERNI/WEHL provides commercial counter offer.

13.05.19	Applicant confirms its board will consider commercial counter offer.
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3.3.14 These land negotiations, which include multiple commercial offers, demonstrate that the Applicant has followed the guidance *Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land*. The Applicant therefore rejects that it has not complied with paragraphs 24-30 of that guidance.

3.3.15 The Applicant does not accept that the compulsory acquisition of interests of WERNI and WEHL would breach Article 1 of the First Protocol of the European Convention on Human Rights for the reasons set out above. The Applicant considered the effect of the compulsory acquisition of land interests in the context of the Convention in **Section 10** of the **Statement of Reasons (4.1, Rev 1)**.

### 3.4 Knights Solicitors on behalf of Wernick Event Hire Limited (RR-042)

#### Summary of Relevant Representation:

Wernick Event Hire Limited ("WEHL") is the occupier of land owned by S Wernick & Sons (Holdings) Limited ("WERNI"). WEHL opposes the application for development consent for the following reasons:

- 3.4.1 Cory seeks to acquire permanently 4,678m<sup>2</sup> of land owned freehold by WERNI.
- 3.4.2 The Book of Reference fails to identify Wernick Event Hire Limited ("WEHL") as an occupier.
- 3.4.3 Cory seeks to compulsory acquire rights over land, take temporary possession of land and extinguish or override existing rights over land. The Respondent considers this land to be fundamental to WEHL's operation and commercially valuable due to the scarceness of the asset class in the locality.
- 3.4.4 The Respondent notes the relevant tests for compulsory acquisition and states:

*"Cory has not demonstrated that all reasonable alternatives to compulsory acquisition of WERNI's land have been explored, its proposed interference with WERNI's rights does not meet the tests set out and compulsory acquisition of WERNI's interests is not justified having regard to Article 1 of the First Protocol to the ECHR. The same goes for WEHL. Cory's conduct has breached paragraphs 24-30 of the Guidance: see the 12 December 2018 letter from their solicitors (Knights). The letter draws attention to other of Cory's failings."*

- 3.4.5 Additionally, the Respondent challenges the statements made in the Application documents for the Riverside Energy Park Order in respect of consultation and negotiations relating to the acquisition of WERNI's land interests.

#### Response to representation:

- 3.4.6 The **Book of Reference (4.3, Rev 1)** submitted at Deadline 2 has been updated to include WEHL as an occupier of plot 02/05.
- 3.4.7 The Applicant does not accept the assertion that plot 02/05 is of an asset class which is scarce in South-east London/North-west Kent. This assertion is also made by SAS Depot Limited in its Relevant Representation (RR-028) in respect of plot 02/06 and WERNI in its Relevant Representation (RR-041) in respect of plot 02/05. WERNI, WEHL and SAS Depot Limited are advised by the same advisers. In any event, Ardent, the Applicant's advisors in respect of land, has carried out a review of available sites similar to plot 02/05, being the plot the subject of the WERNI and WEHL Relevant Representations, and has identified various sites within the South-east London/North-west Kent areas that are currently available and which are comparable to plot 02/05. Ardent, as professional land advisers, does not accept that plot 02/05 is unique and that WEHL can only operate from that plot.

- 3.4.8 The nature of WEHL's business (the occupier of plot 02/05) is an event company providing temporary portable accommodation to businesses running events across the country. WEHL occupies a number of sites, believed to be owned by WERNI, including plot 02/05 and another site predominantly serving the South of the country. WERNI owns other sites for its businesses across the country including one in Dartford. The Applicant understands WEHL wishes to retain a site in South-east London and North West Kent. The Applicant understands that WEHL requires a site of approximately, the same size as plot 02/05 (0.48 ha) that includes an open yard that can be used for the storage of event hire cabins that can be loaded onto vehicles by mobile crane. Based on an external assessment of the site on 12 March 2018, the business utilises an industrial piece of land with concrete hardstanding and utilises a small warehouse with a Gross External Area of approximately c.229m<sup>2</sup>. This type of business, therefore, requires a 0.48ha open yard site within South-east London that is suitable for storage, car parking and a small office block. These requirements do not make plot 02/05 unique.
- 3.4.9 The Applicant contends that the Examining Authority can be satisfied that the compulsory acquisition of the interests of WERNI and WEHL meets the requirements of Section 122 of the Planning Act 2008 as well as the guidance *Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land*. **Section 6.5** and **Appendix A** of the **Statement of Reasons (4.1, Rev 1)** explains why there is a compelling case in the public interest for the Order Land to be compulsorily acquired, with plot 02/05 being land that REP will be built upon, forming part of the access road and tipping hall to the anaerobic digestion plant and the energy for waste plant. Plot 02/05 is clearly required for that part of REP that is classed as the Nationally Significant Infrastructure Project (NSIP) (work numbers 1 and 2) as well as that part of REP that is classed as Associated Development (work numbers 3, 4, 5 and 6).
- 3.4.10 National Policy Statement EN-1 makes clear the reliance on the market to bring forward new facilities. REP is an industry funded, NSIP, delivering on all relevant aspects of national and local policy. The need for the Proposed Development has been established in the **Project and its Benefits Report (7.2, APP-103)** and is underpinned by National Policy Statement EN-3 (particularly paragraph 2.5.2) which explicitly recognises that the recovery of energy from the combustion of waste is likely to play an increasingly important role meeting the UK's energy and renewable energy needs. As such, the benefits in the public interest, which are anticipated to arise from the Proposed Development, are of national significance and would, accordingly, be on a scale outweighing the individual private loss suffered by parties whose interests in land would be interfered with in order to enable the delivery of the Proposed Development. The proposed acquisition of land is legitimate, necessary and proportionate.
- 3.4.11 Regarding alternatives, the REP site, of which plot 02/05 forms part, is being promoted by the Applicant given:
- the REP site means that the Applicant can directly use existing river transport infrastructure that is already in use for waste delivery and the collection of the

subsequently recovered secondary materials. This is a result of the REP site being adjacent to the Riverside Resource Recovery Facility ("RRRF"). No other site can provide this advantage and use of river infrastructure;

- the REP site enables the Applicant to optimise a location that is already in a low carbon and waste management use, including the ability to share infrastructure with RRRF, thereby significantly reducing the footprint of REP and ultimately compulsory acquisition of land required for a facility the size of REP. No other site can provide this advantage of shared infrastructure;
- the REP site is a brownfield site that is adequate to accommodate REP;
- the availability of a suitable electrical connection within the vicinity of the REP site;
- the good potential for district heating; and
- the REP site's location is such that there are virtually no significant adverse effects on the sensitive residential and environmental receptors.

3.4.12 The Applicant is seeking to acquire all land interests by agreement where possible, thereby seeking to avoid the compulsory acquisition of land interests. WERNI and WEHL have the same representation, common directors and have been addressed at the same time. Negotiations with WERNI and WEHL to date are set out in **Appendix B** to the **Statement of Reasons (4.1, Rev 1)**. These are also set out below, for ease of reference, and clearly demonstrate that the Applicant has been seeking to reach agreement with WERNI and WEHL thereby seeking to avoid the need to compulsory acquire the interests of WERNI and WEHL.

3.4.13 Land negotiations and current status:

29.09.17	The Applicant emailed WERNI/WEHL opening up dialogue regarding the possibility of purchasing WERNI/WEHL's site at Norman Road Belvedere (the 'Site') or a possible land swap within the South-East London area.
29.09.17	WERNI/WEHL email to Applicant confirming willingness to consider potential land acquisition options and providing suitable dates to discuss.
29.09.17	Applicant correspondence to WERNI/WEHL confirming availability to discuss Site options.
04.10.17	WERNI/WEHL emailed the Applicant chasing contact re possible dates to discuss the Site options.
04.10.17	The Applicant emailed WERNI/WEHL regarding discussions of potential Site options.
10.10.17	Meeting held with the Applicant and WERNI/WEHL – commercial discussions regarding the potential purchase of the Site and land swap options.

16.01.18	The Applicant emailed WERNI/WEHL providing details of potential alternative sites and provided available dates for a further meeting to discuss.
20.02.18	The Applicant emailed WERNI/WEHL to notify Mr Wernick that the Applicant had visited the Former Transport Yard at Sandpit Road. The Applicant confirmed it would place an offer for the freehold purchase of the site by the 15th March 2018. The Applicant requested access to WERNI/WEHL's Site for a non-intrusive survey.
22.02.18	Mr Wernick confirmed the Site would be vacated by Friday March 2nd whilst work is undertaken on the Site. Confirming the Applicant can access the Site at this time.
20.03.18	Applicant offer submitted on the 16th of March 2018 for the Transport Yard, Sandpit Road. Asking for a final offer based on a series of terms.
27.03.18	Revised bid submitted for the Former Transport Yard, Sandpit Road for a potential land swap of part with WERNI/WEHL.
16.05.18	Issue of formal Request For Information cover letter pack to WERNI (as registered owner) explaining the Proposed Development and seeking information from WERNI.
21.06.18	The Applicant received s42 response and notification from WERNI of its intention to seek legal and valuation advice before responding further to the consultation invitation.
21.06.18	Correspondence with WERNI with regard to the fees undertaking.
21.06.18	Response to issued s42 Documentation.
02.07.18	Response to WERNI's email received on the 21st of June 2018. Confirming the Applicant's on-going investigation into an alternative site for a land swap.
08.08.18	The Applicant received notification of advisor appointments to WERNI/WEHL.
14.08.18	The Applicant met with WERNI/WEHL on site to discuss the proposed developments and site requirements, in the context of any potential future relocation.
04.09.18	Applicant correspondence to agree scope for fee undertakings for WERNI/WEHL
10.10.18	Meeting held between the Applicant and WERNI/WEHL- commercial discussions.
21.11.18	Applicant, discloses copy of formal Red Book Valuation of the Site and puts forward options for determination purchase price for all parties.
21.11.18	WERNI/WEHL notify the Applicant that it will oppose the DCO application.
22.11.18	Applicant correspondence to WERNI/WEHL regarding undertaking for valuation of land.
22.11.18	Correspondence from WERNI/WEHL to Applicant
23.11.18	The Applicant detailed proposal for instructions and undertakings to WERNI/WEHL



23.11.18	The Applicant confirms undertaking to WERNI/WEHL for representation and provision off formal valuation to be disclosed.
26.11.18	WERNI/WEHL correspondence to Applicant confirming undertakings sufficient.
26.11.18	Applicant correspondence to WERNI/WEHL providing details on the DCO process.
26.11.18	WERNI/WEHL confirm to Applicant it will formally oppose application for development consent.
26.11.18	Applicant requests of WERNI/WEHL that representative correspondence in respect of other sites is addressed separately.
26.11.18	The Applicant seeks disclosure of WERNI/WEHL Site valuation.
27.11.18	WERNI/WEHL correspondence to Applicant re representative correspondence.
27.11.18	Applicant correspondence to WERNI/WEHL
28.11.18	WERNI/WEHL correspondence to Applicant – acknowledgement.
03.12.18	WERNI/WEHL correspondence to Applicant regarding Site valuation.
07.12.18	Correspondence from WERNI/WEHL to Applicant regarding the DCO process.
07.12.18	Further correspondence from Applicant to WERNI/WEHL regarding undertakings.
14.12.18	Applicant sends commercial offer letter to WERNI/WEHL.
18.12.18	Email from the Applicant to WERNI/WEHL confirming that PINS had accepted the Applicant's application on 14 December 2018; confirming that a copy of the Applicant's application had been sent to WERNI/WEHL that day on a USB drive; and providing a copy of the link to the PINS website (containing a further copy of the application documents submitted to PINS).
20.12.18	WERNI/WEHL correspondence acknowledging receipt of letter sent 14.12.18 and confirming that WERNI/WEHL's availability was limited until 10 January 2019.
21.12.18	WERNI/WEHL request clarification on the divergences between the ES and the PEIR.
22.12.18	Applicant confirms it will prepare an explanatory note re the changes made between the ES and the PEIR.
24.12.18	WERNI/WEHL acknowledge confirmation.
24.12.18	The Applicant formally explains that the ES now includes the full Environmental Statement, whereas the PIER included the preliminary assessment results only and explaining that the examination timetable will be issued by the Examining Authority under a Rule 6 letter.
31.12.18	Confirmation that WERNI/WEHL were commencing work on Relevant Representation.
31.12.18	WERNI/WEHL confirm intention to register as 'Interested Parties'; downloading a copy of the application from the PINS website; and that

	they were instructing Counsel.
31.12.18	Applicant confirms a copy of the application was provided when two USB drives were sent to WERNI/WEHL (registered post) on 18 December 2018.
02.01.19	notice documentation issued.
12.01.19	Applicant writes to WERNI/WEHL providing a copy of the explanatory note on the differences between the PIER and the ES; confirming that this explanatory note does not form part of the application and is provided on a 'Legally Privileged' basis only to assist in the context of the land discussions only.
14.01.19	WERNI/WEHL acknowledging receipt of the 'Legally Privileged' explanatory note and confirming that it was shared with Counsel to inform the drafting of their Relevant Representations.
16.01.19	Applicant requests a further meeting.
18.01.19	WERNI/WEHL confirms not ready to meet but accepts the fee undertakings provided.
07.02.19	Applicant formally reiterates options to value the Site and chasing for a meeting date.
22.03.19	WERNI/WEHL provide commercial response to the Applicant on Site value.
27.03.19	Applicants requests non-intrusive survey access and meeting on 05.04.19. Access to the Site subsequently confirmed.
28.03.19	Applicant seeks formal valuation from WERNI/WEHL and chases meeting requested for 05.04.19
29.03.19	Applicant carried out Site inspection.
01.04.19	WERNI/WEHL refuses to provide formal valuation but confirms meeting 05.04.19
03.04.19	Applicant confirms meeting on 05.04.19 and seeks copy of valuation as per the undertaking given.
05.04.19	Meeting held between WERNI/WEHL and the Applicant – Commercial discussions.
11.04.19	Applicant seeks to confirm dates for a further follow-up meeting.
15.04.19	Meeting date confirmed.
17.04.19	Meeting location confirmed.
29.04.19	Meeting held between WERNI/WEHL and the Applicant – Commercial discussions.
02.05.19	Telephone conference between WERNI/WEHL and the Applicant – Commercial discussions.
07.05.19	Applicant provides revised commercial offer to purchase the Site.
10.05.19	WERNI/WEHL provides commercial counter offer.
13.05.19	Applicant confirms its board will consider commercial counter offer.

3.4.14 These land negotiations, which include multiple commercial offers, demonstrate that the Applicant has followed the guidance *Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land*. The Applicant therefore rejects that it has not complied with paragraphs 24-30 of that guidance.

3.4.15 The Applicant does not accept that the compulsory acquisition of interests of WERNI and WEHL would breach Article 1 of the First Protocol of the European Convention on Human Rights for the reasons set out above. The Applicant considered the effect of the compulsory acquisition of land interests in the context of the Convention in **Section 10** of the **Statement of Reasons (4.1, Rev 1)**.

### **3.5 NATS LTD (RR-049)**

#### **Summary of Representation:**

3.5.1 Dear Sirs, NATS anticipates no impact from the proposal and has no comments to make on the DCO application. Regards

#### **Response:**

3.5.2 The Applicant acknowledges the Respondent's comments thanks the Respondent for its submission.

### 3.6 Public Health England (RR-067)

#### Summary of Representation:

3.6.1 Thank you for your consultation regarding the above development. Public Health England (PHE) welcomes the opportunity to comment on your proposals at this stage of the project and can confirm that:

- 1. PHE is satisfied with the methodology used to undertake the environmental assessment.
- 2. There are public health benefits in reducing public exposures to non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards: as such, we recommend consideration of mitigation measures that reduce public exposures to pollutant levels as low as reasonably practicable, and that the applicant's proposed air quality management plan recognises this important principle.
- 3. Emissions from the proposed development will be controlled via the Environmental Permitting regime, under the provisions of the Environmental Protection Act 1990. The permitting regime is administered by the Environment Agency (EA), separately from Nationally Significant Infrastructure Planning and PHE will be formally consulted by the EA as part of the permitting process. We will provide detailed comments at that stage.
- 4. Potential impacts arising from historic ground contamination have been considered in the draft development consent order and there is a requirement that a scheme to assess and manage these impacts, be agreed with the relevant local authority in consultation with the Environment Agency, as the relevant regulatory authorities with regards to contaminated land.
- 5. The outline Code of Construction Practice (CoCP) (document reference 7.5), includes provisions for the management, assessment and control of dust, pollution incidents, land contamination, plant and vehicle movements, impacts on water resources and waste management. The document proposes full consultation / agreement with the appropriate regulatory bodies and consequently PHE is of the opinion that these matters can be satisfactorily addressed and wishes to make no additional comments.

3.6.2 We have no additional comments to make at this stage and can confirm that we have chosen NOT to register an interest with the Planning Inspectorate on this occasion.

3.6.3 Please do not hesitate to contact us if you have any questions or concerns.

#### Response:

3.6.4 The Applicant acknowledges the Respondent's comments thanks the Respondent for its submission.

### 3.7 Environment Agency (RR-074)

#### Summary of Representation:

3.7.1 The Environment Agency (EA) raises several points about the Proposed Development, the majority of which can be summarised by the following themes:

- Flood Risk – Compliance with the Thames Estuary 2100 Plan;
- Flood Risk – Activity within the vicinity of the flood defences;
- Biodiversity;
- Ground Water Protection;
- Water Framework Directive;
- Environmental Permit; and
- Draft Development Consent Order (dDCO).

#### Response:

3.7.2 Since submission of the Relevant Representation (RR) the Applicant has met and been in consultation with the Environment Agency (EA) to address points raised in their RR and to progress the Statement of Common Ground (SoCG). A draft version of the SoCG (**8.01.03**) has been submitted at Deadline 2.

#### Flood Risk – Compliance with the Thames Estuary 2100 Plan

3.7.3 The EA asks the Applicant to demonstrate that the Proposed Development does not preclude the raising of the flood defences to the second level (of 7.7 m AOD expected in 2070).

3.7.4 The Applicant has demonstrated to the EA that the Proposed Development will not restrict options for future raising of the Thames Flood Defence. This was achieved through the production of a series of indicative drawings which illustrated potential technical solutions that could be adopted in the future, should the need ever arise to raise the flood bank. These were sent to the EA on 9th March 2019, who confirmed and agreed the information demonstrated on the drawings at a meeting on 22nd March 2019. These drawings are appended to the draft SoCG between the Applicant and the EA, which is appended to this response.

3.7.5 As agreed with the EA, the indicative drawings demonstrate that the Proposed Development does not preclude the raising of the flood defence to 7.7 m AOD as part of the Thames Estuary 2100 second stage and does not restrict future defence raising options.

#### Flood Risk – Activity within the vicinity of the flood defences

- 3.7.6 The Applicant is the riparian owner of the flood defence located within the REP site and has the responsibility to maintain the flood defences. The Applicant can confirm that the Proposed Development will not restrict or prevent the inspection or maintenance of the flood defences, which will be fit for purpose for the lifetime of the Proposed Development.
- 3.7.7 A Flood Risk Activity Permit Area (FRAPA) for REP has been identified following discussions with the EA. Diagram VAA\_WA-50080100\_1.0, VAA-WA-50080110\_1.0 and VAA-WA-50080101\_1.0 of the draft SoCG between the EA and the Applicant, which is appended to this response, identifies an area 16 metres from the flood defences. It should be noted that the FRAPA is not an 'exclusion zone', it is an area in which new development must demonstrate that access, maintenance and function of the flood defences are not compromised.
- 3.7.8 The necessity to apply for a Flood Risk Activity Permit will be disapplied as part of the DCO, with all necessary controls being provided for in the protective provisions for the benefit of the EA to be included in **Part 4 of Schedule 10 of the Draft DCO (3.1, Rev 1)**. Those protective provisions will include a requirement for the Applicant to notify the EA of any works anticipated within the FRAPA (both during construction and operation). The wording of the protective provisions has been updated to include the necessary controls in relation to the FRAPA and is being discussed between the parties (please see response to Q7.0.7 for an update on the protective provisions). The parties are aiming to provide an update on these protective provision at Deadline 3.
- 3.7.9 During construction, activities within the FRAPA are anticipated to include material storage and part of a laydown area required during the erection of a mobile crane.
- 3.7.10 During operation of REP, the primary use of the area within the FRAPA will be the provision of a service road. Both the Applicant and the EA agree that no buildings (as defined within the **dDCO (3.1, Rev 1)**) as "*...includes any structure or erection or any part of a building, structure or erection*") will be placed within the FRAPA. This wording will be reflected in the protective provisions at **Part 4 of Schedule 10 of the dDCO (3.1, Rev 1)** once agreed.
- 3.7.11 The provision of a service road within the FRAPA was discussed with the EA at the meeting on 22<sup>nd</sup> March 2019 where they confirmed these would not impact the access for inspection and maintenance and function of the flood defences.
- 3.7.12 The Applicant can confirm that following further technical design work carried out by the Applicant and UK Power Networks, the Applicant is removing the Election Connection route option through Erith High Street (Electrical Connection route option 2A) (see **Figure 1.2 Application Site Boundary and Assessment Areas of the ES (6.2, APP-056)**). The removal of the Electrical Connection route option through Erith High Street is confirmed in the Applicant's submission to Deadline 2 and the updated **Land Plans (2.1, Rev 1)** and **Works Plans (2.2, Rev 1)** submitted at Deadline 2.

Biodiversity - Local Nature Reserve

- 3.7.13 The EA states that the application does not fully assess the potential impacts on the adjacent Crossness Local Nature Reserve (LNR) and that there is no evidence that a full natural history of the site has been obtained.
- 3.7.14 The Applicant has made a continued effort to engage with the EA Biodiversity Officer to understand in more detail the concerns since the representation was received on February 12th 2019. However, to date, we have received no response. The EA Planning Specialist however confirmed on 13th May 2019 that the advice relating to biodiversity should be seen as advice to '*the applicant where we feel the application could be improved*' and that the EA does not intend to object on the potential impacts relating to Biodiversity.
- 3.7.15 An EIA scoping exercise was undertaken in 2017, which set out the principles to be used during the collection of ecological data at the Application Site and the surrounding area. The EA's response to this on the 21<sup>st</sup> December 2017 did not contain any comments on the proposed survey approach (see **Appendix A.1 – Scoping Opinion and Removal of the River Works Note** of the **ES (6.3; APP-062)**).
- 3.7.16 A suite of ecological surveys was undertaken during 2017 and 2018 within the Application Site and adjacent areas, including Crossness LNR. The scope of the ongoing ecological surveys was set out in **Section 11.5** of the Preliminary Environmental Information Report (PEIR). The EA and other statutory stakeholders were invited to comment, as part of the Applicant's section 42 consultation between 18<sup>th</sup> June 2018 and 30<sup>th</sup> July 2018. Again, no comment on the efficacy of the survey approach was received from the EA (see **Appendix J** of the **Consultation Report (5.1; APP-030)**).
- 3.7.17 In addition, ongoing consultation has been undertaken with Natural England and London Borough of Bexley (LBB) ecologists in relation to the survey approach. No objections to the survey approach have been raised.
- 3.7.18 The breeding and bird surveys followed standard survey approach (Common Bird Census technique) and covered all areas within the application site, as well as additional areas of the Crossness LNR which could be subject to indirect effects. The wintering bird surveys followed a standard survey approach (Wetland Bird Survey [WeBS]) and were targeted on intertidal habitats likely to be of highest value to overwintering birds. Impacts to breeding and wintering birds are fully assessed within **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**. The Applicant considers that the scope of the breeding and wintering bird surveys are sufficient and robust.
- 3.7.19 The ES identified that artificial light spill from the REP site could affect adjacent designated areas used by light sensitive species. An **Outline Code of Construction Practice (CoCP) (7.5, Rev 1)** has been submitted as part of the DCO Application which includes measures to control the impacts from construction lighting. An **Outline Lighting Strategy (6.3, APP-096)** has also been submitted with the ES which assesses the potential operational effects of exterior lighting required for REP on light sensitive receptors and establishes lighting design



objectives to minimise effects of obtrusive light to within guideline levels. **Paragraph 11.9.35 of Chapter 11 Terrestrial Biodiversity of the ES (6.1, Rev 1)** reports no significant lighting effects to light sensitive species (foraging bats). Compliance with the **Operational Lighting Strategy**, which must be in substantial accordance with the **Outline Lighting Strategy (6.3; APP-096)** is secured via requirement 16 in the **dDCO (3.1, Rev 1)** submitted at Deadline 2.

3.7.20 The footprint of the REP Site, Main Temporary Construction Compounds and Data Centre site does not directly effect Crossness LNR. The **Outline Biodiversity and Landscape Mitigation Strategy (OMBLs) (7.6; APP-107)** sets out measures which will be used during construction and operation to avoid or mitigate indirect effects such as those from noise or visual disturbance, dust or pollution. **Chapter 11 Terrestrial Biodiversity of the ES (6.1, Rev 1)** did not identify significant effect to Terrestrial Biodiversity from these potential sources of impact. Compliance with the **Outline Biodiversity and Landscape Mitigation Strategy (OMBLs) (7.6, APP-107)** is secured via requirement 5 in the **dDCO (3.1, Rev 1)** submitted at Deadline 2.

3.7.21 The ES assessed potential impacts from Electrical Connection route options, noting that the preferred route did not directly affect the Crossness LNR.

3.7.22 The Applicant can confirm that following further technical design work carried out by the Applicant and UK Power Networks, the Applicant is removing the part of the Election Connection route option 1 through Crossness LNR (see **Figure 1.2 Application Site Boundary and Assessment Areas of the ES (6.2, APP-056)**). The removal of the Electrical Connection route option through the Crossness LNR is confirmed in the Applicant's submission to Deadline 2 and the updated Land Plans (Revision 1) and Works Plans (Revision 1) submitted at Deadline 2.

#### Biodiversity – Open Mosaic Habitats

3.7.23 The Applicant and the EA are still in discussions regarding the suitability of the creation of Open Mosaic Habitat on the flood embankment.

#### Ground Water Protection

3.7.24 The EA accepts that the site assessment and investigation will be undertaken in accordance with Contaminated Land Report 11 (CLR 11).

3.7.25 The Applicant acknowledges this and can confirm that the assessment within **Chapter 13 – Ground Conditions (6.1, Rev 1)** was underpinned by the Contaminated Land Report 11 (CLR 11) 'Model Procedures for the Management of Land Contamination' (DEFRA/EA, 2004).

#### Water Framework Directive

3.7.26 The EA states *"river works are not proposed under the amended scheme, and therefore WFD water quality compliance for the Thames Middle waterbody, and adjoining Transitional waterbodies are not considered to be affected by the*

*development and ... do not anticipate the need to comment upon matters which would not ordinarily require a marine licence".*

3.7.27 The Applicant acknowledges this and can confirm that works within the river are not proposed as part of the Application.

Environmental Permit

3.7.28 The Environmental Permit application for REP was acknowledged as received and Duly Made on 17<sup>th</sup> December 2018.

3.7.29 The Applicant can confirm that as per '*Guidance for developments requiring planning permission and environmental permits*', dated October 2012 and consultation with the EA, the EP and DCO applications have been 'parallel tracked'.

Draft Development Consent Order

3.7.30 The wording of the protective provisions has been updated since Application and was provided to the Environment Agency for comment on 17 April 2019. These have been included in **Part 4 of Schedule 10** of the **dDCO (3.1, Rev 1)** submitted at Deadline 2. However, the parties are continuing to discuss the protective provisions and hope to be able to provide an agreed set of protective provisions for inclusion in the dDCO in due course. The Applicant received suggested requirements for the dDCO from the EA on 14<sup>th</sup> May 2019. This will be discussed with the EA and incorporated where appropriate in due course.

### 3.8 Womble Bond Dickinson (UK) on behalf of Network Rail Infrastructure Limited (RR-082)

#### Summary of Relevant Representation:

##### 3.8.1 The Relevant Representation from Network Rail Infrastructure Limited states:

*"Network Rail owns and operates Great Britain's railway network and has statutory and regulatory obligations in respect of it. Network Rail is a statutory undertaker in respect of its railway undertaking.*

*Network Rail is also an affected land owner. There are references in the Book of Reference to land owned by Network Rail. Network Rail objects to any proposed compulsory acquisition of its land or any rights in, over or under its land or extinguishment of its rights in third party land.*

*There are protective provisions for the benefit of Network Rail which are well precedented in both TWA Orders and DCOs. Examples of those protective provisions in respect of highway schemes can be found in recent A14 Cambridge to Huntingdon Improvement Scheme Development Consent Order 2016 and the M4 Motorway (Junctions 3 to 12) (Smart Motorway) Development Consent Order 2016. Network Rail is pleased to note that the promoter has included Protective Provisions for the benefit of the railway based upon Network Rail's standard in a schedule to the draft DCO. However, a number of amendments to Network Rail's standard Protective Provisions have been made to those contained within the draft DCO to which Network Rail cannot agree. Network Rail objects to the draft Order on the basis that it does not contain sufficient protections for works on or around the railway and will press, both in representations and in submissions at hearings, the absolute need for protective provisions to be included in a DCO where Network Rail's operational infrastructure is affected by the proposal.*

*Network Rail would ordinarily also expect that the parties will enter into an asset protection agreement and, for any acquisition of land or rights, an easement. Any acquisition by consent of Network Rail would also need to go through the clearance process."*

#### Response:

3.8.2 The Applicant has provided protective provisions for the protection of railway interests in **Part 5 of Schedule 10** to the **draft Development Consent Order (dDCO) (3.1, Rev 1)** which are based on the protective provisions in the Lake Lothing Third Crossing dDCO.

3.8.3 The protective provisions in paragraphs 42(3) and 42(4) of **Part 5 of Schedule 10** to the **dDCO (3.1, Rev 1)** provide that Network Rail Infrastructure Limited's (NRI) rights will not be extinguished and that no compulsory acquisition of land or rights in respect of any railway property will be exercised without the consent of NRI. That consent will be progressed by way of a private agreement, in the usual way with NRI as noted in its representation.

- 3.8.4 A copy of those protective provisions have been sent by the Applicant to NRI in order to commence discussions on whether amendments to those protective provisions are required.
- 3.8.5 In addition, it should be noted that the land and rights to be compulsorily acquired in the vicinity of NRI's assets that have been sought as part of the Application have been limited in order to minimise any impact on NRI's infrastructure or other assets. NRI's attention is drawn to the land and rights sought as shown on:
- a. Sheet 7 of the **Land Plans (2.1, Rev 1)** in the vicinity of the Queens Road overbridges;
  - b. Sheet 11 of the **Land Plans (2.1, Rev 1)** in the vicinity of the Northend Road underbridge;
  - c. Sheet 12 of the **Land Plans (2.1, Rev 1)** in the vicinity of Cray Mill underbridge.
- 3.8.6 Discussions with NRI in relation to the draft protective provisions and agreeing the necessary acquisition of land and/or rights are taking place, as are discussions so that NRI understands the likely engineering works that will be undertaken in the vicinity of their assets. The Applicant anticipates that it will be possible to reach agreement with NRI on the terms of the protective provisions and any other commercial terms required prior to the end of Examination. The Applicant will update the Examining Authority at the earliest opportunity once terms are agreed.
- 3.8.7 In light of the protective provisions already included in the **dDCO (3.1, Rev 1)** and the outcome of the negotiations that are on-going between the parties, the Applicant is of the view that the Secretary of State can be satisfied that the conditions set out in section 127(3) and section 138(4) of the Planning Act 2008 are met in each case.

### **3.9 Winckworth Sherwood LLP on behalf of Port of London Authority (RR-083)**

#### **Response:**

- 3.9.1 The Applicant and the Respondent have been actively discussing a Statement of Common Ground. A final draft Statement of Common Ground has been submitted at Deadline 2 (**8.01.06**).

### **3.10 Eversheds Sutherland (International) LLP on behalf of Thames Water Utilities Limited (TWUL) (RR-086)**

#### **Summary of Representation:**

3.10.1 The relevant representation raises concern that REP will have an adverse impact on the following interests of Thames Water Utilities Limited:

- Crossness Nature Reserve, including its asserted categorisation as land falling under section 127(1)(a) of the Planning Act 2008; Electric cable route through the nature reserve; biodiversity effects and offsetting; disturbance to wildlife and visitors, visual intrusion; shading; lighting and air quality;
- Land at Bob Dunn Way, in respect of Thames Water Utilities Limited (TWUL) rights not being prejudiced; and
- Powers contained within the Draft DCO in respect of statutory undertaker apparatus.

#### **Response:**

##### **Land Categorisation**

3.10.2 The Applicant notes that Thames Water regards the land forming the Crossness Local Nature Reserve (LNR) as land held for the purposes of its undertaking within the scope of section 127(1)(a) of the Planning Act 2008. For the reasons given below, the Applicant does not consider that the proposed construction or operation of REP could potentially result in a serious detriment to the carrying on of Thames Water's undertaking by virtue of the impact on its compliance with its statutory duties.

3.10.3 As explained further below, Paragraph 11.9.2 of **Chapter 11 Terrestrial Biodiversity** of the **Environmental Statement (ES) (6.1, Rev 1)** states that, following mitigation, the conservation objectives (and therefore viability) of Crossness LNR and (Erith Marshes SINC) would not be undermined and effects arising from the Proposed Development would therefore be not significant. Further, the Applicant notes that the previously proposed Electrical Connection route through Crossness LNR has now been removed from the DCO Application, as explained below.

3.10.4 Further, the Applicant can confirm that the plots numbers referred to in Thames Water's RR which are within the ownership of Thames Water, being plots 02/39, 02/40, 02/41, 02/42 and 03/01, are no longer subject to compulsory acquisition and have been removed from the **Land Plans (2.1, Rev 1)** and **Book of Reference (2.2, Rev 1)** as updated in the submission at Deadline 2.

##### **Crossness Local Nature Reserve (LNR)**

###### *General*

- 3.10.5 An assessment of effects to the Crossness LNR accompanied the DCO Application and was presented in **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**.
- 3.10.6 The footprint of the REP Site, Main Temporary Construction Compound and works within the consented Data Centre site do not directly impact upon the Crossness LNR. **Table 1** of the **Outline Biodiversity and Landscape Mitigation Strategy (OBLMS) (7.6, APP-107)** sets out measures which will be used during construction to avoid or mitigate potential indirect effects such as those from noise, visual disturbance, dust and pollution. The OBLMS is secured via Schedule 2 Requirement 5 of the **Draft DCO (3.1, Rev 1)**, which requires that the final BLMS, submitted to and approved by the relevant planning authority, is in substantial accordance with the OBLMS submitted with the application (**7.6, APP-107**).
- 3.10.7 The potential effects of different Electrical Connection Route options were assessed and reported in **Paragraphs 11.9.38 - 11.9.60, Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**. The **Electrical Connection Progress Report** submitted for Deadline 2 confirms that the route through Crossness LNR has been removed in light of selection of a single route from the REP site to Littlebrook substation.
- 3.10.8 The Proposed Development will not give rise to any permanent effects to Crossness LNR, although there is potential for temporary effects during construction. However, as a result of significant reductions to the Application Boundary, the potential spatial extent of such effects is now very limited. In respect of works in the general vicinity of the Crossness LNR, it is noted that mitigation measures set out in **Table 3** of the **OBLMS (7.6, APP-107)** (consideration of noise, lighting, accidental spillages or leaks, fencing of working areas and installation of silt fencing) would mean that no significant effects would arise. The OBLMS also sets out how habitats within the remaining small affected area within the Metropolitan Open Land (MOL) and Site of Importance for Nature Conservation (SINC) (but outside of Crossness LNR) and the species they support, such as water vole and breeding birds, will be protected during the construction phase through consideration of managing accidental spillages or leaks and fencing off the construction area.
- 3.10.9 **Paragraph 11.9.2** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** states that, following mitigation, the conservation objectives (and therefore viability) of Crossness LNR and (Erith Marshes SINC) would not be undermined and effects arising from the Proposed Development would therefore be not significant. Given recent reductions in the Application Boundary the potential for effects to Crossness LNR are much reduced, and the previous assessment of no significant effects remains.
- 3.10.10 **Section 9** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** considers effects on habitats and species within the Crossness LNR (including water voles, barn owls, bats, wintering birds and invertebrates). Potential operational effects from REP, such as those from emissions, are assessed and reported in **Paragraphs 11.9.21 - 11.9.37** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**. Emissions of nitrogen from the Anaerobic Digestion Plant

could affect a small area of the Crossness LNR, however habitats in this area are not of high botanical diversity and predicted effects through nitrogen deposition are assessed as not significant.

*Public Rights of Way*

- 3.10.11 The representation includes comments relating to potential effects of the cabling route along the public rights of way (PRoW) within Crossness LNR, giving rise to footpath diversions.
- 3.10.12 **Table 6.2 of Chapter 6 Transport (6.1, APP-043)**, reports that no permanent closures or diversions of PROWs are required. As reported in **Paragraph 4.4.2 of the Outline Code of Construction Practice (CoCP) (7.5, Rev 1)**, as part of any temporary closures of PROWs associated with the construction of the Electrical Connection, there would be appropriate temporary diversions put in place, where possible, to be agreed with the relevant highways authorities prior to the commencement of construction. The CoCP is secured via Requirement 11 at Schedule 2 to the **dDCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the relevant planning authority is in substantial accordance with the **Outline CoCP (7.5, Rev 1)**.
- 3.10.13 Notwithstanding the above, the removal of the Electrical Connection route entirely within Crossness LNR results in only a small retained area in the southeast corner of the MOL/SINC with limited potential to interact with FP2 where it meets Norman Road. If implemented at this location, the detailed alignment of the works within the 10 m easement would be managed, where possible, to ensure connectivity of the existing footpath alongside the linear working area. If required, a temporary diversion would be available for the southern section of FP2 via the west-east section of FP2, Picardy Manorway/Eastern Way and FP1. The connectivity of FP1 would be maintained via a local diversion on Eastern Way if required.
- 3.10.14 Whilst temporary diversions, if required, would give rise to some increase in length and involve a route outside Crossness LNR, the effects would be short term and overall connectivity from the Crossness LNR to Crossness Southern Marsh would be maintained.

*Electrical Connection routing through the Crossness LNR*

- 3.10.15 As set out in the **Electrical Connection Progress Report (8.02.07)** submitted for Deadline 2 and as explained above, the route through Crossness LNR has been removed in light of the selection of a single route from the REP site to Littlebrook substation.
- 3.10.16 As stated in **Paragraph 4.7.3 of the Outline CoCP (7.5, Rev 1)**, and **Paragraph 11.9.15 of Chapter 11 Terrestrial Biodiversity of the ES (6.1, Rev 1)**, any potential direct effects on water voles during construction of REP would be avoided through ensuring a 5 m offset of all construction work from ditches which may support water vole (except for minor localised works). The CoCP is secured via Requirement 11 at **Schedule 2 to the Draft DCO (3.1, Rev 1)**, which requires that



the final CoCP submitted to and approved by the relevant planning authority is in substantial accordance with the Outline CoCP.

3.10.17 Furthermore, as stated in **Table 3** of the **OBLMS (7.6, APP-107)** potential effects on water voles would be mitigated through a 5 m offset between construction activities and water courses (except for minor localised works), or trapping and temporarily relocating any water voles present to a suitable receptor site, returning them to the ditches following installation of the Electrical Connection. The **OBLMS (7.6, APP-107)** is secured via Requirement 5 at Schedule 2 to the **Draft DCO (3.1, Rev 1)**, which requires that the final BLMS submitted to and approved by the relevant planning authority is in substantial accordance with the OBLMS submitted with the application. However, in light of reductions in the Application Boundary and the removal of the Electrical Connection Route option through Crossness LNR, no trapping and relocation of water voles is anticipated. Therefore, it is considered that there would be no residual significant effect on water vole populations arising from construction of the Electrical Connection, as stated in **Paragraph 11.9.15** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**.

3.10.18 **Chapter 11 Terrestrial Biodiversity, Paragraph 11.7.32** of the **ES (6.1, Rev 1)** reports that a range of aquatic and terrestrial invertebrate species were recorded on site, including Shril Carder Bee. **Chapter 11 Terrestrial Biodiversity, Paragraph 11.9.13** of the **ES (6.1, Rev 1)** reports that, during construction, the loss of or temporary disturbance to habitats of value to invertebrates will be compensated through a financial contribution to the Environment Bank, secured by legal agreement for a contribution towards the enhancement of habitats outside the Application Boundary. As a result, no significant effects to invertebrates, including the Shril Carder Bee, are identified at the construction phase.

3.10.19 For the small area retained in the southeast corner of the MOL/SINC, construction work would not be undertaken at night and would therefore not require temporary lighting. As such, effects on bats in this respect would not occur.

*Biodiversity - General and screening from operational transport*

3.10.20 The representation comments on potential impacts on the Sea Wall Field and West Paddock, specifically on breeding lapwing, overwintering wetland birds from construction noise, dust and vehicle movement.

3.10.21 Direct effects on habitat arising from traffic movements may take place during the construction works for the Proposed Development however, with the appropriate mitigation in place, these are not anticipated to occur and are assessed as being not significant, see **Chapter 11 Terrestrial Biodiversity, Paragraph 11.9.2** of the **ES (6.1, Rev 1)**. Appropriate mitigation includes matters such as timing of works and good practice construction methods. These are secured within **Sections 3 and 4** of the **Outline CoCP (7.5, Rev 1)** and in **Sections 2-4** of the **OBLMS (7.6, APP-107)**. Compliance with these documents are secured through Requirements 11 and 5 of Schedule 2 of the **Draft DCO (3.1, Rev 1)** respectively. Furthermore, in respect of noise impacts on breeding birds during construction (which would include noise related to transport), **Paragraphs 11.9.10 and 11.9.11** of **Chapter 11**

**Terrestrial Biodiversity** of the **ES** confirm that construction will generally not take place at night and no night-time increases are anticipated. Whilst elevated noise levels have the potential to cause some localised displacement of breeding birds, the effect was assessed as Not Significant.

3.10.22 **Tables 1 and 3** of the **OBLMS (7.6, APP-107)** establish the principles and measures to minimise potential effects on designated areas (through consideration of noise, lighting, pollution, fencing off working areas and installation of silt fencing), habitats (through financial contributions to the Environment Bank) and species arising from accidental spillages or leaks during construction. The **OBLMS (7.6, APP-107)** is secured via Requirement 5 at Schedule 2 to the **dDCO (3.1, Rev 1)**, which requires that the final BLMS submitted to and approved by the relevant planning authority is in substantial accordance with the **OBLMS (7.6, APP-107)** submitted with the application.

3.10.23 The potential ecological effects arising from noise and light considered within **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** relate to potential effects on species. However, after consideration of mitigation measures set out in **Paragraph 4.4.3** of the **Outline CoCP (Rev 1)(7.5, Rev 1)**, including working in line with the recommendations of British Standard 5228 (for example, quiet working methods and acoustic screening), and **Paragraph 4.7.3** of the **Outline CoCP (Rev 1) (7.5, Rev 1)**, including appropriate working measures to be adopted to protect habitats and species from lighting, no significant effects from lighting (**Paragraph 11.9.27** of the **ES**) or noise are anticipated to arise. The CoCP is secured via Requirement 11 at Schedule 2 to the **dDCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the relevant planning authority is in substantial accordance with the **Outline CoCP (Rev 1)**.

3.10.24 The representation suggests that there needs to be adequate screening to prevent disturbance from site traffic during operation. The traffic movements within the site would predominantly be to and from the ramp leading to the waste tipping hall, not along the perimeter of the southern boundary or the Main REP Building generally. Traffic movements shown on the illustrative 'Main Vehicle Circulation Route' shown on the **Illustrative Circulation Plan (2.6, APP-013)** would comprise material supplies, Air Pollution Control Residue (APCR) movements and office/visitor movements, not the main route for road-based waste deliveries (which would enter and leave the site by a much shorter route). On this basis, the Applicant does not consider boundary screening appropriate. Such screening would also visually increase the sense of solid boundary massing at the immediate perimeter of Sea Wall Field and West Paddock and detract from the intended approach within the Design Principles process.

3.10.25 **Paragraphs 2.6.22 and 2.6.23** of the **Design Principles** document (**7.4, APP-105**) state that substantial or structured planting would not be an appropriate form of visual mitigation and note that this is supported by the TWUL Representation in respect of perching of avian predators. The Design Principles are secured by Requirement 2(2) in the **dDCO (3.1, Rev 1)**.

*Townscape and Visual Effects*

- 3.10.26 **Table 9.8** in **Chapter 9 TVIA** of the **ES (6.1, APP-046)** summarises the potential visual effects of the Proposed Development during operation on Crossness LNR. Viewpoints 2 and 3 are within Crossness LNR and were selected as being representative of a number of key points where the Proposed Development would be visible; these were discussed and agreed with stakeholders as part of the assessment process. Although moderate and therefore potentially significant visual effects are identified from these viewpoints, the REP site is within an existing industrial area, with a character of industrial development based around the river and embedded mitigation would seek to take account of these adjacent land uses and existing townscape character. The buildings and stack would be seen in the context of other industrial buildings, other existing vertical elements such as wind turbines and other stacks and would be seen as a new feature from viewpoints within 1 km of the REP site, as well as being a narrow feature in views from further afield. The effect is predominantly moderate and potentially significant due to the introduction of a large industrial element in a currently undeveloped space and due to the proximity of the viewer to the new structures.
- 3.10.27 A **Design and Access Statement (DAS) (7.3, APP-104)** accompanies the DCO Application and describes the design evolution of the REP site and the Main REP Building. As a result of the process set out in the DAS, a stepped roof design will seek to ensure that the potential visual impact of the Main REP Building on Crossness LNR is minimised from the outset of the detailed design process. The stepped design allows the maximum height of the Main REP Building to be reduced to the lowest level reasonably practicable and minimises the building massing required to accommodate the internal equipment and facilities.
- 3.10.28 A **Design Principles** document accompanies the DCO Application (**7.4, APP-105**), secured by Requirement 2(2) in the **dDCO (3.1, Rev 1)**. This ensures that the beneficial outcome from the stepped design is further enhanced by a commitment to minimise massing and locate the Main REP Building as far from Crossness LNR as reasonably practicable. The **Design Principles (7.4, APP-105)** represent the primary mitigation in respect of minimising visual intrusion and lighting effects on the nature reserve which has minimised the potential for significant adverse effects.
- 3.10.29 **Paragraph 9.10.7** of **Chapter 9 TVIA** of the **ES (6.1, APP-046)** summarises potential effects of the 'massing' of buildings associated with development in a relatively small area. Sites 008 (Data Centre), 0014 (Savills bus depot, ind. & offices); and 0012 (TRE Belvedere Industrial) are 'Other Developments' which would give rise to an intensification of existing land uses and an increase in the scale and massing of buildings in the area. These developments are smaller than REP and therefore, on balance, it is considered that there will be a slight adverse cumulative townscape effect during construction which is not significant.
- 3.10.30 **Paragraph 9.10.13** of **Chapter 9 TVIA** of the **ES (6.1, APP-046)** summarises the potential cumulative visual effects on Crossness LNR.
- 3.10.31 Committed development, including Savills bus depot, industrial space and offices, Data Centre, and TRE Belvedere Industrial includes large scale industrial buildings / offices of between 20 and 30 m in height. These committed developments will

intensify the existing land use and increase the size and scale of built form in this area. REP will be an additional development, close to the Crossness LNR, larger in scale, mass, and height, giving more enclosure and restriction of views; but with a more distinctive roofline and the tall stack bringing interest and a focal point to the skyline. In the context of these committed developments, the addition of the Proposed Development will give rise to an adverse cumulative visual effect which is a moderate level of significance (which is significant).

3.10.32 The Main REP Building and associated development are located within the existing bounds of the existing Riverside Resource Recovery Facility (RRRF), which is adjacent to further industrial/commercial development to the east of Norman Road and on the north side of the River Thames. The proposals for the main REP site would not therefore result in fragmentation of the Crossness LNR, nor would the buried Electrical Connection cable, which has now been removed in its entirety from the nature reserve.

3.10.33 Whilst it is noted that the London Plan seeks to give MOL the same level of protection as Green Belt, Crossness LNR is not designated as Green Belt in the statutory development plan. As such, paragraph 5.10.4 of the Overarching National Policy Statement for Energy (EN-1) does not apply, nor do the non-statutory provisions of the NPPF at paragraph 133 et seq., in respect of Green Belt. In any event, the potential affected area of MOL has been restricted to a small area in the southeast corner next to Norman Road.

#### *Shading*

3.10.34 Potential effects on Crossness LNR arising from shading from the Main REP Building are assessed and reported in **Paragraph 11.9.26 of Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**. **Paragraph 11.9.26** reports that marginal areas of the Crossness LNR would be subject to some shading and, whilst there is in theory potential for minor changes to botanical assemblage in these areas as a result of shading, these are considered unlikely. Shading effects to the Crossness LNR are considered to be not significant. The Applicant has submitted a **Design Principles (7.4, APP-105)** document which seek, through DP 1.04, to minimise the massing and scale of the facility as far as reasonably practicable. The Design Principles are secured through Requirement 2 at Schedule 2 to the **dDCO (3.1, Rev 1)**.

3.10.35 The assessment of the potential effect of shading on water voles is reported within the document **Further assessment of shading effects to Crossness Local Nature Reserve (8.02.10)** submitted for Deadline 2. The assessment looked at the potential for effects to Crossness LNR from shading from the Main REP Building. The assessment has demonstrated that due to the location, extent and duration of the shading, significant changes to habitats within the Crossness LNR, and species which they support are unlikely. The assessment supports the conclusion of the ES in that *"Whilst there is potential for some minor changes in the botanical assemblage in these areas as a result of shading, this is considered to be unlikely. Therefore, effects from shading to Crossness LNR of County/Metropolitan*

*importance, and Erith Marshes SINC of Local conservation importance, will be Not Significant".*

3.10.36 The potential effect of shading from the consented Data Centres on botanical communities, including Dittander, is outside the scope of the REP DCO Application.

#### *Lighting*

3.10.37 Paragraph 2.12.4 of the relevant representation refers to light effects on habitant species such as barn owls and bats, which are addressed in the paragraphs below.

3.10.38 **Paragraph 11.9.27 of Chapter 11 Terrestrial Biodiversity of the ES (6.1, Rev 1)** reports the assessment findings of the potential operational effects of exterior lighting required for REP on light sensitive receptors. The **Outline Lighting Strategy (6.3, APP-096)** establishes lighting design objectives which seek to minimise the potential effects of obtrusive light to within guideline levels. For the same reason, no significant lighting effects to birds are therefore identified. The operational lighting strategy is secured via Requirement 15 at Schedule 2 to the **dDCO (3.1, Rev 1)**, which requires that no part of Works Nos 1, 2, 3, 4, 5 and 6 may commence until a written scheme for the management of operational external artificial light emissions for that part has been submitted to and approved by the relevant planning authority. The written scheme must be in substantial accordance with the **Outline Lighting Strategy (6.3, APP-096)**. No significant lighting effects to habitats are therefore identified as set out in **Paragraph 11.9.27 of Chapter 11 Terrestrial Biodiversity of the ES (6.1, Rev 1)**.

3.10.39 The **Outline Lighting Strategy (6.3, APP-096)** reports, at **Paragraph 2.5.1**, that the relevant guidance documents which assist with defining acceptable standards and thresholds for exterior lighting include, amongst others, the Bat Conservation Trust (BCT) - Bats and Artificial Lighting in the UK (2018). **Outline Lighting Strategy (6.3, APP-096)** cross refers, at paragraph 5.2.1, to the **Design Principles** document (**7.4, APP-105**), which contains specific binding principles DP5.01 "*Lighting will be appropriate to the local context and will mitigation lighting upon identified habitats, neighbouring occupiers and the wider landscape*", DP5.02 "*Lighting will provide illumination for the safe operation of the various activities proposed to be carried out at Rep, including access and wayfinding*", and DP5.04 "*Lighting elements will be designed to minimise spillage to Crossness Nature Reserve and the Thames Path*" in respect of potential light spillage to the Crossness LNR and the River Thames. The strategy also makes further recommendations in respect of meeting the appropriate Institute of Lighting Professional (ILP) Environmental Zone, by not lighting retained habitats around the margins of the REP site and careful management of adjacent lighting in respect of bats (paragraph 5.3.1).

#### *Air Quality*

3.10.40 The relevant representation refers to air quality concerns during construction and operation, including in relation to increased levels of Nitrogen Dioxide potentially affecting terrestrial biodiversity.

- 3.10.41 **Paragraph 7.9.59** of **Chapter 7 Air Quality** of the **ES (6.1, APP-044)** notes that the dust risk assessment has identified a suite of mitigation which will be required for construction activities. Furthermore **Table 7.36** of the same chapter identifies Low Risk of impacts in relation to Earthworks, Construction and Track out. **Paragraph 4.3.1-4.3.4** of the **Outline CoCP (7.5, Rev 1)** therefore sets out measures which will be used during construction to avoid or mitigate indirect effects to the Crossness LNR from construction dust (including wheel washing, damping of stockpiles and sheeting materials, adherence to guidance such as the London Mayor's Supplementary Planning Guidance (SPG) on controlling dust (July 2014), recording and making available a log of any complaints and covering of vehicles entering and leaving the site). The CoCP is secured via Requirement 11 at Schedule 2 to the **dDCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the relevant planning authority is in substantial accordance with the **Outline CoCP (7.5, Rev 1)** submitted with the DCO Application.
- 3.10.42 Potential operational effects from REP, such as those from emissions, are assessed and reported in **Paragraphs 11.9.21 - 11.9.37** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**. Emissions of nitrogen from the Anaerobic Digestion Plant could affect a small area of the Crossness LNR, however habitats in this area are not of high botanical diversity and predicted effects through nitrogen deposition are assessed as not significant.
- 3.10.43 In respect of nitrogen deposition, further assessment work to revise the deposition rates stated in **Paragraphs 11.9.21 - 11.9.29** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**, will be reported in the **Clarifications and Corrections Report (8.02.05)** which has been submitted at Deadline 2. The revised results were issued to Natural England, which confirm that the potential effect on Crossness LNR remains not significant. This conclusion and the further assessment work have been agreed in a Statement of Common Ground with Natural England (final signed) **(8.01.05)**.

#### *Biodiversity Offsetting*

- 3.10.44 The relevant representation notes that it is important that the biodiversity metric calculation fully takes into account the impacts on Crossness LNR. Notwithstanding that the Electrical Connection route through Crossness LNR has now been removed, the **Biodiversity Accounting Report (Ref)** sets out how the potential effects to Crossness LNR were considered. The biodiversity metric approach relies on identifying the change in biodiversity value arising from the Proposed Development. The metric calculation fully acknowledges the biodiversity value within the REP site, including the presence of 'Open Mosaic Habitat', a Habitat of Principal Importance. **Paragraph 5.1.2** of the **OBLMS (7.6, APP-107)** acknowledges that the developed site would offer limited opportunities for achieving biodiversity net gain, other than on the existing flood bank, such that mitigation would predominantly occur offsite. Requirement 5 of Schedule 2 to the **dDCO (3.1, Rev 1)** requires details of the biodiversity off-setting metric and the mechanism for securing the off-setting value, to be included with the final BLMS to be approved by

the relevant planning authority, which must be substantially in accordance with the **OBLMS (7.6, APP-107)**.

3.10.45 As UKPN's investigations in relation to the Electrical Connection route progressed, the Applicant developed the metric calculation in respect of a 'Realistic Worst Case Overall Route' (which would include routing through Crossness LNR) and a 'Realistic Best Case' route (which assumed routing along Norman Road). These two options have ensured that appropriate steps can be commenced, particularly with the London Borough of Bexley, to seek a scale of mitigation that can deliver a 10% net gain solution. Whilst the Realistic Worst Case Overall Route scenario presented in the **Biodiversity Accounting Report (Ref)** took full account of potential impacts on Crossness LNR, these worst case effects are now avoided through the removal of the Crossness LNR route from the Application Boundary. The **OBLMS (7.6, APP-107)** is secured via Requirement 5 at Schedule 2 to the **dDCO (3.1, Rev 1)**, which requires that the final BLMS, submitted to and approved by the relevant planning authority, is in substantial accordance with the **OBLMS (7.6, APP-107)** submitted with the application.

#### **Land at Bob Dunn Way**

*Comment on works to be carried out potentially prejudicing TWUL's undertaking*

3.10.46 Works affecting Thames Water interests at Bob Dunn Way comprise Work 9 only, being the Electrical Connection route. Furthermore, within parcel 13/12, the works are restricted to 9(c), being only for use as a temporary construction compound. Therefore, in respect of all parcels except 13/12, Works 9(a)-(d) would be permissible, including electrical cable installation by either trenched or trenchless (i.e. drilled or bored) methods within or below the public highway. Given the location of Thames Water's landholdings at the River Darent, trenchless installation is proposed to secure the crossing.

3.10.47 As set out in **Chapter 3 Project and Site Description (3.1, Rev 1)** of the **ES at Paragraph 3.5.33**, trenchless installation requires drilling compounds. Whilst the duration of the works depends on the drilling length and location, it is anticipated that typical trenchless works at significant crossings, including at the River Darent, would be in place for up to approximately 3 weeks.

3.10.48 Such works would be subject to the various controls set out in the **Outline CoCP (7.5, Rev 1)** and **Outline Construction Traffic Management Plan (CTMP) (Rev 1)**, both of which are subject to approval under the **dDCO (3.1, Rev 1)**.

3.10.49 The extent of works within TWUL's undertaking has been refined for reasons set out in the **Electrical Connection Progress Report (8.02.07)** and is set out in the **Land (2.1, Rev 1)** and **Works Plans (2.2, Rev 1)** and associated documents. The Applicant met with TWUL on 14th May 2019 to discuss the revised proposals and understands that TWUL are now satisfied with the proposals and Protective Provisions in relation to Land at Bob Dunn Way.

**Statutory Apparatus**

*Comment on protective provisions*

3.10.50 The response is noted. The Applicant looks forward to receiving Thames Water's comments on the proposed protective provisions and will engage with them to reach agreement going forward.



### 3.11 Transport for London (RR-087)

#### Summary of Representation:

- 3.11.1 Transport for London (TfL) is the strategic transport authority for London with “oversight responsibility” for the Strategic Road Network (SRN) (the road network in the vicinity of the REP site, excluding Norman Road). TfL regulates and procures bus services in London (including services 180 and 401, local to the REP site) and maintains bus infrastructure.
- 3.11.2 TfL has previously provided written advice to the Applicant on the scope of the Transport Assessment for the application on 18 May 2018, and further written advice on 26th October 2018.
- 3.11.3 TfL’s RR states its opinion that the quality of the pedestrian route on Norman Road (a London Borough of Bexley managed road), between the REP site and the local bus stops, is “very poor”.
- 3.11.4 It is TfL’s view that the junction modelling, contained within the Environmental Statement (ES), is not fully representative of the real capacities of the junctions assessed. It considers that the junctions are influenced by each other and are closely linked. However, TfL concludes, that “*given the robust trip generation forecast for the operational phase, TfL considers that the operational traffic impact of the proposed development is unlikely to result in a detrimental impact on the SRN*”.
- 3.11.5 A Requirement of the Development Consent Order (DCO) is sought by TfL to secure the use of the jetty for a majority of waste deliveries, with controls put in place to “*deal with HGV traffic in the event of a jetty outage*”.
- 3.11.6 TfL considers that the traffic impact of the construction of REP is expected to be significant, concluding that insufficient assessment has been undertaken to provide a realistic estimate of the impact of construction on the junctions along the SRN including on bus services. The RR seeks additional modelling to show the impact of construction, including the construction of the Electrical Connection, with mitigation measures secured through an “*appropriate legal mechanism*”. TfL notes that the route of the Electrical Connection has not been chosen. Furthermore, TfL is not clear as to how long the construction of each section would take; for how long lanes would be closed; or where they would be closed.
- 3.11.7 It is TfL’s view that it cannot be determined if the impact of lane closures is acceptable at this stage through the level of information provided at the time of submission. Due to TfL’s understanding of traffic congestion along the A2016, TfL states in its RR that it has significant unresolved concerns and that it would prefer the Electrical Connection to be constructed away from the SRN, reducing strategic traffic impacts.
- 3.11.8 Through its RR, TfL objects to the construction proposals of the Proposed Development.

## Response:

### REP Operational Phase

3.11.9 The Applicant notes that TfL accepts that the assessment of the potential transport impacts of the operational phase of the Proposed Development, as contained within **Paragraphs 6.9.32-6.9.60 of Chapter 6 Transport** of the **ES (6.1, Rev 1)** and the **Transport Assessment (TA), Appendix B.1** to the **ES (6.3, APP-066)**, are “*unlikely to result in a detrimental impact on the SRN*” and therefore raises no objection to the operational phase of REP.

3.11.10 Furthermore, in its RR, the London Borough of Bexley (LBB) has not raised concerns relating to the suitability of pedestrian facilities on Norman Road, for which LBB is the Local Highway Authority. On that basis the Applicant does not consider that any further appraisal relating to the potential transport impacts of the operational phase of REP is required.

### Operational Controls on Waste by Road

3.11.11 The updated draft DCO (Revision 1), submitted at Deadline 2 (20 May 2019) includes a new Requirement, **Requirement 14** in Schedule 2. This restricts the number of two-way vehicle movements made by heavy commercial vehicles delivering waste to Work No 1A, the Energy Recovery Facility (ERF). The proposed wording of the Requirement is as follows:

*“(1)...the number of two-way vehicle movements (one vehicle in and one vehicle out) made by heavy commercial vehicles delivering waste to work number 1A during the operational period must not exceed a maximum of 90 per day (90 vehicles in and 90 vehicles out).*

*(2) Where the daily number of two-way vehicle movements made by heavy commercial vehicles delivering waste to the Riverside Resource Recovery Facility is below the maximum number permitted by condition 28 of planning permission reference 16/02167/FUL (or as permitted under any other planning permission for the Riverside Resource Recovery Facility) so that there is an unused number of two-way heavy commercial vehicles permitted to deliver waste to the Riverside Resource Recovery Facility (“the surplus”), the undertaker may utilise all or part of the surplus for the purposes of work number 1A in addition to the maximum number permitted by sub-paragraph (1).*

*(3) In the event of a jetty outage, the number of two-way vehicle movements (one vehicle in and one vehicle out) made by heavy commercial vehicles delivering waste to work number 1A during the operational period must not exceed a maximum of 300 per day (300 vehicles in and 300 vehicles out) and must not exceed:*

*(a) between the hours of 0730–0900, a maximum of 30 (30 vehicles in and 30 vehicles out); and*

*(b) between the hours of 1630–1800, a maximum of 30 (30 vehicles in and 30 vehicles out).*

*(4) In the event of a jetty outage affecting both the Riverside Resource Recovery Facility and work number 1A, where the daily number of two-way vehicle movements made by heavy commercial vehicles delivering waste to the Riverside Resource Recovery Facility is below the maximum number permitted by condition 27 of planning permission reference 16/02167/FUL (or as permitted under any other planning permission for the Riverside Resource Recovery Facility) so that there is an unused number of two-way heavy commercial vehicles permitted to deliver waste to the Riverside Resource Recovery Facility (“the jetty outage surplus”), the undertaker may utilise all or part of the jetty outage surplus for the purposes of work number 1A in addition to the maximum number permitted by sub-paragraph (3).*

*(5) Save where there is a jetty outage, incinerator bottom ash must only be removed via river.”*

3.11.12 The addition of Requirement 14 to the DCO, is considered to address any outstanding concerns held by TfL regarding HGV traffic in the event of a jetty outage.

#### Construction Phase Impacts on A2016/A206 Corridor

3.11.13 As a consequence of on-going engagement with TfL and in response to concerns raised in the TfL RR, the Applicant has prepared two technical notes to supplement the appraisal of transport impacts associated with the construction phase of the REP site and the Electrical Connection. Both technical notes are appended to this response and reflect the decision to route the Electrical Connection along the A2016/A206 corridor.

3.11.14 The information relating to the route refinement work is presented in the Electrical Connection Progress Report, submitted at Deadline 2 (20 May 2019). The Applicant, in consultation with the developer of the Electrical Connection, UK Power Networks (UKPN) has decided to remove the route option which follows the local roads of Anderson Way and Church Manorway, and along Lower Road and West Street towards Erith. The route proposals have been updated and are shown in Works Plans Rev1 submitted at Deadline 2 (20 May 2019). The Applicant’s preferred route of the Electrical Connection follows the SRN and would therefore have a reduced interface with Arriva’s bus network. It does include short sections which may affect bus routes along the A2016/A206 corridor but to a much lesser extent than the other previously identified route options. The position of the cable within the carriageway would be determined as part of the detailed design of Work No 9 (see the **Works Plans (2.2, Rev 1)** as defined in Requirement 2 of the **Draft DCO (3.1, APP-014)**).

3.11.15 Technical note reference TN009 “*Further Appraisal of Construction Traffic Impacts on A2016/A206 Corridor*” (see Appendix G) provides a review of the flow characteristics at key junctions on the Electrical Connection construction route. It explores the potential for temporary traffic effects relating to the peak construction period of the REP site and the Electrical Connection. The technical note identifies measures which would be delivered through a Construction Traffic Management

Plan (or Plans) (CTMP), secured through **Requirement 13** of **Schedule 2** of the **Draft DCO (3.1, Rev 1)**, to reduce the potential effects of the construction phase of REP in relation to the highway network performance.

- 3.11.16 In discussion with TfL, the Applicant has concluded that the number of on-site parking places at the Main Temporary Construction Compound on Norman Road would be capped at 275 parking spaces, a 50% reduction from the 552 parking spaces proposed at the time of the DCO submission (**Paragraph 6.4.6** of **Chapter 6 Transport** of the **ES (6.1, Rev 1)**). This would significantly reduce the predicted number of workforce car movements at the peak construction period. Furthermore, the technical note states that the proposed construction working hours (07:00-19:00 Mon.-Fri. and 07:00-13:00 Sat.) would result in worker travel outside of the observed network peaks, further reducing any potential effects.
- 3.11.17 The evidence provided in technical note TN009 demonstrates that the potential effect on local junctions during the peak construction of the REP site would not have a residual impact greater than the Minor Adverse impact reported in **Paragraph 6.9.15** of **Chapter 6 Transport** of the **ES (6.1, Rev 1)**, with the incorporation of the CTMP secured by **Requirement 13** of **Schedule 2** of the **Draft DCO (3.1, Rev 1)**.
- 3.11.18 Technical note reference TN013 "*Traffic flows on A2016 Bronze Age Way and A206 Queens Road/Northend Road - Interface with Electrical Connection Construction Works*" (see Appendix F) responds to technical matters raised by TfL in relation to the interface of the construction of the Electrical Connection with the routes of the A2016 (Picardy Manor Way to Bexley Road) and A206 (Queens Road to Perry Street). The Electrical Connection in this area is described within **Chapter 3 Project and Site Description** of the **ES (6.1, Rev 1)** which accompanies the DCO Application.
- 3.11.19 Technical note reference TN013 sets out information and analysis in relation to:
- Traffic flow characteristics on the A2016 Bronze Age Way and A206 Queens Road corridor, in each direction;
  - Theoretical link capacity on the A2016 Bronze Age Way and A206 Queens Road / Northend Road;
  - Queueing and congestion at key points on the A2016 Bronze Age Way and A206 Queens Road / Northend Road corridor; and
  - Flow characteristics at Erith Roundabout (A2016 Bronze Age Way junction with A206 Bexley Road) and potential implications of the construction of the Electrical Connection for REP on the operation of the junction.
- 3.11.20 The technical note **responds to TfL's concerns about the absence of information** regarding the description of the methods of construction and the form of the Electrical Connection, as set out at **Paragraphs 3.5.25, 3.5.28, 3.5.29** and

**3.5.31 of Chapter 3 Project and Site Description** of the **ES (6.1, Rev 1)**, which describe the format of the cable connection, and the projected time frames for completion of each 200m section of trenched construction.

- 3.11.21 It is concluded in technical note reference TN013 that the residual impact of the construction of the Electrical Connection on the SRN of A2016/A206 would be temporary and transient and no greater than the Minor Adverse impact reported in **Paragraph 6.9.78 of Chapter 6 Transport** of the **ES (6.1, Rev 1)**. This level of impact would be subject to the implementation of a CTMP, in line with the updated **Outline CTMP**, submitted at Deadline 2 (20 May 2019). The CTMP would be secured through **Requirement 13 of Schedule 2** of the **draft DCO (3.1, Rev 1)**.
- 3.11.22 The technical note describes additional commitments made by the Applicant on the method and process of construction of the Electrical Connection, further to mitigating potential transport impacts during construction.
- 3.11.23 On the basis of the developing detail for the Electrical Connection route, the following additional mitigation is included at Section 7 in the Outline CTMP (V1), submitted at Deadline 2 (20 May 2019), which would be agreed through the finalised CTMP under **Requirement 13** of the **draft DCO (3.1, Rev 1)**:

*“It is the Applicant’s intention to utilise the area in front of Erith Station for the southbound approach to Erith Roundabout. This will avoid cable installation on the immediate southbound approach or northbound exit of that roundabout. The EC will continue offline along an existing footpath and then cross the western arm of the same roundabout before re-joining the main highway.*

*For the crossing of the western arm of Erith Roundabout, the Applicant will seek to install ducting during off-peak periods only, although such mitigation may require off-peak closure of inbound and outbound lanes on this arm.*

*If the route has to remain on the main highway north-south through Erith Roundabout then a solution in the southbound carriageway will be sought in preference to using the northbound carriageway. This approach would be further reviewed for the section south toward Colyers Lane.*

*The Applicant will adopt this approach to the route for the Electrical Connection unless it is no longer economic, efficient or coordinated to do so<sup>6</sup>.*

- 3.11.24 The Applicant is progressing a Statement of Common Ground (SoCG) with TfL. At the time of writing this response, a draft SoCG has been submitted to TfL for review. The Applicant considers that, through ongoing dialogue with TfL, a SoCG will be agreed in due course.

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<sup>6</sup> These are obligations on UK Power Networks as a Distribution Licence holder.

## 4 Non-statutory Organisation

### 4.1 Dartford and Crayford Creek Restoration Trust (RR-002)

#### Summary of Representation:

#### 4.1.1 The Dartford and Crayford Creek Restoration Trust Relevant Representation states:

*“The Trust wishes to understand proposed developments (particularly the electrical connection) in the vicinity of the Creeks so that adverse impacts upon navigation or amenity are avoided”.*

#### Response:

- 4.1.2 An Environmental Impact Assessment (EIA) has been prepared to accompany the Development Consent Order (DCO) Application and the assessments are presented in an **Environmental Statement (ES) (6.1, APP-038 – APP-099)** which is available to view on the Planning Inspectorate’s website (<https://infrastructure.planninginspectorate.gov.uk/projects/london/riverside-energy-park/>).
- 4.1.3 A hard copy of the Application form, together with copies of the Application documents (including accompanying plans, maps and the ES), were made available for inspection free of charge from 4 January 2019 until 12 February 2019 at the following locations: Upper Belvedere Community Library, Dartford Library and London Borough of Bexley (LBB) Civic Offices. The ES and the DCO Application documents describe the potential effects of the Proposed Development and mitigation measures.
- 4.1.4 Drawing from information contained in the ES, the nature of the works likely to be undertaken in the vicinity of the Creeks is summarised in the following paragraphs.
- 4.1.5 **Chapter 3 Project and Site Description** of the **ES (6.1, APP-040)** describes the Proposed Development in detail, including the potential routes of the Electrical Connection. **Figures 5.2a and 5.2b** of the **ES (6.2, APP-056)** show the extent of the Application Boundary, including the Electrical Connection route options.
- 4.1.6 Since the DCO Application was submitted to PINS, the Electrical Connection route has been updated as a result of further design work and discussions with UKPN.
- 4.1.7 Revised works plans, land plans, Book of Reference, Statement of Reasons and Draft DCO will be submitted to PINS at Examination Deadline 2 which reflect the updated Electrical Connection route.
- 4.1.8 The refined Electrical Connection route crosses over the River Cray and the River Darent, approximately 3 km and 2 km to the west of the connection point at the Littlebrook substation respectively.

- 4.1.9 The Electrical Connection is routed predominantly via the existing road network and will be predominantly underground. The exception would be at the connection point with REP itself, at the connection point to the electricity network and at discrete locations along the Electrical Connection route where it might be attached to existing bridges or supported in new cable bridges over smaller watercourses.
- 4.1.10 The Electrical Connection route would cross the River Darent using the existing highway or by drilling below ground and siting the cables under the river bed. **Section 4** of the **Outline Code of Construction Practice (CoCP) (7.5, Rev 1)** specifically excludes the potential for excavation or ground disturbance within the area of the former historical landfill where the Electrical Connection route crosses the River Darent, to the south of Bob Dunn Way. The CoCP is secured by **Requirement 11** of Schedule 2 of the **Draft DCO (3.1, Rev 1)**, which requires that the final CoCP submitted to and approved by the local authority be in substantial accordance with the Outline CoCP submitted with the application.
- 4.1.11 **Paragraph 12.9.11** of **Chapter 12 Hydrology, Flood Risk and Water Resources** of the ES (**6.1, APP-049**) states that construction activities associated with installation of cable bridges over watercourses have the potential to give rise to very minor effects upon the surface water drainage regime and water quality of receiving watercourses and water bodies as a result of small scale and localised earthworks operations. Such effects would be localised and temporary and controlled using embedded mitigation measures such as: management systems to manage works within the floodplain, best practice working methods; appropriate storage of oil and chemical tanks; passing of water contaminated by hydrocarbons through oil/grit interceptors; prevention of silt laden runoff; or the laying of cables at a sufficient depth beneath watercourses to avoid damage to the integrity of embankments during installation. These measures are set out within **Section 4.8** of the **Outline CoCP (7.5, Rev 1)** and **Paragraph 12.8.2** of **Chapter 12 Hydrology, Flood Risk and Water Resources** of the ES (**6.1, APP-049**).
- 4.1.12 As a result, the magnitude of potential impact upon the surface water drainage regime and water quality during construction of the Electrical Connection would be negligible.
- 4.1.13 Trenchless installation, which is the preferred option for crossing the River Darent, would involve drilling under a watercourse, using, for example, horizontal directional drilling (HDD). As per the technical assessments presented in the ES (**6.1, APP-043-053**) no likely significant effects are anticipated in using this technique as it will be subject to a detailed working method statement secured through the outline CoCP (Rev 1). Furthermore, **Paragraph 12.8.2** of **Chapter 12 Hydrology, Flood Risk and Water Resources** of the ES (**6.1, APP-049**) confirms that where required, cables would be laid at a sufficient depth beneath watercourses to avoid causing damage to the integrity of embankments during installation.
- 4.1.14 In conclusion, given the above, no effects on navigation or amenity of Dartford or Crayford Creek are anticipated.

## 4.2 London Power Networks plc (RR-004)

### Relevant Representation:

- 4.2.1 London Power Networks (LPN) plc is a wholly owned subsidiary of the UK Power Networks Group and is the licenced electricity distribution network operator for part of the area affected and *“objects to the scheme unless at the cost of the Applicant there are first provided to it on no less favourable terms suitable alternative sites and suitable alternative rights for all existing apparatus that will be adversely affected either temporarily or permanently by the Riverside Energy Project”*.

### REP response to representation:

- 4.2.2 The Applicant has provided protective provisions for the protection of electricity undertakers in **Part 2 of Schedule 10** to the **draft Development Consent Order (dDCO) (3.1, Rev 1)**, which address the concerns raised by LPN and ensure that LPN’s apparatus will be protected and access maintained at all times. A copy of those protective provisions was sent by the Applicant to LPN on 26 February 2019 in order to commence discussions on whether amendments to those protective provisions, or bespoke provisions, are required.
- 4.2.3 The Applicant anticipates that it will be possible to reach agreement with LPN on the terms of the protective provisions and any other commercial terms prior to the end of the Examination. The Applicant will update the Examining Authority at the earliest opportunity once terms are agreed.
- 4.2.4 In light of the protective provisions already included in the dDCO and the outcome of the negotiations that are on-going between the parties, the Applicant is of the view that the Secretary of State can be satisfied that conditions set out in section 127(3) and section 138(4) of the Planning Act 2008 are met in each case.
- 4.2.5 LPN, South Eastern Power Networks and Eastern Power Networks are wholly owned subsidiaries of the UK Power Networks (UKPN) Group, covering London and the east/southeast. The design of the Electrical Connection for Riverside Energy Park (REP) is being progressed by the Major Connections team within UKPN, working with the Applicant. Significant consideration has been given to existing statutory undertakers in the development of the route options to date, including where existing apparatus may present a constraint or potential engineering difficulty. UKPN’s expertise in delivering electrical connections ensures that effects and interaction with such apparatus has been, and continues to be, carefully considered.



### 4.3 South Eastern Power Networks plc (RR-005)

#### Relevant Representation:

- 4.3.1 South Eastern Power Networks (SPN) plc is a wholly owned subsidiary of the UK Power Networks Group and is the licenced electricity distribution network operator for the area and “objects to the scheme unless at the cost of the acquiring party there are first provided to it on no less favourable terms suitable alternative sites and suitable alternative rights for all existing apparatus that will be affected either temporarily or permanently by the Riverside Energy Project”.

#### REP response to representation:

- 4.3.2 The Applicant has provided protective provisions for the protection of electricity undertakers in **Part 2 of Schedule 10** to the **draft Development Consent Order (dDCO) (3.1, Rev 1)**, which address the concerns raised by SPN and ensure that SPN’s apparatus will be protected and access maintained at all times. A copy of those protective provisions was sent by the Applicant to SPN on 7 March 2019 in order to commence discussions on whether amendments to those protective provisions, or bespoke provisions, are required.
- 4.3.3 The Applicant anticipates that it will be possible to reach agreement with SPN on the terms of the protective provisions and any other commercial terms prior to the end of the Examination. The Applicant will update the Examining Authority at the earliest opportunity once terms are agreed.
- 4.3.4 In light of the protective provisions already included in the dDCO and the outcome of the negotiations that are on-going between the parties, the Applicant is of the view that the Secretary of State can be satisfied that conditions set out in section 127(3) and section 138(4) of the Planning Act 2008 are met in each case.
- 4.3.5 SPN, London Power Networks and Eastern Power Networks are wholly owned subsidiaries of the UK Power Networks (UKPN) Group, covering London and the east/southeast. The design of the Electrical Connection for Riverside Energy Park (REP) is being progressed by the Major Connections team within UKPN, working with the Applicant. Significant consideration has been given to existing statutory undertakers in the development of the route options to date, including where existing apparatus may present a constraint or potential engineering difficulty. UKPN’s expertise in delivering electrical connections ensures that effects and interaction with such apparatus has been, and continues to be, carefully considered.

#### 4.4 United Kingdom Without Incineration Network (UKWIN) (RR-006)

##### Summary of Representation:

4.4.1 United Kingdom Without Incineration Network's (UKWIN) Relevant Representation (RR) objects to the incineration component of REP for the following reasons:

- Adverse climate change impacts in comparison to disposal by landfill and an increase net release of carbon through the operation of REP; and
- Perceived potential adverse impacts on recycling and the circular economy ambitions in London.

##### Response:

4.4.2 In order to assist the Examining Authority, cross referencing to paragraphs within the UKWIN RR is made by the abbreviation 'UKWIN XX'.

4.4.3 The response is presented under the following sub-headings:

- Climate Change Impacts (Responding to UKWIN 16-46);
- Need for the Proposed Development (Responding to UKWIN 47-81); and
- Compliance with Policy (Responding to UKWIN 82-87).

In summary, the Applicant disagrees with UKWIN. The Proposed Development is demonstrated, not least through the submitted **Project and its Benefits Report ('PBR') (7.2, APP-103)** and subsequent **Supplementary Report to the Project and its Benefits Report (7.2.1)** Submitted for Deadline 2), to be a national and local policy-supported supply of low carbon/renewable energy, that will help to deliver climate change priorities, including sustainable waste management.

##### **Climate Change Impacts**

###### *Introduction*

4.4.4 The Applicant has submitted a Carbon Assessment for the ERF, the 'ERF **Carbon Assessment**' (8.02.08). It is important to note that both this response and the ERF **Carbon Assessment** only refer to the ERF. The carbon benefits of the anaerobic digestion facility and solar generation have not been included but are also recognised in policy.

4.4.5 The ERF **Carbon Assessment** demonstrates that the quantitative criticisms made by UKWIN are not relevant. However, the points of principle are still addressed in this response as follows:

*Landfill burial is preferable over combustion (UKWIN 23-26)*

4.4.6 UKWIN's assertions regarding plastics (primarily made at UKWIN 23-26) are not considered relevant. REP would not be burning plastics as a separate waste stream. It is recognised that there may be some plastics within the residual waste stream, but this is not what is being referred to in the quotes in UKWIN 24 and 25, as explained in the next paragraph. The purpose of the ERF is to recover energy from residual waste, which includes a mixture of non-recyclable materials, and if this residual waste were not to be processed at the ERF, it would instead go to landfill. The ERF **Carbon Assessment (8.02.08)** demonstrates that processing residual waste in the ERF would have a carbon benefit over sending the residual waste to landfill.

4.4.7 The respondent includes two quotations referred to in UKWIN 24 and UKWIN 25 which are considered to lack context:

- The quotation at UKWIN 24<sup>7</sup>, from the UK Resource Minister, Therese Coffey, was made in the context of a debate on plastic packaging and the Minister was responding to a comment specifically about the use of waste packaging material in cement kilns; and
- The quotation at UKWIN 25 from page 10 of "Energy from waste - a Guide to the Debate" is specifically referring to plastics which cannot be recycled as a separate waste stream, not to plastics included in mixed residual waste.

4.4.8 The Applicant notes that government policy is to reduce the quantity of plastics in the residual waste stream. The **ERF Carbon Assessment (8.02.08 at Table 8)** shows that processing residual waste containing less plastics results in a greater net carbon benefit for the ERF over landfill. However, it also demonstrates that REP has a clear benefit over landfill, even if the plastics content of residual waste remains the same or even increases.

*REP produces electricity which is more carbon intensive than electricity produced from CCGTs. (UKWIN 36-46)*

4.4.9 The Applicant rejects the contention that REP is more carbon intensive than a Combined Cycle Gas Turbine (CCGT) plant. The Applicant considers that carbon emissions from the REP ERF and emissions from a CCGT plant should not be compared because the REP ERF does not only generate electricity; it also diverts waste from landfill and thereby offers carbon benefits and sustainable treatment options for London's residual waste. A CCGT simply generates electricity.

4.4.10 As the respondent ignores the carbon benefits of diverting waste from landfill in these paragraphs, the Applicant considers that the comparison between REP and CCGTs is invalid. The Applicant notes that the Respondent has itself undertaken a more thorough comparison between the ERF and landfill.

*Biogenic CO2 emissions (UKWIN 88-98)*

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<sup>7</sup> The UKWIN footnote has been redacted. The Applicant has determined that this quote came from a debate in Westminster Hall on 23 January 2017 on e-petition 167596 relating to the banning of non-recyclable and non-compostable packaging.

4.4.11 The Respondent's RR Annex A asserts that landfill should be given a credit for sequestering biogenic carbon (UKWIN 88-98). The Applicant does not accept this position and addresses the two referenced reports below:

4.4.12 In respect of the Defra report "Energy recovery for residual waste - A carbon based modelling approach" (described as the 'Defra 2014 Report' by the respondent and in this document, as "The Carbon Modelling Report" (extract in Appendix B)), UKWIN 90 quotes solely from paragraph 174 of this report. The Applicant considers that this quote has been taken out of context. Section 6.3 of the Defra 2014 Report, read as a whole and attached as Appendix A, clearly indicates that the authors did not recommend that the potential carbon sink effect be included, as explained below:

- While the impact of the sequestration effect on the carbon model was considered in paragraphs 172-184, the Defra 2014 Report notes that there was considerable uncertainty around the calculation. Paragraph 179 states:

*"A range of different values exist in the literature for the amount of biogenic carbon that is sequestered in landfill. The baseline assumptions used in this model result in a very high level of sequestration, around 53% for the baseline composition. The outcome will be sensitive to the level of sequestration in two ways. Reducing the level of sequestration will require less biogenic carbon to be included in the EfW side of the model and will also result in more methane being emitted from the landfill side. Both factors will favour EfW over landfill."*

- In the **ERF Carbon Assessment (8.02.08, Table 4)**, the Applicant has used a sequestration rate of 50%, which is considered to be a conservative assumption. EFW - A Guide to the Debate suggests that up to half of the biogenic carbon would be sequestered. The respondent does not confirm the sequestration rate that it has used in its calculations in its Annex A.
- Paragraph 184 of the Defra 2014 Report, concludes that further work is required to understand sequestration levels:

*"There is an additional complicating factor regarding the assumptions around sequestration levels. The proportion of landfill gas captured is difficult to measure directly so assumed levels have previously been derived from a combination of measurement of the amount of landfill gas captured as a proportion of the amount modelled as being produced. However, the modelling for this also contains assumptions on sequestration. Therefore, any lowering in the sequestration assumptions will also inherently reduce the assumed level of landfill gas capture. This interaction has not been captured in the above analysis. As a result the scenarios outlined above will be particularly sensitive to sequestration levels with any drop in assumed sequestration significantly favouring EfW over landfill. Given all of these interactions there is a high degree of uncertainty and further work is required."*

- The Applicant considers this section of the Defra 2014 Report, taken as a whole, provides an explanation that the assumed landfill gas capture rates in the Defra

2014 Report are based on a high sequestration rate, which may not be correct, and which is at the higher end of rates in the literature (as stated in paragraph 179). If the sequestration rates are lower, then more landfill gas is being generated than expected and so the capture rates would be lower, making the impact of landfill considerably worse. Hence, the approach used in the Defra 2014 Report and in the ERF Carbon Assessment (Applicant's Reference, 8.02.08) (i.e., using high sequestration and landfill gas capture rates and not giving an additional credit for sequestered carbon) is considered to be conservative, in that it will tend to favour landfill over energy from waste (EfW).

- Hence, the Applicant does not accept that the Defra 2014 Report supports the inclusion of a credit for sequestered carbon and consequently also does not accept the validity of UKWIN's calculations on this point.

4.4.13 The respondent seeks to draw support from three reports prepared by Eunomia, quoting from them at UKWIN 94-96. Although the full references have been redacted, the Applicant's advisors are familiar with the documents. The Applicant notes that the context of the three reports is important:

- The 2006 report "A changing climate for energy from waste" was written by the Chairman and founder of Eunomia for Friends of the Earth. The quotation represented the author's opinion on the correct treatment of biogenic carbon when comparing waste ERF with landfill. This opinion has not been generally accepted by relevant authorities or government, although it has remained Eunomia's position since then.
- The 2010 report was prepared for the European Commission but, again, represents the author's opinion on the correct treatment of biogenic carbon. The lead author from Eunomia was the same as for the 2006 report. As far as the Applicant is aware, the 2010 report did not lead to any changes in the approach to lifecycle assessment.
- The 2015 report was again prepared by the same author as the 2006 and 2010 reports. It was commissioned by Zero Waste Europe (a group which opposes the use of waste ERF) and was specifically intended to attack the approach taken under the United Nations Framework Convention on Climate Change (UNFCCC) to assessing the greenhouse gas emissions from the waste sector as part of the national inventories. The UNFCCC reporting guidelines currently mandate the use of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, which specifically exclude biogenic carbon. As far as the Applicant is aware, neither the UNFCCC nor the IPCC has changed its guidelines in response to the Eunomia report.

4.4.14 In summary, while these quotations demonstrate that the Chairman of Eunomia has held a consistent position on this point since 2006 and that the respondent agrees with this position, the quotations do not support a change in approach by the relevant carbon authorities. UKWIN 97 suggests that the approach adopted by the Applicant is open to criticism, but the only examples of criticism that UKWIN has

provided come from reports written by a single individual. The Applicant is not aware that any of these reports has changed policy or guidance on the matter.

Consequently, the Applicant rejects the assertion made at UKWIN 98, that UKWIN's proposed method is more in line with best practice when compared to the assessment undertaken by the Applicant in the ERF Carbon Assessment (**8.02.08**). Displaced energy source (UKWIN 102-112).

4.4.15 UKWIN 102-112 states that the long run marginal emissions factor should be used as the counterfactual electricity source, rather than CCGT. UKWIN draws most support for this assertion from the Defra 2014 Report, specifically paragraphs 68 and 199. UKWIN also refers to evidence submitted by Alan Watson to the public inquiry for the Javelin Park ERF (UKWIN 110) and to footnote 29 of "Energy-from-Waste: A Guide to the Debate" (UKWIN 111, the 'EfW Guide to the Debate').

4.4.16 Footnote 29 of the EfW Guide to the Debate states:

*"A gas fired power station (Combined Cycle Gas Turbine - CCGT) is a reasonable comparator as this is the most likely technology if you wanted to build a new power station today. When conducting more detailed assessments the energy offset should be calculated in line with DECC guidance using the appropriate marginal energy factor".*

4.4.17 The interpretation of footnote 29 was considered at both the public inquiries into the Javelin Park ERF and the New Barnfield EfW plant (Hatfield). These inquiries took place prior to the latest version of the EfW Guide to the Debate was published, and in both cases, material was submitted on the changed text of footnote 29 that now appears in the EfW Guide to the Debate. These are considered in turn below:

- The Javelin Park ERF decision (APP/T1600/A/13/2200210) was given on 6 January 2015, following the Inspector's Report of 6 June 2014 (Appendix C of this Report). The Secretary of State stated in paragraph 19 that he *"has given careful consideration to the Inspector's assessment of greenhouse gas emissions IR1020-1032. In terms of whether the proposal would be inherently better than landfill with regard to greenhouse gas emissions, the Secretary of State agrees with the Inspector that the EfW facility proposed would be better than landfill since there can be no methane released to the atmosphere as a result of the process (IR1033)." The Inspector said, in paragraph 1023, that "The assumption in the model that the electricity exported from the appeal proposal would displace that otherwise produced by a CCGT should not be criticised. This is what Guide to the Debate identifies as the current standard comparator since this is the marginal technology choice if building a new power station". He then continued in paragraph 1024 to say: "In contrast to GlosVAIN, the change to Footnote 29 in the Guide to the Debate that Mr Watson draws attention to (PINQ4) still does not advocate the use of the long run marginal supply as the comparator."*

4.4.18 For the avoidance of doubt, the Applicant confirms that this decision explains that the evidence given by Alan Watson, referred to at UKWIN 110, was specifically

considered and rejected by the Inspector, and that the Inspector's approach was supported by the Secretary of State.

- The New Barnfield EfW decision (APP/M1900/V/13/2192045) was given on 16 July 2015, following the quashing of a previous decision (given on 7 July 2014), and the Inspector's Report dated 19 February 2014. In his decision, the Secretary of State stated that he *"agrees with the Inspector's assessment of carbon balance and climate change issues at IR984-989. In reaching this view, he has had regard to post inquiry representation in 2014." The Inspector stated, at paragraph 989, that "Herts WoW also challenged the use of CCGT as an appropriate comparator for electricity generated by the proposed RERF in Veolia's WRATE analysis. However, the recent DEFRA Document "Energy from Waste - a Guide to the Debate Feb 2013" provides support for the use of CCGT in making such as assessment at the present time.... It is reasonable to make the assessment of benefits using the marginal technology at the present time as the appropriate comparator."*

4.4.19 In both cases, the Secretary of State agreed with the Inspector that the correct comparator was a CCGT plant. Further, this approach has been followed consistently since publication (February 2014) of the EfW Guide to the Debate. The ERF Carbon Assessment (**8.02.08**) uses a carbon emissions factor for CCGT of 0.357 tCO<sub>2</sub>/MWh, which is lower than the comparator factor of 0.385 tCO<sub>2</sub>/MWh used in Cory Riverside Energy: A Carbon Case (the carbon assessment previously undertaken for RRRF, the 'RRRF Carbon Assessment') referred to by UKWIN.

4.4.20 Paragraph 68 of the Defra 2014 Report does refer to the marginal electricity mix. The footnote to paragraph 68 expands on this point, stating [emphasis by the Applicant]:

*"The marginal energy factor relates to the generation of an additional unit of grid electricity. There will be a range of different plants generating so the carbon intensity will be a mix of these. As this mixture will change with time so will the emissions factor. An alternative way of considering it is the carbon intensity of the plant you would build to deliver that same energy if you didn't use EfW. Currently this is approximately the same as CCGT hence its use as the baseline value, however, this factor should only be used as a guide - use of the marginal factor is the correct approach for detailed analysis."*

4.4.21 The underlined text is important, as it reflects the correct principle explained in footnote 29 of the EfW Guide to the Debate, and subsequently supported by the Secretary of State. However, this point was not taken forward to paragraph 119 of the Defra 2014 Report, which UKWIN also quotes:

*"More correctly we should use the marginal energy mix which represents the carbon intensity of generating an additional kW of electricity. Currently this is comparable to CCGT as this is the marginal technology, however, as renewable energy and nuclear make a greater contribution to the marginal energy mix this will change and the result will be a significant drop in the carbon intensity of the marginal energy mix."*

4.4.22 The Applicant does not agree with this paragraph of the Defra 2014 Report on this point and continues to consider that the correct comparator for an EfW facility such as the ERF is a CCGT plant. This is because the Applicant considers that building the ERF (or any such facility) will have little or no effect on how nuclear, wind or solar plants operate, taking account of market realities, because:

- Existing nuclear plants are being phased out, but they run all the time possible as the marginal operating costs are low;
- If any new nuclear plants are built, these will be supported by high strike prices while still having low marginal operating costs, so they will again run all the time possible;
- Wind and solar run whenever environmental conditions allow (subject to maintenance regimes) and are supported by generous subsidies in many cases.

4.4.23 It is worth noting that operators of waste ERFs have bid for and been awarded contracts in the Capacity Market. In this market they are primarily competing with CCGT plants, gas engines and diesel engines. The Capacity Market has developed over the last few years, with the first delivery year starting on 1 October 2017, and while it is currently suspended due to a legal challenge, the net effect is that electricity from waste ERF facilities is most likely to displace generation from CCGT plants, gas engines and diesel engines. This means that CCGT is the correct comparator and may actually be conservative.

4.4.24 In the ERF **Carbon Assessment (8.02.08, Section 4.3)**, the sensitivity to the displaced energy source assumption has been assessed. This demonstrates that the ERF has a net benefit over landfill of between 66,800 and 171,600 tCO<sub>2</sub>e per annum even if UKWIN's preferred grid displacement figure is used.

#### **Performance of landfill sites (UKWIN 113)**

4.4.25 UKWIN 113 suggests that a landfill gas capture rate of 75% should be used, rather than the 66% used in the RRRF Carbon Assessment. UKWIN's suggestion is based on the Defra 2014 Report.

4.4.26 In the ERF **Carbon Assessment (8.02.08)**, the baseline landfill gas capture rate used is 68%. As explained in the assessment (see para 2.2.3b) this assumption is based on a detailed study of UK landfill facilities<sup>8</sup> prepared by Golder Associates for Defra, and published after the Defra 2014 Report. The Golder's report concludes that a figure of 68% is representative of large modern landfill facilities, whilst the composite figures across all UK landfill facilities would be 52%. Further, the ERF **Carbon Assessment (8.02.08, Section 4.3)** also considers a landfill capture rate of 75% as a sensitivity test and there continues to be a net benefit over landfill of between 54,200 and 142,500 tCO<sub>2</sub>e per annum.

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<sup>8</sup> Review of Landfill Methane Emissions Modelling; Report No. 13514290381.506/A.1. Golder Associates for DEFRA. November 2014. Accessed from

<http://scienceresearch.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=18923>



4.4.27 Finally, the Applicant notes that the ERF **Carbon Assessment (8.02.08, Section 4.3)** includes a very conservative sensitivity case, which uses the respondent's preferred displaced energy source, the respondent's suggested landfill capture rate, assumes that REP exports no heat and assumes that the waste supplied to REP has a large fraction of putrescible waste removed. Even in this case, there is a net benefit of landfill of over 14,000 tCO<sub>2</sub>e per annum.

### **Need for the Proposed Development**

#### *Impact on recycling and the circular economy (UKWIN 47-53)*

4.4.28 UKWIN 47 to 53 sets out a number of quotes that are presented as indicating that the government considers that there is '*sufficient incineration capacity at a national level*' (UKWIN 50). These quotes are all presented without any context nor regard for current government policy in relation to modern, efficient waste ERF facilities. UKWIN 76 is simply a presentation of its own statement that was simply being 'noted' at the EFRACOM (Environment Food and Rural Affairs Committee).

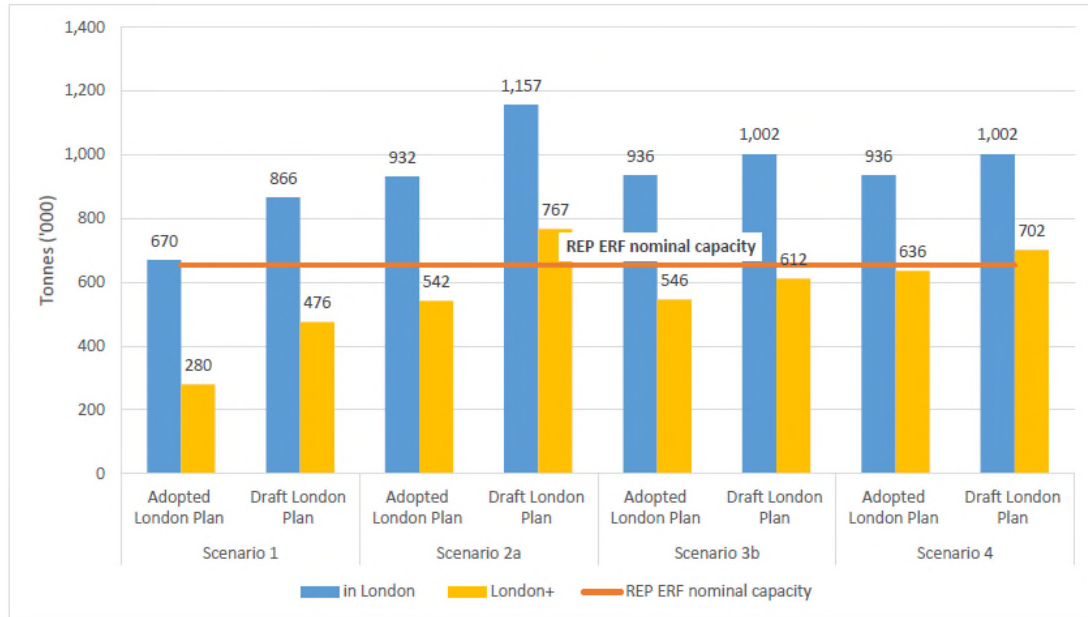
4.4.29 As demonstrated in both the **PBR (7.2, APP-103)** and the **Supplementary Report to the Project and its Benefits Report (7.2.1)**, government policy, including the recently published RWS, is wholly supportive of facilities such as the Proposed Development. Even the National Infrastructure Assessment (quoted at UKWIN 52) recognises the value of combustion for the right type of wastes. It seeks a recycling rate of 65% across municipal wastes and focusses on increased recycling for plastics and food waste, all of which is supported by the Proposed Development, not least through the Anaerobic Digestion facility.

4.4.30 The respondent's RR does not substantiate its claims that REP will prejudice the achievement of further recycling. The Applicant wholly recognises, and welcomes, the achievement of higher rates of recycling, and has explicitly considered this outcome. As demonstrated in **The London Waste Strategy Assessment ('LWSA') (Annex A of the PBR, 7.2, APP-103)**, there is substantial potential for London to achieve a significant increase in recycling and there would still remain residual wastes that should be diverted from landfill; REP is demonstrated to be at the right level of the waste hierarchy. Further, through its recovery of both energy and secondary materials, it also makes an appropriate and beneficial contribution to delivering the circular economy.

4.4.31 The LWSA has been undertaken using data and policy priorities from the adopted London Plan, the draft London Plan and from the London Environment Strategy. The LWSA concludes that even in the most conservative assessment, using the lowest waste arisings and the aspirational policy expectations regarding waste management, at least one third of the nominal throughput of the capacity of REP (principally the Energy Recovery Facility, the 'ERF') is required to sustainably manage London's residual waste. A more realistic level of need, calculated through using actual waste arisings and applying recycling objectives of the London Environment Strategy, demonstrates that all, if not more, of that nominal throughput will be required if London is going to achieve self-sufficiency and diversion from

landfill targets. This is readily demonstrated in Figure 6.1 of the **LWSA**, reproduced below as Figure 1.

Figure 1: Extract from LWSA (Annex A, PINS Reference APP-103) of Figure 6.1 - Scenarios 1, 2a, 3b and 4 of the LWSA at 2026



*The role of energy from waste facilities (UKWIN 12,21 and, 80)*

4.4.32 Contrary to UKWIN 21, EfW facilities are considered within NPS EN-3 and wholly recognised as one element of the secure, decentralised, renewable/low carbon energy supply that is urgently needed.

4.4.33 As demonstrated in the **PBR (7.2, APP-103)** and **PBR Supplemental Note (Applicant's Reference 7.2.1)** Defra's RWS (2018) (The new Resources and Waste Strategy, referenced at UKWIN 47) is wholly supportive of new, modern, efficient, ERF such as the Proposed Development. Uniquely, the Application Site enables increased river transport for transporting both waste to be treated and the subsequently recovered secondary materials. In addition it is well located to connect to a district heating network supplied to a substantial area of regeneration and social housing. Contrary to UKWIN 12, the Proposed Development would not be in conflict to the proximity principle, as explained in the **PBR (see Section 4.3, 7.2, APP-103)** there are very particular advantages in locating REP at the Application Site, and bringing waste to it.

4.4.34 Further, contrary to the respondent, the Applicant considers that the evidence in relation to London Boroughs' use of ERF demonstrates that energy recovery and recycling work well alongside each other. In the table following UKWIN 80, four authorities are singled out as having the lowest rate of recycling alongside high

levels of waste combustion. Table 4.1 below reviews those four authorities, presenting the respondent's data alongside that from Defra,<sup>9</sup> using 2015/16 and 2017/18 data. The Defra data shows that in 2015/16, the use of ERF and recycling in 2015/16 is not as disparate as is suggested by the respondent. Further, the Defra data demonstrates that a balance is being found by each London Borough: for LB Bexley and Kingston Upon Thames, recycling has slightly increased with a slight decrease seen in incineration; LB Croydon has seen a 7% increase in incineration, with a 3% decrease in recycling; whilst in LB Bromley both incineration and recycling have increased slightly. It cannot be said that waste ERFs limit recycling, even when an authority has a high reliance on waste combustion, it can, and demonstrably does, increase recycling. These two technologies work alongside each other to take waste out of landfill. As the LWSA (**Annex A, 7.2, APP-103**) shows, even if a significant increase in recycling across all of London's waste is delivered, there still remains a need for new waste ERF capacity; the Proposed Development is appropriately sized and plays a key role alongside recycling.

**Table 4.1: Local Authority Collected Waste incineration and recycling rates across four London boroughs, 2017/18 (an update of the table in UKWIN RR at paragraph 80)**

Source	UK WIN Response		Defra		Defra	
Year	2015/16		2015/16		2017/18	
Authority	Incineration (per cent)	Recycling (per cent)	Incineration (per cent)	Recycling (per cent)	Incineration (per cent)	Recycling (per cent)
LB Bexley	82.43	15.51	52.63	47.10	52.24	47.57
LB Bromley	74.36	21.25	32.76	39.15	35.11	42.52
LB Croydon	80.27	19.08	2.06	41.01	9.36	37.96
LB Kingston Upon Thames	82.74	16.60	32.58	47.76	34.82	49.74

### **Compliance with Policy**

4.4.35 REP is wholly compliant with policy, this is demonstrated through both the **Planning Statement (7.1, APP-102)** and **PBR (7.2 APP-103)**.

4.4.36 In particular, the **LWSA (Annex A, 7.2, APP-103)** demonstrates that both adopted and draft London Plan policy, seeking to achieve increased recycling, can be delivered alongside REP.

4.4.37 The tables at UKWIN 64 present an '*implied combined recycling rate for London*' based on the data set out in the evidence base to the draft London Plan.<sup>10</sup> The Applicant does not understand the purpose of these tables as the recycling rates

<sup>9</sup> Percentages calculated from Table 2: Management of Local Authority Collected Waste, England. WasteDataFlow, <http://www.wastedataflow.org>. WasteDataFlow is the web based system for municipal waste data reporting by UK local authorities to government.

<sup>10</sup> Task 1 – GLA Waste Arisings Model Critical Friend Review, March 2017, and Task 3 – Strategic Waste Data, , May 2017. Both reports produced by SLR

are already set out clearly within that evidence base and within both the adopted and proposed policy. Further, the data within those tables are unclear: the rows titled 'Recycled' are actually the total arisings predicted for each year; the rows titled 'Total' are not explained.

- 4.4.38 Further, whilst both UKWIN and the London Mayor have expressed a desire for no more waste incineration (UKWIN 65 to 67 and 83) the evidence presented does not support the claims made. The tables at UKWIN 67 are predicated on waste incineration capacity of over 3 million tonnes (as set out in the tables at UKWIN 55). This is not a reasonable level of capacity to rely upon, not least as it includes both capacity outside of London and capacity that is not yet operational and which may never become operational. It is also far in excess of the level of operational capacity recognised by the Greater London Authority.
- 4.4.39 Table 4.2 presents the level of capacity that the Applicant considers could reasonably be relied upon by UKWIN. The updated existing capacities within and beyond London relying on UKWIN figures are very similar to those presented in the **LWSA (Annex A, 7.2, APP-103)**.
- 4.4.40 Table 4.3 then considers the impact on the potential to result in waste incineration overcapacity, using the residual waste arising set out in the tables at UKWIN 65. The negative figures in Table 4.3 indicate the level of remaining need for additional treatment capacity for the residual waste arisings as calculated by UKWIN. Table 4.3 demonstrates, as does the **LWSA (Annex A, 7.2, APP-103)**, that even when relying on the most conservative of assumptions, there remains a need for new EfW capacity in London.
- 4.4.41 The EC Communication quoted at UKWIN 75 is an example of the approach followed by the Applicant. It is entirely appropriate to seek to strike the right balance between EfW capacity for non-recyclable waste, and the re-use/recycling of materials. The **LWSA (Annex A, 7.2, APP-103)** demonstrates that REP is appropriately sized to make a beneficial contribution to London achieving its policy goals of being a net zero-carbon city and sustainably managing its own residual wastes. In addition, the **LWSA (Annex A, 7.2, APP-103)** identifies c.2million tonnes of residual wastes in nearby authorities that should also be diverted from landfill.
- 4.4.42 In any event, policy is clear that the role of planning is not to limit the amount of new energy generation capacity, particularly when that provides a supply of renewable/low carbon power. As is made clear within the **PBR (at Section 2.2, 7.2 APP-103)** NPS EN-1 sets no cap on the amount of new generation capacity that should be delivered, not least at paragraph 3.3.24 where the Government confirms that it is not its intention to '*set targets or limits on any new generating infrastructure to be consented in accordance with the energy NPSs. It is not the IPC's role to deliver specific amounts of generating capacity for each technology type*'.

**Table 4.2: An update of UKWIN estimate of London incineration capacity (tables at UK WIN 55)**

Facility	UKWIN RR Capacity	London Capacity	LWSA Permitted Capacity	London Capacity (by contract)
<b>Operational Incinerators</b>				
Edmonton, North London	620,000	620,000	675,000	0 (Replaced by NLHPP)
Riverside (Belvedere), Bexley, South East London	785,000	785,000	785,000	785,000
Lewisham (SELCHP), South East London	488,000	488,000	488,000	488,000
Colnbrook (Lakeside), Slough	450,000	150,000	400,000	90,000
Allington, Maidstone	500,000	167,000		
NLHPP			700,000	700,000
Sevenside ERC			400,000	300,000
Greatmoor EfW			300,000	0 (Replaced by NLHPP)
<b>Incinerators currently under construction</b>				
Sutton, South London	302,500	302,500	275,000	275,000
Edmonton, North London	80,000	80,000	See NLHPP above	
Thames Gateway	180,000	180,000		
Shepperton, Surrey	73,150	24,100		
Sittingbourne, Kent	550,000	181,500		
Hoddesdon, Hertfordshire	119,700	40,000		
Total	4,148,350	3,018,100	4,023,000	2,638,000
EXISTING CAPACITY 'in LONDON'	excluding/including	2,275,500	excluding/including	<b>2,248,000</b>
EXISTING CAPACITY 'LONDON+'	Colnbrook and Allington	2,592,500	Colnbrook and Sevenside ERC	<b>2,638,000</b>

**Table 4.3: An update on UKWIN potential for incineration over capacity (tables at UKWIN 65**

Plan/Year	UK WIN	Incineration over capacity using capacities at Table 02			
		UKWIN	UKWIN	LWSA	LWSA
<b>UKWIN 2016 London Plan</b>	<b>residual waste</b>	<b>London +</b>	<b>in London</b>	<b>London +</b>	<b>in London</b>
<b>2026</b>	3,000,000	-407,500	-724,500	-362,000	-752,000
<b>2031</b>	2,778,000	-185,500	-502,500	-140,000	-530,000
<b>2036</b>	2,833,000	-240,500	-557,500	-195,000	-195,000
<b>UKWIN Draft New London Plan</b>	<b>residual waste</b>	<b>London +</b>	<b>in London</b>	<b>London +</b>	<b>in London</b>
<b>2026</b>	3,099,000	-506,500	-823,500	-461,000	-851,000
<b>2031</b>	2,845,000	-252,500	-569,500	-207,000	-597,000
<b>2036</b>	2,910,000	-317,500	-634,500	-272,000	-662,000

### Summary of Response:

4.4.43 The respondent raises several questions about the Proposed Development, the majority of which have been summarised into the following topic areas; climate change impacts, need for the Proposed Development and compliance with policy.

4.4.44 The Applicant disagrees with the respondents RR. The Proposed Development is urgently needed to provide resilience to London and the South East's infrastructure, replace closing landfill sites, and move waste up the waste hierarchy. It is wholly policy compliant, delivering:

- increased renewable/low carbon energy supply;
- reduced greenhouse gas emissions;
- CHP; and
- sustainable waste management.

4.4.45 The Applicant acknowledges that there is uncertainty on the outcome of future waste arisings within London and the South East, including how it will be managed. However, it is demonstrated through the **LWSA (Annex A, 7.2, APP-103)** that there will remain a range of substantial tonnages of residual waste that would exceed REP's operational requirements and should be diverted from landfill. The focussed study presented within the LWSA aligns with the Tolvik Report<sup>11</sup>, an independent study of waste arisings and management options, which indicates that London and the South East, again under various scenarios, would produce substantial tonnages of residual waste that needs to be diverted from landfill.

4.4.46 The overriding conclusion is that, even based on the most conservative estimates, London requires new infrastructure in order to deliver the Mayor's policies for sustainable and secure waste management and energy supply.

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<sup>11</sup> Residual Waste in London and the South East. Where is it going to go...? Tolvik Consulting October 2018.

## Glossary

Acronym	Full Term
CCGT	Combined Cycle Gas Turbine
DEFRA	Department for Environment, Food and Rural Affairs
EC	European Commission
EFRACOM	Environment Food and Rural Affairs Committee
EfW	Energy from Waste
ERF	Energy Recovery Facility
GLA	Greater London Authority
HertsWOW	Herts Without Waste
IPC	Infrastructure Planning Commission (superseded by the Planning Inspectorate)
IPCC	Intergovernmental Panel on Climate Change
LWSA	London Waste Strategy Assessment
NLHPP	North London Heat and Power Project
NPSs	National Policy Statements
PBR	The Project and its Benefits Report (APP-103)
REP	Riverside Energy Park
RR	Relevant Representation
RRRF	Riverside Resource Recovery Facility
RWS	The new Resources and Waste Strategy
SELCHP	South East London Combined Heat & Power Energy Recovery Facility
Severnside ERC	Severnside Energy Recovery Centre
UKWIN	United Kingdom Without Incineration Network
UNFCCC	United Nations Framework Convention on Climate Change
WRATE	The Waste and Resources Assessment Tool for the Environment



## 4.5 National Grid Electricity Transmission Plc (RR-008)

### Summary of Relevant Representation:

- 4.5.1 The Relevant Representation lodged by National Grid Electricity Transmission Plc (National Grid) seeks to protect its statutory obligations in relation to infrastructure and land which is within or in close proximity to the proposed Order limits. National Grid requests that its rights to retain its apparatus in situ and rights of access to inspect, maintain, renew and repair such apparatus located within or in close proximity to the Order limits is maintained at all times and access to inspect and maintain such apparatus is not restricted.
- 4.5.2 National Grid requests protective provisions to be included within the DCO to ensure that its interests are adequately protected and to ensure compliance with relevant safety standards.

### REP response to representation:

- 4.5.3 The Applicant has provided protective provisions for the protection of electricity undertakers in **Part 2 of Schedule 10** to the **draft Development Consent Order (dDCO) (3.1, Rev 1)** which address the concerns raised by National Grid Electricity Transmission plc (NGET). However, a copy of bespoke protective provisions for the protection of NGET was sent by the Applicant to NGET on 26 October 2018 in order to commence discussions on whether amendments to the protective provisions are required. The Applicant will include the bespoke protective provisions on the face of the dDCO at Deadline 2 of the Examination.
- 4.5.4 The protective provisions will ensure that NGET apparatus will be protected and access maintained at all times. The protective provisions also ensure that, if it is necessary to remove apparatus, no rights will be extinguished without NGET agreement and no apparatus will be removed until alternative apparatus has been constructed.
- 4.5.5 Discussions with NGET in relation to the draft protective provisions are taking place, and the Applicant anticipates that it will be possible to reach agreement with NGET on the terms of the protective provisions and any other commercial terms prior to the end of Examination. The Applicant will update the Examining Authority at the earliest opportunity once terms are agreed.
- 4.5.6 In light of the protective provisions already included in the dDCO and the outcome of the negotiations that are on-going between the parties, the Applicant is of the view that the Secretary of State can be satisfied that conditions set out in section 127(3) and section 138(4) of the Planning Act 2008 are met in each case.
- 4.5.7 The design of the Electrical Connection is being progressed by UKPN who have existing apparatus within Littlebrook substation. As a result, UKPN has an established relationship with NGET at the site and the efficient and coordinated installation of the REP connection is therefore assured.

## 4.6 Maritime and Coastguard Agency (RR-027)

### Summary of Representation:

4.6.1 The Maritime and Coastguard Agency (MCA) submitted a Relevant Representation (RR) to the Planning Inspectorate on 31 January 2019.

4.6.2 In summary, its RR states:

*"We note that the proposed project will include the construction of new jetty facilities on the River Thames, and will additionally seek to use the waterway as an alternative to road use, which will increase marine traffic on the River. This infrastructure will likely require a marine licence, at which time the MCA will be invited to comment on the application from a navigation safety perspective.*

*The project falls within the Statutory Harbour jurisdiction of the Port of London Authority, who are compliant with the Port Marine Safety Code. We would therefore expect the developer to liaise and consult closely with the PLA to consider potential impacts on existing marine traffic, and the PLA's Safety Management System (SMS). A Navigation Risk Assessment should be carried out to support this, with potential risk mitigation measures agreed with the PLA."*

4.6.3 Following further engagement with the Applicant, the MCA amended its response on 22 March 2019. Its amended response relates to river safety only, due to there being no additional development works to the jetty or within the River Thames, and confirmed it is happy to defer to the PLA on this matter.

### Response:

#### River Licensing

4.6.4 The Applicant acknowledges the MCA's comment regarding river licensing. However, following further engagement with the MCA, it has been confirmed that its RR (dated 31 January 2019) was made in error and based on the **EIA Scoping Report (6.3, APP-062)**, submitted in November 2017. The Applicant explained that since the Scoping Opinion was issued by the Secretary of State, the scope of REP has been reduced. Temporary construction and dredging works within the marine environment, which were included in the Scoping Report, are no longer included as part of the Proposed Development. Following discussions with the PLA, the Applicant has amended the draft Development Consent Order at Deadline 2 to include an article that makes it clear that nothing in the Order relieves the Applicant of any requirement to obtain any permit or licence under the Port of London Act 1968 that may be required in respect of operations that may be carried out within the Thames.

#### River Safety

4.6.5 A **Navigational Risk Assessment (NRA)** accompanies the DCO Application (Appendix B.2 to the Environmental Statement, Navigational Risk Assessment (6.3,

APP-067)). The NRA presents the assessment on the level of safety associated with vessels on the River Thames during REP operations. Paragraph 7.3 of the **NRA** identifies that the additional movements associated with REP would have a negligible effect upon navigational safety on the River Thames.

- 4.6.6 The Applicant can confirm that the Port of London Authority (PLA) has been consulted throughout the course of the EIA and the development of the DCO Application, including in the preparation of the NRA. The PLA agrees with the Applicant's assessment undertaken in the NRA (see Appendix J of the **Consultation Report, 5.1, APP-030**). The Applicant and the PLA have been discussing a Statement of Common Ground which confirms agreement on all matters, including the NRA. This Statement of Common Ground is submitted at Deadline 2 (**8.01.06**).

## 4.7 Bexley Natural Environment Forum (RR-033)

### Summary of Responses:

4.7.1 The respondent raises several questions about the Proposed Development, the majority of which can be summarised by the following themes:

- The perceived drop in recycling rates as a result of Energy Recovery Facilities (ERF);
- Scope for increasing home garden composting in Bexley rather than burning food waste;
- The ambiguity of location for (and lack of a map detailing) the area to be used for construction vehicles and materials;
- Representations in relation to potential effects on Sites of Metropolitan Importance for Nature Conservation and land between REP and the 'Cory/Borax' fields;
- Disturbance of breeding kestrels arising from the Main Temporary Construction Compound;
- Air quality effects associated with increased lorry traffic;
- The potential for adverse effects to air quality;
- The consideration of cumulative air quality effects;
- Preference for an Electrical Connection Route that does not pass through the Crossness Nature Reserve;
- Visual Impacts associated with the Proposed Development;
- Potential effects in relation to night time lighting;
- Representations in relation to the stepped roof design and opportunities for alternative solar provision;
- Effects to biodiversity and the feasibility of offsite compensation; and
- Additional DCO requirements should development consent be granted.

### Response:

#### **Representations in relation to the perceived drop in recycling rates as a result of ERFs**

4.7.2 REP will support, and is in compliance with, the waste hierarchy principles and make best use of the residual waste arising in London and the South East.

- 4.7.3 Despite improvements in the prevention, re-use and recycling of waste, there will remain residual waste which should be diverted from landfill in accordance with the waste hierarchy. REP will provide a suitable alternative to help treat London's residual waste remaining after recyclable waste has been treated, helping to ensure that less waste is sent to landfill or shipped overseas.
- 4.7.4 Waste producers are incentivised financially to minimise waste management costs where they can. Work undertaken by WRAP (WRAP Gate Fees Report, 2018 [http://www.wrap.org.uk/sites/files/wrap/WRAP%20Gate%20Fees%202018\\_exec+extended%20summary%20report\\_FINAL.pdf](http://www.wrap.org.uk/sites/files/wrap/WRAP%20Gate%20Fees%202018_exec+extended%20summary%20report_FINAL.pdf)) shows that the gate fees for recycling are consistently less than gate fees for energy recovery or disposal. Accordingly, the ERF will not displace recycling.
- 4.7.5 The ERF will support the drive to move waste further up the waste hierarchy and work alongside the Mayor's recycling targets and policy aspirations.

**Representations in relation to the scope for increasing home garden composting in Bexley rather than 'burning food waste'**

- 4.7.6 The Respondent states that REP will burn food waste and that increased home garden composting should be promoted instead of the Proposed Development.
- 4.7.7 The proposed Anaerobic Digestion (AD) facility will treat up to c. 40,000 tonnes per annum of food and green waste. This could be from both household (where home composting may not be appropriate or available) and commercial operations. This will be a benefit to Bexley and the surrounding area, providing an in-borough solution for collected green waste which is currently transported much further away to be processed. By providing a facility for food and green waste locally, REP will provide further environmental benefits, including a reduction in lorry trips collecting food and green waste, therefore reducing carbon emissions and generating renewable energy in the process.
- 4.7.8 REP will include the Anaerobic Digestion facility which will accept green and food waste. Anaerobic digestion has been recognised as one of the best methods for food recycling and will therefore help contribute towards the target of zero biodegradable or recyclable waste being sent to landfill. It will also help contribute towards the Mayor's 2030 municipal recycling targets<sup>[1][2][3]</sup> (see **Section 2.3** and Paragraph 4.3.19 of the **Project and its Benefits Report (PBR) (7.2, APP-103)**).
- 4.7.9 The biogas arising from the AD process would be passed through a gas-upgrading system to produce gas which is suitable for Compressed Natural Gas (CNG) production and/or for injection into a local gas network. CNG can be used as a fuel for vehicles, including, for example, converted onsite vehicles (which shuttle waste

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<sup>[1]</sup> London Environment Strategy, Mayor of London, May 2018

[https://www.london.gov.uk/sites/default/files/london\\_environment\\_strategy\\_0.pdf](https://www.london.gov.uk/sites/default/files/london_environment_strategy_0.pdf)

<sup>[2]</sup> London Plan, Mayor of London, January 2017

<https://www.london.gov.uk/what-we-do/planning/london-plan/current-london-plan/london-plan-2016-pdf>

<sup>[3]</sup> Draft New London Plan, Mayor of London, August 2018

<https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan>

containers within the site). CNG would be the preferred option if feasible and viable. However, if a CNG option is not progressed, then REP would incorporate a "CHP engine" which would use the biogas to generate electricity and heat, which could be used to support the AD process or added to the energy exported from the other elements of REP.

4.7.10 The digestate resulting from the AD process would be handled in line with the waste hierarchy, the first option being transported off-site for use in the agricultural sector as a fertiliser whenever possible.

4.7.11 REP would incorporate a digestate drying, storage and loading room to process (through maturation) suitable solid digestate to meet the standards required for agricultural use.

**Representations in relation to ambiguity of location for, and lack of a map detailing the area to be used for construction vehicles and materials**

4.7.12 The area to be used for the Main Temporary Construction Compound, including that for construction vehicles and materials storage, is shown on sheets 2 and 3 of the **Works Plans (2.2, Rev 1)**. This area is also shown in **Environmental Statement Figures, Figure 1.2 (Application Boundary and Assessment Areas)** of the ES (6.2, APP-056).

**Representations in relation to potential effects on Sites of Metropolitan Importance for Nature Conservation and land between REP and the 'Cory/Borax' fields.**

4.7.13 Potential effects on habitats and species within the Data Centre fields and the Main Temporary Construction Compound have been fully considered within **Section 11.9, Chapter 11 Biodiversity** of the ES (6.1, Rev 1).

4.7.14 **Section 11.9.1, Chapter 11 Biodiversity** of the ES (6.1, Rev 1) reports that the footprints of the REP Site, Main Temporary Construction Compound and Data Centre site do not directly affect any designated area, and therefore there would be no likely significant effects on designated areas in terms of land take.

4.7.15 **Paragraph 11.9.1, Chapter 11 Terrestrial Biodiversity** of the ES (6.1 Rev 1) does however report the potential for indirect effects on designated areas during construction and decommissioning through noise and visual disturbance, dust generation and pollution. During the construction and decommissioning phases, protection of habitats and species would be provided for through the Biodiversity and Landscape Mitigation strategy (BLMS) an outline of which was provided with the Application (**OBLMS (7.6, APP-107)**). After consideration of the OBLMS, **Paragraph 11.9.2, Chapter 11 Terrestrial Biodiversity** of the ES (6.1, Rev 1) reports that impacts will not undermine the conservation objectives of identified sites and effects would therefore be Not Significant.

4.7.16 Compliance with the provisions of the OBLMS is secured by **Requirement 5** at Schedule 2 to the **draft Development Consent Order (dDCO) (3.1, Rev 1)**, which

requires a final BLMS, to be substantially in accordance with the OBLMS submitted with the Application, to be approved by the local authority before the commencement of construction of REP.

4.7.17 Breeding and wintering bird surveys were undertaken at the REP site and surrounding area in 2018. A number of species were recorded, including red listed species.

4.7.18 **Paragraph 11.9.8, Chapter 11 Terrestrial Biodiversity** of the **ES (6.1 Rev 1)** reports that suitable alternative breeding habitat is present and standard measures to avoid adverse construction effects (such as vegetation clearance outside of the nesting season, or inspection of vegetation to be cleared, use of screens providing physical barriers, good site construction practice and avoidance of noisy activities when passage and wintering birds are present), and to enhance retained habitats where appropriate, are included in **Tables 1 and 3** of the **OBLMS (7.6, APP-107)**. The OBLMS is secured via requirement 5 at Schedule 2 to the **dDCO (3.1, Rev 1)**, which requires that the final BLMS submitted to and approved by the local authority is in substantial accordance with the OBLMS submitted with the application.

4.7.19 Paragraph 11.9.11 of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1 Rev 1)** reports that given the abundance of alternative habitats in the surrounding area, and the temporary nature of the potential effects, construction effects to breeding birds are assessed to be Not Significant.

4.7.20 **Paragraph 11.7.32** of **Chapter 11 Terrestrial Biodiversity** of the **ES** reports that a range of aquatic and terrestrial invertebrate species were recorded on site. **Paragraph 11.9.13** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1 Rev 1)** reports that during construction, the loss or temporary disturbance of habitats of value to invertebrates will be compensated through a financial contribution to the Environment Bank, secured by legal agreement. Provision for the biodiversity offsetting metric is to be included in the OBLMS, as required under **Requirement 5** at Schedule 2 to the **dDCO (3.1 Rev 1)**. As a result, no significant effects to invertebrates are identified at the construction phase.

4.7.21 Paragraph 11.9.37 of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** reports that during operation, potential effects on invertebrates could arise from pollution incidents. However, as the site will be managed in accordance with measures set out in the environmental permit, pollution incidents are considered unlikely. The **Outline CoCP (7.5, Rev 1)** at section 3.5 sets out the measures to control the risk of pollution. **Requirement 11** at Schedule 2 to the **dDCO (3.1, Rev 1)** requires the CoCP to be substantially in accordance with the outline CoCP (**7.5, Rev 1**).

**Representations in relation to disturbance of breeding kestrels arising from the Main Temporary Construction Compound**

4.7.22 **Paragraph 11.7.27** of **Chapter 11 Terrestrial Biodiversity** of the **ES, (3.1, Rev 1)** reports that it was identified through consultation that there are kestrels breeding in fields to the west of Norman Road and that both permanent and temporary effects

could arise to habitats of breeding birds. However suitable alternative habitat is present adjacent to these areas and standard measures to avoid adverse construction effects and to enhance retained habitats, where appropriate, are included in **Tables 1 and 3** the **OBLMS (7.6, APP-107)**.

- 4.7.23 Due to the abundance of alternative habitats in the surrounding area, and the temporary nature of the potential effects, **Paragraph 11.9.11** of **ES Chapter 11 Terrestrial Biodiversity** of the **ES, (3.1, Rev 1)** reports that construction effects to breeding birds are assessed to be Not Significant.

#### **Air quality effects associated with increased lorry traffic**

- 4.7.24 The respondent considers communication is unclear regarding the delivery of waste by river or road. REP will predominantly be a river-fed facility, maximising the use of the existing jetty and the Applicant's river transportation infrastructure to deliver waste and export ash for recycling. Where environmentally and commercially appropriate, it is expected that some waste, primarily green and food waste, will be transported to REP by road.

- 4.7.25 **Section 6.9, Chapter 6 Transport** of the **ES (6.1, Rev 1)** included an assessment scenario of '100% by road' for waste transport. This was undertaken because, as part of the EIA process, it is required to assess the reasonable 'worst case' scenario from a road transport perspective, which would involve 100% of waste transported by road.

- 4.7.26 The potential air quality effects arising from increased lorry movements are reported in **Paragraph 7.9.13** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**. Potential emissions from additional operational road traffic associated with the Proposed Development, including worst case locations or roads with the greatest increase in traffic was assessed at 27 receptors. The assessment found that effects were considered to be Not Significant even in the worst case scenario of 100% waste transport by road. In relation to the construction and de-commissioning phases, **Paragraph 7.9.12** of **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** also reports no significant effects.

#### **The consideration of cumulative air quality effects**

- 4.7.27 The respondent queries whether the Applicant has assessed combined Air Quality effects of Incinerators 1, 2 and the Thames Water Sludge Facility. The Applicant assumes Incinerators 1 and 2 relate to RRRF and the ERF at REP. The potential impacts of RRRF, REP and Crossness Sludge Powered Generator, considered together, have been modelled and the combined predicted concentrations added to baseline levels and loads for the Proposed Development. The baseline level assessed against necessarily takes into account the context of wider London air quality, as suggested by the respondent. The results of the combined emissions are reported in **Appendix C.2.2** of the **ES (6.3, APP-069)** which show that no thresholds are breached and no likely significant effects are predicted.



4.7.28 The deposition of nitrogen oxides, sulphur dioxide, ammonia, hydrogen fluoride, nitrogen, total acid, nitrogen acid and sulphur acid has been calculated from the Proposed Development upon 14 statutory International and National designated areas within 15 km of the stack, and seven non-statutory designated areas within 2 km of the stack. These include Crossness Nature Reserve and Rainham Marshes. All assessments presented in the ES (**PINS Reference APP-043-APP-052**) have considered cumulative effects of the Proposed Development and other relevant existing and planned development. Further detail on the cumulative assessment methodology is set out in **Section 4.10 of Chapter 4 Assessment Methodology** of the ES (**6.1, APP-041**).

4.7.29 **Paragraph 11.9.32 of Chapter 11 Terrestrial Biodiversity** of the **ES (6.1 Rev 1)** reports that potential effects relating to chemical deposition are Not Significant.

**Representations in relation to a preference for an Electrical Connection Route that does not pass through the Crossness Nature Reserve**

4.7.30 The Applicant can confirm that following further technical design work carried out by the Applicant and UK Power Networks, the Applicant is removing the Election Connection route option (part of route option 1) through Crossness Nature Reserve. The removal of the Electrical Connection route option through the Crossness Nature Reserve is confirmed in the Applicant's submission to the Examination at Deadline 2 and the updated Land Plans (**2.1, Rev 1**), Works Plans (**2.2, Rev 1**) and Book of Reference (**4.3, Rev 1**) submitted at Deadline 2.

**Representations in relation to visual effects associated with the Proposed Development**

4.7.31 The respondent states that the 'Artists Impressions' of the Proposed Development do not accurately depict the visual effects associated with the Proposed Development. In particular the respondent refers to the 'in combination' effects on the Crossness LNR when considering the Data Centre development, and the view from 'Thames scarp slope' and 'ground level from the marshes'.

4.7.32 It is not clear which 'artists impression' the Relevant Representation is referring to.

4.7.33 **Section 9.9 of Chapter 9 Townscape and Visual Impact Assessment** of the **ES (6.1, Rev 1)** and **Appendix E.2 of the ES (6.3, APP-073 and APP-074)** report the assessment of views (see viewpoints 2 and 3) from the Thames scarp slope and ground level from the marshes to identify the likely significant visual effects on people's visual links to the river, and on the landscape character of the area, which includes the Crossness Local Nature Reserve. The viewpoint locations were selected as being representative of a number of key points where the Proposed Development would be visible and were discussed and agreed with stakeholders as part of the assessment process. **Section 9.10 of Chapter 9 Townscape and Visual Impact Assessment** of the **ES (6.1, Rev 1)** and **Appendix E.5 of the ES (6.3, APP-077)** report the assessment of cumulative townscape and visual effects of REP and the Data Centre.

- 4.7.34 **Paragraph 9.10.13** of **Chapter 9 Townscape and Visual Impact Assessment** of the **ES (6.1, Rev 1)** reports a significant adverse cumulative effect at viewpoints 2 and 3 during construction and operation. However, it is noted that these wireframes were based on a worst case building design with no stepped roof. It is considered that the stepped roof building form referred to in the **Design Principles Document (7.4, APP-105)** will reduce massing and minimise visual effects compared to the square roof.
- 4.7.35 It is not clear which 'artists impression' the Relevant Representation is referring to. Accurate Visual Representations (AVRs) as wireframes were prepared and included as part of the assessments reported in **Chapter 9 Townscape and Visual Impact Assessment** of the **ES (6.1, Rev 1)**. The dedicated project website ([www.riversideenergypark.com](http://www.riversideenergypark.com)) includes a rolling banner which appears to match the description within the Relevant Representation. This image is intended to provide an indicative and illustrative overview of how the Proposed Development could look from an elevated position. This image was not used for assessment purposes.

#### **Representations in relation to night time lighting**

- 4.7.36 As no likely significant effects were anticipated, lighting effects on human receptors were scoped out by the Secretary of State in his **Scoping Opinion, Appendix A.1** of the **ES (6.3, APP-062)**. However, an Outline Lighting Strategy was submitted to accompany the DCO application (see **ES Appendix K.3 (6.3, APP-096)**) to show how the Proposed Development would utilise lighting and minimise light spill by efficient use and appropriate directionality. Schedule 2, Requirement 15 of the **dDCO (3.1, Rev 1)** requires that an Operational Lighting Strategy, which must be substantially in accordance with the Outline Lighting Strategy, must be approved by the relevant planning authority prior to the commencement of works commencing onsite.
- 4.7.37 Additionally, a Design Principles document was submitted to accompany the DCO (**7.4, APP-105**), which includes Design Principle DP5.01 stating "*...lighting will be appropriate to the local context and will mitigate lighting impacts upon identified habitats, neighbouring occupiers and the wider landscape*". Requirement 2, at Schedule 2 of the **dDCO (3.1, Rev 1)** requires that design details to be submitted to the local authority for approval prior to construction are in accordance with those Design Principles.
- 4.7.38 Finally, contractors constructing REP are required by **Requirement 11** at Schedule 2 to the dDCO to comply with a Code of Construction Practice (CoCP) an outline of which was submitted with the Application (**7.5, Rev 1**). **Section 4.10** of the Outline CoCP sets out relevant guidance and legislation, as well as general design objectives, which seek to minimise potential adverse effects of construction lighting.
- 4.7.39 **Paragraph 11.9.34** of **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** reports the assessment of potential lighting effects of the Proposed Development on light sensitive biodiversity receptors which include the designated areas of

Crossness LNR, Belvedere Dykes SINC, River Thames and Tidal Tributaries SINC and Erith Marshes SINC. The residual effects of lighting on these receptors following mitigation outlined in the **Outline Lighting Strategy Appendix K.3** of the **ES (6.3, APP-096)** and **Outline CoCP (7.5, Rev 1)** are reported as being Not Significant.

**Representations in relation to the stepped roof design and opportunities for alternative solar provision**

4.7.40 The Respondent states that the proposed stepped roof design of REP will not blend with adjacent buildings. Accurate Visual Representations (AVRs) as wireframes were prepared and included as part of the assessments presented in **Chapter 9 Townscape and Visual Assessment** of the **ES (6.1, Rev 1)**. These wireframes were based on a worst case building design with no stepped roof. It is considered that the stepped roof building form referred to in the **Design Principles document (7.4, APP-105)** will reduce massing and minimise visual effects compared to the square roof. There is a mixture of built forms and rooflines in the locality of REP. The stepped roof form will add roofline and skyline interest to the horizontal linear form and the creation of a varied and dynamic roofscape; as well as a positive variation and simplicity of form. Further information on the selection of the stepped-roof design and the design rationale for REP can be found in the **Design and Access Statement (7.3, APP-104)** and the **Design Principles document (7.4, APP-105)**.

4.7.41 In relation to the suggestion in the relevant representation for alternative solar provision, the Proposed Development comprises complementary energy generating equipment which seeks to maximise the generation of renewable energy. As RRRF is not included within the DCO Application, it is not considered appropriate to explore options for retrofitting solar panels at RRRF within the DCO Application. Further, the RRRF stack, located at the south end of the plant, casts a shadow over the facility making it unsuited to solar power generation.

4.7.42 Roofs of surrounding warehouses fall outside of the Application Boundary and are not in the control of the Applicant.

**Representations in relation to effects to biodiversity and the feasibility of off-site compensation**

4.7.43 An assessment of the potential effects on terrestrial biodiversity arising from the construction, operation and de-commissioning of the Proposed Development has been undertaken and is presented in **Chapter 11 Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**. A biodiversity metric calculation is being undertaken by the Environment Bank to enable a biodiversity balance for the Proposed Development to be determined and to demonstrate the overall net gain in biodiversity in accordance with policy and to provide feedback to consultees. Opportunities for appropriate enhancement in and around the development have been identified and an **Outline Biodiversity and Landscape Mitigation Strategy (OBLMS) (7.6, APP-107)** has been submitted to accompany the DCO application, which includes all mitigation measures and opportunities to provide enhancements.

- 4.7.44 **Paragraph 11.11.1 of Chapter 11 Terrestrial Biodiversity** of the ES (**6.1, Rev 1**) states that the loss of habitats of ecological value within the REP site may be compensated through provision of an area of open mosaic habitat on the flood bank within the REP site, as well as a financial contribution to the Environment Bank with a legal agreement for contribution towards enhancement of habitats outside the Application Boundary. This has been, and will be, informed using a biodiversity metric to quantify the potential habitat losses and gains as a result of REP, in order to determine the extent of off-site compensatory measures required to achieve the aim of net biodiversity gain, in accordance with local and national policy.
- 4.7.45 This process is recognised as an appropriate method for habitat compensation by national policy and has been agreed with statutory consultees (e.g. Natural England) throughout the preparation of the application.
- 4.7.46 **Requirement 5**, at Schedule 2 to the **draft DCO (3.1, Rev 1)** requires (at paragraphs (c) and (d) the final approved BLMS to contain the following details: the results of the biodiversity off-setting metric together with the value of off-setting required, the nature of such off-setting, 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.
- 4.7.47 Indirect effects to Terrestrial Biodiversity from the Proposed Development are addressed within this section of the report.
- 4.7.48 The ES reports that, after consideration of mitigation, residual effects to terrestrial biodiversity will be Not Significant.

**Representations in relation to proposed additional DCO requirements should development consent be granted**

- 4.7.49 The comments relating to the provision of additional DCO requirements are noted. The requirements, as set out in the **dDCO (3.1, Rev 1)** have been the subject of numerous iterations and discussions with stakeholders. They have been drafted to provide the appropriate level of mitigation and enhancement relating directly to potential adverse environmental effects identified through the EIA process and reported in the ES. The form and content of the requirements at Schedule 2 to the draft DCO will continue to be considered throughout the Examination.

## 4.8 Essex Wildlife Trust (RR-045)

### Summary of Representation:

- 4.8.1 The relevant representation from Essex Wildlife Trust raises a concern in relation to:

*"potential impacts on biodiversity, designated and priority habitats, and protected species, including water voles, reptiles, wintering and breeding birds and invertebrates."*

*The respondent also requests the opportunity to "comment on proposed mitigation strategies to ensure that the proposed development can achieve a measurable net gain in biodiversity".*

### Response:

- 4.8.2 The Applicant contacted Essex Wildlife Trust on the 4th April 2019 to further understand their specific areas of concern. The Applicant then received the following response from Essex Wildlife Trust on the 10th of April 2019 (the full email has been appended to this response):

*"I've now thoroughly examined the proposals and have come to the conclusion that there are unlikely to be any significant effects on Essex habitats/species.*

*Thank you for taking the time to contact me; I registered our interest with PINS initially in response to concerns from one of our members. However, I now feel that Kent Wildlife Trust are better placed to comment as the application site is within their county boundary".*

- 4.8.3 Based on the above, the Applicant concludes that Essex Wildlife Trust has no outstanding concerns regarding the Application.

**From:** Annie Gordon <[AnnieG@essexwt.org.uk](mailto:AnnieG@essexwt.org.uk)>  
**Date:** 10 April 2019 at 13:28:23 BST  
**To:** Helen Evriviades <[hevriades@peterbrett.com](mailto:hevriades@peterbrett.com)>  
**Subject: Re: Riverside Energy Park - EWT contact?**

Dear Helen,

Please accept my apologies for the delay in getting back to you. I've now thoroughly examined the proposals and have come to the conclusion that there are unlikely to be any significant effects on Essex habitats/species.

Thank you for taking the time to contact me; I registered our interest with PINS initially in response to concerns from one of our members. However, I now feel that Kent Wildlife Trust are better placed to comment as the application site is within their county boundary.

Thank you again and kind regards,

*Annie*

Dr Annie Gordon  
Landscape Conservation Planning Coordinator  
Essex Wildlife Trust  
Tel: 01621 862953  
Mob: [REDACTED]

## 4.9 Bexley-Greenwich Environment Alliance (RR-050)

### Summary of Representation:

4.9.1 Bexley-Greenwich Environment Alliance submitted a Relevant Representation (RR) to the Planning Inspectorate on 07 February 2019. The RR raises concerns regarding:

- "Global warming;
- Inequitable siting of incinerators in the London area, ie this will be 4 within a 6km radius and three within 1km;
- Potential harm to adjacent nature reserve and also Rainham Marshes;
- Evidence suggests that the ratio of deaths are higher in London Boroughs where incinerators are sited or down-wind from same; and
- Potential long term and widespread harm as Bexley Council plan to build c11,000 homes plus schools within 1km distance from the incinerator, tower blocks planned could be as high or higher than the chimney".

### Response:

#### Concerns regarding global warming

4.9.2 **Appendix K.2 Qualitative Greenhouse Gas Emissions Assessment** of the **Environmental Statement (ES) (6.3, APP-095)** has been prepared to accompany the DCO Application. The assessment has been undertaken in line with the Institute for Environmental Management and Assessment (IEMA) EIA Guidance on assessing greenhouse gas emissions and significance (2017).

4.9.3 The greenhouse gas emissions assessment concluded that the operation of REP would contribute positively to the national, local and waste sector emissions inventory through the recovery of energy from waste, low carbon/renewable energy generation and energy storage.

4.9.4 A detailed **Carbon Assessment Report (8.0.2.08)** has also been provided by the Applicant. This report assesses the carbon impacts and benefits of REP and demonstrates that base case for the assessment shows that the benefit of REP is about 137,000 tonnes of CO<sub>2</sub>-equivalent per year, or about 229 kg CO<sub>2</sub>e per tonne of waste processed, compared to sending the same waste for disposal in a landfill site.

4.9.5 National policy, set out in NPS EN-1 and NPS EN-3 describe an urgent need for new energy generation infrastructure of the types set out in the NPSs, of which energy from waste is one, and emphasise an expectation that industry will provide this capacity through private-led investment, such as REP. Alongside the drive for new energy generation is the desire for it to be renewable or low carbon to help meet climate change targets. As demonstrated in **Sections 5.2** and **5.3** of the

**Planning Statement (7.1, APP-102)** and **The Project and its Benefits Report (PBR) (7.2, APP-103)**, REP fully conforms to the NPS policy objectives, as well as regional and local planning policy and guidance.

**Inequitable siting of incinerators in the London area**

- 4.9.6 Bexley-Greenwich Environment Alliance expresses concern regarding the *"inequitable siting of incinerators in the London area...this will be 4 within a 6km radius and three within 1km"*. The Applicant is uncertain what specific facilities the respondent is considering in its RR. However, the Applicant can confirm that any existing development (including the Crossness Sewage Sludge Incinerator and Riverside Resource Recovery Facility) have been included within the baseline of the assessments undertaken within the ES (6.1, APP-043 - 051). The majority of assessments undertaken have not identified significant adverse residual effects. **Chapter 9 Townscape and Visual Impact Assessment (TVIA)** of the **ES (6.1, Rev 1)** however, has identified some significant residual adverse effects from the temporary construction phase and operation of the Proposed Development. The socio-economic assessment contained in **Chapter 14 Socio-economics** of the **ES (6.1, Rev 1)** identified significant beneficial effects from both the temporary construction phase and operation of the Proposed Development.
- 4.9.7 The Applicant considers the location of REP to be highly suitable for this type of development. In deciding upon the location for REP, the Applicant has had regard to factors such as those described in Section 2.5 of NPS EN-3 which sets out factors influencing site selection in relation to 'Biomass and Waste Combustion' facilities. Furthermore, as per **Paragraph 5.2.6 of Chapter 5, Alternatives Considered of the ES (6.1, Rev1)**, given that the Applicant owns the majority of the freehold of the REP site circa 85% (with a further 9% currently under lease), along with the proximity of associated road and jetty links with the River Thames (and associated network of riparian Waste Transfer Stations in London), the location was considered ideally suited for the Proposed Development. The Proposed Development can also be provided without significant effects on the environment or the local community.
- 4.9.8 Furthermore, REP will support the waste hierarchy principles and make best use of the residual waste arising in London and the South East. REP supports both regional and local waste management needs. In spite of the improvements made in the prevention, re-use and recycling of waste within London, over two million tonnes of non-recyclable waste is currently sent to landfill or shipped overseas. As demonstrated in **The Project and its Benefits Report (PBR) (7.2, APP-103)**, London has a clear waste infrastructure capacity gap which urgently needs investment, particularly as only 2 out of the 11 active landfill sites where London's residual waste is currently sent for disposal will be operational after 2025. REP will help London transition to a low-carbon and self-sufficient city providing an appropriate alternative to treat London's waste which remains after recycling. This provides a substantial and reliable alternative to waste being sent to landfill or shipped overseas. Therefore, the ERF element of REP will support the drive to



move waste further up the waste hierarchy and work alongside the Mayor's recycling targets.

- 4.9.9 It is envisaged that the Anaerobic Digestion facility will also provide an in-borough solution for LBB which currently sends its food and green waste out of the borough to be processed.

**Potential harm to adjacent nature reserve and Rainham Marshes**

- 4.9.10 Bexley-Greenwich Environment Alliance raise concern regarding "*potential harm to adjacent nature reserve and Rainham Marshes*" but does not define what is meant by 'potential harm'.

- 4.9.11 Potential biodiversity effects on designated sites, including; Crossness Local Nature Reserve (LNR) and Rainham Marshes Local Nature Reserve (LNR) have been assessed and are reported in **Chapter 11, Terrestrial Biodiversity** of the **ES (6.1; Rev 1)**. **Paragraphs 11.12.1-11.12.4** of **Chapter 11, Terrestrial Biodiversity** of the **ES (6.1; Rev 1)** conclude that no likely residual significant effects are anticipated on terrestrial biodiversity receptors as a result of construction, operation or decommission of the Proposed Development, when considered either in isolation or in combination with other planned developments. This assessment and its conclusions have been agreed with Natural England through an SOCG (**submitted at Deadline 2 (8.01.05)**).

- 4.9.12 **Paragraphs 7.9.42-7.9.47** of **Chapter 7, Air Quality** of the **ES (6.1; APP-044)** and paragraphs 11.9.21-11.9.25 of **Chapter 11, Terrestrial Biodiversity** of the **ES (6.1; Rev 1)** also consider the potential air quality effects upon designated areas, including Crossness LNR and Rainham Marshes LNR. Table 7.37 of **Chapter 7, Air Quality** of the **ES (6.1; APP-044)** and paragraph 11.13.7 of **Chapter 11, Terrestrial Biodiversity** of the **ES (6.1; Rev 1)** show that no likely significant effects are anticipated.

- 4.9.13 Furthermore, the Applicant can confirm that following further technical design work carried out by the Applicant and UK Power Networks, the Applicant is removing the Election Connection route option (**Electrical Connection Progress Report (8.02.07)**) through Crossness LNR. The removal of the Electrical Connection route option through the Crossness LNR is confirmed in the Applicant's submission to the Examination at Deadline 2 and the updated Land Plans (**2.1, Rev 1**) and Works Plans (**2.2, Rev 1**) submitted into the Examination at Deadline 2.

**Evidence that the ratio of deaths is higher in London Boroughs where incinerators are sited or down-wind from same**

- 4.9.14 Bexley-Greenwich Environment Alliance state that "*evidence suggests that the ratio of deaths are higher in London Boroughs where incinerators are sited or down-wind from same*". Bexley-Greenwich Environment Alliance presents no evidence to justify or explain the assertion in its RR.

- 4.9.15 By contrast, the Applicant has submitted a **Human Health Risk Assessment (HHRA)** presented in **Appendix C.3** of the **ES (6.3, APP-070)**, which considers the potential effects on human health arising from long-term exposure to dioxins and furans, dioxin-like polychlorinated biphenyls (PCBs) and trace metals emitted from the proposed ERF at REP. Paragraphs 3.6.1-3.6.4 of **Appendix C.3 - HHRA** of the **ES (6.3; APP-070)** show that no likely significant effects are anticipated in relation to long term exposure in relation to long term exposure to dioxins and furans, dioxin-like PCBs and trace metals.
- 4.9.16 In addition, **Paragraph 21.1.3** of the **Health Impact Assessment (HIA)** presented in **Appendix K.1** of the **ES (6.3, APP-094)** concludes that no likely significant adverse effects to human health are anticipated as a result of the construction and operation of the Proposed Development.

**Potential long term and widespread harm on future development**

- 4.9.17 In line with Schedule 4 (part 5) to the Infrastructure EIA Regulations 2017 (as amended), a cumulative assessment has been undertaken to consider the likely significant effects of the Proposed Development on the environment resulting from the cumulation of effects with other existing and/or approved projects in the vicinity. The list of other existing and approved projects included in the cumulative assessment was agreed with statutory consultees, including the London Borough of Bexley.
- 4.9.18 The cumulative assessment identifies no likely significant effects arising from the Proposed Development on any planned homes, schools or tower blocks or other sensitive receptors in the vicinity of the site or the wider area.
- 4.9.19 Further detail on the cumulative assessment is provided in **Section 4.10** of **Chapter 4 ES Assessment Methodology** of the **ES (6.1, APP-041)** and **Appendix A.4 Cumulative Assessment - Matrix** of the **ES (6.3, APP-065)**.
- 4.9.20 Furthermore, as evidenced in **Section 5.3** of the **PBR (7.2, APP-103)** and paragraph 21.1.4 of the **HIA (6.3, APP-094)**, it is envisaged that the Proposed Development could give rise to benefits on future developments in Bexley. Paragraphs 21.1.3.21.1.4 of the **HIA (6.3, APP-094)**, conclude that the no likely significant adverse effects to human health are anticipated and there will be some long-term beneficial effects associated with the provision of a secure energy supply through local district heat network opportunities.

#### **4.10 Cory Environmental Limited (RR-060)**

##### **Relevant Representation:**

4.10.1 Relevant Representation to the Planning Inspectorate on Riverside Energy Park EN010093

4.10.2 Cory Environmental Holdings Limited (trading as Cory Riverside Energy) (company number 05360864) (CEHL) has identified Cory Environmental Limited (CEL) (company number 49722) as an organisation with an interest in land to which the proposed Riverside Energy Park (REP) Development Consent Order application relates.

4.10.3 CEL received notification that the Development Consent Order (DCO) relating to REP was accepted by the Planning Inspectorate for examination on 14 December 2019. CEL requests to register with the Planning Inspectorate as an Interested Party to take part in the examination of the REP Development Consent Order application by making the following relevant representations:

4.10.4 Application in Principle - CEL is a member of the Cory Riverside Energy Group and an indirect subsidiary of CEHL. REP will support the growth of the Cory Riverside Energy Group and will help to address London's waste treatment and energy needs in the context of constrained waste treatment capacity and increasing desire for renewable energy. REP would have no detrimental impact on any CEL operations. CEL therefore has no objection to the application for a Development Consent Order.

4.10.5 Compulsory Acquisition - CEL owns several areas of land that would be subject to powers of compulsory acquisition of interests in and rights over land, the temporary use of land and the overriding of easements and other rights. The REP Book of Reference (Examination Library Reference APP-018) identifies the following plots of land in CEL ownership:

4.10.6 02/04, 02/20, 02/22 - CEL has no objection to the compulsory acquisition powers sought in the application for Development Consent Order in respect of CEL's interests. CEL intends to sell a portion of its land to CEHL/ Riverside Energy Park Limited (a 100% owned subsidiary of CEHL) in support of the REP development and supports the application in its entirety.

Kind regards,

Julian Walker

##### **Response to representation:**

4.10.7 The Applicant acknowledges the Respondent's comments thanks the Respondent for its submission



#### **4.11 London First (RR-080)**

##### **Relevant Representation:**

- 4.11.1 I am writing on behalf of London First in support of the application by Cory Riverside Energy for an Order granting development consent for the Riverside Energy Park.
- 4.11.2 London First is a business campaigning group with a mission to make London the best city in the world to do business. We convene and mobilise business leaders to tackle the key challenges facing our capital. We are made up of over 200 leading employers across a wide range of sectors, overseen by a non-executive board of influential business leaders. A list of our members is available on our website.
- 4.11.3 We believe that Cory's proposals for the Riverside Energy Park would deliver significant additional waste management and energy generation capacity vital to supporting a successful and growing capital to become more sustainable and resilient. We further believe that Cory's proposals are consistent with relevant national and London policies.
- 4.11.4 The draft London Plan sets out how the capital's population is projected to increase by 70,000 every year, reaching 10.58 million in 2041. This means that just to meet demand, at least 66,000 new homes need to be built – along with space for tens of thousands of new jobs – every single year. Supporting the needs of future businesses and a growing population, more sustainably, requires significant investment in the infrastructure of London and the SE, much of which is operating at or near capacity.
- 4.11.5 London and the SE already faces a significant waste capacity shortfall, with significant volumes of waste sent to either landfill or overseas for treatment. Major new infrastructure is required in the capital to enable London and the SE to divert waste from landfill and become self-sufficient in waste management, while also increasing its ability to generate low carbon and renewable energy to London's businesses and residents.
- 4.11.6 The proposed REP would meet these needs by providing low carbon electricity from residual waste, which would otherwise be sent to landfill or exported overseas. It also offers significant potential for heat distribution, which is of particular relevance given the scale of proposed housing growth in the wider area, including the nearby Thamesmead redevelopment. By using the river Thames, Cory will also minimise road movements, reducing congestion and carbon emissions, while bringing significant air quality improvements.
- 4.11.7 Cory is a longstanding and respected operator in the capital, with established relationships with businesses and local authorities. The proposed new REP would complement its existing Belvedere facility, and create around 85 new jobs, on top of the 365 people already employed in the capital. The REP is a market-led proposal, backed by investors with a proven track record in infrastructure investment, which would require no public subsidy.

4.11.8 We believe that the REP would significantly enhance the ability of London and the wider SE to meet its future waste management and energy generation needs. The proposed REP has the potential to make London cleaner, greener and more resilient, while supporting additional new jobs – all at no cost to the taxpayer. We strongly support the proposal.

**Response to representation:**

4.11.9 The Applicant acknowledges the Respondent's comments thanks the Respondent for its submission

## 5 Member of the Public / Business

### 5.1 Maz Mohammed (RR-001)

#### Summary of Relevant Representation:

5.1.1 Maz Mohammad (MM) made a Relevant Representation in respect of the application for development consent. MM queried the Applicant's need to acquire interests in land next to the adopted highway boundary and immediately east of the River Darent.

#### Response to representation:

5.1.2 The Applicant met with the Respondent on 21st January 2019 to discuss the matters raised in the Relevant Representation. During this meeting the Respondent discussed his intention to develop the land in the future. The Respondent advised that temporary use and occupation of land was not a major concern. However, the extent of the permanent right acquisition was of concern to the Respondent. The Respondent did not want the permanent works to conflict with his plans to develop in the future.

5.1.3 In response to the Relevant Representation and the meeting, the Applicant has reduced the DCO boundary. In respect of the Respondent's land this removes parcel '13/16' (6984 sq m) and parcel '14/05' (1131 sq m), reducing the extent of parcels down to a small single parcel in which the Respondent has a freehold interest '13/14' (365 sq m). This is shown on the attached plan (**Mazhar Mohammad Option Agreement Plan: Land Comparison Appendix D**) with the removed land parcel area hatched black and retained parcel '13/14' edged red and filled blue.

5.1.4 The only land in which the Respondent has a freehold interest that remains within the DCO Land is this thin strip of peripheral land (parcel '13/14') against the east bank of the River Darent, at the far western side of the Respondent's land as shown on the attached plan and specifically required for horizontal directional drilling and permanent works.

5.1.5 Land negotiations and current status:

02.01.19	Applicant issues s56 notice.
17.01.19	Applicant and the Respondent exchanged emails to arrange a meeting to discuss the project and its implications.
18.01.19	Emails exchanged to arrange meeting for 21st January 2019.
21.01.19	Applicant meets with the Respondent
29.03.19	Email from Applicant to the Respondent regarding ecological survey access.
29.04.19	Applicant agent phone call to the Respondent. Future meeting to be arranged following changes to the Order Limits. The Respondent

Riverside Energy Park  
Applicant Responses to Relevant Representations

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	requested updated option agreement plans ahead of next meeting.
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## 5.2 Knights Solicitors on behalf of SAS Depot Limited (RR-028)

### Summary of Relevant Representation:

- 5.2.1 SAS Depot Limited (“SASDE”) opposes the application for development consent for the following reasons:
- 5.2.2 The compulsory acquisition of 6,362m<sup>2</sup> of land (plot 02/06) owned freehold by SASDE which SASDE notes is its sole commercial property asset from which it receives rent. SASDE considers its landholding is an asset class which is scarce in the locality;
- 5.2.3 SASDE notes the relevant tests for compulsory acquisition and states:
- 5.2.4 *“Contrary to paragraphs 8 and 10 of the Guidance, Cory has not demonstrated that all reasonable alternatives to compulsory acquisition of SASDE’s land have been explored, its proposed interference with SASDE’s rights does not meet the tests set out and compulsory acquisition of SASDE’s interests is not justified having regard to Article 1 of the First Protocol to the ECHR. Cory’s conduct has also been in breach of paragraphs 24-30 of the Guidance as particularised in the 12 December 2018 letter from their solicitors (Knights). The letter also draws attention to other of Cory’s failings.”*
- 5.2.5 SASDE challenges the statements made in the Application documents in respect of consultation and negotiations relating to the acquisition of SADE’s land interests.
- 5.2.6 SASDE has concerns regarding the sustainability, practicality and environmental impact of the Proposed Development.

### Response to representation:

- 5.2.7 Riverside Resource Recovery Limited ("RRRL"), is the current tenant of plot 02/06 by virtue of a lease completed on 23 December 2014 (the **Book of Reference** submitted with the DCO Application (**4.3; APP-018**), does not record this lease but this has been corrected in Revision 1 (**4.3, Rev 1**), submitted at Deadline 2). RRRL is a subsidiary company of the Applicant and both are companies within the Cory Group (as defined in **Section 1.2** of the **Funding Statement (4.2, APP-017)**). Therefore, the rent that SASDE currently receives from plot 02/06 is from a subsidiary company of the Applicant. In the event that a voluntary agreement is not reached for the Applicant to acquire the freehold from SASDE and the Applicant is awarded compulsory acquisition powers over this plot, then the loss of rental income would be a matter to be determined pursuant to the Compensation Code.
- 5.2.8 The **Book of Reference (4.3, Rev 1)** records SADE’s interests in the Order Land as follows:
- (a) Freehold owner in respect of plot 02/06; and
  - (b) Category 2 interests in respect of plots: 02/07, 02/11, 02/20, 02/24, 02/36.

- 5.2.9 The Applicant does not accept the assertion that plot 02/06 is of an asset class which is scarce in south east London/north west Kent. This plot is owned by SASDE but not occupied by it. The plot is held as an investment for SASDE to receive a rental income. Accordingly, there are no grounds to oppose compulsory acquisition of plot 02/06 when the compensation that SASDE would receive can be utilised by SASDE to acquire another investment property of equivalent value and which need not be restricted to a property of the same asset class. Ardent, the Applicant's advisors in respect of land, has carried out a review of available freehold sites which have the similar characteristics to plot 02/06 and has identified various sites that are available.
- 5.2.10 The Applicant contends that the Examining Authority can be satisfied that the compulsory acquisition of SASDE's interests meets the requirements of Section 122 of the Planning Act 2008 as well as the guidance *Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land*. **Section 6.5 of the Statement of Reasons (4.1, Rev 1)** explains why there is a compelling case in the public interest for the Order Land to be compulsorily acquired, with plot 02/06 being land that REP will be built upon, forming part of the access road and tipping hall to the Anaerobic Digestion and the EFW elements of REP. Plot 02/06 is clearly required for the construction and operation of REP, being the Nationally Significant Infrastructure Project (NSIP) comprised in the Application.
- 5.2.11 The Respondent made the claim that "*Cory's conduct has also been in breach of paragraphs 24-30 of the Guidance as particularised in the 12 December 2018 letter from their solicitors (Knights). The letter also draws attention to other of Cory's failings.*" The Applicant does not accept this statement and rebuts any accusation that it has breached paragraphs 24-30 of the Guidance. The Applicant is unable to rebut any specific allegation as it never received a letter from the Respondent dated 12 December 2018 and therefore, we are unsure of the issues the Respondent is referring to.
- 5.2.12 National Policy Statement EN-1 makes clear the reliance on the market to bring forward new facilities. REP is an industry funded *NSIP*, delivering on all relevant aspects of national and local policy. The need for the Proposed Development has been established in the **Project and its Benefits Report (7.2, APP-103)** and is underpinned by National Policy Statement EN-3 (particularly paragraph 2.5.2) which explicitly recognises that the recovery of energy from the combustion of waste is likely to play an increasingly important role meeting the UK's energy and renewable energy needs. As such, the benefits in the public interest, which are anticipated to arise from the Proposed Development are of national significance and would, accordingly, be on a scale outweighing the individual private loss suffered by parties whose interests in land were interfered with in order to enable the delivery of the Proposed Development. The proposed acquisition of land is legitimate, necessary and proportionate.
- 5.2.13 Regarding *alternatives*, the REP site, of which plot 02/06 forms part, is being promoted by the Applicant given:

- a. the REP site means that the Applicant can directly use existing river transport infrastructure that is already geared up for waste delivery and the collection of the subsequently recovered secondary materials. This is a result of the REP site being adjacent to the Riverside Resource Recovery Facility ("RRRF"). No other site can provide this advantage and use of river infrastructure;
- b. the REP site enables the Applicant to optimise a location that is already in a low carbon and waste management use, including the ability to share infrastructure with RRRF, thereby reducing the footprint of REP and ultimately compulsory acquisition of land required for a facility the size of REP. No other site can provide this advantage of shared infrastructure;
- c. the REP site is a brownfield site that is adequate to accommodate REP;
- d. the availability of a suitable electrical connection within the vicinity of the REP site;
- e. the good potential for district heating; and
- f. the REP site's location is such that there are virtually no significant adverse effects on the sensitive residential and environmental receptors.

5.2.14 The Applicant is seeking to acquire all land interests by agreement where possible, thereby seeking to avoid *the* compulsory acquisition of land interests. Negotiations with SASDE are set out in **Appendix C** to the **Statement of Reasons (4.1, Rev 1)**. Negotiations since the Application was submitted are summarised below, this clearly demonstrates that the Applicant has been seeking to reach agreement with SASDE thereby seeking to avoid the need to compulsory acquire SASDE's interests.

23.12.14	Leasehold agreement between SAS Depot Limited and Riverside Resource Recovery Limited until 31st December 2019.
04.07.17	Meeting held between the Applicant and SASDE discussing the fundamental issues for the freehold sale of the Norman Road site by SASDE.
11.08.17	Letter from the Applicant to SASDE discussing site values and commercial offer for the Site.
21.08.17	Letter from SASDE to the Applicant proposing land values per acre; rejecting offer due to the loss in annual income not being addressed; and counter-offer.
22.09.17	Letter from the Applicant to SASDE – commercial counter offer including purchase of Site as an asset purchase or the purchase of the shares in SASDE.
02.10.17	Letter from SASDE to the Applicant – response to second offer, noting that as the 'Service Fee', and the loss of annual income were not addressed the offer is rejected. Commercial counter offer proposed.
10.10.17	Meeting between SASDE and the Applicant – Commercial discussions

	and initial discussions around the outline plans/proposals for the Proposed Development (REP).
07.11.17	Email from SASDE providing contact details of their local land agents and heads of terms (subject to contract).
11.12.17	Meeting between SASDE and the Applicant – commercial discussions around various possible scenarios (to be considered by the Applicant) and outline plans/proposals for the Proposed Development (REP) and initial discussions concerning compulsory acquisition powers.
15.12.17	Email from the Applicant to SASDE outlining the requirement to own the freehold of Site; requesting SASDE's acceptable purchase price for the freehold and/or whether they would consider a land swap within the South-east London / North-west Kent area.
17.12.17	Email/Letter from SASDE to the Applicant – confirming they remain a willing seller and relaying disappointment that various scenarios suggested by SASDE within their earlier meeting were not acceptable to the Applicant.
18.12.17	Email from the Applicant to SASDE regarding SASDE's disappointment and encouragement to continue commercial discussions.
19.01.18	Email from SASDE confirming legal representation and contact details.
20.01.18	Email from the Applicant attaching two letters dated 19.01.18 to SASDE including a new commercial offer to SASDE.
23.01.18	Two letters from SASDE (1) rejection of Applicant's offer and counter proposal and (2) response and information as to SASDE's methodology on land value and requirements.
09.02.18	Letter from the Applicant re valuation methodology and confirmation that the Applicant had engaged land agents to assist with the valuation of the Site.
31.05.18	Email from SASDE to the Applicant confirming land agent representation on behalf of SASDE and proposing fee undertakings.
12.06.18	S.42 documentation issued regarding REP.
03.07.18	Letter from the Applicant to SASDE providing a copy of the Site valuation (dated 18.04.18) and counter-offer for purchase of the Site.
10.07.18	Acknowledgement of receipt of s42 Documentation adding a response will be issued by 30.07.18.
24.07.18	Response to issued s42 Documentation.
25.07.18	Two letters (1) confirming SASDE had engaged legal representation and (2) SASDE response for the Notice of Proposed Application for a Development Consent Order. Detailing the ownership structure of SASDE and the location of their interests within the proposed development area.
26.07.18	Letter from SASDE proposing fee undertakings regarding land valuations.
16.08.18	Letter from the Applicant to SASDE regarding clarification as whether SASDE was motivated to reach a commercial agreement and therefore scope of fee undertaking.

03.09.18	Email from SASDE noting that SASDE would not sell its site were it not for the anticipated DCO application.
17.10.18	Email from SASDE chasing on response to correspondence dated 03.09.18
31.10.18	Letter and email from SASDE to the Applicant regarding remit of future commercial negotiations and correspondence protocol re party representatives.
01.11.18	Email from SASDE re agenda for proposed meeting on 08.11.18.
01.11.18	Email from the Applicant to SASDE re confirmation of meeting scheduled for 08.11.18
06.11.18	Email from SASDE to the Applicant confirming directions and agenda for meeting held on 08.11.18; fee undertakings; and requests copy of application ahead of the Applicant's submission.
07.11.18	Letter from the Applicant to SASDE regarding fee undertakings and confirmation of the Applicant's wish to agree a commercial arrangement.
07.11.18	Various emails from SASDE re fee undertakings and the Applicant's responses.
07.11.18	Letter from SASDE to the Applicant confirming its opposition to the application and REP scheme.
08.11.18	Meeting between the Applicant and SASDE – Commercial discussions and further fee undertaking correspondence exchanged and offered. SASDE confirmed that Counsel had been retained.
09.11.18	Email from SASDE containing draft minutes which are rejected by the Applicant as an accurate reflection of the commercial meeting held on 08.11.18
12.11.18	Email from SASDE to the Applicant requesting an advance copy of the Applicant's DCO application prior to it being accepted by PINS.
12.11.18	Various email exchanges between the Applicant and SASDE regarding fee cap undertakings.
13.11.18	Email from the Applicant to SASDE confirming DCO application was submitted and offered to provide copy of the application via USB drive once accepted by PINS.
13.11.18	Email/letter from SASDE providing copy invoices in error.
14.11.18	Email from SASDE acknowledging receipt of notice that the Applicant's application for DCO has been submitted to PINS.
16.11.18	Various email exchanges between SASDE and RRRL regarding access to site for SASDE's valuation purposes.
19.11.18	Email from SASDE re fee undertakings and costs apportionment.
22.11.18	Email from Applicant notifying SASDE that the application was submitted to PINS and confirmation that a copy would be provided to SASDE by USB drive once accepted by the Examining Authority.
23.11.18	Email from SASDE confirming verbal request to destroy copy invoices sent in error; discussion over fee undertakings and request for PINS reference number.
27.11.18	Email exchange between the Applicant and SASDE re correspondence

	protocol.
13.12.18	Letter from the Applicant providing further undertaking to SASDE and requesting a meeting to discuss land values.
18.12.18	Email from the Applicant to SASDE confirming that PINS had accepted the Applicant's application on 14 December 2018; confirming that a copy of the Applicant's application had been sent to SASDE that day on a USB drive; and providing a copy of the link to the PINS website (containing a further copy of the application documents submitted to PINS).
18.12.18	Email from SASDE to the Applicant confirming that they had no capacity to have a meeting prior to 2019 and seeking to debate the comparable land values.
18.12.18	Email from the Applicant to SASDE requesting a copy of the Red Book valuation as per the original undertaking provided.
21.12.18	SASDE request clarification on the divergences between the ES and the PEIR.
22.12.18	Applicant confirms it will prepare an explanatory note re the changes made between the ES and the PEIR.
24.12.18	SASDE acknowledge confirmation.
24.12.18	The Applicant formally explains that the ES now includes the full Environmental Statement, whereas the PEIR included the preliminary assessment results only and explaining that the examination timetable will be issued by the Examining Authority under a Rule 6 letter.
31.12.18	Confirmation that SASDE were commencing work on Relevant Representation.
31.12.18	SASDE confirm intention to register as 'Interested Parties'; downloading a copy of the application from the PINS website; and that they were instructing Counsel.
31.12.18	Applicant confirms a copy of the application was provided when USB drive were sent to SAS (registered post) on 18 December 2018.
02.01.19	s56 notice documentation issued.
12.01.19	Applicant writes to SASDE providing a copy of the explanatory note on the differences between the PEIR and the ES; confirming that this explanatory note does not form part of the application and is provided on a 'Legally Privileged' basis only to assist in the context of the land discussions only.
14.01.19	SASDE acknowledging receipt of the 'Legally Privileged' explanatory note and confirming that it was shared with Counsel to inform the drafting of their Relevant Representations.
31.01.19	Email exchanges from SASDE and the Applicant regarding queries raised on the Applicant's application and the DCO process. All queries were clarified and the correct process was outlined by the Applicant.
01.02.19	Further email exchanges between SASDE and the Applicant regard the DCO process and terminology.
12.02.19	Email/letter from SASDE requesting payment of undertaking without submitting invoices in support (as requested by the Applicant and agreed by SASDE).

20.02.19	Email from SASDE to Applicant re lead advisors for correspondence purposes.
04.03.19	Letter from the Applicant to SASDE re further fee undertaking; chasing for a meeting to discuss the site valuation; and confirmation that the commercial offer made to SASDE on 02.07.18 was still open for acceptance.
07.03.19	SASDE response regarding valuation and further fees undertaking request.
12.03.19	Email from the Applicant in response to previous correspondence – discussions around land comparable evidence and valuations.
22.03.19	Letter from SASDE providing comment on the Applicant's site valuation rather than undertaking their own Red Book valuation; commentary on various comparable sites and broad commercial figures around compensation and land values; and invoice in respect of fee undertaking.
26.03.19	Email from SASDE to the Applicant re chasing payment/settlement of previous fee undertakings.
27.03.19	Applicant chases SASDE for a commercial meeting and broad rebuttal of the comparable site values.
01.04.19	Letter from the Applicant confirming settlement of previous undertaking would be settled forthwith on receipt of requested supporting invoice.
01.04.19	SASDE not willing to disclose formal valuation but confirmed meeting 05.04.19 and requested further fee undertaking.
03.04.19	Applicant seeks disclosure of SASDE formal Red Book valuation and agreed fee undertaking for meeting on 05.04.19.
05.04.19	Meeting between the Applicant and SASDE – Commercial discussions.
08.04.19	Email from the Applicant chasing receipt of supporting invoices for fee undertakings.
10.04.19	Email exchanges between SASDE to the Applicant – SASDE confirming that new invoices for fee undertakings were being raised. SASDE claiming that previous invoices has been raised and sent the Applicant, which Applicant never received.
11.04.19	Applicant seeks to confirm dates for a further follow-up meeting.
12.04.19	Letter from SASDE enclosing new invoices for previous fee undertakings.
15.04.19	Email from SASDE re correspondence protocol.
15.04.19	Meeting date confirmed.
17.04.19	Meeting location confirmed.
17.04.19	Email from the Applicant acknowledging receipt of new invoices and confirmed settlement of previous fee undertaking.
25.04.19	Email from SASDE providing breakdown of total professional costs incurred to date.
29.04.19	Meeting held between SASDE and the Applicant – Commercial Discussions.
09.05.19	Letter from the Applicant to SASDE providing new commercial offer to purchase the freehold Site.

16.05.19	Email from SASDE to the Applicant acknowledging receipt of new commercial offer and confirmation that it is being considered.
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5.2.15 These land negotiations, which include multiple commercial offers, demonstrate that the Applicant has followed the guidance Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land.

5.2.16 The Applicant does not accept that the compulsory acquisition of SASDE's interests would breach Article 1 of the First Protocol of the European Convention on Human Rights for the reasons set out above. The Applicant considered the effect of the compulsory acquisition of land interests in the context of the Convention in **Section 10** of the **Statement of Reasons (4.1, Rev 1)**.

5.2.17 SASDE asserts that it has concerns regarding sustainability, practicality and environmental impact of REP. However, there is no reasoning or explanation provided. The Applicant has prepared a detailed application for development consent which addresses these issues. In particular, the Application materials include **the Project and its Benefits Report (7.2, APP-103)** which sets out its position in relation to the sustainability of the Proposed Development and an **Environmental Statement (6.1, APP-038-100)** which considers the environmental impact of REP. The Applicant considers that SASDE's concerns should be adequately addressed in these documents.



### 5.3 Western Riverside Waste Authority (RR-029)

#### Summary of Relevant Representation:

##### 5.3.1 WRWA notes its relevant representation:

*"It is supportive of development initiatives which enhance the waste treatment infrastructure available to its constituent councils and to London in general, especially (given the lack of suitable sites within its area and the lower carbon footprint of waterborne traffic) where such facilities are accessible by river."*

The respondent notes that WRWA and Cory Environmental Limited entered into a public private partnership agreement (PPPA) in 2002 pursuant to which the existing Riverside Recovery Energy from Waste Facility ("RRRF") was constructed and operated by Riverside Resource Recovery Limited ("RRRL"). Considering this agreement, the respondent notes:

5.3.2 *"The Authority is the cornerstone customer of Belvedere/RRRL and is its lender and owner of last resort under quasi-PFI arrangements. Without the Authority's support Belvedere would not have been able to have been constructed."* Under the PPPA, the respondent has been granted a leasehold interest over land within the Application Site as security for the waste disposal obligations accepted by RRRL. The respondent consider considers this security essential to protect WRWAs interests (which extend until 2046) given the highly leveraged nature of RRRL.

5.3.3 The respondent states that the PPPA also grants WRWA the right to require the land to be made available for the construction of appropriate facilities should a change in law require waste to be treated other than mass burn incineration. In light of the Government's Resource and Waste Strategy the land is strategically important to WRWA.

5.3.4 The respondent is also concerned that the use of the jetty/wharf and access roads by REP may cause issues to the delivery of WRWA waste to RRRF.

5.3.5 The respondent does not consider it in the public interest to enable the Applicant to compulsorily acquire land which serves as security to WRWA in respect of the contractual arrangements that exist between RRRL and WRWA.

#### Response to representation:

5.3.6 The Applicant is pleased to note that the Western Riverside Waste Authority ("Authority") is supportive of development initiatives such as the Riverside Energy Park project ("REP") which enhance the waste treatment infrastructure available to the Authority's constituent councils and London. The Applicant agrees with the Authority's position on the importance of facilities that are accessible by river given the lack of suitable sites for waste treatment infrastructure in the area and the lower carbon footprint of waterborne traffic (ref. paragraph (1) of the Authority's Relevant Representation).

5.3.7 The Applicant notes that while the Authority is rightly concerned to protect its rights, it hopes and anticipates that a mutually acceptable position will be negotiated with the Applicant (ref. paragraph (7) of the Authority's Relevant Representation). The Applicant agrees entirely. Negotiations with the Authority have progressed constructively and at pace. Discussions, which are focused on commercial considerations, are ongoing and the Applicant anticipates that it will have come to a mutually agreeable position, addressing the Authority's concerns, prior to the end of the examination period.

5.3.8 The Applicant notes that there is therefore no objection by the Authority as to the 'principle' of the REP's development.

### **Contractual relationship of the parties**

5.3.9 In paragraph (2) of the Authority's Relevant Representation, it notes that it is the cornerstone customer of Riverside Resource Recovery Limited's ("RRRL") facility known as Riverside Resource Recovery Energy from Waste Facility ("RRRF"). Again, the Applicant agrees. Due to waste and lending markets at the time of its construction, the existing RRRF could not have been constructed without the support of a cornerstone customer such as the Authority. At the time that RRRF was constructed, this was not unusual - it was common for facilities such as RRRF to require a cornerstone customer such as the Authority. The Applicant notes that markets have since changed.

5.3.10 However, the Applicant does not agree with the Authority's characterisation of itself as the "lender and owner of last resort" of the existing RRRF (also called "Belvedere" by the Authority). Whilst it is correct that under the contract between a separate entity within the Cory Group (as defined within **Section 1.2 of the Funding Statement (4.2, APP-017)**), Cory Environmental Limited ("Cory"), and the Authority, RRRL's assets can be transferred to the Authority upon the Authority repaying RRRL's debt / paying compensation for its assets (depending on the scenario), this eventuality can come about only in extremely limited, and unlikely, circumstances.

### **The Authority's leasehold interest**

5.3.11 In paragraph (3) of the Authority's Relevant Representation, the Authority notes that it has been granted a leasehold interest over the site of RRRF ("Site"). To clarify, the purpose of this leasehold interest is to ensure that, in a contract compensation and termination scenario, the Authority has immediate access to RRRF to enable it to continue to undertake its statutory duty to dispose of the constituent councils' residual waste, while waiting for the formal freehold land transfer to occur (which would also occur under the contract). The interest does not have any wider significance.

5.3.12 Further, it is important to note that the section of the Site over which compulsory acquisition powers are sought to extinguish the Authority's leasehold interest to enable REP to be constructed, represents a small portion of unused land that is superfluous to the operation of RRRF ("Surplus Land"). The Surplus Land comprises wasteland habitat, meadow and container storage. Contrary to what is

suggested in paragraph (3) of the Authority's Relevant Representation, the Authority's security over the Surplus Land is in no way essential to protect the Authority's interests. In a termination scenario, the Authority could discharge its statutory waste disposal obligations without access to the Surplus Land, as it would still hold a leasehold interest over the remaining Site upon which RRRF and other critical infrastructure (such as the jetty and the internal roads and ramps) sit. In addition, while the entrance to the Site is proposed to be acquired under the DCO, RRRL - and any future owner of the Site - will have permanent access rights enshrined in the DCO Protective Provisions (see paragraph 3 of **Part 1 of Schedule 10** to the **draft Development Consent Order (dDCO) (3.1, Rev 1)**). The Authority's position is therefore entirely protected.

5.3.13 In this regard, the RRRL Protective Provisions were provided to the Authority at a meeting held in February 2019 and the Applicant awaits their comments.

5.3.14 In paragraph (3) of its relevant representation, the Authority describes RRRL as a "highly leveraged" special purpose vehicle, with the apparent intention of suggesting it to be an entity with a high risk of insolvency, resulting in a contract termination scenario. This is an incorrect characterisation of the business.

5.3.15 RRRL - like many infrastructure companies - is appropriately leveraged with bank and institutional debt. In 2008, RRRL obtained standard project finance debt in order to facilitate the construction of RRRF. It was refinanced in 2018 with debt that extends beyond the term of the Authority's contract. The debt was secured on good terms, reflecting the trust that the lenders have in the asset, which has now been operating in a highly effective and reliable manner for eight years, and the wider Cory Group business, which was sold in 2018 to a consortium of long-term infrastructure investors investing pension fund capital. Further, the Examining Authority should note that other Cory Group operating and holding entities (excluding the Applicant) act as obligors of RRRL's debt. As a Group, the Cory Group is not highly leveraged. The Cory Group was acquired by its current shareholders for an enterprise value of c£1.5bn in June 2018; the c£553.8m debt held by RRRL is the only external borrowings held by the group. Therefore, the value of equity in the group far exceeds its borrowings, with an equity to debt ratio of 2:1.

### **Response to the Authority's substantive case**

#### *Change in law*

5.3.16 The Authority notes in paragraph (4) of its relevant representation that it has rights to require that land at the Site be made available for construction of appropriate facilities should a change in law require waste to be treated other than by combustion with energy recovery. This is somewhat of an oversimplification of the rights and requirements in the contract between Cory and the Authority. The right is subject to a number of conditions (for example, that Cory (or RRRL) can obtain planning permission and obtain funding for the build of such a facility at reasonable rates), and the costs associated with the change in law / change to the services are effectively passed on to the Authority.

- 5.3.17 The Authority further notes that the Government's Resources and Waste Strategy published December 2018 ("Strategy"), proposes that food waste will in future be required to be treated separately from the remainder of the waste stream, making the maintenance of the availability of land at the Site strategically important to the Authority. Notably, this is the only 'change in law' scenario which is considered by the Authority and the Applicant would agree that this is the only current 'change in law' scenario that can be reasonably anticipated.
- 5.3.18 Significantly, REP has been designed with such a change in law in mind. It is intended that REP will contain an Anaerobic Digestion facility that can treat 40,000 tonnes of food and green waste per annum, which is far in excess of the volume of food waste generated by the Authority's constituent councils. Therefore, the application for the DCO expressly provides for construction of an appropriate Anaerobic Digestion facility as part of REP, on the very same land which the Authority is anticipating might be needed to bring forward such a facility. The further point to note in this context is that the DCO proposal will result in provision of an Anaerobic Digestion facility without the need to pass on the development costs to the Authority, as would be required if RRRL was to build it under the contract. The Applicant has made an offer to the Authority for an option over capacity in the Anaerobic Digestion facility to have its food waste treated (terms commercially confidential). The Applicant looks forward to receiving the Authority's response to this proposal.

*Congestion or disruption*

- 5.3.19 The Authority contends that REP's use of RRRL's assets at the Site leads to a risk of congestion and/or disruption to the receipt of the Authority's waste by RRRL.
- 5.3.20 Firstly, the Applicant notes that this is not a matter directly relevant to the compulsory acquisition of the Authority's leasehold interest in the Surplus Land. The Applicant is not seeking (nor can it seek) compulsory acquisition powers over the jetty (given the jetty is a chattel rather than land) by which the Authority's waste is brought to the RRRL Site (on barges owned and operated by the Cory Group). In any event, the Authority's concern of a risk of congestion or disruption is unfounded. Royal Haskoning has undertaken a survey on the Applicant's behalf which demonstrates ample capacity at the jetty for both RRRL's and REP's waste volumes. Furthermore, RRRL secured increased working hours on the jetty in 2017 (to 24 hours a day, 7 days a week, 365 days a year) increasing its operational capacity specifically with the proposed development of REP in mind.
- 5.3.21 In any event, if the studies undertaken had shown that congestion would result on the jetty, then it would not have been in the Cory Group's interests to bring forward REP without a further upgrade to increase capacity on the jetty, since the adverse impact on both RRRL's operations (another company in the Cory Group) and the operations of the proposed REP would clearly be undesirable. The Cory Group has not sought this as there is no evidence to suggest that congestion will be an issue.
- 5.3.22 Furthermore, RRRL has the benefit of Protective Provisions (**Part 1 of Schedule 10** to the **dDCO (3.1, Rev 1)**) which cover not only the access road referred to above,

but also a commitment for REP to consult with RRRL over the installation of pipes for the offtake of waste heat, access protection during the temporary closure of Norman Road and various processes that REP must comply with should it exercise compulsory acquisition powers within the "RRRL facility perimeter" (defined as plots 02/01, 02/03, 02/10, 02/13, 02/14, 02/15, 02/18, 02/19, 02/25, 02/29, 02/31 and 02/32).

*Prejudicing future treatment routes*

5.3.23 The Authority contends in paragraph (6) of its relevant representation that the granting of compulsory acquisition powers over any part of the Site would potentially prejudice treatment routes for future waste generated by the Authority's constituent councils. This generalised contention is without any basis. On the contrary, the development of REP on the Surplus (and other) Land will help secure much needed waste treatment capacity for future waste streams and waste generated by the Authority's constituent councils. Further, it will also provide waste treatment capacity to other local authorities and commercial and industrial customers in London and beyond.

**Conclusion:**

5.3.24 In conclusion, and for the avoidance of doubt, the DCO Application does not seek to extinguish the Authority's leasehold interest over the RRRF facility, rather only over that part which is currently not operational land for the RRRF (i.e. the Surplus Land). The Applicant maintains that the use of the Surplus Land for a NSIP as proposed is manifestly in the public interest, as opposed to the Surplus Land being left as just that; land which is surplus to requirements when it could be utilised to help generate low carbon/renewable energy (of which there is an urgent need as set out in NPS EN-1) as well as to help move waste up the waste hierarchy and have a positive effect on carbon emissions by reducing the amount of waste sent to landfill. The Authority's substantive concern over a change in law is directly addressed by the inclusion within the REP of the Anaerobic Digestion facility, combined with the offer to the Authority of an option over capacity in the Anaerobic Digestion facility to have its food waste treated. The Authority's other main concern, in respect of congestion/disruption, is not a compulsory acquisition issue, but rather an operational point that has no factual basis and is contrary to the expert's due diligence that has been undertaken and sound operational practices that will be adopted by the Cory Group.

## 5.4 Knights Solicitors on behalf of S Wernick & Sons (Holdings) Limited (RR-041)

### Summary of Relevant Representation:

5.4.1 S Wernick & Sons (Holdings) Limited ("WERNI") opposes the application for development consent for the following reasons:

- Cory seeks to acquire permanently 4,678m<sup>2</sup> of land owned freehold by WERNI.
- The Book of Reference fails to identify Wernick Event Hire Limited ("WEHL") as an occupier.
- Cory seeks to compulsory acquire rights over land, take temporary possession of land and extinguish or override existing rights over land. WERNI considers this land to be fundamental to WEHL's operation and commercially valuable due to the scarceness of the asset class in the locality.

5.4.2 WERNI notes the relevant tests for compulsory acquisition and states:

*"Cory has not demonstrated that all reasonable alternatives to compulsory acquisition of WERNI's land have been explored, its proposed interference with WERNI's rights does not meet the tests set out and compulsory acquisition of WERNI's interests is not justified having regard to Article 1 of the First Protocol to the ECHR. The same goes for WEHL. Cory's conduct has breached paragraphs 24-30 of the Guidance: see the 12 December 2018 letter from their solicitors (Knights). The letter draws attention to other of Cory's failings."*

5.4.3 Additionally, WERNI challenges the statements made in the Application documents for the Riverside Energy Park Order in respect of consultation and negotiations relating to the acquisition of WERNI's land interests.

### Response to representation:

5.4.4 The **Book of Reference (4.3, Rev 1)** submitted at Deadline 2 has been updated to include WEHL as an occupier of plot 02/05.

5.4.5 The Applicant does not accept the assertion that plot 02/05 is an asset class which is scarce in South-east London/North-west Kent. This assertion is also made by SAS Depot Limited in its Relevant Representation (RR-028) in respect of plot 02/06 and WEHL in its Relevant Representation (RR0-042) in respect of plot 02/05). WERNI, WEHL and SAS Depot Limited are advised by the same advisers. In any event, Ardent, the Applicant's advisors in respect of land, has carried out a review of available sites similar to plot 02/05, being the plot the subject of the WERNI and WEHL Relevant Representations, and has identified various sites within the South-east London/North-west Kent areas that are currently available and which are comparable to plot 02/05. Ardent, as professional land advisers, does not accept that plot 02/05 is unique and that WEHL can only operate from that plot.

- 5.4.6 The nature of WEHL's business (the occupier of plot 02/05) is an event company providing temporary portable accommodation to businesses running events across the country. WEHL occupies a number of sites, believed to be owned by WERNI, including plot 02/05 and another site predominantly serving the South of the country. WERNI owns other sites for its businesses across the country including one in Dartford. The Applicant understands WEHL wishes to retain a site in South-east London and North West Kent. The Applicant understands that WEHL requires a site of approximately, the same size as plot 02/05 (0.48 ha) that includes an open yard that can be used for the storage of event hire cabins that can be loaded onto vehicles by mobile crane. Based on an external assessment of the site on 12 March 2018, the business utilises an industrial piece of land with concrete hardstanding and utilises a small warehouse with a Gross External Area of approximately c.229m<sup>2</sup>. This type of business, therefore, requires a 0.48ha open yard site within South-east London that is suitable for storage, car parking and a small office block. These requirements do not make plot 02/05 unique.
- 5.4.7 The Applicant contends that the Examining Authority can be satisfied that the compulsory acquisition of the interests of WERNI and WEHL meets the requirements of Section 122 of the Planning Act 2008 as well as the guidance *Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land*. **Section 6.5** and **Appendix A** of the **Statement of Reasons (4.1, Rev 1)** explains why there is a compelling case in the public interest for the Order Land to be compulsorily acquired, with plot 02/05 being land that REP will be built upon, forming part of the access road and tipping hall to the anaerobic digestion plant and the energy for waste plant. Plot 02/05 is clearly required for that part of REP that is classed as the Nationally Significant Infrastructure Project (NSIP) (work numbers 1 and 2) as well as that part of REP that is classed as Associated Development (work numbers 3, 4, 5 and 6).
- 5.4.8 National Policy Statement EN-1 makes clear the reliance on the market to bring forward new facilities. REP is an industry funded, NSIP, delivering on all relevant aspects of national and local policy. The need for the Proposed Development has been established in the **Project and its Benefits Report (7.2, APP-103)** and is underpinned by National Policy Statement EN-3 (particularly paragraph 2.5.2) which explicitly recognises that the recovery of energy from the combustion of waste is likely to play an increasingly important role meeting the UK's energy and renewable energy needs. As such, the benefits in the public interest, which are anticipated to arise from the Proposed Development, are of national significance and would, accordingly, be on a scale outweighing the individual private loss suffered by parties whose interests in land would be interfered with in order to enable the delivery of the Proposed Development. The proposed acquisition of land is legitimate, necessary and proportionate.
- 5.4.9 Regarding alternatives, the REP site, of which plot 02/05 forms part, is being promoted by the Applicant given:
- a. the REP site means that the Applicant can directly use existing river transport infrastructure that is already in use for waste delivery and the

collection of the subsequently recovered secondary materials. This is a result of the REP site being adjacent to the Riverside Resource Recovery Facility ("RRRF"). No other site can provide this advantage and use of river infrastructure;

- b. the REP site enables the Applicant to optimise a location that is already in a low carbon and waste management use, including the ability to share infrastructure with RRRF, thereby significantly reducing the footprint of REP and ultimately compulsory acquisition of land required for a facility the size of REP. No other site can provide this advantage of shared infrastructure;
- c. the REP site is a brownfield site that is adequate to accommodate REP;
- d. the availability of a suitable electrical connection within the vicinity of the REP site;
- e. the good potential for district heating; and
- f. the REP site's location is such that there are virtually no significant adverse effects on the sensitive residential and environmental receptors.

5.4.10 The Applicant is seeking to acquire all land interests by agreement where possible, thereby seeking to avoid the compulsory acquisition of land interests. WERNI and WEHL have the same representation, common directors and have been addressed at the same time. Negotiations with WERNI and WEHL to date are set out in **Appendix B** to the **Statement of Reasons (4.1, Rev 1)**. These are also set out below, for ease of reference, and clearly demonstrate that the Applicant has been seeking to reach agreement with WERNI and WEHL thereby seeking to avoid the need to compulsory acquire the interests of WERNI and WEHL.

5.4.11 Land negotiations and current status:

29.09.17	The Applicant emailed WERNI/WEHL opening up dialogue regarding the possibility of purchasing WERNI/WEHL's site at Norman Road Belvedere (the 'Site') or a possible land swap within the South-East London area.
29.09.17	WERNI/WEHL email to Applicant confirming willingness to consider potential land acquisition options and providing suitable dates to discuss.
29.09.17	Applicant correspondence to WERNI/WEHL confirming availability to discuss Site options.
04.10.17	WERNI/WEHL emailed the Applicant chasing contact re possible dates to discuss the Site options.
04.10.17	The Applicant emailed WERNI/WEHL regarding discussions of potential Site options.
10.10.17	Meeting held with the Applicant and WERNI/WEHL – commercial discussions regarding the potential purchase of the Site and land swap options.



16.01.18	The Applicant emailed WERNI/WEHL providing details of potential alternative sites and provided available dates for a further meeting to discuss.
20.02.18	The Applicant emailed WERNI/WEHL to notify Mr Wernick that the Applicant had visited the Former Transport Yard at Sandpit Road. The Applicant confirmed it would place an offer for the freehold purchase of the site by the 15th March 2018. The Applicant requested access to WERNI/WEHL's Site for a non-intrusive survey.
22.02.18	Mr Wernick confirmed the Site would be vacated by Friday March 2nd whilst work is undertaken on the Site. Confirming the Applicant can access the Site at this time.
20.03.18	Applicant offer submitted on the 16th of March 2018 for the Transport Yard, Sandpit Road. Asking for a final offer based on a series of terms.
27.03.18	Revised bid submitted for the Former Transport Yard, Sandpit Road for a potential land swap of part with WERNI/WEHL.
16.05.18	Issue of formal Request For Information cover letter pack to WERNI (as registered owner) explaining the Proposed Development and seeking information from WERNI.
21.06.18	The Applicant received s42 response and notification from WERNI of its intention to seek legal and valuation advice before responding further to the consultation invitation.
21.06.18	Correspondence with WERNI with regard to the fees undertaking.
21.06.18	Response to issued s42 Documentation.
02.07.18	Response to WERNI's email received on the 21st of June 2018. Confirming the Applicant's on-going investigation into an alternative site for a land swap.
08.08.18	The Applicant received notification of advisor appointments to WERNI/WEHL.
14.08.18	The Applicant met with WERNI/WEHL on site to discuss the proposed developments and site requirements, in the context of any potential future relocation.
04.09.18	Applicant correspondence to agree scope for fee undertakings for WERNI/WEHL
10.10.18	Meeting held between the Applicant and WERNI/WEHL- commercial discussions.
21.11.18	Applicant, discloses copy of formal Red Book Valuation of the Site and puts forward options for determination purchase price for all parties.
21.11.18	WERNI/WEHL notify the Applicant that it will oppose the DCO application.
22.11.18	Applicant correspondence to WERNI/WEHL regarding undertaking for valuation of land.
22.11.18	Correspondence from WERNI/WEHL to Applicant
23.11.18	The Applicant detailed proposal for instructions and undertakings to WERNI/WEHL
23.11.18	The Applicant confirms undertaking to WERNI/WEHL for representation and provision of formal valuation to be disclosed.

26.11.18	WERNI/WEHL correspondence to Applicant confirming undertakings sufficient.
26.11.18	Applicant correspondence to WERNI/WEHL providing details on the DCO process.
26.11.18	WERNI/WEHL confirm to Applicant it will formally oppose application for development consent.
26.11.18	Applicant requests of WERNI/WEHL that representative correspondence in respect of other sites is addressed separately.
26.11.18	The Applicant seeks disclosure of WERNI/WEHL Site valuation.
27.11.18	WERNI/WEHL correspondence to Applicant re representative correspondence.
27.11.18	Applicant correspondence to WERNI/WEHL
28.11.18	WERNI/WEHL correspondence to Applicant – acknowledgement.
03.12.18	WERNI/WEHL correspondence to Applicant regarding Site valuation.
07.12.18	Correspondence from WERNI/WEHL to Applicant regarding the DCO process.
07.12.18	Further correspondence from Applicant to WERNI/WEHL regarding undertakings.
14.12.18	Applicant sends commercial offer letter to WERNI/WEHL.
18.12.18	Email from the Applicant to WERNI/WEHL confirming that PINS had accepted the Applicant's application on 14 December 2018; confirming that a copy of the Applicant's application had been sent to WERNI/WEHL that day on a USB drive; and providing a copy of the link to the PINS website (containing a further copy of the application documents submitted to PINS).
20.12.18	WERNI/WEHL correspondence acknowledging receipt of letter sent 14.12.18 and confirming that WERNI/WEHL's availability was limited until 10 January 2019.
21.12.18	WERNI/WEHL request clarification on the divergences between the ES and the PEIR.
22.12.18	Applicant confirms it will prepare an explanatory note re the changes made between the ES and the PEIR.
24.12.18	WERNI/WEHL acknowledge confirmation.
24.12.18	The Applicant formally explains that the ES now includes the full Environmental Statement, whereas the PIER included the preliminary assessment results only and explaining that the examination timetable will be issued by the Examining Authority under a Rule 6 letter.
31.12.18	Confirmation that WERNI/WEHL were commencing work on Relevant Representation.
31.12.18	WERNI/WEHL confirm intention to register as 'Interested Parties'; downloading a copy of the application from the PINS website; and that they were instructing Counsel.
31.12.18	Applicant confirms a copy of the application was provided when two USB drives were sent to WERNI/WEHL (registered post) on 18 December 2018.
02.01.19	s56 notice documentation issued.

12.01.19	Applicant writes to WERNI/WEHL providing a copy of the explanatory note on the differences between the PIER and the ES; confirming that this explanatory note does not form part of the application and is provided on a 'Legally Privileged' basis only to assist in the context of the land discussions only.
14.01.19	WERNI/WEHL acknowledging receipt of the 'Legally Privileged' explanatory note and confirming that it was shared with Counsel to inform the drafting of their Relevant Representations.
16.01.19	Applicant requests a further meeting.
18.01.19	WERNI/WEHL confirms not ready to meet but accepts the fee undertakings provided.
07.02.19	Applicant formally reiterates options to value the Site and chasing for a meeting date.
22.03.19	WERNI/WEHL provide commercial response to the Applicant on Site value.
27.03.19	Applicant requests non-intrusive survey access and meeting on 05.04.19. Access to the Site subsequently confirmed.
28.03.19	Applicant seeks formal valuation from WERNI/WEHL and chases meeting requested for 05.04.19
29.03.19	Applicant carried out Site inspection.
01.04.19	WERNI/WEHL refuses to provide formal valuation but confirms meeting 05.04.19
03.04.19	Applicant confirms meeting on 05.04.19 and seeks copy of valuation as per the undertaking given.
05.04.19	Meeting held between WERNI/WEHL and the Applicant – Commercial discussions.
11.04.19	Applicant seeks to confirm dates for a further follow-up meeting.
15.04.19	Meeting date confirmed.
17.04.19	Meeting location confirmed.
29.04.19	Meeting held between WERNI/WEHL and the Applicant – Commercial discussions.
02.05.19	Telephone conference between WERNI/WEHL and the Applicant – Commercial discussions.
07.05.19	Applicant provides revised commercial offer to purchase the Site.
10.05.19	WERNI/WEHL provides commercial counter offer.
13.05.19	Applicant confirms its board will consider commercial counter offer.

## 5.5 Knights Solicitors on behalf of Wernick Event Hire Limited (RR-042)

### Summary of Relevant Representation:

5.5.1 Wernick Event Hire Limited ("WEHL") is the occupier of land owned by S Wernick & Sons (Holdings) Limited ("WERNI"). WEHL opposes the application for development consent for the following reasons:

- Cory seeks to acquire permanently 4,678m<sup>2</sup> of land owned freehold by WERNI.
- The Book of Reference fails to identify Wernick Event Hire Limited ("WEHL") as an occupier.
- Cory seeks to compulsory acquire rights over land, take temporary possession of land and extinguish or override existing rights over land. WEHL considers this land to be fundamental to WEHL's operation and commercially valuable due to the scarceness of the asset class in the locality.

5.5.2 WEHL notes the relevant tests for compulsory acquisition and states:

*"Cory has not demonstrated that all reasonable alternatives to compulsory acquisition of WERNI's land have been explored, its proposed interference with WERNI's rights does not meet the tests set out and compulsory acquisition of WERNI's interests is not justified having regard to Article 1 of the First Protocol to the ECHR. The same goes for WEHL. Cory's conduct has breached paragraphs 24-30 of the Guidance: see the 12 December 2018 letter from their solicitors (Knights). The letter draws attention to other of Cory's failings."*

5.5.3 Additionally, WEHL challenges the statements made in the Application documents for the Riverside Energy Park Order in respect of consultation and negotiations relating to the acquisition of WERNI's land interests.

### Response to representation:

5.5.4 The **Book of Reference (4.3, Rev 1)** submitted at Deadline 2 has been updated to include WEHL as an occupier of plot 02/05.

5.5.5 The Applicant does not accept the assertion that plot 02/05 is an asset class which is scarce in South-east London/North-west Kent. This assertion is also made by SAS Depot Limited in its Relevant Representation (RR-028) in respect of plot 02/06 and WERNI in its Relevant Representation (RR-041) in respect of plot 02/05). WERNI, WEHL and SAS Depot Limited are advised by the same advisers. In any event, Ardent, the Applicant's advisers in respect of land, has carried out a review of available sites similar to plot 02/05, being the plot the subject of the WERNI and WEHL Relevant Representations, and has identified various sites within the South-east London/North-west Kent areas that are currently available and which are comparable to plot 02/05. Ardent, as professional land advisers, does not accept that plot 02/05 is unique and that WEHL can only operate from that plot.

- 5.5.6 The nature of WEHL's business (the occupier of plot 02/05) is an event company providing temporary portable accommodation to businesses running events across the country. WEHL occupies a number of sites, believed to be owned by WERNI, including plot 02/05 and another site predominantly serving the South of the country. WERNI owns other sites for its businesses across the country including one in Dartford. The Applicant understands WEHL wishes to retain a site in South-east London and North West Kent. The Applicant understands that WEHL requires a site of approximately, the same size as plot 02/05 (0.48 ha) that includes an open yard that can be used for the storage of event hire cabins that can be loaded onto vehicles by mobile crane. Based on an external assessment of the site on 12 March 2018, the business utilises an industrial piece of land with concrete hardstanding and utilises a small warehouse with a Gross External Area of approximately c.229m<sup>2</sup>. This type of business, therefore, requires a 0.48ha open yard site within South-east London that is suitable for storage, car parking and a small office block. These requirements do not make plot 02/05 unique.
- 5.5.7 The Applicant contends that the Examining Authority can be satisfied that the compulsory acquisition of the interests of WERNI and WEHL meets the requirements of Section 122 of the Planning Act 2008 as well as the guidance *Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land*. **Section 6.5** and **Appendix A** of the **Statement of Reasons (4.1, Rev 1)** explains why there is a compelling case in the public interest for the Order Land to be compulsorily acquired, with plot 02/05 being land that REP will be built upon, forming part of the access road and tipping hall to the anaerobic digestion plant and the energy for waste plant. Plot 02/05 is clearly required for that part of REP that is classed as the Nationally Significant Infrastructure Project (NSIP) (work numbers 1 and 2) as well as that part of REP that is classed as Associated Development (work numbers 3, 4, 5 and 6).
- 5.5.8 National Policy Statement EN-1 makes clear the reliance on the market to bring forward new facilities. REP is an industry funded, NSIP, delivering on all relevant aspects of national and local policy. The need for the Proposed Development has been established in the **Project and its Benefits Report (7.2, APP-103)** and is underpinned by National Policy Statement EN-3 (particularly paragraph 2.5.2) which explicitly recognises that the recovery of energy from the combustion of waste is likely to play an increasingly important role meeting the UK's energy and renewable energy needs. As such, the benefits in the public interest, which are anticipated to arise from the Proposed Development, are of national significance and would, accordingly, be on a scale outweighing the individual private loss suffered by parties whose interests in land would be interfered with in order to enable the delivery of the Proposed Development. The proposed acquisition of land is legitimate, necessary and proportionate.
- 5.5.9 Regarding alternatives, the REP site, of which plot 02/05 forms part, is being promoted by the Applicant given:
- g. the REP site means that the Applicant can directly use existing river transport infrastructure that is already in use for waste delivery and the

collection of the subsequently recovered secondary materials. This is a result of the REP site being adjacent to the Riverside Resource Recovery Facility ("RRRF"). No other site can provide this advantage and use of river infrastructure;

- h. the REP site enables the Applicant to optimise a location that is already in a low carbon and waste management use, including the ability to share infrastructure with RRRF, thereby significantly reducing the footprint of REP and ultimately compulsory acquisition of land required for a facility the size of REP. No other site can provide this advantage of shared infrastructure;
- i. the REP site is a brownfield site that is adequate to accommodate REP;
- j. the availability of a suitable electrical connection within the vicinity of the REP site;
- k. the good potential for district heating; and
- l. the REP site's location is such that there are virtually no significant adverse effects on the sensitive residential and environmental receptors.

5.5.10 The Applicant is seeking to acquire all land interests by agreement where possible, thereby seeking to avoid the compulsory acquisition of land interests. WERNI and WEHL have the same representation, common directors and have been addressed at the same time. Negotiations with WERNI and WEHL to date are set out in **Appendix B** to the **Statement of Reasons (4.1, Rev 1)**. These are also set out below, for ease of reference, and clearly demonstrate that the Applicant has been seeking to reach agreement with WERNI and WEHL thereby seeking to avoid the need to compulsory acquire the interests of WERNI and WEHL.

5.5.11 Land negotiations and current status:

29.09.17	The Applicant emailed WERNI/WEHL opening up dialogue regarding the possibility of purchasing WERNI/WEHL's site at Norman Road Belvedere (the 'Site') or a possible land swap within the South-East London area.
29.09.17	WERNI/WEHL email to Applicant confirming willingness to consider potential land acquisition options and providing suitable dates to discuss.
29.09.17	Applicant correspondence to WERNI/WEHL confirming availability to discuss Site options.
04.10.17	WERNI/WEHL emailed the Applicant chasing contact re possible dates to discuss the Site options.
04.10.17	The Applicant emailed WERNI/WEHL regarding discussions of potential Site options.
10.10.17	Meeting held with the Applicant and WERNI/WEHL – commercial discussions regarding the potential purchase of the Site and land swap options.

16.01.18	The Applicant emailed WERNI/WEHL providing details of potential alternative sites and provided available dates for a further meeting to discuss.
20.02.18	The Applicant emailed WERNI/WEHL to notify Mr Wernick that the Applicant had visited the Former Transport Yard at Sandpit Road. The Applicant confirmed it would place an offer for the freehold purchase of the site by the 15th March 2018. The Applicant requested access to WERNI/WEHL's Site for a non-intrusive survey.
22.02.18	Mr Wernick confirmed the Site would be vacated by Friday March 2nd whilst work is undertaken on the Site. Confirming the Applicant can access the Site at this time.
20.03.18	Applicant offer submitted on the 16th of March 2018 for the Transport Yard, Sandpit Road. Asking for a final offer based on a series of terms.
27.03.18	Revised bid submitted for the Former Transport Yard, Sandpit Road for a potential land swap of part with WERNI/WEHL.
16.05.18	Issue of formal Request For Information cover letter pack to WERNI (as registered owner) explaining the Proposed Development and seeking information from WERNI.
21.06.18	The Applicant received s42 response and notification from WERNI of its intention to seek legal and valuation advice before responding further to the consultation invitation.
21.06.18	Correspondence with WERNI with regard to the fees undertaking.
21.06.18	Response to issued s42 Documentation.
02.07.18	Response to WERNI's email received on the 21st of June 2018. Confirming the Applicant's on-going investigation into an alternative site for a land swap.
08.08.18	The Applicant received notification of advisor appointments to WERNI/WEHL.
14.08.18	The Applicant met with WERNI/WEHL on site to discuss the proposed developments and site requirements, in the context of any potential future relocation.
04.09.18	Applicant correspondence to agree scope for fee undertakings for WERNI/WEHL
10.10.18	Meeting held between the Applicant and WERNI/WEHL- commercial discussions.
21.11.18	Applicant discloses copy of formal Red Book Valuation of the Site and puts forward options for determination purchase price for all parties.
21.11.18	WERNI/WEHL notify the Applicant that it will oppose the DCO application.
22.11.18	Applicant correspondence to WERNI/WEHL regarding undertaking for valuation of land.
22.11.18	Correspondence from WERNI/WEHL to Applicant
23.11.18	The Applicant detailed proposal for instructions and undertakings to WERNI/WEHL
23.11.18	The Applicant confirms undertaking to WERNI/WEHL for representation and provision of formal valuation to be disclosed.

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26.11.18	WERNI/WEHL correspondence to Applicant confirming undertakings sufficient.
26.11.18	Applicant correspondence to WERNI/WEHL providing details on the DCO process.
26.11.18	WERNI/WEHL confirm to Applicant it will formally oppose application for development consent.
26.11.18	Applicant requests of WERNI/WEHL that representative correspondence in respect of other sites is addressed separately.
26.11.18	The Applicant seeks disclosure of WERNI/WEHL Site valuation.
27.11.18	WERNI/WEHL correspondence to Applicant re representative correspondence.
27.11.18	Applicant correspondence to WERNI/WEHL
28.11.18	WERNI/WEHL correspondence to Applicant – acknowledgement.
03.12.18	WERNI/WEHL correspondence to Applicant regarding Site valuation.
07.12.18	Correspondence from WERNI/WEHL to Applicant regarding the DCO process.
07.12.18	Further correspondence from Applicant to WERNI/WEHL regarding undertakings.
14.12.18	Applicant sends commercial offer letter to WERNI/WEHL.
18.12.18	Email from the Applicant to WERNI/WEHL confirming that PINS had accepted the Applicant's application on 14 December 2018; confirming that a copy of the Applicant's application had been sent to WERNI/WEHL that day on a USB drive; and providing a copy of the link to the PINS website (containing a further copy of the application documents submitted to PINS).
20.12.18	WERNI/WEHL correspondence acknowledging receipt of letter sent 14.12.18 and confirming that WERNI/WEHL's availability was limited until 10 January 2019.
21.12.18	WERNI/WEHL request clarification on the divergences between the ES and the PEIR.
22.12.18	Applicant confirms it will prepare an explanatory note re the changes made between the ES and the PEIR.
24.12.18	WERNI/WEHL acknowledge confirmation.
24.12.18	The Applicant formally explains that the ES now includes the full Environmental Statement, whereas the PIER included the preliminary assessment results only and explaining that the examination timetable will be issued by the Examining Authority under a Rule 6 letter.
31.12.18	Confirmation that WERNI/WEHL were commencing work on Relevant Representation.
31.12.18	WERNI/WEHL confirm intention to register as 'Interested Parties'; downloading a copy of the application from the PINS website; and that they were instructing Counsel.
31.12.18	Applicant confirms a copy of the application was provided when two USB drives were sent to WERNI/WEHL (registered post) on 18 December 2018.
02.01.19	s56 notice documentation issued.



12.01.19	Applicant writes to WERNI/WEHL providing a copy of the explanatory note on the differences between the PIER and the ES; confirming that this explanatory note does not form part of the application and is provided on a 'Legally Privileged' basis only to assist in the context of the land discussions only.
14.01.19	WERNI/WEHL acknowledging receipt of the 'Legally Privileged' explanatory note and confirming that it was shared with Counsel to inform the drafting of their Relevant Representations.
16.01.19	Applicant requests a further meeting.
18.01.19	WERNI/WEHL confirms not ready to meet but accepts the fee undertakings provided.
07.02.19	Applicant formally reiterates options to value the Site and chasing for a meeting date.
22.03.19	WERNI/WEHL provide commercial response to the Applicant on Site value.
27.03.19	Applicant requests non-intrusive survey access and meeting on 05.04.19. Access to the Site subsequently confirmed.
28.03.19	Applicant seeks formal valuation from WERNI/WEHL and chases meeting requested for 05.04.19
29.03.19	Applicant carried out Site inspection.
01.04.19	WERNI/WEHL refuses to provide formal valuation but confirms meeting 05.04.19
03.04.19	Applicant confirms meeting on 05.04.19 and seeks copy of valuation as per the undertaking given.
05.04.19	Meeting held between WERNI/WEHL and the Applicant – Commercial discussions.
11.04.19	Applicant seeks to confirm dates for a further follow-up meeting.
15.04.19	Meeting date confirmed.
17.04.19	Meeting location confirmed.
29.04.19	Meeting held between WERNI/WEHL and the Applicant – Commercial discussions.
02.05.19	Telephone conference between WERNI/WEHL and the Applicant – Commercial discussions.
07.05.19	Applicant provides revised commercial offer to purchase the Site.
10.05.19	WERNI/WEHL provides commercial counter offer.
13.05.19	Applicant confirms its board will consider commercial counter offer.

5.5.12 These land negotiations, which include multiple commercial offers, demonstrate that the Applicant has followed the guidance *Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land*. The Applicant therefore rejects that it has not complied with paragraphs 24-30 of that guidance.

5.5.13 The Applicant does not accept that the compulsory acquisition of interests of WERNI and WEHL would breach Article 1 of the First Protocol of the European Convention on Human Rights for the reasons set out above. The Applicant

considered the effect of the compulsory acquisition of land interests in the context of the Convention in **Section 10** of the **Statement of Reasons (4.1, Rev 1)**.

## 5.6 Ingrebourne Valley Limited (RR-053)

### Summary of Relevant Representation:

- 5.6.1 The Ingrebourne Valley Limited (IVL) Relevant Representation states that it does not object to the DCO Application generally. However, the IVL does object to the area of the Order Limits which potentially affects the southern end of a site owned by IVL known as Joyce Green Quarry.
- 5.6.2 IVL notes that the extant planning permission pertaining to Joyce Green Quarry includes an approved ecological mitigation strategy. This involves the construction of receptor sites for both water vole and reptiles within the proposed REP DCO Order Limits. IVL notes that the Order Limits intercept approximately 80% of the permitted reptile receptor area and southern part of the water vole receptor site. Therefore, the IVL raises concern that the Proposed Development may compromise the habitat restoration occurring within this area.

### Response to representation:

- 5.6.3 The Applicant undertook a landowner meeting with IVL on 31<sup>st</sup> October 2018. During this meeting IVL raised its concerns and issues relating to the Order Limits being sought and repeated these points in their Relevant Representation.
- 5.6.4 Subsequent to this meeting, the Applicant has amended the area of the Order Limits relating to the Joyce Green Quarry restoration site (the Restoration Site), reducing, as far as practicable, the area required for installation of the Electrical Connection Route.
- 5.6.5 Whilst the revised Order Limits retain several smaller areas of land within the Restoration Site, the Applicant proposes trenchless installation methods including Horizontal Directional Drilling (HDD) in respect of the ecological receptor areas in particular the fenced water vole receptor area near the River Darent. This would ensure the majority of works would be undertaken below ground, and therefore would not affect above ground habitat or receptor areas. In the discrete areas of above ground works, the Applicant would ensure appropriate mitigation is in place to minimise any potential effects on species and habitat.
- 5.6.6 The Applicant held a subsequent meeting with IVL on the 8th of May 2019 to present the proposed amendments to the Order Limits and discuss the revised approach to the installation of the Electrical Connection Route through the Restoration Site. IVL considered the proposed amendments to be a very positive response to its concerns and provided the trenchless installation methods are secured for the installation of the Electrical Connection through the Restoration Site, the Applicant understands that the Respondent would be prepared to withdraw its objection. The Applicant will be updating the **Outline Biodiversity and Landscape Mitigation Strategy (7.6, APP-107)** to incorporate the commitments it has made to the Respondent and will provide the updated Strategy to the Examination at Deadline 3.

5.6.7 The revised area of land either owned by the Respondent or in which the Respondent owns the subsoil is included within the Order Limits is displayed on the **Land Plans (2.1, Rev 1)** and is included for the acquisition of rights for a buried cable. There are a number of plots that have reduced in size. This is shown below:

Plot number	Boundary at Submission	Revised boundary
13/06	11,406 sq m	3,154 sq m
13/18	18,233 sq m	18,049 sq m
14/01	4,444 sq m	473 sq m
14/02	162 sq m	130 sq m
<b>Total</b>	<b>34,245 sq m</b>	<b>21,806 sq m</b>

5.6.8 The Applicant has reduced the effect on the IVL land by 12,439 sq m due to the boundary amendments.

5.6.9 The Applicant requires the compulsory acquisition of rights in these plots to install the Electrical Connection for REP. As is demonstrated through the reduction in options and the width of the Electrical Connection (see the **Electrical Connection Progress Report (8.02.07)**, submitted at Deadline 2), the Applicant has reduced the area over which it is seeking compulsory acquisition powers to as far as is reasonably practicable.

5.6.10 As stated above the commitments that the Applicant has made in respect of how the Electrical Connection will be installed in the Restoration Site will be secured through an updated **Outline Biodiversity and Landscape Mitigation Strategy (7.6, APP-107)**.

5.6.11 The Applicant will be writing to IVL to formally explain the amendments to the Order Limits at Deadline 2 and to share the updated **Outline Biodiversity and Landscape Mitigation Strategy (7.6, APP-107)** that will be submitted at Deadline 3, following which the Applicant is hopeful that IVL will withdraw its Representation.

## **5.8 Spring Law on behalf of Creek Side Developments (Kent) Limited (RR-061)**

### **Summary of Relevant Representation:**

- 5.8.1 Creek Side Developments (Kent) Limited ("Creek") has general concerns about the proposed development and how the Development Consent Order (DCO) will affect the land it is purchasing, being plot 02/52.
- 5.8.2 Creek has acknowledged that the Applicant is intending to use plot 02/52 temporarily which it considers to be compulsory acquisition.
- 5.8.3 Creek has accepted that the Applicant is willing to seek an agreement with Creek. However, when the relevant representations were published, the Applicant and Creek had not reached an agreement and negotiations were ongoing.
- 5.8.4 Creek had made a relevant representation objecting to the application for development consent on the basis that issues are pending on being satisfied by both Creek and its lender. This is due to the proposed development potentially having an adverse effect on Creek's site and its capital value.
- 5.8.5 Creek has acknowledged that the Applicant remains willing to seek an agreement with Creek. This is to allow temporary use of the site by way of a lease in connection with the Proposed Development. Subject to the terms being agreed, Creek would be eager to progress negotiations further.

### **Response to representation:**

- 5.8.6 The Respondent is not the legal owner of plot 02/52 and currently only has an equitable interest in this land having exchanged a contract for sale whereby completion is dependent on certain conditions being satisfied.
- 5.8.7 The Respondent's Relevant Representation from Creek was received on the 11 February 2019. Following this, a landowner meeting was arranged between the Applicant and Creek on 21st March 2019. This meeting was held to discuss Creek's intentions for and interest within plot 02/52 and to provide an understanding of Creek's current position.
- 5.8.8 At the landowner meeting the Applicant and Creek discussed the terms of a lease for temporary use. The main points of the meeting are listed below:
- The Applicant clearly defined the Proposed Development and how this would affect Creek's land;
  - Creek clarified the position on plot 02/52 and explained that they were in the process of purchasing plot 02/52 from the freeholder, Seamus Gannon (SG);
  - The Applicant explained that it wanted to seek an agreement for lease to be able to facilitate temporary use and occupation of plot 02/52;

- The Applicant was unable to agree a lease over the plot 02/52 with Creek due to the current position on ownership. SG being the legal freehold owner of plot 02/52 and having accepted an offer to purchase from Creek on a subject to contract basis. As this was the case the Applicant was in the process of drawing up the terms of a tripartite agreement/option for lease;
- Creek confirmed that their intention was to purchase plot 02/52 from SG as soon as possible and agree a lease directly with the Applicant; and
- Creek clarified that if a lease was agreed in principle with the Applicant and it removed plot 02/52 from the Order Limits, then Creek would withdraw its objection to REP.

5.8.9 Creek seeks to complete the purchase of the freehold of plot 02/52 from SG within the near future.

5.8.10 The Applicant intends to retain plot 02/52 within the Order Land. Although good progress has been made since the Applicant met with Creek on 21 March 2019, a commercial agreement has yet to be finalized given Creek are not yet the legal owners of plot 02/52. Further, the Applicant has demonstrated the need to compulsory acquire temporary use powers over plot 02/52 and seeks to retain these rights within the DCO.

5.8.11 In conclusion, the Applicant and Creek are making good progress towards achieving an agreement for lease and both the Applicant and Creek remain willing to enter into a commercial agreement concerning plot 02/52. In anticipation of completion of the freehold sale and purchase between SG and Creek, both the Applicant and Creek are currently concluding heads of terms for a lease.

## 5.9 Tozers LLP on behalf of Landsul Limited (RR-063)

### Summary of Relevant Representation:

- 5.9.1 Landsul Limited (“Landsul”) is a freehold owner of land which would be subject to compulsory and temporary use powers. This would have an impact on Landsul’s ability to operate from the land and carry out the proposals in their planning permission (ref: 13/00918/FULM), therefore sterilising the land. It may potentially result in the need for a new planning permission. Part of the land is occupied by Munster Joinery (UK) Limited (“Munster”), an associated company of Landsul.
- 5.9.2 The loss of areas of yard will impact their operations and make it difficult and dangerous for vehicles to manoeuvre within the reduced space. In addition, the Proposed Development will result in loss of car/lorry parking spaces. This may deter customers from the showroom which could result in reduced sales. The planning permission also stipulates a minimum number of car parking and lorry parking bays.
- 5.9.3 Landsul has the following further concerns:
- a. The temporary use of the surface water pond would have an impact on flooding and surface water drainage on the remainder of the land;
  - b. loss of sales;
  - c. Site specific impacts (e.g. noise, dust, vibration and working hours);
  - d. The need for permanent and continuous rights of access and services to the land;
  - e. The need for appropriate reinstatement and hand over of the land;
  - f. The draft Development Consent Order does not specify the purpose for temporary possession;
  - g. No assessment has been made, as required in the NPS, of the impacts the proposed development will have on Landsul’s land, its proposals for the land and its business;
  - h. The Environmental Statement fails to properly assess alternatives and has not considered the fact that the land has the benefit of planning permission which is in the course of being implemented;
  - i. Failure to demonstrate the need or compelling case for the proposed powers;
  - j. Failure to demonstrate that land is needed for the whole of the construction process from start to finish including commissioning; and
  - k. There is sufficient land to provide adequate construction compound areas without the need for Landsul’s land;

- l. The need for appropriate reinstatement and hand over of the land; and
- m. Failure to consult where Cory did not forward their proposals until 4 months after the meeting.

**REP response to representation:**

**Introduction and summary of plots affected by temporary possession and compulsory acquisition**

5.9.4 The relevant representation made on behalf of Landsul also considers Munster. The **Book of Reference (4.3, APP-018)** which accompanied the application recorded:

- a. Landsul Limited's interests in the Order Land as follows:
  - i Freehold owner in respect of plots: 02/53, 03/07 (no powers of compulsory acquisition or temporary possession were sought over plot 03/07); and
  - ii Category 2 interests in respect of plots: 02/29, 02/30, 02/52, 02/54, 02/55, 03/05, 03/06, 03/09, 03/10.
- b. Munster Joinery (UK) Limited's interests in the Order Land as follows:
  - i Occupier in respect of plots: 02/53, 03/07 (no powers of compulsory acquisition or temporary possession were sought over plot 03/07); and
  - ii Category 2 interests in respect of plots: 02/29, 02/30 and 03/10.

5.9.5 Following further diligent inquiry, the Applicant has established that Landsul and Munster have Category 2 interests in only two plots. The following is the position that the Applicant understands to be the case following this further diligent inquiry:

- a. Landsul Limited's interests in the Order Land are as follows:
  - i Freehold owner in respect of plots: 02/53, 03/07 (no powers of compulsory acquisition or temporary possession were sought over plot 03/07); and
  - ii Category 2 interests in respect of plots: 02/55 and 03/09.
- b. Munster Joinery (UK) Limited's interests in the Order Land are as follows:
  - i Occupier in respect of plots: 02/53, 03/07 (no powers of compulsory acquisition or temporary possession were sought over plot 03/07); and
  - ii Category 2 interests in respect of plots: 02/55 and 03/09

5.9.6 The Applicant can confirm that since the receipt of Landsul's Relevant Representation, it has been working to ascertain whether it can revise its



construction proposals so as to avoid the need to temporarily use plot 02/53 as its temporary construction compound. After completing this work, the Applicant has reached the conclusion that, following revisions to its construction proposals, it can forgo the need to use plot 02/53 as temporary construction compound. The revisions involve moving the temporary construction compound to plots 02/44 and 02/49, which are in the freehold ownership of Riverside Resource Recovery Limited, part of the Cory Group (as defined in **Section 1.2 of the Funding Statement (4.2, APP-017)**). This has recently become possible as a result of a change in the programme for the construction of the proposed data centre on these plots. Due to this, the Applicant has also inserted into the **draft Development Consent Order (dDCO) (3.1; Rev 1)**, submitted at Deadline 2, a provision whereby the planning permission for the data centre is preserved following the end of the temporary use of these plots.

5.9.7 In light of the above, the Applicant has agreed to remove plots 02/55, 03/07 and 03/09 from the Order Land.

5.9.8 The removal of plots 02/53, 02/55, 03/07 and 03/09 was communicated to Tozers Solicitors, on 2 May 2019 (see letter enclosed as **Appendix E** of this Report). It is confirmed that in the revised **Book of Reference (4.3, Rev 1)** and **Land Plans (2.1, Rev 1)** submitted to the examination for Deadline 2, the land interests of Landsul Limited and Munster Joinery (UK) Limited are no longer within the Order Land and therefore are no longer referred to in the Book of Reference.

5.9.9 Landsul is also concerned over the temporary closure of Norman Road, which is its only access. This is addressed in the next section.

#### **The ability of Munster Joinery to continue operating from the land**

5.9.10 Norman Road would not be closed to traffic as a result of carrying out the authorised development, such that access to plot 2/53 would be prevented.

5.9.11 **Article 12** of the **dDCO (3.1; Rev 1)** regulates the temporary prohibition or restriction powers as they relate to streets and public rights of way. This article does enable the Applicant to temporarily restrict the movement of both pedestrians and vehicles along Norman Road, but importantly Article 12(3) requires the Applicant to "*provide reasonable access for non-motorised users (including pedestrians) and vehicles going to and from premises abutting a street or public right of way*". As such, reasonable access to plot 02/53 would be retained throughout the construction process.

5.9.12 In addition, the Construction Traffic Management Plan, secured by **Requirement 13** of the **dDCO (3.1; Rev 1)**, will ensure that the movement of construction traffic will not have an adverse impact on other road users of Norman Road.

#### **Other concerns**

5.9.13 Landsul and Munster reported a number of concerns about the Proposed Development. The Applicant considers that these concerns are addressed by the

removal of its land interests from the Order Land. The only exception to this is the need for continuing access to plot 02/53 throughout the construction period, which is addressed above.

5.9.14 Given the amendments to the Order Land, the Applicant has not responded to each of the additional points summarised above.

## **5.10 Belvedere Community Forum (RR-043)**

### **Relevant Representation:**

5.10.1 Cory held public exhibitions during the summer of 2018 at the Belvedere Community Centre and has worked with the Belvedere Community Forum to identify the main environmental and planning considerations that will be addressed by the design of the Energy Park. They regularly keep us updated during our Public meetings and support the work of the Forum by attending the meetings and telephoning me if there are any new developments.

### **Response to representation:**

5.10.2 The Applicant acknowledges the Respondent's comments thanks the Respondent for its submission

## 5.11 Newell Projects Ltd on behalf of ARRIVA London Ltd (RR-055)

### Summary of Representation:

- 5.11.1 Arriva operates bus routes 99, 229, 401, 428, 469 and B12 under contract to Transport for London (TfL) on roads around Belvedere and Erith. It is responsible for ensuring these services run reliably within TfL performance criteria. It is Arriva's assertion that failure to meet performance criteria would result in significant cost penalties. The routes in the London Borough of Bexley (LBB) used by these bus services, in the vicinity of the Electrical Connection, are illustrated in sketch 42166-5501-001, which is **Appendix A** to this response.
- 5.11.2 Arriva has concerns about the development, in particular in respect of the highway and cable laying works between Belvedere and Dartford. Arriva believes that the proposed works would cause severe traffic disruption along the Public Highway network and the surrounding area where the above bus routes operate.
- 5.11.3 It is Arriva's view that without traffic modelling or understanding of the proposed phasing of temporary traffic management, it is difficult to fully comprehend or model the delays that may be caused. Arriva has therefore considered 10-minute and 20-minute delay scenarios for its services and seeks payment of costs from the Applicant associated with cost penalties which it states will be imposed upon it for failure to meet performance criteria set by TfL due to delay caused by the potential development disruption.
- 5.11.4 The Relevant Representation concludes that, to maintain the current level of service, a 10-minute delay would require 6 additional buses at a cost of £1.7M pa and the loss of ticket revenue has been estimated to be at £0.34M pa. Arriva estimates that the 20-minute delay scenario would require 12 extra buses at a cost of £3.2M pa and the loss of revenue has been estimated at £0.93M pa.
- 5.11.5 Arriva urges the Applicant to engage with them, together with TfL, in order to discuss the potential impact of the proposals, in order to minimise disruption to the public transport system. Arriva states that it has received no response to date.
- 5.11.6 Arriva raised similar concerns in a response to the Section 42 Statutory Consultation Minor Refinements Consultation (July-September 2018). The Applicant provided an initial response in **Table 1** of **Appendix J.3** of the **Consultation Report (5.1, APP-030)**.

### Response to representation:

#### **Bus Service Interface with the Electrical Connection Route Options**

- 5.11.7 **Paragraphs 6.9.63 to 6.9.69** of **Chapter 6 Transport** of the **ES (6.1, Rev 1)**, present the appraisal of the potential temporary Severance impacts of the construction of the Electrical Connection. It is judged that the impacts could be Minor Adverse where lane closures are required or Major Adverse where road closures would be required. Mitigation measures through the implementation of a

CTMP (secured by **Requirement 13** of the **Draft Development Consent Order (dDCO) (3.1, Rev 1)**) would reduce the impacts to no greater than Minor Adverse. Furthermore, Driver Delay is considered at **Paragraphs 6.9.79 and 6.9.80** of **Chapter 6 Transport** of the **ES (6.1, Rev 1)**. The temporary impacts are judged to be no greater than Minor Adverse. **Paragraphs 5.11.18** and **5.11.28** of this response review the traffic volumes on A2016 and A206, the roads along which the Electrical Connection will interface with local bus services. Those paragraphs demonstrate that the selected Electrical Connection route along the A206/A2016 two-lane dual carriageway roads will have sufficient off-peak capacity such that delays to traffic will be minimal during the road works. At network peak periods the road would typically continue to function within capacity, with the probable exception of the network around the Bexley Road and James Watt Way junctions – which is congested at peak periods currently.

- 5.11.8 It is not disputed that the Applicant's preferred route for the Electrical Connection and the alternative route options contained within the ES, interface with sections of the bus services listed within Arriva's relevant representation (i.e. routes 99, 229, 401, 428, 469 and B12).
- 5.11.9 The Applicant has further investigated, with UKPN, information concerning the feasibility of the cable connection. The Applicant has decided to remove the route option which followed the local roads of Anderson Way and Church Manorway, and which then continued along Lower Road and West toward Erith. That route for the Electrical Connection option was indicated in the **Works Plans (2.2, APP-008)** and illustrated on the sketch, reference 42166-5501-001, **Appendix A** to this response.
- 5.11.10 The information relating to the further route refinement work has been submitted at Deadline 2 – presented in the **Electrical Connection Progress Report (8.02.07)**. The route proposals have been updated and are shown in **Works Plans (2.2, Rev 1)** submitted at Deadline 2. The Applicant's preferred route of the Electrical Connection (illustrated on the sketch, reference 42166-5501-001, **Appendix A** to this Relevant Representation response) follows the SRN and therefore has a reduced interface with Arriva's bus network. However, it does include short sections which may affect bus routes. The location of the route within the carriageway would be determined as part of the detailed design of **Work No 9** as defined in the **dDCO (3.1, Rev 1)**.
- 5.11.11 The route of the Electrical Connection interface with the following bus routes are (with Arriva services show in **bold text**):
- a. A2016 Picardy Manorway between Norman Way and Bronze Age Way junction (approximately 250m) - interfacing with bus services 180 and **401** which use this section in both directions, plus schools' service 601. On the dual carriageway of Picardy Manorway, the cable run would follow either the eastbound or westbound carriageway, depending on the chosen route of the Electrical Connection. The route would therefore interface with Arriva service 401 in one direction only (i.e. either the westbound or eastbound) over a distance of approximately 370m;

- b. A2016 intersection with Lower Road – interfacing with bus services **229** and **469**, plus schools' services 602 and 669;
- c. A206 between Bexley Road and James Watt Way (approximately 300m) – interfacing with bus services **B12, 99, 229** which travel southbound only; **428** which uses this section in both directions; plus an intersection with schools' services 602 and 669. Between Bexley Road and James Watt Way the Electrical Connection would cross the route of Arriva 99 and 229. It is anticipated that in this area the Electrical Connection would follow the route of the northbound carriageway on A206, therefore not directly affecting the route of Arriva services 99, 229 and B12 which travel southbound between Bexley Road and James Watt Way. The construction of the Electrical Connection will follow the route of service 428 in the northbound direction;
- d. A206 between Colyer's Lane and Bridge Road (approximately 380m) – interfacing with bus service **N89** and **428** which use this section in both directions. Arriva's night bus service N89 coincides with the route of the Electrical Connection between Bridge Road and Colyers Lane, a distance of approximately 380m. **Section 3.2** of the **Outline Code of Construction Practice (7.5, Rev 1)** sets out the proposed standard working hours (07:00-19:00 Mon-Fri exc. Bank Holidays and 07:00-13:00 Sat). As this service operates outside of those hours, it would not be affected by live roadworks. The service would pass the working area in a single lane, outside of congested periods on the network; and
- e. A206 Perry Street Roundabout to Howbury Lane (approximately 350m) – interfacing with bus service **99** and **428** which use this section in both directions. On A206, the Electrical Connection coincides with Arriva service 99 in one direction only between the roundabouts of Perry Street and Howbury Lane.
- f. Service 428 travels along A206 in both directions between Bexley Road and Bridge Road (approximately 1.6km). The route then leaves the A206 before re-joining at Howbury Lane.

### **Construction of the Electrical Connection**

5.11.12 **Chapter 3 Project and Site Description** of the ES (**6.1, Rev 1**) indicates that the construction of the Electrical Connection will use only one side of the dual carriageway.

5.11.13 **Paragraph 3.5.25** of **Chapter 3 Project and Site Description** of the ES (**6.1, Rev 1**) states that:

*"Where works are undertaken along footpaths and verges, a 3 m wide working corridor would be likely and generally be expected to cause some encroachment of the works area onto the highway, typically resulting in a lane closure. Where the proposals require works within the highway carriageway, a lane closure would be*

*required. Depending on the width of the chosen highway route, a lane closure for the working area would typically require:*

*a. On dual carriageways - a reduction from two lanes to one along one of the carriageways; and*

*b. On single carriageways – traffic signals to control single lane traffic working."*

5.11.14 **Paragraphs 3.5.28 and 3.5.29 of Chapter 3 Project and Site Description of the ES (6.1, Rev 1)** state that:

*"When trenching works are being undertaken it is expected that a length of up to 200 m would typically be excavated to facilitate duct laying. Longer lengths of excavation would be avoided by the commitment from UKPN to use a ducted cable system. This allows relatively short lengths of ducting to be installed and long cable lengths to be pulled through later between jointing pits.*

*The actual working area that would be fenced off could be up to c. 300 m to allow for safe clearances, including traffic management. Typical main mobile plant for open trenching would include an excavator with a breaker attachment, a dumper truck and a compactor. A specialist trenching machine may also be used. Where works are close to existing live services, precautionary digging may be undertaken locally by hand."*

5.11.15 **Paragraph 3.5.31 of Chapter 3 Project and Site Description of the ES (6.1, Rev 1)** states that:

*"It is expected that a typical trench length would be open for around 7 days and that this would be on a rolling basis along the length of the route. The location of jointing pits would need to be determined by subsequent detailed design. Their location would depend on the maximum length the cables can be pulled, which will depend on the number of bends and cable drum lengths. Joint pits may need to be accessed, with an associated working area, to install and joint cables. The expected time for such an installation would be approximately 5 days."*

5.11.16 Trenchless options for the construction of the Electrical Connection have been considered and could be adopted along sections of the route. These limited locations would typically be at bridges, waterways, railway crossings and other structures. Trenchless construction would be supported by a compound, approximately 30m by 20m in area, to contain the necessary construction plant, equipment and materials, as set out at **Paragraph 3.5.33 of Chapter 3 Project and Site Description of the ES (6.1, Rev 1)**.

5.11.17 The agreed temporary traffic management would be set out within a finalised CTMP and agreed with LBB (as Local Planning Authority), in consultation with TfL and secured through Requirement 13 of the **dDCO (3.1, Rev 1)**. This would facilitate a safe working environment. The working area would be managed in accordance with Chapter 8 'Road Works and Temporary Situations (2009)' of the

DfT's Traffic Signs Manual. Within sections of two-lane dual carriageway, lane closures will be used. Where necessary portable traffic signals could be required, such as in place of the existing permanent traffic signals.

**Link Capacity - A2016 Bronze Age Way and A206 Queens Road / Northend Road**

- 5.11.18 The following paragraphs consider the volume of traffic and theoretical capacity on the strategic roads of A2016 (Bronze Age Way) and A206 (Queens Road/Northend Road), along which the Electrical Connection will be constructed. These routes are where the Electrical Connection interfaces with local bus services in LBB.
- 5.11.19 Automatic Traffic Count (ATC) surveys have been undertaken on A2016 Bronze Age Way and A206 Northend Road to inform the baseline assessment for **Appendix B.1 the Transport Assessment (TA)** to the **ES (6.3, APP-066)** and for the appraisal of predicted traffic impacts associated with the construction of the REP site and the associated Electrical Connection.
- 5.11.20 Data were collected at approximately 40m to the south of Picardy Manorway / Anderson Way roundabout and on A206 Northend Road at approximately 110m to the north of A206 Northend Road / A2000 Perry Street / Parkside Avenue roundabout. The data were collected across two weeks between 14 April 2018 to 27 April 2018. The average weekday hourly traffic profiles are illustrated in **Figure 2** and **Figure 3** below.

Figure 2: Daily traffic flow profile on A2016 Bronze Age Way

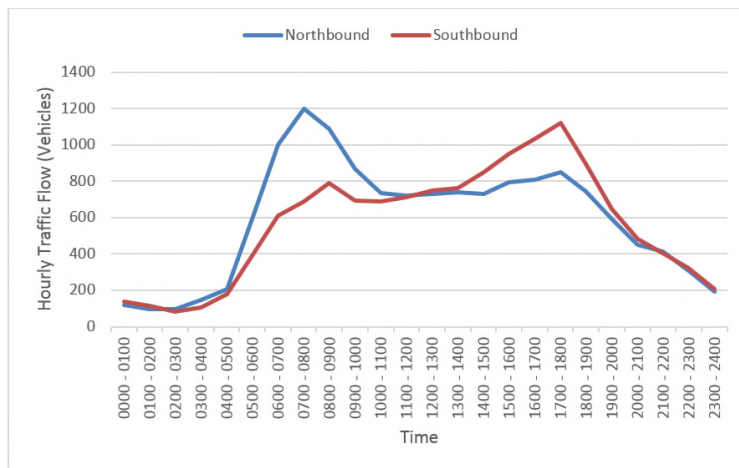
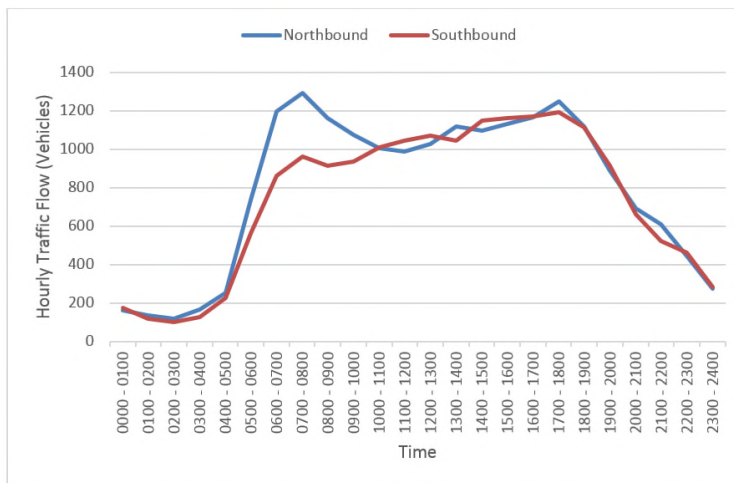




Figure 3: Daily traffic flow profile on A206 Northend Road



5.11.21 The Design Manual for Roads and Bridges (DMRB) Volume 5 Section 1 Part 3 TA 79/99 Amendment No 1 – Determination of Urban Road Capacity, Table 1 'Types of Urban Roads and the features that distinguish them', provides guidance as to the classification of route for the A2016/A206 corridor. Table 2 'Capacities of Urban Roads one-way hourly flows in each direction' provides a guide to the volume of traffic each type of route might be expected to carry.

5.11.22 In accordance with those tables, the dual carriageway sections of A2106 and A206 would be classified as Urban All-purpose class 2 (UAP2) routes – i.e. dual carriageways of approximately 7.3m width per carriageway and 2 lanes in each direction. UAP2 class routes should be able to carry in the region of 3,200 vehicles per hour in either direction across both lanes – remote from the interaction with junctions. Each lane would have a capacity in the order of 1,600 vehicles per hour.

5.11.23 The link capacity along the corridor could be slightly lower due to a moderately high proportion of heavy goods vehicles (HGV) - typically observed to be higher than 15%.

5.11.24 The maximum traffic flow on A2016 Bronze Age Way occurs in the northbound direction during the morning peak period at 1,201 vehicles per hour, across both lanes, between 07:00 – 08:00. This volume of traffic lies substantially within the theoretical capacity of one lane of the northbound carriageway. At the A206 Northend Road survey the peak is marginally higher and earlier at 1,301 vehicles per hour, across both lanes, between 06:30 – 07:30.

5.11.25 At peak construction (Month 13), the predicted morning peak flow of construction traffic for the REP site and the Electrical Connection (excluding workforce, who would be travelling prior to the peak period) in 2022 is estimated to be 2 vehicles per hour on the A206/A2016 corridor to the north of the Perry Street roundabout. The cumulative morning peak hour traffic flow on Bronze Age Way during peak construction, including forecast growth to 2022 and committed developments, would

be in the order of 1,322 vehicles per hour across both lanes. On A206 Northend Road the morning peak hour flow is predicted to be 1,347 vehicles in the peak hour. These traffic flows are indicated within the figure titled '2022 Do Minimum Traffic Flows - AM Peak 07:45-08:45 (in Vehicles)' of the updated **Outline CTMP (Rev 1)**, as submitted at Deadline 2, which supersedes the **Outline CTMP, Appendix L** of the **TA, Appendix B.1** of the **ES (6.3, APP-066)**. That volume of link flow would be within the 1,600 vehicles per hour theoretical capacity for a single lane on this UAP2 corridor and well within the theoretical volume for two lanes.

- 5.11.26 The data collected for both the A2016 (near Picardy Manorway) and A206 (near Perry Street) indicate that the peak period is clearly defined with traffic volumes rising quickly to the peak and diminishing after it. This suggests that residual demand is quickly cleared.
- 5.11.27 The link peak traffic volumes are within the theoretical capacity of a single lane on a road constructed to the standard of a UAP2 road – as identified in DMRB Volume 5 Section 1 Part 3 TA 79/99 Amendment No 1 – Determination of Urban Road Capacity. A localised temporary lane closure during the construction of the Electrical Connection would not take the link out of theoretical capacity in either the northbound or southbound direction.
- 5.11.28 The above demonstrates that the selected Electrical Connection route along the A206/A2016 two-lane dual carriageway roads will have sufficient off-peak capacity such that delays to traffic will be minimal during the road works. At network peak periods the road would typically continue to function within capacity, with the probable exception of the network around the Bexley Road and James Watt Way junctions – which is congested at peak periods currently.

### **Construction Traffic Management**

- 5.11.29 In developing the detailed method of construction, UKPN will identify points along the connection where the route crosses junctions and side roads. At these points the Applicant and UKPN will continue to work closely with the Local Highway Authority to devise an appropriate working method which minimises disruption.
- 5.11.30 The Electrical Connection would be carried out in accordance with an agreed method outlined in an appropriate Construction Traffic Management Plan (CTMP) together with the associated traffic management for those works. The CTMP is secured by **Requirement 13** of **Schedule 2** of the **dDCO (3.1, Rev 1)** and will be approved by the relevant planning authority in consultation with the Local Highway Authority and, where appropriate, in consultation with TfL and KCC.
- 5.11.31 An updated **Outline CTMP (Rev 1)**, as submitted at Deadline 2, which supersedes the **Outline CTMP, Appendix L** of the **TA, Appendix B.1** of the **ES (6.3, APP-066)**. **Paragraph 6.2.1** of that document proposes that sections of works on the Public Highway would be kept to around 200m (extending to approximately 300 m when the associated temporary traffic management measures are included). As stated at paragraph 6.2.4 of the updated **Outline CTMP (Rev 1)**, as submitted at Deadline 2, which supersedes the **Outline CTMP, Appendix L** of the **TA,**

**Appendix B.1** of the **ES (6.3, APP-066)**, the final detail and extents would be agreed with the Local Highway Authority as part of the development of the CTMP.

5.11.32 The CTMP will set out the interface and interactions with bus services and set out how those should be managed. This information is contained in the updated **Outline CTMP (Rev 1)**, as submitted at Deadline 2, which supersedes the **Outline CTMP, Appendix L** of the **TA, Appendix B.1** of the **ES (6.3, APP-066)**, and **Requirement 13** of **Schedule 2** of the **dDCO (3.1, Rev 1)** requires the CTMP to be substantially in accordance with this document. This would guide safe and efficient construction processes and seek to minimise delay to traffic. Where the road works require temporary traffic signals at intersections, these could be managed such that, at busier times, traffic flows are balanced to keep delays to a minimum.

5.11.33 An updated **Outline CTMP (Rev 1)**, as submitted at Deadline 2, which supersedes the **Outline CTMP, Appendix L** of the **TA, Appendix B.1** of the **ES (6.3, APP-066)** reflects on-going engagement with consultees. This document includes further detail relating to the method of temporary traffic management during the construction of the Electrical Connection. The Applicant has also amended **Requirement 13**, secured by **Schedule 2** of the **dDCO (3.1, Rev 1)** to include a requirement that the CTMP must be accompanied by a statement explaining how the likely construction traffic impacts identified in the environmental statement are addressed through the measures contained in the CTMP. That amendment is reflected in Revision 1 of the **dDCO (3.1, Rev 1)** submitted at Deadline 2.

### **Impact on Arriva's Service**

5.11.34 As outlined above, construction of the Electrical Connection will be carried out in accordance with UKPN's standard working practices and in a manner similar to other road works. Paragraphs above demonstrate that the selected Electrical Connection route along the A206/A2016 two-lane dual carriageway roads will have sufficient off-peak capacity such that delays to traffic will be minimal during the road works. At network peak periods the road would typically continue to function within capacity, with the probable exception of the network around the Bexley Road and James Watt Way junctions – which is congested at peak periods currently.

5.11.35 On the basis of the potential interfaces between the Electrical Connection corridor and Arriva's bus services, and with the management processes which will be employed through the CTMP, it is the Applicant's view that delays to bus services along the preferred Electrical Connection route would be minimal, particularly during off-peak periods. Under normal portable traffic signal control at the intersection points and the temporary junction controls, the delays at the road works will be at most 2-3 minutes and will be mitigated and managed in consultation with the Local Highway Authority and TfL, where appropriate. As such, the Applicant does not agree with Arriva's assessment of the impact on its bus services.

5.11.36 In accordance with Section 42 of the Planning Act 2008, the Applicant has consulted with a number of stakeholders, including Arriva and TfL. Arriva's response to the REP proposal was appraised and the Applicant has provided a response at **Appendix J.3** of the **Consultation Report (5.1, APP-030)**, part of the

DCO Application. The Applicant engaged with TfL during the traffic assessment work and preparation of the DCO Application and continues to do so in relation to TfL's Relevant Representation.

5.11.37 Arriva's relevant representation seeks payment of costs from the Applicant associated with cost penalties which it states will be imposed upon it for failure to meet performance criteria set by TfL due to delay caused by the potential development disruption. As set out above, the construction of the electrical connection will not have the impact claimed by Arriva and will be managed and mitigated through the use of the CTMP, secured by **Requirement 13 Schedule 2** of the **dDCO (3.1, Rev 1)**.

5.11.38 In addition, there is no legal obligation on the Applicant to provide compensation to Arriva for delays as a result of works to construct the electrical connection. There is no entitlement to compensation if a business, including bus services, is affected by road works undertaken by statutory undertakers or the highway authority – the circumstances in this case are no different. Therefore, Arriva could not make a claim against the Applicant or UKPN.

5.11.39 Without prejudice to the point above that costs are not claimable, Arriva has not substantiated its claims by providing copies of the contractual obligations on which it is seeking to rely. The Applicant requests to see a full copy of the agreement that Arriva is referring to in the Relevant Representation.

## 5.12 Tozers LLP on behalf of Munster Joinery (U.K.) Limited (RR-065)

### Summary of Relevant Representation:

5.12.1 Munster Joinery (U.K) Limited (“Munster”) is an occupier of land subject to compulsory purchase and temporary use powers with rights over, an interest in or a right to compensation in respect of certain plots. The land in respect of which Munster is an occupier is owned by Landsul Limited (“Landsul”).

5.12.2 The loss of areas of yard will impact their operations and make it difficult and dangerous for vehicles to manoeuvre within the reduced space. In addition, the proposed development will result in loss of car/lorry parking spaces. This may deter customers from the showroom which could result in reduced sales. The planning permission also stipulates a minimum number of car parking and lorry parking bays.

5.12.3 Munster has the following further concerns:

- a. The temporary use of the surface water pond would have an impact on flooding and surface water drainage on the remainder of the land;
- b. loss of sales;
- c. Site specific impacts (e.g. noise, dust, vibration and working hours);
- d. The need for permanent and continuous rights of access and services to the land;
- e. The need for appropriate reinstatement and hand over of the land;
- f. The draft Development Consent Order does not specify the purpose for temporary possession;
- g. No assessment has been made, as required in the NPS, of the impacts the proposed development will have on Landsul Limited’s land, the proposals for the land and Munster’s business;
- h. The Environmental Statement fails to properly assess alternatives and has not considered the fact that the land has the benefit of planning permission which is in the course of being implemented;
- i. Failure to demonstrate the need or compelling case for the proposed powers;
- j. Failure to demonstrate that land is needed for the whole of the construction process from start to finish including commissioning; and
- k. There is sufficient land to provide adequate construction compound areas without the need for Landsul’s land;
- l. The need for appropriate reinstatement and hand over of the land; and

- m. Failure to consult where Cory did not forward their proposals until 4 months after the meeting.

**Response to representation:**

**Introduction and summary of plots affected by temporary possession and compulsory acquisition**

5.12.4 The relevant representation made on behalf of Munster also considers Landsul. The **Book of Reference (4.3, APP-018)** which accompanied the Application recorded:

- a. Landsul Limited's interests in the Order Land as follows:
  - i Freehold owner in respect of plots: 02/53, 03/07 (no powers of compulsory acquisition or temporary possession were sought over plot 03/07); and
  - ii Category 2 interests in respect of plots: 02/29, 02/30, 02/52, 02/54, 02/55, 03/05, 03/06, 03/09, 03/10.
- b. Munster Joinery (UK) Limited's interests in the Order Land as follows:
  - i Occupier in respect of plots: 02/53, 03/07 (no powers of compulsory acquisition or temporary possession were sought over plot 03/07); and
  - ii Category 2 interests in respect of plots: 02/29, 02/30 and 03/10.

5.12.5 Following further diligent inquiry, the Applicant has established that Landsul and Munster have Category 2 interests in only two plots. The following is the position that the Applicant understands to be the case following this further diligent inquiry:

- a. Landsul Limited's interests in the Order Land are as follows:
  - i Freehold owner in respect of plots: 02/53, 03/07 (no powers of compulsory acquisition or temporary possession were sought over plot 03/07); and
  - ii Category 2 interests in respect of plots: 02/55 and 03/09.
- b. Munster Joinery (UK) Limited's interests in the Order Land are as follows:
  - i Occupier in respect of plots: 02/53, 03/07 (no powers of compulsory acquisition or temporary possession were sought over plot 03/07); and
  - ii Category 2 interests in respect of plots: 02/55 and 03/09

5.12.6 The Applicant can confirm that since the receipt of Munster's Relevant Representation, it has been working to ascertain whether it can revise its construction proposals so as to avoid the need to temporarily use plot 02/53 as its temporary construction compound. After completing this work, the Applicant has

reached the conclusion that it can, following revisions to its construction proposals, forgo the need to use plot 02/53 as temporary construction compound. The revisions involve moving the temporary construction compound to plots 02/44 and 02/49, which are in the freehold ownership of Riverside Resource Recovery Limited, part of the Cory Group (as defined in **Section 1.2** of the **Funding Statement (4.2, APP-017)**). This has recently become possible as a result of a change in the programme for the construction of the proposed data centre on these plots. Due to this, the Applicant has also inserted into the **draft Development Consent Order (dDCO) (3.1, Rev 1)** submitted at Deadline 2, a provision whereby the planning permission for the data centre is preserved following the end of the temporary use of these plots.

5.12.7 In light of the above, the Applicant has agreed to remove plots 02/55, 03/07 and 03/09 from the Order Land.

5.12.8 The removal of Plots 02/53, 02/55, 03/07 and 03/09 was communicated to Tozers Solicitors, on 2 May 2019 (see letter appended at **Appendix E**). It is confirmed that in the revised **Book of Reference (4.3, Rev 1)** and **Land Plans (2.2, Rev 1)** submitted to the examination for Deadline 2 that the land interests of Landsul Limited and Munster Joinery (UK) Limited are no longer within the Order Land and therefore are no longer referred to in the Book of Reference.

5.12.9 Munster is also concerned over the temporary closure of Norman Road, which is its only access. This is addressed in the next section.

#### **The ability of Munster to continue operating from the Land**

5.12.10 Norman Road would not be closed to traffic as a result of carrying out the authorised development, such that access to plot 2/53 would be prevented.

5.12.11 Article 12 of the **dDCO (3.1, Rev 1)** regulates the temporary prohibition or restriction powers as they relate to streets and public rights of way. This article does enable the Applicant to temporarily restrict the movement of both pedestrians and vehicles along Norman Road, but importantly Article 12(3) requires the Applicant to "*provide reasonable access for non-motorised users (including pedestrians) and vehicles going to and from premises abutting a street or public right of way*". As such, reasonable access to plot 02/53 would be retained throughout the construction process.

5.12.12 In addition, the Construction Traffic Management Plan, secured by Requirement 13 of the **dDCO (3.1, Rev 1)**, will ensure that the movement of construction traffic will not have an adverse impact on other road users of Norman Road.

#### **Other concerns**

5.12.13 Landsul and Munster reported a number of concerns about the Proposed Development. The Applicant considers that these concerns are addressed by the removal of its land interests from the Order Land. The only exception to this is the

need for continuing access to plot 02/53 throughout the construction period, which is addressed above.

5.12.14 Given the amendments to the Order Land, the Applicant has not responded to each of the additional points summarised above.



## 5.13 JMW Planning Solutions Ltd on behalf of Prologis UK Ltd (RR-066)

### Summary of Representation:

#### 5.13.1 The representation states:

*"Our representation relates to the Electrical Connection element of the proposal, in particular the route options suggested at/adjacent to The Bridge (Bob Dunn Way, Dartford) marked as 2B on the 'Application Boundary and Assessment Areas' plan [Figure 2 in the NTS] and as illustrated on Sheets 14, 15 and 16 of the Land Plans & PROW Plans.*

*We are concerned in relation to the likely disruption that will be caused at The Bridge as a result of the proposed works. In our opinion, the preferred option would be to route the Electrical Connection along Bob Dunn Way and Rennie Drive, rather than use the proposed UTC sports field and the existing Fastrack road."*

### Response to representation:

5.13.2 The Representation refers to the two route options proposed at the eastern section of the Electrical Connection route. However, subsequent to the submitted application and the Relevant Representations process, the Applicant has selected the preferred Electrical Connection route option (Route 2B – the Bridge) as its proposed route. The alternative Electrical Connection route (Route 1 – Bob Dunn Way) which would have passed along Bob Dunn Way and Rennie Drive has therefore been removed. These changes are reflected in updated **Works Plans (2.2, Rev 1)**, **Land Plans (2.1, Rev 1)**, **Access and Public Rights of Way Plans (2.3, Rev 1)**, among other documents revised accordingly for Deadline 2.

5.13.3 Route 2B has been chosen on the basis of limited interaction with the Fastrack bus services which operate on a 10 minute (understood to be reducing to 9 minutes) frequency. Relative to potential effects of a lane closure on the approach or exit from junction 1A of the A282, utilisation of the Fastrack route 2B is considered particularly preferable and specific mitigation proposals are captured within the Statements of Common Grounds with Dartford Borough Council (DBC) and Kent County Council (KCC).

5.13.4 No other vehicles are permitted to use the Fastrack route, meaning that the effect of any temporary signalisation would be limited to an interaction with buses only, giving rise to a minor delay to the service over a temporary period as set out above. The minor nature of the works and comparatively low vehicle frequency on the Fastrack route, indicates there is ample opportunity to minimise disruption around bus stops and footways.

5.13.5 The importance of the Fastrack service as a public transport asset has been discussed with DBC and KCC and the Applicant has committed to responding to this in the updated **Outline Construction Traffic Management Plan (CTMP) (6.3, Rev 1)**, as submitted at Deadline 2, which supersedes the **Outline CTMP**,

**Appendix L** of the **TA**, **Appendix B.1** of the **ES (6.3, APP-066)** by providing additional commentary on measures seeking to minimise any disruption.

- 5.13.6 The former route option along Bob Dunn Way (Route 1) would have required a lane closure on the approach to junction 1A of the A282 and would have the potential to interact with regular flows of all traffic types. During the route selection process UKPN and the Applicant held discussions with planning, highway and streetworks teams from both DBC and KCC and as a result concluded that the route through The Bridge (2B) should be progressed as the preferred option, which has now been confirmed.
- 5.13.7 It is also considered that the proposals can be adequately routed within the future UTC sports field site to create an acceptable solution in relation to the approved development scheme there. The Applicant is progressing discussions with both Dartford Borough Council and Prologis on this basis.
- 5.13.8 The general nature of works associated with the installation of the Electrical Connection is set out in **Chapter 3 Project and Site Description** of the **ES (6.1, Rev 1)**, and with additional information contained in the **Environmental Statement Supplementary Report (6.6, Rev 0)** at **Paragraphs 3.5.24 to 3.5.34**. **Paragraph 3.5.28 of Chapter 3 Project and Site Description** of the **ES (6.1, Rev 1)** sets out that a typical trench length of 200m would be open for around seven days. As such, whilst the overall programme for construction of the Electrical Connection is estimated to be 18-24 months, the works would progress along each length of the route in a comparatively short space of time and relatively small working area.
- 5.13.9 The working area has been minimised as far as reasonably practical through a significant commitment from UK Power Networks (UKPN, the local Distribution Network Operator) to install the Electrical Connection using a buried ducted solution. This would allow for a shorter length of open excavation to be undertaken at any given time, such that the reinstatement and reopening of traffic lanes can occur as quickly as possible.
- 5.13.10 The Electrical Connection is essential to export low carbon, renewable electricity from REP and requires cables to be laid in a single trefoil (three ducts laid together). The trench width associated with this type of installation is typically 0.45m. As such, the works would be typical of other utility/streetworks installations and would require a single lane closure through The Bridge development when works are carried out in the roadway or footway/verge.
- 5.13.11 The Applicant understands that the latest approved masterplan for The Bridge development is contained in Revision K "The Bridge Dartford Framework Plan", pursuant to a non material amendment 14/01800/NONMAT. This shows that Route 2B would follow the existing and constructed busway which would give rise to limited temporary effects as set out above.
- 5.13.12 The Representation references sports pitches. It is understood that this relates to development described in approved application 17/00010/COU, for a change of use for sports provision. The proposed Electrical Connection has been aligned close to

the northern boundary and would therefore not interact with the sports pitches. Furthermore, the route of the Electrical Connection would provide the opportunity to pass underneath the 1.5m wide hoggin access path, under the proposed northern parking spaces, or under the central parking aisle such that a satisfactory technical solution can be reached which aligns with the intended design and future uses proposed by the UTC.

5.13.13 In summary, the Applicant considers Electrical Connection route option 2B would not have significant adverse effects on The Bridge development and could be acceptably accommodated within the proposed UTC sports field development area. Installation of the Electrical Connection would generate minor temporary delays to the existing Fastrack bus service which would not be significant. Acknowledging discussions with DBC and KCC, and additional commitments set out in the updated **Outline Construction Traffic Management Plan (CTMP) (6.3, Rev 1)**, which supersedes the **Outline CTMP (Appendix L of the TA, Appendix B.1 of the ES (6.3, APP-066))**, the applicant has chosen Electrical Connection route 2B.

## 5.14 Riverside Resource Recovery Limited (RR-068)

### Relevant Representation:

5.14.1 Relevant Representation to the Planning Inspectorate on Riverside Energy Park EN010093

5.14.2 Cory Environmental Holdings Limited (trading as Cory Riverside Energy) (company number 05360864) (CEHL) has identified Riverside Resource Recovery Limited (RRRL) (company number 3723386) as an organisation with an interest in land to which the proposed Riverside Energy Park (REP) Development Consent Order application relates.

5.14.3 RRRL received notification that the Development Consent Order relating to REP was accepted by the Planning Inspectorate for examination on 14 December 2019. RRRL requests to register with the Planning Inspectorate as an Interested Party to take part in the examination of the REP Development Consent Order application by making the following relevant representations:

5.14.4 Application in Principle

5.14.5 RRRL is a member of the Cory Riverside Energy Group and indirect subsidiary of CEHL. As outlined in the REP application, RRRL owns and operates an existing EfW facility on land adjacent to the site proposed for the REP development. While both facilities intend to share the use of existing infrastructure through commercial arrangements, including the jetty and access roads, RRRL considers the REP development would complement and support future operations and help to address London's waste treatment and energy needs, in the context of constrained waste treatment capacity and increasing desire for renewable energy. RRRL therefore actively supports the REP application in its entirety. RRRL supports the inclusion of the protective provisions in Part 1 of Schedule 10 to the draft DCO (Examination Library Reference APP-014) that have been included for RRRL's benefit.

5.14.6 Compulsory Acquisition - RRRL owns several areas of land that would be subject to powers of compulsory acquisition of interests in and rights over land, the temporary use of land and the overriding of easements and other rights. The REP Book of Reference (Examination Library Reference APP-018) identifies the following plots of land in RRRL ownership:

5.14.7 02/01, 02/02, 02/03, 02/07, 02/08, 02/09, 02/10, 02/11, 02/12, 02/13, 02/14, 02/15, 02/16, 02/17, 02/18, 02/19, 02/20, 02/21, 02/23, 02/24, 02/25, 02/26, 02/27, 02/28, 02/29, 02/30, 02/31, 02/32, 02/34, 02/35, 02/36s, 02/37s, 02/43, 02/44, 02/47, 02/48, 02/49, 02/51, 02/56, 03/10.

5.14.8 RRRL has no objection to the compulsory acquisition powers sought in the application for Development Consent Order in respect of RRRL's interests. RRRL intends to sell a portion of its land to CEHL or Riverside Energy Park Limited (a 100% owned subsidiary of CEHL) in support of the REP development.

5.14.9 RRRL supports the Application in its entirety.

Kind regards,

Julian Walker

**Response to representation:**

5.14.10 The Applicant acknowledges the Respondent's comments thanks the Respondent for its submission

## 5.15 John Cruddas MP (RR-036)

### Summary of Representation:

- 5.15.1 The respondent, John Cruddas MP, the Member of Parliament for Dagenham and Rainham, objects to the Proposed Development.
- 5.15.2 The respondent raises concerns in relation to the potential effects of the Proposed Development on air quality and biodiversity in Dagenham and Rainham. The respondent cites a report by the Greater London Authority which states that incineration of solid waste can lead to emissions of toxic heavy metal, dioxins and other substances that are detrimental to human health and biodiversity and which would have negative effects on Rainham Marshes and the Ingrebourne Valley.
- 5.15.3 The respondent asserts that the Applicant has not demonstrated that there is a demand for a facility of this size.
- 5.15.4 The respondent refers to the Applicant's Environmental Statement, and highlights that the Proposed Development would lead to an increase in air contaminants and states that *"any impacts on air quality would directly affect Rainham and Wennington Ward in its entirety, and the area of South Hornchurch Ward south of Rainham Road."* The respondent then refers to the potential for over 3,000 homes, two new schools, leisure facilities and open spaces in the south of his constituency.
- 5.15.5 The respondent notes the importance of undertaking a Human Health Risk Assessment that considers existing and future residents across the Beam Park and Barking Riverside development area.

### Response to representation:

#### Air Quality

- 5.15.1 The Applicant is in ongoing consultation with the Greater London Authority and directly responds to the GLA's Relevant Representation in **Section 2.5** of this report.
- 5.15.2 An air quality assessment has been prepared to accompany the DCO Application and is presented in **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**. The assessment shows that no likely significant air quality effects are anticipated on human or ecological receptors as a result of the construction, operation or decommissioning of the Proposed Development, either in isolation or when considered in combination with other planned developments in the area.
- 5.15.3 **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** specifically considers the potential effects of emissions from the ERF at relevant receptor locations in Rainham and Tables 7.23 to 7.26 list the local authority air quality monitoring locations (of which 'HV1' is located in Rainham) which have been used to inform the air quality assessment. The following receptors within Rainham have been considered: R4

Wennington Road, R6 Brady Primary School, R7 Wennington Road/Anglesey Drive, and R22 Rainham Village Children's Centre.

- 5.15.4 The assessment also considers potential effects on ecology and identifies the following receptors within the Rainham area: Inner Thames Marshes Site of Special Scientific Interest (SSSI)/Rainham Marshes (SSSI/Local Nature Reserve (LNR)).
- 5.15.5 The assessment presented in **Section 7.9 of Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** shows that no likely significant adverse air quality effects are anticipated within Rainham on either human or ecological receptors as a result of the construction, operation or decommissioning of the Proposed Development, when considered either in isolation or in combination with other planned developments.
- 5.15.6 As set out in **Table 7.34 of Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**, a wide range of potential pollutants have been modelled for the ERF stack. These include oxides of nitrogen, nickel, arsenic, sulphur dioxide, and ammonia. Concentrations of all of these pollutants have shown to be well below the relevant assessment levels and therefore no significant effects have been reported.
- 5.15.7 These findings are supported by **Figures 7.5-7.7 of Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**.
- 5.15.8 Furthermore, the Applicant has recently had their Environmental Permit Application duly made by the Environment Agency. Within the Environmental Permit the Applicant is proposing additional modern emissions control technology meaning that the NO<sub>x</sub> emissions from ERF reported in the ES would voluntarily be further reduced by approximately 37.5%.
- 5.15.9 Given the lack of any air quality effects as described above, the Applicant does not agree that the Proposed Development would affect any future planned development in the area.

#### **Human Health Risk Assessment**

- 5.15.10 Further to the request in the **EIA Scoping Opinion (6.3, APP-062)**, a **Human Health Risk Assessment (HHRA)** has been undertaken (contrary to the assertion made by the respondent) to accompany the air quality assessment and is presented in **Appendix C.3 HHRA** of the **ES (6.3, APP-070)**. The HHRA considers the potential effects on human health arising from long-term exposure to dioxins and furans, dioxin-like polychlorinated biphenyls (PCBs) and trace metals emitted from the proposed ERF at REP. The assessment at **Paragraphs 7.9.34-7.9.41 of Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** shows that no likely significant effects are anticipated in relation to long term exposure to dioxins and furans, dioxin-like PCBs and trace metals in Rainham or anywhere else in the study area (defined as 10km from the ERF stack).
- 5.15.11 A **Health Impact Assessment (HIA) (6.3, APP-094)** has also been prepared to accompany the DCO Application. Where the **HHRA (6.3, APP-070)** provides a quantitative assessment of the potential effects of air borne pollutants on human

health receptors, the HIA considers the wider potential positive and negative health and well-being impacts on residential communities and other groups that may be affected during operation and construction/decommissioning of the Proposed Development.

5.15.12 **Paragraph 21.1.3** of the **HIA (6.3, APP-094)** concludes that there would be no likely significant residual adverse effects to human health predicted as a result of construction, operation or decommissioning of the Proposed Development.

5.15.13 It also concludes that there may be some long term beneficial effects on surrounding communities and vulnerable groups (such as those in social housing) associated with the provision of a secure energy supply. However, this would be dependent on the pricing structure of this energy and the affordability to those on low incomes.

5.15.14 Given the lack of effects on human health as described above, the Applicant does not agree that the Proposed Development would affect any future planned development in the area.

### **Need for the Project**

5.15.15 The Applicant demonstrates a clear demand for the size of the Proposed Development in **The Project and its Benefits Report (PBR) (7.2, APP-103)**. This document was submitted with the application and is published on the PINS website.

5.15.16 Despite the welcomed improvements gained in the prevention, re-use and recycling of waste within London, over two million tonnes of London's non-recyclable waste is currently sent to landfills or shipped overseas. As such, London has a clear waste infrastructure capacity gap which urgently needs investment, particularly as only 2 out of the 11 active landfill sites where London's residual waste is currently disposed of will be operational after 2025. The ERF within the REP will help London drive waste up the waste hierarchy.

5.15.17 Further detail is also provided in the **Supplementary Report to the Project and its Benefits Report (7.2, APP-103)** which explains how REP conforms to new national policies, including; 'Our Waste, Our Resources: A Strategy for England'.

5.15.18 Furthermore, NPS EN-1 and NPS EN-3 both establish through national policy an urgent and substantial need for new energy generation infrastructure of the types set out in the NPSs, which includes energy from waste. The NPSs emphasise an expectation that industry will provide this capacity through private-led investment, such as REP. Alongside the drive for new energy generation, is the desire for it to be renewable or low carbon to help meet climate change targets. As demonstrated in **Sections 5.2 and 5.3** of the **Planning Statement (7.1, APP-102)** and **The Project and its Benefits Report (7.2, APP-103)**, REP conforms to the policy objectives of the two NPSs, as well as regional and local planning policy and guidance.



- 5.15.19 The Applicant has considered the opportunities for heat connection specifically for REP within the **Combined Heat and Power (CHP) Assessment (5.4, APP-035)** which has been prepared to accompany the DCO Application. The Applicant's continued involvement in achieving a district heating network (DHN) locally has informed a review and update to this assessment, (**Combined Heat and Power Supplementary Report (5.4.1)**).
- 5.15.20 REP responds directly to the outcomes sought through the National Policy Statements EN-1 and EN-3 by being designed at the outset as CHP Enabled. A CHP Enabled plant is one which is fully capable of exporting heat, with all required on site infrastructure in place.
- 5.15.21 **Section 6** of the **CHP Assessment (5.4, APP-035)** presents the heat demand investigation which assess potential heat off-takers for the heat produced by REP within a 10km radius of the Proposed Development. The assessment has been undertaken in line with the Environment Agency's CHP Ready Guidance. The **Combined Heat and Power Supplementary Report (5.4.1)** concludes in **Paragraph 1.5.5** there is sufficient heat demand within the locality to accommodate the heat produced from REP & the neighbouring Riverside Resource Recovery Facility (RRRF).
- 5.15.22 The area surrounding the REP site comprises heat demand predominantly from the residential, transport, industrial and retail sectors, primarily due to high proportion of industrial estates, distribution centres and warehousing facilities located to the south and east of the REP site. Because of this potential heat demand, the REP site is therefore in an excellent location to deliver a viable CHP scheme.
- 5.15.23 **Paragraph 10.3.2** of the **Combined Heat and Power (CHP) Assessment (5.4, APP-035)** confirms that seven prospective residential and commercial developments have been identified to the west of the REP site in Thamesmead which could offer the potential for REP to supply heat to a district heat network.
- 5.15.24 The Applicant is engaging with the developer (Peabody) and local planning authorities regarding feasibility of connecting up to 20,000 new residential dwellings and additionally commercial premises. The continued efforts of the Applicant to enable a district heating scheme to be achieved are recognised in Peabody's letter of 17 April 2019 (provided at **Appendix A** to the **Combined Heat and Power Supplementary Report (5.4.1)** which concludes with support for '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.'
- 5.15.25 **Paragraph 10.3.4** of the **CHP Assessment (5.4, APP-035)** concludes that developing a district heat network to initially serve new-build consumers within Thamesmead would present the most favourable use of heat from CHP. Work undertaken in the London Borough of Bexley Energy Master Plan (EMP) has also identified this as a realistic and deliverable project. With the exception of one scheme which is currently under construction, the prospective developments are

due to complete mid 2020s and therefore align with the construction programme for REP, which is anticipated to commence operations and reliability testing in 2024. The Applicant has worked with LBB and the Greater London Authority on developing the EMP which has strong support from key stakeholders.

5.15.26 The **Combined Heat and Power Supplementary Report (5.4.1)** confirms that REP, by virtue of offering a waste management solution utilising high efficiency technologies to generate heat and power, is able to comply with the Carbon Intensity Floor (CIF) target outlined in the Adopted and Draft London Plans and the Mayor's London Environment Strategy.

5.15.27 It is considered that REP, in contributing new renewable/low carbon energy generating capacity will also support the waste hierarchy principles and make best use of the residual waste arising in London. Despite improvements in the prevention, re-use and recycling of waste, there will remain residual waste that should be diverted from landfill. REP will be a suitable alternative to help treat this waste remaining after recycling, helping to ensure that less waste is sent to landfill or shipped overseas. Waste management follows the most cost-effective solution, with work undertaken by WRAP (WRAP gate fees report, 2018) showing that the gate fees for recycling are consistently less than for energy recovery or disposal. The ERF will support the drive to move waste further up the waste hierarchy and work alongside the Mayor's recycling targets and policy aspirations identified in the London Environment Strategy.

### **Site Meeting**

5.15.28 The Applicant notes that Mr. Cruddas attended a site visit to the existing RRRF on 25 April 2019, where his outstanding concerns were discussed. The Applicant hopes that Mr. Cruddas found the visit useful and informative.

## 5.16 Sir David Evennett MP (RR-052)

### Summary of Representation:

#### 5.16.1 The respondent states:

*"I strongly opposed the existing Riverside Resource Recovery Facility on environmental grounds, as I was unconvinced by the need to incinerate waste so close to heavily populated areas given the effect on the environment and particularly on air quality. I am concerned that the additional facility may negatively impact the environment for my constituents, as well as the residents of Bexley Borough in general, and hope these issues will be taken into consideration".*

### Response to representation:

#### **Choice of site**

5.16.2 As stated in **Paragraph 5.2.6 of Chapter 5 Alternatives Considered** of the **Environmental Statement (ES) (6.1, Rev 1)**, the location of REP has been selected for a number of reasons, including:

- It is located adjacent to the existing Riverside Resource Recovery Facility (RRRF) and therefore would have access to shared services;
- It would have access to the existing purpose-built jetty and the River Thames network beyond allowing easy delivery and removal of products;
- It has existing road access to the road network via Norman Road;
- There is adequate footprint to accommodate the required REP plant and equipment;
- the REP site is within an existing industrial area, with a character of industrial development based around the river and the site layout seeks to take account of adjacent land uses and existing industrial character; and
- It was considered to be at a sufficient distance from sensitive residential receptors to limit impacts (i.e. in terms of noise), as RRRF is a similar development which operates highly successfully.

5.16.3 Further information regarding the suitability and advantages of the site in relation to siting of the Proposed Development is included in the Site Suitability and Delivery note which has been submitted to support the DCO Application at Examination Deadline 2.

5.16.4 Furthermore, the Applicant has prepared a **Project and its Benefits Report (PBR) (7.2, APP-103)** to accompany the DCO Application. The **PBR (7.2, APP-103)** explains how REP will deliver the demonstrated need for major energy generating infrastructure, provide investment in sustainable waste management and a range of societal benefits. It also provides an assessment using a range of scenarios based

on different waste forecasts and recycling and recovery policies within London that demonstrates that there is a clear and urgent need for additional residual waste management capacity (see **Annex A – The London Waste Strategy Assessment 'LWSA'** to the **PBR (7.2, APP-103)**).

### **Summary of Likely Significant Effects**

- 5.16.5 An Environmental Impact Assessment (EIA) has been prepared to accompany the DCO Application and the findings are presented in an **ES (6.1, Rev 1)**. The ES sets out the likely significant environmental effects of the Proposed Development, including potential effects on human receptors. No likely significant residual effects are anticipated for any topics other than on townscape and visual receptors.
- 5.16.6 **Table 9.8** in **Chapter 9 Townscape and Visual Impact Assessment (TVIA)** of the **ES (6.1, Rev 1)** summarises the potential townscape and visual effects of the Proposed Development on receptors in the vicinity of the Proposed Development. Although moderate and therefore potentially significant visual effects have been identified from some locations, the REP site is within an existing industrial area, with a character of industrial development based around the river and the site layout seeks to take account of adjacent land uses and existing townscape character. The buildings and stack would be seen in the context of other industrial buildings and existing vertical structures such as wind turbines and other stacks.
- 5.16.7 The wireframes of the Proposed Development on which the TVIA was based were produced as a worst case, showing a building with a square roof, with a scale and massing larger than that proposed, as explained below.
- 5.16.8 A **Design and Access Statement (DAS) (7.3, APP-104)** was submitted with the application identifying the design evolution of the REP site and the Main REP Building. As a result of the process set out in the DAS, a stepped roof design was chosen and included in the submission. This will ensure that the visual impact of the Main REP Building is minimised from the outset of the design process. The stepped design allows the maximum height of the Main REP Building to be reduced to the lowest level reasonably practicable and minimises the massing required to accommodate the internal equipment and facilities. The stepped roof design is reflected in Design Principle DP 1.02 in **Design Principles (7.4, APP-105)** submitted with the application. Requirement 2 at Schedule 2 to the **dDCO (3.1, Rev 1)** requires that the details of the layout, scale and external appearance of the Main REP Building to submitted for approval to the Local Planning Authority before construction can commence are to be in accordance with the design principles contained in the DAS referred to above. The selection of stepped roof design is therefore secured by the terms of the DCO.

### **Air Quality**

- 5.16.9 An air quality assessment is presented in **Chapter 7 Air Quality** of the **ES (6.1, Rev 1)**. The assessment, in **Section 7.9** shows that no likely significant air quality effects are predicted on human or ecological receptors as a result of the construction, operation or decommissioning of the Proposed Development, when

considered either in isolation or in combination with other planned developments. **Figures 7.5-7.9 of Chapter 7 Air Quality** of the **ES (6.1, Rev 1)** show the predicted dispersion profiles of emissions from the ERF and demonstrate that the emissions dispersion is focussed primarily in the immediate vicinity of the site and to the north, such that there are no effects on LBB.

5.16.10 Furthermore, the Applicant, in their Environmental Permit, which has recently been validated by the Environment Agency, has committed to invest in additional abatement systems which will result in a significant reduction in air quality impacts from REP compared to those assessed as part of the ES for the DCO Application and as such, the ERF would operate well below legislative limits.

5.16.11 The Applicant looks forward to meeting Sir David Evennett MP, who has accepted an invitation to attend a site visit to the existing RRRF on 10th May 2019, where his outstanding concerns can be discussed.

## 5.17 Teresa Pearce MP (RR-054)

### Summary of Representation

5.17.1 Teresa Pearce MP submitted a Relevant Representation (RR) to the Planning Inspectorate on 08 February 2019. The RR states the following concerns in relation to the Proposed Development:

*" 1. It does nothing to encourage recycling or to reduce waste. In fact once councils buy into this scheme it is likely to suppress recycling rates in the capital. The development is described as 'Combined Heat and Power'-ready but has not demonstrated any demand for the heat produced, questions have been raised but no concrete answers have been given. I do not believe that it will contribute to the circular economy and does not support achieving high recycling rates, as set out in the Mayor's London Environment Strategy (LES).*

*2. The Cory application is to build on the north-east boundary of Crossness Nature Reserve. This will have enormous impacts on the nature reserve which is a haven for rare birds, animals and insects not least from the 3-4 year construction phase. It will have a detrimental effect on this rare and valuable habitat which is one of the best in London and is home to a huge diversity of species. Once destroyed it will be lost forever and we have a duty to safeguard some of the species that are rare or nationally scarce.*

*3. I have concerns regarding the ability of local residents to look at the full plans. A number of residents have raised the lack of availability of the full details in local libraries. I understand that the plans should be made fully available but they are not to be found in the libraries. The only way is for residents to look online which seems to discriminate against those not digitally connected."*

### Response to representation:

#### **Potential Reduction in Recycling Rates**

5.17.2 The respondent raises concern that REP *"does nothing to encourage recycling...[and] once councils buy into this scheme it is likely to suppress recycling rates in the capital"* but presents no evidence to justify or support this assertion.

5.17.3 REP will support the waste hierarchy principles and will treat residual waste at the appropriate level of the waste hierarchy. REP has been classified by the Environment Agency (EA) as achieving R1 status and is therefore classed as 'Recovery' which is above that of disposal (landfill) in the waste hierarchy.

5.17.4 **Table 6.1** of the **London Waste Strategy Assessment (Annex A within The Project and its Benefits Report (PBR) (7.2, APP-103))** has demonstrated that even if London achieves the challenging recycling targets set within the London Environment Strategy, there is still a need for further residual waste management capacity within London. As demonstrated in **PBR (7.2, APP-103)**, REP supports both regional and local waste management needs. In spite of the welcome

improvements made in the prevention, re-use and recycling of waste within London, over two million tonnes of non-recyclable waste is currently sent to landfill or shipped overseas. As such, REP will be a suitable alternative to help treat this waste which remains after recycling, ensuring that less waste is sent to landfill or shipped overseas, and as such will support the drive to move waste further up the waste hierarchy.

5.17.5 Delivery of the Circular Economy can be achieved by valuing resources to gain benefits. The Waste Strategy for England 'Our Waste, our Resources: a Strategy for England', in December 2018 (WRS 2018) confirms that energy from waste has a clear place within the 'circular economy':

*"But it's not just in material reuse that the circular economy delivers benefits. It's also relevant to energy generation and savings. Incineration non-recyclable or contaminated waste (such as food packaging) can generate energy. Bio-waste can also be used to make bio-gas, a renewable energy source" (WRS 2018, page 26).*

5.17.6 REP contributes to the circular economy through the generation of energy from residual waste that would otherwise be required to be sent to landfill and through the recycling of the incinerator bottom ash (IBA) and air pollution control residue (APCR), both of which helps to reduce the need for virgin raw materials (e.g. primary won aggregates extracted through quarrying) and prevent the impacts of its manufacture.

5.17.7 REP will not prevent recycling or hinder local recycling rates. As waste management follows the most cost-effective solution, the ERF component of REP will not hinder recycling rates as recycling is a cheaper process for waste producers. Waste producers thereby have a financial imperative to maximise recycling where they can. This financial incentive is demonstrated in WRAP's Gate Report 2018<sup>12</sup>. Table 1 of WRAP's published Gate Report 2018 clearly shows that the median gate fees at material recycling facilities and organic waste treatment facilities (e.g. anaerobic digestion facilities), which are preferred in the waste hierarchy, are significantly lower than gate fees at energy from waste plant and landfill facilities, with the median anaerobic digestion gate fee for England continuing to decline. Therefore, waste producers have a financial imperative to recycle and the ERF element of REP will not stop them recycling. REP will support the drive to move waste further up the waste hierarchy by preventing residual waste (waste that is left after recycling) going to landfill and work alongside the Mayor's recycling targets and policy aspirations identified in the London Environment Strategy (LES).

5.17.8 Accordingly, REP will support the waste hierarchy in London, providing for both food and green wastes and residual wastes arising in the locality, enable the Circular Economy to be realised and contribute to making significant progress to

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<sup>12</sup> Gate Fees Report 2018 – Comparing the costs of alternative waste treatment options, WRAP [http://www.wrap.org.uk/sites/files/wrap/WRAP%20Gate%20Fees%202018\\_exec+extended%20summary%20report\\_FINAL.pdf](http://www.wrap.org.uk/sites/files/wrap/WRAP%20Gate%20Fees%202018_exec+extended%20summary%20report_FINAL.pdf)

London achieving status as a zero carbon city. Further details are provided in the **PBR (7.2, APP-103)** and the **Supplementary Report to the Project and its Benefits Report (7.2.1)**.

### **Combined Heat and Power (CHP) Opportunities**

- 5.17.9 The Applicant has considered the opportunities for heat connection specifically for REP within the **Combined Heat and Power (CHP) Assessment (5.4, APP-035)** and the **CHP Supplementary Report (5.4.1)**.
- 5.17.10 **Section 3** of the updated **CHP Assessment (5.4, APP-035)** presents the heat demand investigation which assesses potential off-takers for the heat produced by REP within a 10 km radius of the Proposed Development. The assessment has been undertaken in line with the Environment Agency's CHP Ready Guidance. **Paragraph 3.2.6** of the updated **CHP Supplementary Report (5.4.1)** confirms that there is sufficient heat demand to accommodate both the heat produced from REP and the adjacent Riverside Resource Recovery Facility (RRRF).
- 5.17.11 The Applicant has engaged with major local commercial developers to the west of the REP site in Thamesmead which could offer the potential for REP to supply heat to a district heat network. Through this engagement, a key local developer (Peabody) has written to support the commitment to progress a district heat network (See **Appendix A** of the **CHP Supplementary Report (5.4.1)**). In conjunction with partners, Peabody have identified Thamesmead as a key strategic growth area, aiming to develop 20,000 new homes over the next 30 years. The Bexley District Heating Partnership Board (of which Peabody is a member) was established to realise the opportunity for CHP offtake. As a member of the Partnership Board, Peabody support the Proposed Development which would contribute to the collective goal of developing a heat network in the area.
- 5.17.12 Relative to comparable projects at the pre-consent stage, the Applicant has taken considerable, demonstrable steps to actively pursue opportunities for heat export and has clearly identified the demand for a heat network in the area of the Proposed Development.

### **Effects on Crossness Nature Reserve**

- 5.17.13 Potential biodiversity effects on designated sites, including; Crossness Local Nature Reserve (LNR), have been assessed and are reported in **Chapter 11, Terrestrial Biodiversity** of the **ES (6.1, Rev 1)**. Paragraphs 11.12.1-11.12.4 of **Chapter 11, Terrestrial Biodiversity** of the **ES (6.1, Rev 1)** conclude that no likely residual significant effects are anticipated on terrestrial biodiversity receptors as a result of construction, operation or decommission of the Proposed Development, when considered either in isolation or in combination with other planned developments. This assessment and its conclusions have been agreed with Natural England in the **Statement of Common Ground** submitted at Deadline 2 (**8.01.05**).



5.17.14 Furthermore, the Applicant can confirm that following further technical design work carried out by the Applicant and UK Power Networks, the Applicant is removing the Election Connection route option through Crossness LNR. The removal of the Electrical Connection route option through the Crossness LNR is confirmed in the **Electrical Connection Progress Report (8.02.07)** submitted at Deadline 2 and the updated **Land Plans (2.1, Rev 1)** and **Works Plans (2.2, Rev 1)** submitted at Deadline 2.

#### **Availability of documents to local residents**

5.17.15 It is considered that the Applicant has carried out thorough and detailed pre-application consultation with stakeholders, including the local community, as described in the **Consultation Report (5.1, APP-19-APP-32)**. This is evidenced by the application acceptance process as well as the non-statutory and statutory consultation exercise which the Proposed Development has passed through.

5.17.16 As part of the acceptance process for the REP DCO Application, section 55(4) of the Planning Act 2008, as amended, requires the Secretary of State to have regard to any adequacy of consultation (AoC) representation received from a local authority consultee. The AoC responses for the Proposed Development are available on the Planning Inspectorate website (<https://infrastructure.planninginspectorate.gov.uk/projects/london/riverside-energy-park/?ipcsection=docs&stage=2&filter1=Adequacy+of+Consultation+Representation>). No concerns regarding the adequacy of consultation with the local community (section 47 of the Planning Act 2008) were raised by the local authorities which responded, comprising: LB Bexley; Thurrock Council; RB Greenwich; LB Lewisham; Kent County Council; Gravesham Borough Council; East Sussex County Council; LB Tower Hamlets; Dartford Borough Council; Brentwood Borough Council; 'Be First' on behalf of LB Barking and Dagenham; and the Greater London Authority.

5.17.17 The relevant representations period on the accepted application, under section 56 of the Planning Act 2008, ran from 4th January to 12th February 2019.

5.17.18 In compliance with section 56 of the Planning Act 2008, the Applicant notified statutory consultees and interested parties of the accepted Application. As required by Regulation 9(4) of the APFP Regulations, the content of the notice included; a statement that a copy of the application form and its accompanying documents, plans and maps are available for inspection free of charge at the places (including at least one address in the vicinity of the proposed development) and times set out in the notice, the latest date on which those documents will be available for inspection (being a date not earlier than the deadline date and the deadline for receipt by the Secretary of State of representations giving notice of their interest in, or objection to, the Application).

5.17.19 In line with these requirements, a hard copy of the Application form, together with copies of the Application documents (including accompanying plans, maps and the Environmental Statement) were sent directly to prescribed bodies and made available from 4th January 2019 until 12th February 2019 for inspection free of charge at the following locations: Upper Belvedere Community Library, Dartford

Library and LB Bexley Civic Offices. Copies of the Application form and the accompanying documents, plans and maps could also have been purchased from the Application, with contact details included on the 'section 56 notice'.

5.17.20 In addition, the accepted Application form and its accompanying documents, plans and maps are available to view free of charge at Slade Green and Howbury Community Library throughout the examination period.

# Appendix A Appendix A – Drawing 42166-5501-001 - Bus Route Interface with Electrical Connection Route



## Appendix B Carbon Modelling Report extract



Department  
for Environment  
Food & Rural Affairs

[www.gov.uk/defra](http://www.gov.uk/defra)

### **Energy recovery for residual waste**

### **A carbon based modelling approach**

**February 2014**

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PB 14131

WR1910

**Table 20. Central methane scenario (60% initial capture) minimum lifetime biogenic content required**

Plant efficiency	Minimum lifetime biogenic content required %						
	Existing plant 1995-2020	Existing plant 2000-2025	Existing plant 2005-2030	Existing plant 2010-2035	New plant 2015-2040	New plant 2020-2045	New plant 2025-2050
30%	40.19	42.46	45.98	50.31	54.8	58.93	62.39
25%	43.47	45.51	48.63	52.46	56.44	60.08	63.12
20%	46.71	48.54	51.26	54.59	58.06	61.22	63.85
15%	49.93	51.53	53.87	56.71	59.68	62.35	64.57

170. Cells shaded green indicate where the lifetime biogenic content required is less than the 50% currently used for deeming of Renewables Obligation Certificates (ROCs). Orange indicates where the content falls in the 60-68% range currently considered likely for mixed municipal waste. This indicates that for the central set of assumptions all plants are viable for municipal waste with a biogenic content at the top end of the commonly used range. As might be expected the low methane scenario required higher biogenic content than the central scenario for a given plant while conversely the high methane scenario required lower biogenic content.

171. Once the plant reaches the end of its 25 year life it needs to still be providing a carbon benefit for that life to be extended. The minimum biogenic content to extend a plant's lifetime to a given year is shown in the table below. Higher biogenic content is required to justify extending a plant's lifetime beyond the initial 25 years under this set of assumptions.

**Table 21. Central methane scenario (60% initial capture) Minimum biogenic content required to extend plant life beyond initial 25yr lifetime**

Plant efficiency	Minimum biogenic content required to extend plant lifetime beyond initial 25 year period %						
	Existing plant 1995-2020	Existing plant 2000-2025	Existing plant 2005-2030	Existing plant 2010-2035	New plant 2015-2040	New plant 2020-2045	New plant 2025-2050
30%	47.12	52.86	59.67	61.93	64.53	66.48	67.61
25%	49.77	54.84	60.63	62.61	65.03	66.77	67.85
20%	52.4	56.8	61.59	63.29	65.53	67.06	68.09
15%	55.01	58.75	62.55	63.97	66.02	67.34	68.33

### 6.3. Treatment of biogenic CO<sub>2</sub>

172. So far this analysis has ignored biogenic CO<sub>2</sub> emissions based on the assumption that it is short cycle and therefore has no net global warming impact. Impacts from factors such as changes in land use to grow the original plants are accounted for in overall carbon inventories elsewhere and are conventionally not considered as part of waste management or energy generation.

173. However, the model assumes that not all of the biogenic material decomposes in landfill but it is all converted to CO<sub>2</sub> in energy from waste. Landfill therefore acts as a partial carbon sink for the biogenic carbon. This is a potential additional benefit for landfill over energy from waste.

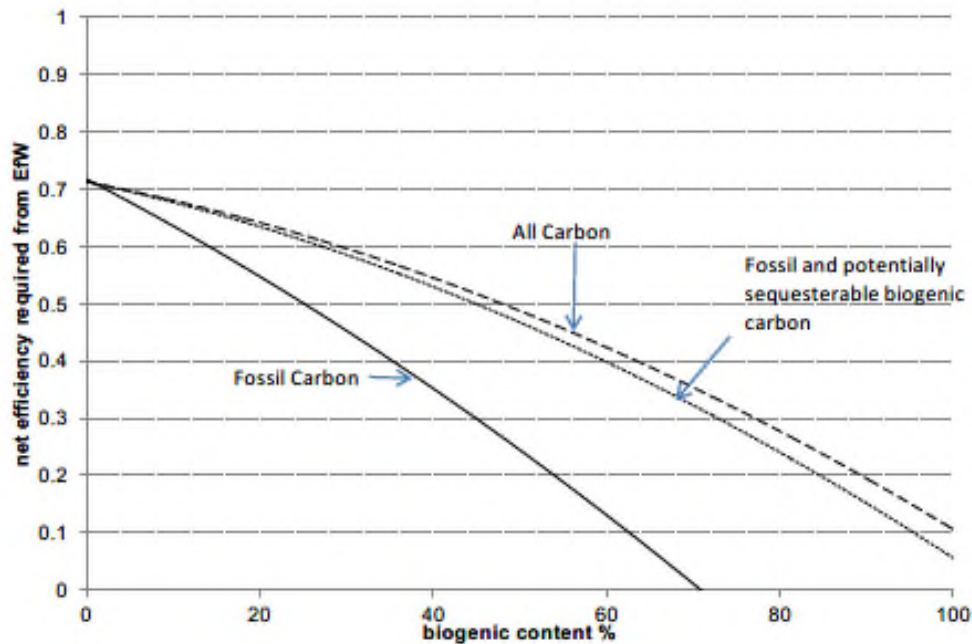
174. There are two ways to account for this additional effect:

- Estimate the amount of biogenic carbon sequestered and include the CO<sub>2</sub> produced from the same amount of carbon in the EfW side of the model (or subtract it from the landfill side)
- Include all carbon emissions, both biogenic and fossil on both sides of the model

175. While both approaches would address the issue of sequestered biogenic carbon the first would potentially be the better solution as it would avoid double counting carbon with other inventories.

176. Both approaches were examined in the model using the baseline set of assumptions (equivalent to the high capture low methane scenario) and the results are shown in Chart 15 below.

**Chart 15. Net efficiency of EfW plant required with different biogenic content of waste considering EfW emissions of: only fossil carbon (solid line), fossil and potentially sequesterable biogenic carbon (dotted line) and all carbon (dashed line)**



177. It can be seen from Chart 15 that both approaches deliver a very similar change with, as expected, EfW becoming more disfavoured relative to landfill with the greatest change at high biogenic content of the waste. Taking into account sequestered biogenic carbon in landfill will require greater EfW efficiency and/or biogenic content.

178. The similarity between the two approaches is unsurprising as biogenic carbon which is not sequestered in landfill or converted to methane becomes CO<sub>2</sub>, as it would in EfW, so for that aspect the two sides of the model cancel out. The slight difference is due to the need for EfW to compensate for the CO<sub>2</sub> offset by electricity generation

from landfill gas when all emissions are considered. The small difference indicates how relatively small a contribution this energy makes to the overall balance. Given this similarity it may be better to consider only the sequestered biogenic C to avoid double counting with other inventories.

179. A range of different values exist in the literature for the amount of biogenic carbon that is sequestered in landfill. The baseline assumptions used in this model result in a very high level of sequestration, around 53% for the baseline composition. The outcome will be sensitive to the level of sequestration in two ways. Reducing the level of sequestration will require less biogenic carbon to be included in the EfW side of the model and will also result in more methane being emitted from the landfill side. Both factors will favour EfW over landfill. To examine the sensitivity of the model to changes in sequestration the baseline proportion of decomposable carbon in each waste type was increased by 50%. This changed the overall proportion of sequestered biogenic carbon from 53% to 29.5%. The values used are summarised in Table 22 below.

**Table 22. Changes in modelled sequestration levels for each component by increasing the proportion of biogenic C considered sequesterable**

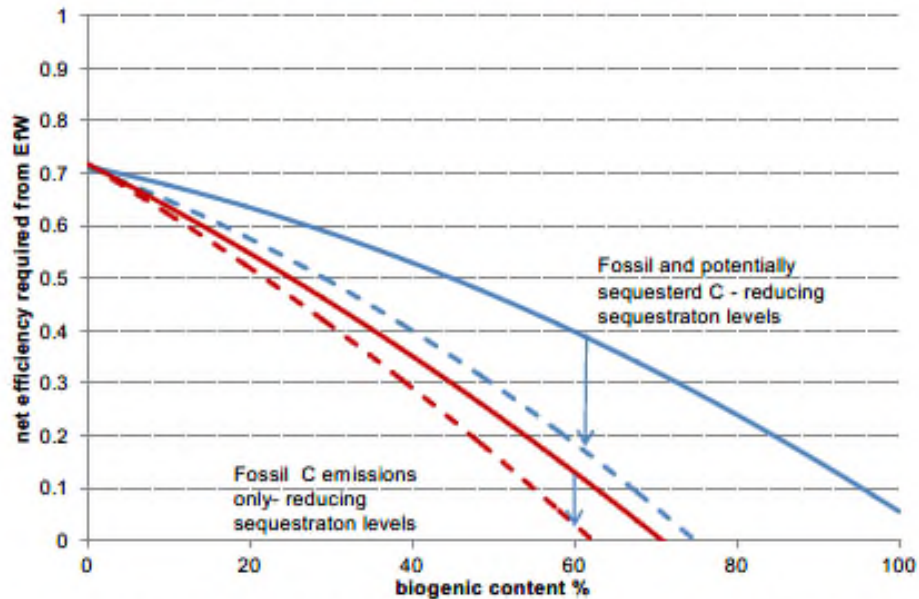
Material	High sequestration % (model baseline)	Reduced sequestration %
Mixed Paper and Card	50.63	25.94
Plastics		
Textiles (and footwear)	66.65	49.98
Miscellaneous combustibles	53.21	29.82
Miscellaneous non-combustibles	100	100
Food	39.36	9.04
Garden	48.71	23.06
Soil and other organic waste	96.43	94.64
Glass	100	100
Metals, White Goods and Other Non-biodeg Products		
Non-organic fines		
Wood	71.52	57.28
Sanitary / disposable nappies	71.33	57
Total	53.00	29.50

180. By taking this approach materials which already have a high proportion of decomposable carbon are most greatly affected, i.e. Food, Paper and garden waste.

181. The impact of these changes on the model outputs is shown in Chart 16 below.



**Chart 16. Impact of reducing the assumed level of carbon that decomposes on model outputs for fossil emissions (red) and fossil and potentially sequestered biogenic C (blue). Baseline model (solid line) and reduced sequestration (dashed line)**



182. As noted above, changing the level of sequestration impacts on both the amount of biogenic carbon that needs to be counted on the EfW side of the model and the amount of methane emitted on the landfill side. As a consequence changing the sequestration level impacts not only when considering both fossil and sequestered carbon but also when considering fossil carbon alone.
183. In the example above for the baseline composition (61% biogenic) reducing the amount of sequestration of biogenic carbon from 50% to 30% results in a drop of 10% in the efficiency required if just considering fossil carbon and 20% if considering both fossil and sequestered biogenic carbon.
184. There is an additional complicating factor regarding the assumptions around sequestration levels. The proportion of landfill gas captured is difficult to measure directly so assumed levels have previously been derived from a combination of measurement of the amount of landfill gas captured as a proportion of the amount modelled as being produced. However, the modelling for this also contains assumptions on sequestration, Therefore any lowering in the sequestration assumptions will also inherently reduce the assumed level of landfill gas capture. This interaction has not been captured in the above analysis. As a result the scenarios outlined above will be particularly sensitive to sequestration levels with any drop in assumed sequestration significantly favouring EfW over landfill. Given all of these interactions there is a high degree of uncertainty and further work is required.

## **Appendix C    Javelin Park**



Department for  
Communities and  
Local Government

Nick Roberts  
Axis PED Ltd  
Camellia House  
76 Water Lane  
Wilmslow  
Cheshire SK9 5BB

Our Ref: APP/T1600/A/13/2200210

Your Ref: NR/1422

6 January 2015

Dear Sir

**TOWN AND COUNTRY PLANNING ACT 1990 – SECTION 78  
APPEAL BY URBASER BALFOUR BEATTY  
LAND AT JAVELIN PARK, NEAR HARESFIELD, GLOUCESTERSHIRE  
APPLICATION REF: 12/0008/STMAJW**

1. I am directed by the Secretary of State to say that consideration has been given to the report of the Inspector, Brian Cook BA (Hons) DipTP MRTPI, who held a public local inquiry between 19 November and 13 December 2013 and between 14 – 29 January 2014 into your client's appeal against Gloucestershire County Council's (the Council) refusal to grant planning permission for an Energy from Waste (EfW) facility for the combustion of non-hazardous waste and the generation of energy, comprising the main EfW facility, a bottom ash processing facility and education/visitor centre, together with associated/ancillary infrastructure including access roads, weighbridges, fencing/gates, lighting, emissions stack, surface water drainage basins and landscaping, in accordance with application ref 12/0008/STMAJW dated 31 January 2012.
2. On 16 July 2013, the appeal was recovered for the Secretary of State's determination, in pursuance of section 79 of, and paragraph 3 of Schedule 6 to the Town and Country Planning Act 1990, because the appeal involves proposals of major significance for the delivery of the Government's climate change programme and energy policies.

**Inspector's recommendation and summary of the decision**

3. The Inspector recommended that the appeal be allowed and planning permission granted subject to conditions. The Secretary of State agrees with the Inspector's analysis, except where indicated below and he has decided to allow the appeal and grant planning permission. A copy of the Inspector's report (IR) is enclosed. All references to paragraph numbers, unless otherwise stated, are to that report.

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2 Marsham Street  
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Email PCC@communities.gsi.gov.uk

#### **Procedural matters**

4. In reaching this position, the Secretary of State has taken into account the Environmental Statement (ES) which was submitted under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations, the two further statements submitted under Regulation 22(1) and the further clarification and errata statements (IR8). The Secretary of State considers that the ES and the further information provided complies with the above regulations and that sufficient information has been provided for him to assess the environmental impact of the proposals.

#### **Matters arising after the close of the inquiry**

5. The Secretary of State has taken account of the fact that, following the close of the inquiry, two matters occurred on which the comments of the main and Rule 6 parties were requested by the Planning Inspectorate on 10 March 2014 (IR17). On 18 February 2014 the Court of Appeal decision in *Barnwell Manor Wind Energy Limited v East Northamptonshire DC, English Heritage, National Trust and Secretary of State for Communities and Local Government* [2014] EWCA Civ 137 (*Barnwell Manor*) was handed down (IR18). In addition, on 6 March 2014, the Government issued the National Planning Practice Guidance (the Guidance) (IR19).
6. Subsequently, on 1 August 2014, the Secretary of State received a letter from GlosVAIN which purported to describe new information, relevant to the Secretary of State's decision on this appeal. GlosVAIN's letter was circulated to interested parties on 16 September 2014. On 16 October 2014, the Secretary of State circulated the responses received and also invited comments on his publication of new planning policy and new planning practice guidance on waste.
7. In coming to his decision on the appeal before him, the Secretary of State has taken account of all the representations referred to in paragraphs 5 and 6 above, which are listed at Annex A to this letter.
8. The Secretary of State is also in receipt of further correspondence following the close of the inquiry which is again listed at Annex A. He has carefully considered these representations but does not consider that they raise new matters that would affect his decision or require him to refer back to parties on their contents prior to reaching his decision. Copies of the representations referred to in paragraphs 5-8 will be provided on application to the address at the bottom of the first page of this letter.

#### **Policy considerations**

9. In deciding the appeal the Secretary of State has had regard to section 38(6) of the Planning and Compulsory Purchase Act 2004 which requires that proposals be determined in accordance with the development plan unless material considerations indicate otherwise.
10. In this case the development plan consists of the Waste Core Strategy (WCS) (2012), the saved policies of the Waste Local Plan (WLP) (2004) and the Stroud District Local Plan (SDLP) (2005). The Secretary of State considers that the policies identified in

IR30 – 39 are the most relevant policies to this appeal. The Secretary of State has had regard to the Inspector's remarks about the emerging Stroud District Local Plan (IR41) and he is aware that the Plan's examination in public is due to resume shortly.

11. The Secretary of State observes that Planning Policy Statement 10: *Planning for Sustainable Waste Management* was cancelled with the publication of the new waste policy and guidance in October 2014. With that exception, he has had regard to those documents identified by the Inspector at IR42. The Secretary of State has also taken into account the Guidance published in March 2014; and the policy and guidance on waste published on 16 October 2014;
12. In accordance with section 66(1) of the Planning (Listed Buildings and Conservation Areas) Act 1990 (the LBCA), the Secretary of State has paid special attention to the desirability of preserving those listed structures potentially affected by the scheme or their settings or any features of special architectural or historic interest which they may possess.

#### **Preliminary Matters**

13. The Secretary of State has had regard to the Inspector's remarks at IR16 and IR21 about his role in relation to the WCS and about his former links with Gloucestershire including its County Council, and the fact that parties were made aware of those points.
14. In relation to the residual Municipal Solid Waste (MSW) treatment procurement project and the preparation of the WCS, the Secretary of State has taken account of the Inspector's timeline at IR964 and his comments at IR965. The Secretary of State sees no reason to disagree with the Inspector's analysis and conclusions about the way the WCS should be interpreted (IR966 – 992) including the weight to be given in this particular case to the Framework in respect of policy on the historic environment (IR989).
15. The Secretary of State has carefully considered the Inspector's comments about the procurement process (IR993 – 996) and he agrees with the Inspector (IR997) that this is not a matter he should take into account in his determination of this appeal.

#### **Main Issues**

16. The Secretary of State agrees that the main issues in this appeal are those identified by the Inspector at IR998.

#### ***Delivery of the Government's climate change programme and energy policies***

17. The Secretary of State has noted the Inspector's introductory remarks at IR999-1009 and, like the Inspector, he considers that the two issues are firstly, the extent to which the appeal proposal would represent a renewable and low carbon source of energy and secondly, the contribution, if any, it would make towards cutting greenhouse gas emissions (IR1010).
18. The Secretary of State agrees with the Inspector's analysis in respect of renewable and low carbon energy (IR1011-1017) and endorses his summary (IR1018) that

national energy policy confirms that there is an urgent and continuing need for new renewable electricity generating projects and recognises that even small scale projects have a valuable contribution to make. He also agrees that there is no limit to the provision that can come forward and no threshold below which the renewable energy contribution from a mixed scheme should be disregarded in some way and that EfW is a potential source of such energy which unlike weather dependant sources can provide a dependable peak and base load power on demand (IR1018). Like the Inspector, the Secretary of State considers that, with around half its exported electricity classified as renewable, the scheme would accord with national energy policy in this regard (IR1019).

19. The Secretary of State has given careful consideration to the Inspector's assessment of greenhouse gas emissions IR1020-1032. In terms of whether the proposal would be inherently better than landfill with regard to greenhouse gas emissions, the Secretary of State agrees with the Inspector that the EfW facility proposed would be better than landfill since there can be no methane released to the atmosphere as a result of the process (IR1033).
20. Turning to whether the proposal can be classified as low carbon, for the reasons given at IR1034-1035, the Secretary of State agrees with the Inspector that Government energy policy confirms that CO2 emissions from schemes like the appeal proposal are not a barrier to consent (IR1035).
21. For the reasons given by the Inspector at IR1036, the Secretary of State agrees with the Inspector's conclusion that the appeal proposal would contribute to the Government's overall policy for energy production over the period to 2050 and would do nothing to hinder its climate change programme. He agrees too that this would be a benefit of the scheme to which considerable weight should be attributed in the planning balance (IR1037).

***Whether the appeal proposal would be acceptable 'in principle' under WCS policy WCS6***

22. Having had regard to the Inspector's introductory remarks at IR1038-1042, the Secretary of State shares his view that, in principle, planning permission should be granted for the appeal proposal under policy WCS6 subject to compliance with its criteria a, b and c. He has gone on to consider those criteria.
23. The Secretary of State has carefully considered the Inspector's reasoning and conclusions on how the General and Key Development Criteria apply to this appeal (IR1043-1057). He has considered the representation dated 29 October 2014 submitted by GlosVAIN which argues that a localised height restriction applies to the appeal site but, having taken account of the Inspector's remarks at IR1123-1124, he does not consider that the height restriction relating to the planning consent for warehousing on the site amounts to a localised height restriction applicable to the appeal before him. He agrees with the Inspector's conclusion at IR1057 that the appeal proposal would be within the parameters of the guidance that underpins that part of the General Development Criteria in Appendix 5 as adopted. Like the Inspector (IR1057), the Secretary of State agrees that it is incompatible with the content of the WCS to object to the appeal proposal for reasons of height and scale.

24. For the reasons given by the Inspector at IR1059-1064, the Secretary of State agrees with the Inspector's conclusion that an Appropriate Assessment is not required and there is no conflict with WCS policy WCS6(b) (IR1065).
25. In relation to the matter of dealing only with the County's waste, the Secretary of State has carefully considered the Inspector's assessment and his conclusion that the appeal proposal does not conflict with WCS policy WCS6(c) (IR1071). The Secretary of State has also had regard to the policy and guidance on waste which he published in October 2014. Under the heading "Do the self-sufficiency and proximity principles require each waste planning authority to manage all of its own waste?", the guidance (reference ID: 28-007-20141016) states that, "though this should be the aim, there is no expectation that each local planning authority should deal solely with its own waste to meet the requirements of the self-sufficiency and proximity principles". The guidance goes on to observe that "the ability to source waste from a range of locations/organisations helps ensure existing capacity is used effectively and efficiently, and importantly helps maintain local flexibility to increase recycling without resulting in local overcapacity". The Secretary of State considers that his recently published guidance on this matter is a material consideration which carries significant weight in relation to the matter of dealing only with the County's waste.
26. The Inspector also states (IR1071) that, in the absence of the condition which the Council wish to impose, criterion WCS6(c) can have no practical effect once planning permission has been granted. Having taken account of the Inspector's analysis at IR1296-1297 and the guidance referred to in the preceding paragraph, the Secretary of State shares the Inspector's view (IR1297) that there is some doubt whether suggested condition 30 is necessary or reasonable and that there is little doubt that it would be very difficult to enforce in the circumstances described by the appellant with respect to waste transfer station waste. He sees no reason to disagree with the Inspector's advice that suggested condition 30 should not be imposed. In these circumstances, and bearing in mind the Inspector's remarks at IR1067 – 1068 and the fact that the Council accepts that criterion (c) is complied with at the point the appeal falls to be determined (IR1069), the Secretary of State concludes that the appeal proposal does not materially conflict with WCS policy WCS6(c).
27. The Secretary of State has considered carefully the Inspector's conclusions (IR1072) on whether the appeal proposal would be acceptable 'in principle' under WCS policy WCS6. For the reasons set out above, the Secretary of State considers that there would not be any material conflict with WCS policy WCS6(b) or (c). In terms of compliance with WCS6(a), the Secretary of State agrees with the Inspector's approach in first considering the proposal against WCS policies WCS14 and WCS17. The Secretary of State addresses these matters below.

***The character and appearance of the Vale landscape and the setting of the Cotswolds AONB***

28. The Secretary of State has noted the Inspector's introductory comments (IR1073-1082), and his approach to his consideration of this issue (IR1083-1091). He has carefully considered the Inspector's assessment as set out at IR1092 -1163 and he shares the Inspector's views both with regard to a fallback position of B8 warehousing (IR1102) and his characterisation of the site as urban fringe (IR1103).

29. Turning first to landscape impact, for the reasons given by the Inspector at IR1105 - 1121, the Secretary of State concurs with the Inspector's conclusion (IR1122) that there would be no conflict with WCS policy WCS14. In terms of visual impact, the Secretary of State also agrees with the Inspector's reasoning at IR1123 – 1151 and shares his view (IR1152) that there would be no conflict with WCS policy WCS17.
30. The Secretary of State has carefully considered the Inspector's comments on the proposal's effect on the setting of the Cotswolds AONB at IR1153 – 1162. For the reasons given at IR1154-1156, in common with the Inspector (IR1157) the Secretary of State concludes that the first indent of policy WCS14 would be met. He also agrees with the Inspector that, in the views out from the AONB, the expanse of the landscape is such that any impact would be mitigated by the design measures proposed (IR1159). The Inspector goes on to conclude that in looking towards the AONB it is only in the immediate vicinity of the building that there would be any significant interruption of the view (IR1160). The Secretary of State agrees with that assessment, and agrees too (IR1161) that the appeal proposal would cause no material difference in the light of the other developments and transport corridors nearby. He therefore endorses the Inspector's conclusion that there would not be any conflict in this regard with WCS policy WCS14 (IR1163).
31. The Secretary of State agrees with the Inspector that the way that WCS policy WCS6 and Appendix 5 work together means that the appeal site is allocated in the WCS unfettered both in terms of the type of strategic residual recovery facility that might be accommodated, and the scale of the buildings that might be constructed. He agrees too that while the development plan does not 'rubber stamp' the proposal, what amount to matters of principle cannot now be raised against the proposed development, when they should have properly been included within the WCS as constraints on the form of development that could come forward on this particular allocated site (IR1164).
32. The Secretary of State also agrees with the Inspector (IR1165) that, based on the available evidence, the appeal site should be considered as being on the urban fringe. He notes the Inspector's comment that it is an urban fringe that has been advancing into the Vale landscape over a period of at least 40 years and it is planned to continue that progress. He agrees too with the Inspector's conclusion that the landscape has the capacity to absorb this additional development (IR1165).
33. The Secretary of State acknowledges that considerations of visual impact are complex; particularly in light of the fall-back development of B8 warehousing that could take place. He agrees with the Inspector that a building of the size proposed on such an open site cannot be other than prominent in view although the appellant's Zone of Visual Influence shows that those views may be more limited than are indicated by the bare earth Zone of Theoretical Influence (IR1166). The Inspector goes on to argue that this is an inevitable consequence of the unfettered allocation of the site in WCS policy WCS6. The Secretary of State sees no reason to disagree with the Inspector's conclusion (IR1166) that the appellant has addressed the factors set out in WCS Appendix 5 to successfully deal with that consequence.
34. The Secretary of State endorses the Inspector's conclusion (IR1167) that the appeal proposal would not conflict with either WCS policy WCS14 or WCS policy WCS17.



He agrees too that by virtue of the way those two policies are drawn into Appendix 5 there would be no conflict either with WCS policy WCS6(a) (IR1167).

***The effect that the appeal proposal would have on the setting of the various heritage assets in the vicinity of the appeal site***

35. The Secretary of State has given careful consideration to the Inspector's comments on the scheme's potential impacts on the setting of the various heritage assets in the vicinity of the appeal site (IR1169-1185). He has taken account of the view of the Council that the proposal would cause harm to the significance of 12 designated heritage assets whereas the appellant considers that this finding would apply to only two, Hiltmead Farmhouse and St Peter's Church, Haresfield (IR1178). For the reasons given by the Inspector (IR1173 - 1183), the Secretary of State agrees with the Inspector that, generally, Mr Grover (for the Council) has interpreted the setting of each heritage asset to be far too extensive and, for the most part, incorrectly characterised settings as rural (IR1183). The Secretary of State sees no reason to disagree with the Inspector's assessments of the scheme's impacts on St Peter's Church, Haresfield (IR1175 – 1177), Haresfield Court (IR1180) and Haresfield Hillcamp and Ring Hill Earthworks (IR1181). He also concurs with the Inspector's analysis with regard to the heritage assets he references at IR1183, including the Grade II\* listed Hardwicke Court.
36. Having had regard to the Inspector's analysis at IR1186 – 1188 and his view that the position taken by English Heritage is in fact contrary to its own guidance and not supported by evidence before the inquiry, the Secretary of State gives very little weight to the views of English Heritage in his determination of this case.
37. In accordance with the LBCA, the Secretary of State attaches considerable weight and importance to the harm which would be caused to designated heritage assets.
38. He agrees with the main parties (IR1184) and the Inspector (IR1191) that, in this case, the heritage assets most affected by the appeal scheme would be St Peter's Church, Haresfield (Grade II\* listed) and Hiltmead Farmhouse (Grade II listed) and that, in the case of these two assets, the scheme's impact on setting would harm the significance of the asset.
39. The Secretary of State has considered the Inspector's remarks at IR1191. He agrees with the Inspector that the level of harm would not be 'substantial' in the terms set out in the Framework but he considers that, in accordance with s.66 of the LBCA, the preservation of setting is to be treated as a desired or sought-after objective, and considerable importance and weight attaches to the desirability of preserving the setting of listed buildings when weighing this factor in the balance. The Secretary of State takes the view that it does not follow that if the harm to heritage assets is found to be less than substantial, then the subsequent balancing exercise undertaken by the decision taker should ignore the overarching statutory duty imposed by section 66(1) and he therefore sees a need to give considerable weight to the desirability of preserving the setting of all listed buildings.

***Other matters***

Residential amenity

40. The Secretary of State has carefully considered the Inspector's assessment of residential amenity at IR1195-1201. For the reasons given by the Inspector at IR1199, he agrees that there would not be an overbearing effect on either Hiltmead or the Hiltmead Traveller's site. The Secretary of State agrees too that although the Lodge is somewhat nearer and the appeal development would be visible from it, for the reasons given by the Inspector at IR1200, the effect would not be overbearing (IR1201).

Need

41. Whilst the Inspector refers to the draft revision of PPS10 (IR1202) and the Companion Guide to PPS10 (IR1221), both of which have been superseded, the Secretary of State agrees with the Inspector's reasoning and conclusions on need at IR1202-1225. Like the Inspector (IR1204), the Secretary of State attributes considerable weight to the fact that the appeal development would achieve an upward shift in the waste hierarchy. The Secretary of State sees no reason to disagree with the Inspector's view that there is insufficient evidence before him to undermine the statistical basis on which the WCS has been adopted or require a reassessment of the residual waste for which other recovery facilities should be provided (IR1215). He accepts the Inspector's conclusion that while residual waste from outside the County may well be managed at the proposed facility, that would not be contrary to Government policy and should not be a factor that weighs against the appeal proposal (IR1224). He agrees too that the residual waste to be managed through other recovery facilities is set out in a recently adopted local plan and, like the Inspector, he finds no evidence that satisfies him that those figures do not remain robust (IR1225). The Secretary of State agrees with the Inspector's view that the quantitative need for recovery capacity is therefore established and the appeal proposal would make a very significant contribution to that need (IR1225).

Alternative technologies

42. Turning to the Inspector's consideration of the alternative technologies which were promoted at the inquiry (IR1226-1231), for the reasons given in those paragraphs the Secretary of State agrees with his conclusion that no weight should be given to the argument that alternative technologies should be considered, but rather, that the essence of the issue for determination in this appeal is whether the land use implications of the chosen technology are acceptable at the appeal site (IR1231).

Perception of harm

43. The Secretary of State has carefully considered the Inspector's assessment on this matter set out at IR1232 – 1248 and he too concludes that minimal weight should be attributed to the claimed land use consequence of the perceived harm to health and that limited weight should be given to this issue in the planning balance (IR1249).

Consequences of the appeal not succeeding

44. It is common ground between the main parties that the consequence of the appeal being dismissed would be the continued disposal of the County's residual municipal solid waste to landfill (IR1250). For the reasons given by the Inspector (IR1250 – 1256), the Secretary of State agrees with him that some weight should be attributed to the expectation that dismissal of this appeal would result in a delay of some years at least in moving away from disposal to landfill of the County's residual municipal solid waste (IR1256-1257).

Highway safety

45. For the reasons given by the Inspector at IR1258 -1261, the Secretary of State agrees with his conclusion that there would be no policy conflict arising from this issue and, as such, this is not a matter to which any weight should be attributed either way in the balance (IR1262)

**Legal arguments**

*Priority considerations of alternatives (Persistent Organic Pollutants)*

46. The Secretary of State has considered carefully the Inspector's comments on this issue at IR1263 – 1269 and agrees with him that the duty under Article 6(3) of Regulation (EC) No. 850/2004 rests with the Environment Agency, not the local planning authority (IR1270). He sees no reason to doubt that in issuing the Environmental Permit the Environment Agency has discharged that duty (IR1270).

*Localism*

47. For the reasons given by the Inspector at IR1271 – 1274, the Secretary of State agrees that in this case, the spirit of the Localism Act has been followed.

*The best interests of children*

48. The Secretary of State has carefully considered the Inspector's assessment of this issue (IR1275 – 1280), the evidence of Mr Ttofa (IR940 -941) and the evidence of Mr Phillips (IR449 – 450). He agrees with Mr Phillips (IR449) that the issues raised by Mr Ttofa in this regard and which relate to health, visual, financial and environmental impacts have been comprehensively addressed in the submitted evidence and he has given that evidence very careful consideration. He has also taken account of the fact that neither the Inspector (IR1279) nor Mr Phillips (IR450) consider that there is any suggestion that, in this particular case, the interests of children are any different from the interests of the general public. In these circumstances, the Secretary of State does not consider that the best interests of the children have a material impact on the planning balance in this case.

**Conditions**

49. The Secretary of State has considered the conditions recommended by the Inspector and set out at Annex B to the IR, the Inspector's comments at IR1281-1316, national policy set out at paragraphs 203 and 206 of the Framework and the planning

guidance. For the reasons given by the Inspector (IR1281-1316), he is satisfied that the proposed conditions, as reproduced at Annex B of this letter, are necessary and meet the tests identified at paragraph 206 of the Framework.

### **Planning balance**

50. The Secretary of State finds that a number of matters weigh in the balance in favour of the appeal proposal, namely the contribution to the Government's overall energy policy and climate change programme, to which he attributes considerable weight; management of waste that is now consigned to landfill further up the waste hierarchy, to which he attributes considerable weight; a significant contribution towards a recently established quantitative need for residual waste recovery capacity, to which he attributes considerable weight; and the adverse consequences of the appeal not succeeding; to which he attributes some weight.

51. In terms of Framework paragraph 134, the Secretary of State finds that the planning balance falls in favour of the appeal scheme with the result that the less than substantial harm to the significance of the two heritage assets identified is outweighed. However, two matters weigh in the balance against the appeal proposal. The first is the desirability of preserving the settings of the heritage assets to which s66 of the LBCA requires that considerable importance and weight must be attributed. The Secretary of State finds in this case that the weight to be applied by s66 is in fact limited, given the extent of the harm to heritage assets which he has identified. With regard to the second matter, namely the perception of harm to the health of the local community, this is a matter to which the Secretary of State attributes limited weight.

### **Overall conclusions**

52. The Secretary of State concludes that the appeal proposal would comply with the relevant development plan policies and is satisfied that for the purposes of paragraph 134 of the Framework, the less than substantial harm to the settings, and thus the significance of the two heritage assets, is outweighed by substantial public benefits. He concludes that there are no other material considerations to indicate that the appeal should be determined other than in accordance with the development plan. For this reason, the Secretary of State has concluded that the appeal should be allowed.

### **Formal decision**

53. Accordingly, for the reasons given above, the Secretary of State agrees with the Inspector's recommendation. He hereby allows your client's appeal and grants planning permission for an Energy from Waste (EfW) facility for the combustion of non-hazardous waste and the generation of energy, comprising the main EfW facility, a bottom ash processing facility and education/visitor centre, together with associated/ancillary infrastructure including access roads, weighbridges, fencing/gates, lighting, emissions stack, surface water drainage basins and landscaping, in accordance with application ref 12/0008/STMAJW dated 31 January 2012 subject to the conditions set out at Annex B to this letter.

54. An applicant for any consent, agreement or approval required by a condition of this permission for agreement of reserved matters has a statutory right of appeal to the

Secretary of State if consent, agreement or approval is refused or granted conditionally or if the Local Planning Authority fail to give notice of their decision within the prescribed period.

55. This letter does not convey any approval or consent which may be required under any enactment, bye-law, order or regulation other than section 57 of the Town and Country Planning Act 1990.

56. This letter serves as the Secretary of State's statement under Regulation 21(2) of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999.

**Right to challenge the decision**

57. A separate note is attached setting out the circumstances in which the validity of the Secretary of State's decision may be challenged by making an application to the High Court within six weeks from the date of this letter.

58. A copy of this letter has been sent to Gloucestershire County Council, Stroud District Council, Gloucestershire Vale Against Incineration (GlosVAIN) and Gloucestershire Friends of the Earth Network (GFOEN). A notification letter has been sent to all other parties who asked to be informed of the decision.

Yours faithfully

**Christine Symes**  
Authorised by the Secretary of State to sign in that behalf

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1017. Furthermore, the same section of EN-1 confirms EfW as one of the five sources of future large-scale renewable energy generation, the others being onshore and off shore wind, biomass and wave and tidal (CD6.5, paragraph 3.4.3). It goes on to say that renewable energy from the combustion of waste in EfW plants such as that proposed satisfies what Mr Phillips described as the four 'D's: dependable, diversified, distributed and dispatchable energy [107].

1018. In summary therefore, national energy policy confirms that there is an urgent and continuing need for new renewable electricity generating projects and recognises that even small scale projects have a valuable contribution to make. There is no limit to the provision that can come forward and no threshold below which the renewable energy contribution from a mixed scheme should be disregarded in some way. EfW is recognised as a potential source of such energy which unlike weather dependent sources can provide dependable peak and base load power on demand.

1019. The appeal proposal would export some 14.5 Megawatts to the local grid with around half classified as renewable. The appeal scheme would therefore accord with national energy policy in this regard. I return to consider the low carbon nature of the proposal below.

#### Greenhouse gas emissions

1020. Guide to the Debate contains a useful section on this and compares EfW with landfill (CD7.9, paragraphs 33 to 44). This is relevant to the consideration of this appeal since the appeal proposal is designed to manage residual waste, that is waste which remains after the prevention, preparing for reuse and recycling initiatives and activities of both the WCAs and the commercial and industrial waste generators have been brought to bear. Currently, this waste is largely landfilled by the WDA and the private sector.

1021. In short, managing untreated mixed waste by either combustion in an EfW plant or deposit in a landfill will release gases that contribute to global warming. However, whereas landfill will release both CO<sub>2</sub> and methane, an EfW process emits only CO<sub>2</sub>. Methane is currently assessed as being 25 times more damaging (CD7.9, paragraph 35) although this multiplier may be increased (UBB5 I, paragraph 1.3). Whether EfW produces a lower volume of greenhouse gases than landfill is a complex assessment that needs to be undertaken on a case-by-case basis (CD7.9, paragraph 42). Nevertheless, there are two general rules that apply. These are (CD7.9, paragraph 43):

- The proportion and type of biogenic waste is key with high biogenic content making EfW inherently better and landfill inherently worse.
- The more efficient the EfW plant is at turning waste into energy, the greater the carbon offset from conventional power generation and the lower the net emissions from EfW.

1022. UBB has used WRATE to assess the CO<sub>2</sub> equivalent savings that would be achieved by the appeal proposal. This is explained by Mr Aumonier in his evidence (UBB5, section 5.5) and set out in detail in UBB5 I. GlosVAIN is highly critical of the approach used (GV1, paragraphs 323 to 359).

1023. Some of these criticisms do not stand scrutiny. The assumption in the model that the electricity exported from the appeal proposal would displace that

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otherwise produced by a CCGT should not be criticised. This is what Guide to the Debate identifies as the current standard comparator since this is the marginal technology choice if building a new power station [115]. As already discussed [1005] this document is one which should be afforded considerable weight as part of Government policy.

1024. In contrast to GlosVAIN, the change to Footnote 29 in the Guide to the Debate that Mr Watson draws attention to (PINQ4) still does not advocate the use of the long run marginal supply as the comparator. In addition, he may well be right that Dairy Crest provides a major opportunity to match available heat load with potential heat supply from the appeal proposal. Mr Aumonier did not rule this out although he accepted that it was a long shot [711]. However, for the 'win-win' opportunity Mr Watson claims to be realised, there would need to be an available site and a clear proposal at or nearer to the Dairy Crest plant; none has been put forward at this Inquiry. Mr Watson's argument is therefore a theoretical one to which very little weight should be given.
1025. Nor is it wrong to consider the savings by comparison with greenhouse gas emissions from landfill. That is the waste management method that is used now and would be used in the near future at least should the appeal proposal not come forward [477].
1026. Having said that, WRATE is clearly very sensitive to the default assumptions embedded in the model and those fed into it. That much is clear since while the model used for the submitted the planning application assessed the carbon benefit as some 40,480 tonnes CO2 equivalent (UBB5, paragraph 183), that undertaken by Mr Aumonier estimated the saving to be 19,714 tonnes CO2 equivalent (UBB5, paragraph 181). Although Mr Aumonier explains the reasons for this (UBB5, paragraphs 183 to 184), it does tend to lend support to some of the criticisms identified by Mr Watson (GV1, paragraph 329).
1027. Guide to the Debate confirms that generating heat and electricity together through CHP typically produces much greater efficiencies, in excess of 40% (CD7.9, paragraph 121). As set out above from the same source, the more efficient the EFW plant is, the greater the carbon offset [1021]. It is not therefore surprising that Mr Aumonier does not dispute (UBB5/REB/A, paragraph 23) Mr Watson's evidence that incinerators are particularly inefficient generators of electricity although this can be improved by operation as CHP (GV1, paragraph 348).
1028. From this it seems to me therefore that the carbon offset that would be achieved, the extent to which the appeal proposal can be considered low carbon and therefore the contribution to reducing greenhouse emissions that would be made by the appeal proposal, will be influenced by the potential for CHP to be realised.
1029. That no contracts exist between UBB and potential users of any heat is entirely to be expected at this stage of the process towards a planning permission and this has been accepted in other appeal decisions of this nature [120]. Nevertheless, UBB has identified what it considers to be a number of potential users through the heat user study presented by Mr Aumonier (UBB5C). However, Mr Simons neatly summarised the difficulty with this evidence based as it is largely on conversations and correspondence entered into by Mr Aumonier but not available to the Inquiry for reasons of commercial sensitivity [711].

# Appendix D Maz Mohammad Op Agree(Cory)





## Appendix E Landsul



**BY LETTER AND EMAIL**

Simon Catterall  
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Southernhay West  
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Our Ref 104670723.4/le061657629.07002  
File ref L00469-0004

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E.thomas.edwards@pinsentmasons.com

2 May 2019

Dear Simon

**Cory Riverside Energy Park: Property on the west side of Norman Road, Belvedere DA17 (known as Site 2, Norman Road, Belvedere)**  
**Our client: Cory Environmental Holdings Limited ("Cory")**  
**Your clients: Landsul Limited and Munster Joinery (UK) Limited**

I write to you in respect of Cory's application for development consent (PINS reference EN010093) for the construction, operation and maintenance of the proposed Riverside Energy Park ("REP").

As you are aware, the application for development consent was made on 16 November 2018 and the preliminary meeting took place on 10 April 2019. In the application that was submitted to the Secretary of State, the Book of Reference (APP-018) which accompanied the application recorded:-

Landsul Limited's interests in the Order Land as follows:

- Freehold owner in respect of plots: 02/53, 03/07 (no powers of compulsory acquisition or temporary possession were sought over plot 03/07); and
- Category 2 interests in respect of plots: 02/29, 02/30, 02/52, 02/54, 02/55, 03/05, 03/06, 03/09, 03/10.

Munster Joinery (UK) Limited's interests in the Order Land as follows:

- Occupier in respect of plots: 02/53, 03/07 (no powers of compulsory acquisition or temporary possession were sought over plot 03/07); and
- Category 2 interests in respect of plots: 02/29, 02/30 and 03/10.

Following further diligent inquiry, Cory has established that Landsul and Munster have Category 2 interests in only two plots. The following is the position that Cory understands to be the case following this further diligent inquiry:

Landsul Limited's interests in the Order Land are as follows:

Pinsent Masons LLP

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- Freehold owner in respect of plots: 02/53, 03/07 (no powers of compulsory acquisition or temporary possession were sought over plot 03/07); and
- Category 2 interests in respect of plots: 02/55 and 03/09.

Munster Joinery (UK) Limited's interests in the Order Land are as follows:

- Occupier in respect of plots: 02/53, 03/07 (no powers of compulsory acquisition or temporary possession were sought over plot 03/07); and
- Category 2 interests in respect of plots: 02/55 and 03/09

Cory's application for development consent sought the temporary use of plot 02/53 for a construction compound for the period of construction of REP. Following submission of the application and following receipt of your clients' concerns, Cory has been working to ascertain whether it can revise its construction proposals so as to avoid the need to temporarily use plot 02/53. Having carried out this review, Cory has determined that it can re-work its construction proposals and thus remove the need for temporary possession of plot 02/53. This means that Cory will no longer need to negotiate with your clients over such temporary use.

Therefore, Cory will no longer be seeking temporary possession powers over plot 02/53 and will exclude this plot from the Order Land. In addition, Cory will be excluding plots 02/55 and 03/09. Plot 03/07 will also be removed from the Order Land (rather than being included but over which no powers are sought as shown by the key on Sheet 1 of the Land Plans (APP- 007)). These changes will be made at Deadline 2 (20th May 2019), and recorded in revised Land Plans, Works Plans and an updated Book of Reference.

This amendment will mean that your client will no longer have any interests in the Order Land and will therefore not be named in the revised Book of Reference.

With plot 02/53 removed from the Order Land, and with plot 03/07 already excluded, we understand from your Relevant Representation that this would leave only one outstanding concern, being the closure of Norman Road. Norman Road would not be closed so as to prevent reasonable access to those premises that abut Norman Road, indeed our client's Resource Recovery Facility will still be in operation during the construction of REP and will require access along Norman Road. Article 12 (Temporary prohibition or restriction of use of streets and public rights of way) of the draft DCO (APP-014) provides that where Cory exercises powers under this article on Norman Road, to enable the construction of its electrical grid connection, that it will be required to provide reasonable access for both non-motorised users and vehicles to those premises that abut Norman Road, which would include your clients' premises. Your clients' access to its premises during the period of construction of REP is therefore assured.

Cory has had regard to your clients' concerns as set out in its Relevant Representation and hopes that the changes that are to be made at Deadline 2, together with existing protections included in the DCO, address those concerns.

A copy of this letter will be submitted to the examination so that the Examining Authority are aware of the position.

Yours sincerely,



**Tom Edwards**  
Senior Associate  
for Pinsent Masons LLP



**Appendix F Technical Note TN013 - Traffic flows on  
A2016 Bronze Age Way and A206 Queens  
Road/Northend Road - Interface with Electrical  
Connection Construction Works**

# TECHNICAL NOTE

**Subject: Traffic flows on A2016 Bronze Age Way and A206 Queens Road/Northend Road - Interface with Electrical Connection Construction Works**

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## 1. Introduction

- 1.1. This technical note has been prepared on behalf of Cory Environmental Holdings Limited (trading as Cory Riverside Energy (Cory or “the Applicant”)) for Riverside Energy Park (REP). The note responds to technical matters raised relating to the interface of the construction of the Electrical Connection, as described within **Chapter 3 Project and Site Description** of the **ES (6.1, Rev 1)** which accompanies the Development Consent Order (DCO) Application, with the routes of the A2016 (Picardy Manor Way to Bexley Road and A206 Queens Road to Perry Street).
- 1.2. The matters were raised by TfL at meetings held on 22 October 2018, 18 January 2019, 08 February 2019 and 13 March 2019, within related correspondence during that period and within the TfL Relevant Representation (RR) submitted on 12 February 2019, namely:

*“The traffic impact of the construction of the REP is expected to be significant. TfL concludes that insufficient assessment has been undertaken to provide a realistic estimate of the impact of construction on the junctions along the SRN and therefore on bus services as well, and would therefore object to the current construction proposals. Additional modelling needs to be undertaken to show the impact of construction and mitigation measures must be secured through appropriate legal mechanisms to mitigate this impact.*

*The impact of the Electrical Connection construction has not been sufficiently assessed through the TA or CTMP as currently the route has not been chosen, it is unclear how long construction of each section would take and therefore how long lanes would need to be closed and where they would need to be closed. The impact of the lane closures has not been assessed and therefore it cannot be determined if this impact is acceptable at this stage. However, given TfL’s understanding of the existing traffic congestion along the A2016, TfL have significant concerns which have not been alleviated. It is noted that TfL would prefer the Electrical Connection to be constructed away from the SRN, as this would reduce the potential for strategic traffic impacts.”*

- 1.3. Matters were further raised by the London Borough of Bexley in correspondence with their Consultant Ricardo, namely:

*Cumulative Impact of REP Construction and Electrical Connection: Clarification is required from the Applicant as to how the combined potential impact of the REP construction and associated temporary works, and those regarding the Electrical Connection has been assessed. It is important that the added implication of the works associated with the Electrical Connection is considered*

## TECHNICAL NOTE

*with the impact of the REP construction especially as there may be programme overlap. As indicated under 6.9.62 of the ES, the final details (e.g., method of construction, form of traffic management, the programme, sequence of works, length of time within a location and location of active works) are not known at this stage since no details are currently available. Therefore, there is uncertainty about overall impact.*

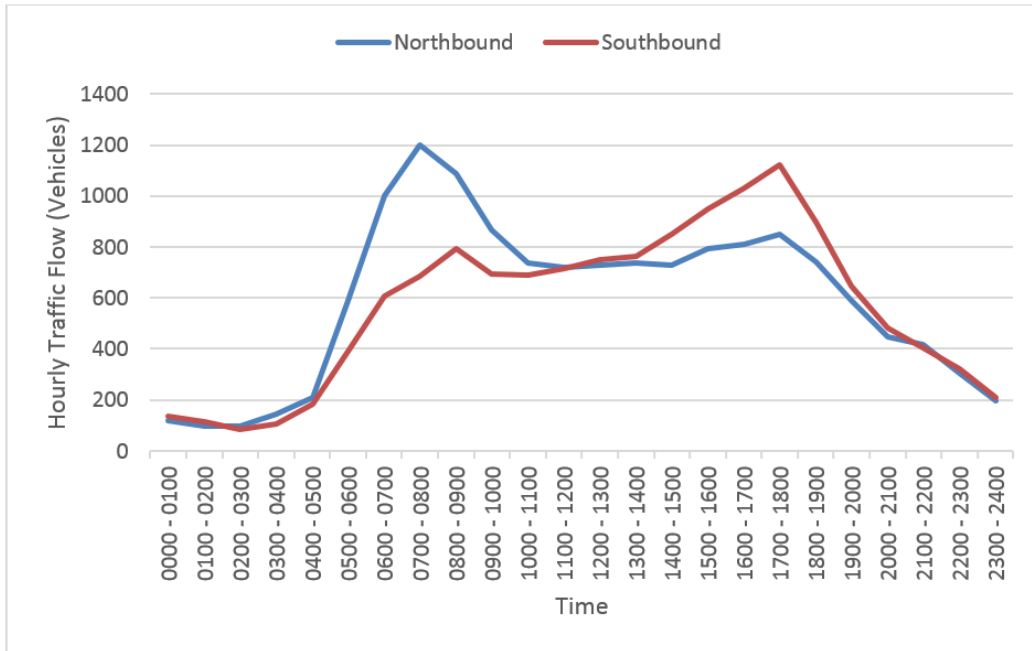
- 1.4. This Technical Note sets out the following information and analysis in relation to the construction of the Electrical Connection:
  - Traffic flow characteristics on the A2016 Bronze Age Way and A206 Queens Road corridor, in each direction;
  - Theoretical link capacity on the A2016 Bronze Age Way and A206 Queens Road / Northend Road;
  - Queueing and congestion at key points on the A2016 Bronze Age Way and A206 Queens Road / Northend Road corridor; and
  - Flow characteristics at Erith Roundabout (A2016 Bronze Age Way junction with A206 Bexley Road) and potential implications of the construction of the Electrical Connection for REP on the operation of the junction.

## 2. Observed Link Traffic Flows on the A2016 Bronze Age Way and A206 Northend Road

- 2.1. Automatic Traffic Count (ATC) surveys have been undertaken on A2016 Bronze Age Way and A206 Northend Road to inform the baseline assessment for **Appendix B.1 the Transport Assessment (TA) to the ES (6.3, APP-066)** and for the appraisal of predicted traffic impacts associated with the construction of the REP site and the associated Electrical Connection.
- 2.2. Data were collected at approximately 40m to the south of Picardy Manorway / Anderson Way roundabout and on A206 Northend Road at approximately 110m to the north of A206 Northend Road / A2000 Perry Street / Parkside Avenue roundabout. The data were collected across two weeks between 14 April 2018 to 27 April 2018. The average weekday hourly traffic profiles are illustrated in Figure 1 and Figure 2 below.
- 2.3. Based on a review of the traffic data across the two weeks, the following traffic characteristics have been deduced:
  - A2016 Bronze Age Way
    - 24-hour traffic flow is slightly higher in the northbound direction - average weekday flow of 14,214 vehicles northbound and 13,623 vehicles southbound;
    - The maximum hourly traffic flow is slightly higher in the northbound direction - 1,201 vehicles northbound (07:00 – 08:00) and 1,136 vehicles southbound (16:30-17:30);
    - Morning two-way link flows plateau between 07:00 and 09:00 – 1,888 vehicles (07:00-08:00) and 1,880 vehicles (08:00-09:00); and
    - The link data indicate a tidal flow characteristic, with northbound dominant in the morning and southbound dominant in the afternoon.

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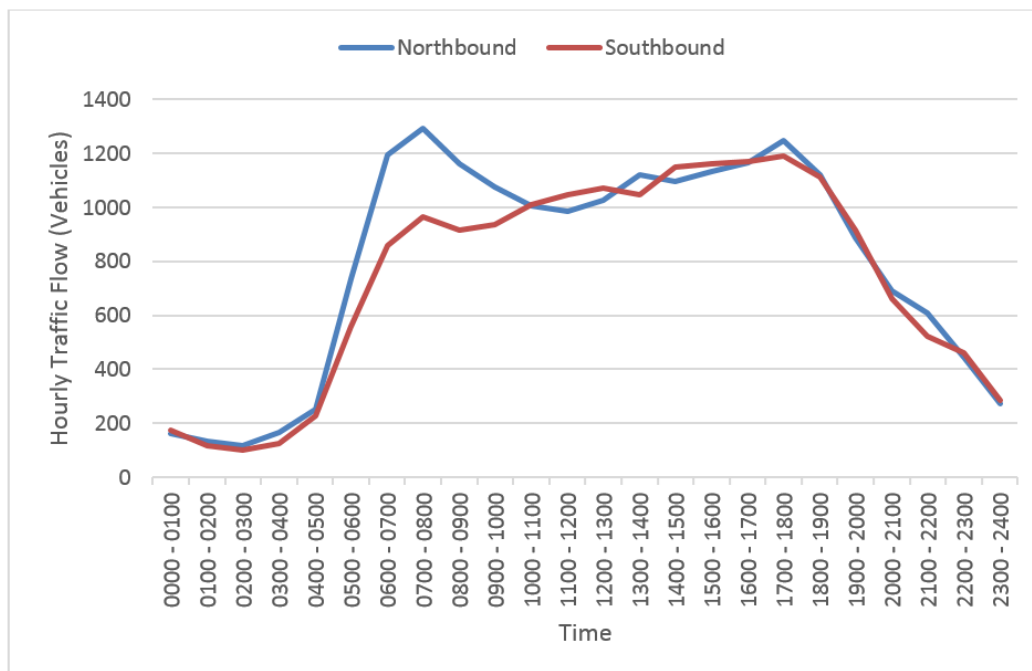
Figure 1: Daily traffic flow profile on A2016 Bronze Age Way



## A206 Northend Road

- 24-hour traffic flow is higher in the northbound direction - average weekday traffic flow of 19,092 vehicles northbound and 17,769 vehicles southbound;
- The maximum hourly traffic flow is slightly higher in the northbound direction - 1,301 vehicles northbound (06:30 – 07:30) and 1,191 vehicles southbound (17:00-18:00);
- Morning two-way traffic flows peak prior to congestion building; and
- Northbound and southbound flows are balanced on A206 Northend Road during the evening peak period.

Figure 2: Daily traffic flow profile on A206 Northend Road



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2.4. The data show that the corridor has a defined morning and afternoon peak in each direction and the northbound morning peak is more pronounced and higher than that in the afternoon. On A2016 to the north of the Erith Roundabout traffic volumes are lower than on A206, often more than 100 fewer vehicles per hour. The effects on traffic flow of constructing the Electrical Connection, therefore, would be less on the A2016 Bronze Age Way link than on A206 Queens Road / Northend Road links.

### 3. Link Capacity - A2016 Bronze Age Way and A206 Queens Road / Northend Road

3.1. The Design Manual for Roads and Bridges (DMRB) Volume 5 Section 1 Part 3 TA 79/99 Amendment No 1 – Determination of Urban Road Capacity, Table 1 ‘Types of Urban Roads and the features that distinguish them’, provides guidance as to the classification of route for the A2016/A206 corridor. Table 2 ‘Capacities of Urban Roads one-way hourly flows in each direction’ provides a guide to the volume of traffic each type of route might be expected to carry.

3.2. In accordance with those tables, the dual carriageway sections of A2106 and A206 would be classified as Urban All-purpose class 2 (UAP2) routes – i.e. dual carriageways of approximately 7.3m width per carriageway and 2 lanes in each direction. UAP2 class routes should be able to carry in the region of 3,200 vehicles per hour in either direction across both lanes – remote from the interaction with junctions. Each lane would have a capacity in the order of 1,600 vehicles per hour.

3.3. The link capacity along the corridor could be slightly lower due to a moderately high proportion of heavy goods vehicles (HGV) - typically observed to be higher than 15%.

3.4. The maximum traffic flow on A2016 Bronze Age Way occurs in the northbound direction during the morning peak period at 1,201 vehicles per hour, across both lanes, between 07:00 – 08:00. This volume of traffic lies substantially within the theoretical capacity of one lane of the northbound carriageway. At the A206 Northend Road survey the peak is marginally higher and earlier at 1,301 vehicles per hour, across both lanes, between 06:30 – 07:30.

3.5. At peak construction (Month 13), the predicted morning peak flow of construction traffic for the REP site and the Electrical Connection (excluding workforce, who would be travelling prior to the peak period) in 2022 is estimated to be 2 vehicles per hour on the A206/A2016 corridor to the north of the Perry Street roundabout. The cumulative morning peak hour traffic flow on Bronze Age Way during peak construction, including forecast growth to 2022 and committed developments, would be in the order of 1,322 vehicles per hour across both lanes. On A206 Northend Road the morning peak hour flow is predicted to be 1,347 vehicles in the peak hour. These traffic flows are indicated within the figure titled ‘2022 Do Minimum Traffic Flows - AM Peak 07:45-08:45 (in Vehicles)’ of **Appendix J of Appendix B.1 the TA to the ES (6.3, APP-066)**. That volume of link flow would be within the 1,600 vehicles per hour theoretical capacity for a single lane on this UAP2 corridor and well within the theoretical volume for two lanes.



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- 3.6. The data collected for both the A2016 (near Picardy Manorway) and A206 (near Perry Street) indicate that the peak period is clearly defined with traffic volumes rising quickly to the peak and diminishing after it. This suggests that residual demand is quickly cleared. Video evidence of the operation of the junctions along the corridor substantiate this.
- 3.7. The link peak traffic volumes are within the theoretical capacity of a single lane on a road constructed to the standard of a UAP2 road – as identified in DMRB Volume 5 Section 1 Part 3 TA 79/99 Amendment No 1 – Determination of Urban Road Capacity. A localised temporary lane closure during the construction of the Electrical Connection would not take the link out of theoretical capacity in either the northbound or southbound direction.

### 4. Levels of Queueing at Key Points along the A2016 Bronze Age Way, A206 Queens Road and A206 South Road

- 4.1. Video footage was collected at six junctions along the A2016/A206 to provide data on vehicle activity to inform the baseline for the appraisal of traffic impacts within **Appendix B.1** the **TA** to the **ES (6.3, APP-066)**. The locations surveyed are listed in **Table 2.1** and **Figure 2.1** of **Appendix B.1**, the **TA** to the **ES (6.3, APP-066)**.
- 4.2. TfL had noted during engagement and in its Relevant Representation, that:

*“it is considered that the junctions [of Picardy Manorway, Erith Roundabout and James Watt Way] are influenced by each other’s performance given that they are closely linked”.*
- 4.3. The footage of the Picardy Manorway/Anderson Way roundabout shows there is no queueing on the approaches to or exits from the junction, including during the network peak periods. The junction currently works within capacity and sensitivity analysis has demonstrated that there is sufficient reserve capacity during the construction period for the network not to be congested during the construction of the Electrical Connection. TN007 – Construction Phase Sensitivity Test (dated 23/01/19, issued to TfL on 28/01/19), shows that the A2016 Picardy Manorway roundabout is expected to operate with spare capacity as assessed during the peak period of construction for REP, and based on the robust assumptions adopted within the **TA, Appendix B.1** of the **ES (6.3, APP-066)** for Month 13 (i.e. the highest level of cumulative workforce and construction traffic, anticipated to be during 2022).
- 4.4. The Erith Roundabout is 2.3km from the Picardy Manorway/Anderson Way junction and there is no evidence of interaction between the operation of these junctions in either the northbound or southbound direction. Consequently, this Technical Note focuses on Erith Roundabout and A206 Queens Road/ James Watt Way during the above peak construction phase for REP. The junctions on Picardy Manorway are priority roundabouts and there is no control linkage to the Erith Roundabout - i.e. the junction of A2016 Bronze Age Way/Bexley Road/Queens Road or the A206 Queens Road/James Watt Way traffic signals.

## TECHNICAL NOTE

- 4.5. Example screenshots of the video footage for Erith Roundabout, A206 Queens Road / James Watt Way junction and A206 Northend Road / Boundary Street roundabout during the morning peak are included at Figures 3 – 8 below.

*Figure 3: Erith Roundabout 2018 during morning peak period – Bexley Road (west)*



*Figure 4: James Watt Way junction 2018 at start of morning peak period – A206 (camera facing southbound)*



# TECHNICAL NOTE

Figure 5: James Watt Way junction 2018 morning peak period – A206 (camera facing southbound)



Figure 6: James Watt Way junction 2018 end of morning peak period – A206 (camera facing southbound)



## TECHNICAL NOTE

*Figure 7: A206 South Road/ Boundary Street/ A206 Northend Road junction 2018 morning peak period – A206 (camera facing southbound)*



*Figure 8: A206 South Road/ Boundary Street/ A206 Northend Road junction 2018 end of morning peak period – A206 (camera facing southbound)*



- 4.6. Video footage recorded as part of the traffic surveys at: Erith Roundabout; James Watt Way traffic signals; and Boundary Street / Northend Road roundabout indicate that during the morning peak period the network is congested, and queues can form northbound along this section.

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- 4.7. On the day of the video survey at James Watt Way, Friday 25 May 2018, northbound queues built during the morning from 07:30 and dissipated between 09:45 and 10:00. A video survey of the Erith Roundabout, on Wednesday 19 April 2018, however, indicated that the northbound approach to Erith Roundabout was not congested at 07:30 – as illustrated in Figure 9. The approach started to become congested around 08:00. At that time, traffic continued to move through the junction and there were no stationary queues. Traffic was only observed to queue momentarily on this approach when the pedestrian crossing on Bexley Road was used.

*Figure 9: A206 Erith Roundabout April 2018 morning peak period – from Walnut Tree Road (camera facing southwest)*



- 4.8. Southbound traffic, including during peak periods, typically flows through the junctions and clears the James Watt Way junctions on each cycle of the traffic signals.
- 4.9. Based on the video footage from 25 May 2018, queueing is observed in the northbound direction in the morning, originating from the interface between James Watt Way and Erith Roundabout. At their peak, queues extend to the south until approximately 100m to the south of A206 Boundary Street / A206 Northend Road roundabout.
- 4.10. The section of A206 between Erith Roundabout and Boundary Street / Northend Road is approximately 850m long. Traffic which is discharged from the traffic signals at James Watt Way towards Erith Roundabout generally cleared sufficiently to let traffic emerge from James Watt Way before the next green time for northbound A206 traffic.
- 4.11. Queues were not observed to build in either northbound or southbound direction on the A2016/A206 corridor during the evening peak period. Figures 9 and 10 are example screenshots of the network during the evening peak.

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Figure 10: Erith Roundabout 2018 evening peak period – A206 (camera facing west to Bexley Road (west))



Figure 11: James Watt Way junction 2018 evening peak period – A206 (camera facing southbound)



## TECHNICAL NOTE

4.12. Video evidence has indicated that traffic flows readily through this section of the network for most of the day. Queues were only noted to build on A206 to the south of the James Watt Way junction during the morning peak period and dissipated quickly after the peak period. Those queues are considered to be a combination of the volume and balance of traffic and the operation of the James Watt Way junction. The presence of approximately 60m of on-street parking on the northbound carriageway in the vicinity of Thanet Road, to the south of James Watt Way, narrows the corridor to a single lane – extending the length of the queues.

### 5. Flow Characteristics at Erith Roundabout and James Watt Way Junction and Potential Implications

5.1. As stated in **Section 4**, the network can be congested around the Erith Roundabout during peak periods and queueing in the northbound direction was observed to originate from James Watt Way and build to the south in the morning peak. This section of the report considers the flow characteristics at Erith Roundabout and its potential impacts.

5.2. Overall, the following observations have been made at Erith Roundabout from the traffic count data collected in April and May 2018:

- The total junction flows peaked at both the morning and evening peak periods;
- The flows during the evening peak period are approximately 10% greater than the morning peak period - 3,690 vehicles through the junction in the evening (17:00-18:00) compared to 3,360 vehicles in the morning (08:00-09:00).

5.3. However, despite the fact that the total junction flows are higher during the evening peak period, based on the video footage available, the junction appears to be more congested during the morning peak hour with greater levels of queueing. This is likely to be attributed to:

- morning northbound flow from A206 Queens Road which is higher in number and proportion compared to the evening peak period. Of that flow from A206 Queens Road, a large proportion (72% of 1347 vehicles) travels straight ahead to A2016 Bronze Age Way. Those vehicles have priority over entry from A206 Bexley Road (west). In the evening, more of the lower volume of traffic turns left from A206 Queens Road into Bexley Road (west) (43% of 1270 vehicles) – allowing more opportunities to exit from Bexley Road (west).
- traffic exiting A206 Bexley Road (west) which is opposed by northbound and eastbound traffic flow from A206 Queens Road. Both of these traffic flows are a higher proportion of the junction flows in the morning peak period compared to the evening (52% of 3360 in the morning peak and 41% of 3690 in the evening peak).
- southbound traffic from A2016 Bronze Age Way to A206 Queens Road is unopposed. In the evening the dominant southbound flow from A2016 Bronze Age Way is to A206 Queens Road (25% of 3690 vehicles). This does not cause northbound queueing on A206 Queens Road.

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Table 1: Peak Hour Traffic at Erith Roundabout – April 2018

<b>AM Peak</b>	<b>08:00-09:00</b>					
	Walnut Tree Road	Bexley Road	A206 Queens Road	A206 Bexley Road	A2016 Bronze Age Way	<b>Total</b>
Walnut Tree Road	0	0	0	0	0	<b>0</b>
Bexley Road	41	0	71	188	43	<b>343</b>
A206 Queens Road	51	0	10	373	946	<b>1380</b>
A206 Bexley Road	178	0	308	1	262	<b>749</b>
A2016 Bronze Age Way	22	0	661	201	4	<b>888</b>
<b>Total</b>	<b>292</b>	<b>0</b>	<b>1050</b>	<b>763</b>	<b>1255</b>	<b>3360</b>
<b>PM Peak</b>	<b>17:00-18:00</b>					
	Walnut Tree Road	Bexley Road	A206 Queens Road	A206 Bexley Road	A2016 Bronze Age Way	<b>Total</b>
Walnut Tree Road	0	0	0	0	0	<b>0</b>
Bexley Road	65	0	109	168	40	<b>382</b>
A206 Queens Road	85	0	10	551	719	<b>1365</b>
A206 Bexley Road	200	0	361	2	143	<b>706</b>
A2016 Bronze Age Way	23	0	933	281	0	<b>1237</b>
<b>Total</b>	<b>373</b>	<b>0</b>	<b>1413</b>	<b>1002</b>	<b>902</b>	<b>3690</b>

- 5.4. The junction at James Watt Way is a signal controlled junction with all lanes controlled by Split Cycle Offset Optimisation Technique (SCOOT) – a system to optimise the management of traffic through a traffic signal junction, often linked to other local junctions. The operation of the traffic signals at James Watt Way strongly influences the operation of the adjoining network. The cycle of the traffic signals is such that each approach can be managed to minimise or balance delays reflecting the strategy for that junction.
- 5.5. Observing the operation of the network in the vicinity of Erith Roundabout and James Watt Way, during the morning and evening peak periods, has shown that the junction is affected by the balance of flows as much as the volume of flow. The construction of the Electrical Connection through the junctions, and the area most affected by congestion, will not result in an increase in the volume of traffic, aside from the few construction vehicles associated with the contractor’s workforce and materials. The traffic impact from the construction period will be temporary and transient road works which will require a series of lane closures.
- 5.6. **Paragraph 3.5.25 of Chapter 3 Project and Site Description of the ES (6.1, Rev1)** states that:



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*“Where works are undertaken along footpaths and verges, a 3 m wide working corridor would be likely and generally be expected to cause some encroachment of the works area onto the highway, typically resulting in a lane closure. Where the proposals require works within the highway carriageway, a lane closure would be required. Depending on the width of the chosen highway route, a lane closure for the working area would typically require:*

*a. On dual carriageways - a reduction from two lanes to one along one of the carriageways; and*

*b. On single carriageways – traffic signals to control single lane traffic working.”*

**5.7. Paragraphs 3.5.28 and 3.5.29 of Chapter 3 Project and Site Description of the ES (6.1, Rev1) state that:**

*“When trenching works are being undertaken it is expected that a length of up to 200 m would typically be excavated to facilitate duct laying. Longer lengths of excavation would be avoided by the commitment from UKPN to use a ducted cable system. This allows relatively short lengths of ducting to be installed and long cable lengths to be pulled through later between jointing pits.*

*The actual working area that would be fenced off could be up to c. 300 m to allow for safe clearances, including traffic management. Typical main mobile plant for open trenching would include an excavator with a breaker attachment, a dumper truck and a compactor. A specialist trenching machine may also be used. Where works are close to existing live services, precautionary digging may be undertaken locally by hand.”*

**5.8. Paragraph 3.5.31 of Chapter 3 Project and Site Description of the ES (6.1, Rev1) states that:**

*“It is expected that a typical trench length would be open for around 7 days and that this would be on a rolling basis along the length of the route. The location of jointing pits would need to be determined by subsequent detailed design. Their location would depend on the maximum length the cables can be pulled, which will depend on the number of bends and cable drum lengths. Joint pits may need to be accessed, with an associated working area, to install and joint cables. The expected time for such an installation would be approximately 5 days.”*

**5.9. Trenchless options for the construction of the Electrical Connection have been considered and could be adopted along sections of the route. These limited locations would typically be at bridges, waterways, railway crossings and other structures. Trenchless construction would be supported by a compound, approximately 30m by 20m in area, to contain the necessary construction plant, equipment and materials, as set out at Paragraph 3.5.33 of Chapter 3 Project and Site Description of the ES (6.1, Rev1).**

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5.10. It is therefore expected that the construction period between the vicinity of Erith Roundabout and Boundary Road / Northend Road would take place over a period of approximately 4-6 weeks.

### 6. Conclusion and Options for Further Mitigation

6.1. The available information has shown that the theoretical capacity along A2016 Bronze Age Way, north of Erith Roundabout, is such that a temporary and transient 300m lane closure within the links during construction of the Electrical Connection should not cause undue congestion or disruption.

6.2. From the Erith Roundabout southwards traffic flows are such that a temporary lane closure would only cause little to moderate disruption during the off-peak periods. A northbound lane closure during weekday morning peak periods would, however, cause additional congestion and queueing on the approaches to and when passing the road works due to the temporary lane closures – where peak period queues have been observed to occur between Erith Roundabout and Boundary Road / Northend Road. The extent of the addition to the existing congestion and queueing has not been quantified through software modelling, for the reasons explained below. However it is considered that such an exercise would only demonstrate what has already been observed. Implementing any identified physical mitigation, such as junction alterations / improvements would be disproportionate to the length of time it would take to construct the Electrical Connection and potentially would be more disruptive than the temporary road works.

6.3. The construction of the Electrical Connection between Erith Roundabout and Boundary Street / Northend Road roundabout is predicted to take approximately 4-6 weeks (assuming approximately 200m progress per 7 days).

6.4. Carrying out Transport Planning modelling of the impact of this period is estimated to take no less than six months to collect the requisite traffic data; prepare and fully validate the necessary models; and undertake the scenario testing. Having established the outputs from the models, a strategy for mitigation would need to be formulated and agreed. It is not known what that strategy would entail but, should it suggest physical network changes, it is anticipated that the implementation of those network changes would cause substantially more network disruption than the temporary road works for the construction of the Electrical Connection. The design of the changes would similarly take a long period to prepare, review, conclude and commission.

6.5. The Applicant does not dispute that the construction of the Electrical Connection will cause temporary disruption to the road network – similar to other Statutory Utility roadworks which might be carried out in the area and across the wider network in London. However, there seems little justification in undertaking further and extensive theoretical analysis to demonstrate a point which cannot be proportionately mitigated.

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- 6.6. The Applicant therefore commits to continue to work with the London Borough of Bexley, as Local Highway Authority, and in consultation with TfL, to programme and manage the roadworks in such a way as to seek methods to minimise the impact of the roadworks on the A2016/A206 corridor through the development of an appropriate Construction Traffic Management Plan (CTMP). An outline for that CTMP is provided within the updated Outline CTMP (Rev 1), as submitted at deadline 2, which supersedes the **Outline CTMP, Appendix L** of the **TA, Appendix B.1** of the **ES (6.3, APP-066)**.
- 6.7. The detailed route of the Electrical Connection within the Order Limits, as indicated on the **Works Plans (2.2, Rev1)**, would be communicated to LBB as part of the development of the detailed CTMP. That CTMP is secured at **Requirement 13** of the **draft Development Consent Order (dDCO) (3.1, Rev1)**.
- 6.8. The Electrical Connection contractor will seek to use Erith Station approach to circumvent the northbound exit from Erith Roundabout – unless it is not practicable, economic, efficient or coordinated to do so.
- 6.9. South of the railway crossing on-street parking currently narrows the carriageway to a single lane, as such the lane closure to construct the Electrical Connection would not materially change the width of the corridor at that point. On-street parking would have to be suspended and relocated during that period.
- 6.10. **Section 5.5** of **Chapter 5 ‘Alternatives Considered’** of the **ES (6.1, Rev1)** presents the options which have been explored for the route of the Electrical Connection including a connection to Barking; upgrading existing connections and options within the road route between REP and the Littlebrook sub-station.
- 6.11. The option for the Electrical Connection following Anderson Way; Church Manorway through West Street and Manor Road has been withdrawn, with the **Works Plan (2.2, Rev1)**, duly updated and submitted at Deadline 2.
- 6.12. Defining the construction period, method and management of the Electrical Connection through a detail CTMP will help to minimise impacts and disruption and would be secured through **Requirement 13** of **Schedule 2** of the **dDCO (3.1, Rev1)**.
- 6.13. On the basis of the evolving detail for the Electrical Connection route, the following additional mitigation would be agreed through the finalised CTMP for those works. That mitigation is included at Section 7 in the updated **Outline CTMP (Rev 1)**, as submitted at deadline 2, which supersedes the **Outline CTMP, Appendix L** of the **TA, Appendix B.1** of the **ES (6.3, APP-066)**, as follows:

*“It is the Applicant’s intention to utilise the area in front of Erith Station for the southbound approach to Erith Roundabout. This will avoid cable installation on the immediate southbound approach or northbound exit of that roundabout. The EC will continue offline along an existing footpath and then cross the western arm of the same roundabout before re-joining the main highway.*”

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*For the crossing of the western arm of Erith Roundabout, the Applicant will seek to install ducting during off-peak periods only, although such mitigation may require off-peak closure of inbound and outbound lanes on this arm.*

*If the route has to remain on the main highway north-south through Erith Roundabout then a solution in the southbound carriageway will be sought in preference to using the northbound carriageway. This approach would be further reviewed for the section south toward Colyers Lane.*

*The Applicant will adopt this approach to the route for the Electrical Connection unless it is no longer economic, efficient or coordinated to do so<sup>1</sup>.*

6.14. The complementary reduction in on-site parking to a maximum of 275 spaces would significantly reduce the induced level of workforce traffic on the local road network. This has been proposed and discussed in Technical Note reference TN009 “Further Appraisal of Construction Traffic Impacts on A2016/A206 Corridor”, which has been submitted as part of the response to the Relevant Representation of TfL and LBB and is appended to the draft Statements of Common Ground with those organisations.

6.15. **Paragraphs 6.9.77 and 6.9.78 of Chapter 6 Transport of the ES (6.1, Rev1)** has assessed the impacts of the construction of the Electrical Connection on Driver Delay. It is not contested that the working areas associated with the construction will impact on traffic flow along the corridor but it is concluded that the level of impact would continue to be Minor Adverse, subject to the implementation of a CTMP, secured as **Requirement 13 of the dDCO (3.1, Rev1)**.

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<sup>1</sup> These are obligations on UK Power Networks as a Distribution Licence holder.

**Appendix G Technical Note TN009 – Further  
Appraisal of Construction Traffic Impacts on  
A2016/A206 Corridor**

# TECHNICAL NOTE

**Subject: Further Appraisal of Construction Traffic Impacts on A2016/A206 Corridor**

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## Executive Summary

- i. This technical note has been prepared on behalf of Cory Environmental Holdings Limited (the Applicant), trading as Cory Riverside Energy for Riverside Energy Park, in response to technical matters raised by TfL during engagement and in their Relevant Representation.
- ii. Information and evidence are set out in relation to the predicted construction phase of Riverside Energy Park and the Electrical Connection and:
  - provide a review of the flow characteristics at key junctions on the construction route for Riverside Energy Park;
  - explore the possible temporary impacts of the peak construction period of Riverside Energy Park; and
  - identify measures which would be delivered through a Construction Traffic Management Plan or Plans, secured through **Requirement 13** of **Schedule 2** of the **draft Development Consent Order (3.1, Rev1)**, to reduce the potential impacts of Riverside Energy Park's construction phase in relation to the highway network performance.
- iii. Associated assumptions from the **Transport Assessment, Appendix B.1** of the **Environmental Statement (6.3, Rev1)** are captured and the technical note considers the volume of traffic along the A2016/A206 corridor at the point of the Erith Roundabout and James Watt Way junctions during the morning and evening network peak periods.
- iv. The predicted cumulative peak traffic flows for Riverside Energy Park construction workforce and other construction vehicles for Month 13 of the construction programme are set out and distributed across the highway network as indicated within the **Transport Assessment, Appendix B.1** of the **Environmental Statement (6.3, APP-066)**.
- v. Further to negotiations with TfL, the Applicant is proposing to reduce on-site parking from 552 parking spaces to a maximum of 275 parking spaces. This significantly reduces the projected number of people commuting by car and has a consequential reduction on the flows on the network.
- vi. The information in this technical note shows that the traffic associated with REP during that Month 13 would be applied to the road network prior to the morning peak period and after the evening peak. The cumulative level of flow during those periods, taking into account mitigation through the implementation of a Construction Traffic Management Plan or Plans, would be lower than the existing or projected network peak periods.

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- vii. It is concluded that the reduction in on-site parking; the focus of workforce commuting outside of the network peak periods; and the implementation of Construction Traffic Management Plans during the construction phase would minimise the impact of the construction phase traffic such that the level of impact would be Minor Adverse or Small (in accordance with significance criteria within Table 6.13 of **Chapter 6 Transport** of the **Environmental Statement (6.1, Rev1)**) which would be Not Significant.
- viii. This technical note complements technical note reference TN013 “Traffic flows on A2016 Bronze Age Way and A206 Queens Road/Northend Road - Interface with Electrical Connection Construction Works” which reviews the anticipated impacts of the construction of the Electrical Connection on the operation of the A2016/A206 corridor. That note concludes that with mitigation through a proposed CTMP secured as **Requirement 13** of **Schedule 2** of the **draft Development Consent Order (3.1, Rev1)**, the impact on the SRN would be at most Minor Adverse

### 1. Introduction

- 1.1. This technical note has been prepared on behalf of Cory Environmental Holdings Limited (trading as Cory Riverside Energy (Cory or “the Applicant”)) for Riverside Energy Park (REP), in response to technical matters raised by TfL at meetings held on 22 October 2018, 18 January 2019, 08 February 2019 and 13 March 2019, and related correspondence during that period and within the TfL Relevant Representation (RR) submitted on 12 February 2019.
- 1.2. TfL states in its RR that: “...*given the robust trip generation forecast for the operational phase, TfL considers that the operational traffic impact of the proposed development is unlikely to result in a detrimental impact on the SRN.*”
- 1.3. The RR goes on to state that:

*“The traffic impact of the construction of REP is expected to be significant. TfL concludes that insufficient assessment has been undertaken to provide a realistic estimate of the impact of construction on the junctions along the SRN and therefore on bus services as well, and would therefore object to the current construction proposals. Additional modelling needs to be undertaken to show the impact of construction and mitigation measures must be secured through appropriate legal mechanisms to mitigate the impact.*”

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*The impact of the Electrical Connection construction has not been sufficiently assessed through the TA or CTMP as currently the route has not been chosen, it is unclear how long construction of each section would take and therefore how long lanes would need to be closed and where they would need to be closed. The impact of the lane closures has not been assessed and therefore it cannot be determined if this impact is acceptable at this stage. However, given TfL's understanding of the existing traffic congestion along the A2016, TfL have significant concerns which have not been alleviated. It is noted that TfL would prefer the Electrical Connection to be constructed away from the SRN, as this would reduce the potential for strategic traffic impacts."*

- 1.4. This technical note, therefore, sets out information and evidence relating to the predicted construction phase of REP and the Electrical Connection and:
  - provides a review of the flow characteristics at key junctions on the construction route for REP;
  - explores the possible temporary impacts of the peak construction period of REP; and
  - identifies measures which would be delivered through a Construction Traffic Management Plan (CTMP), secured through **Requirement 13** of **Schedule 2** of the **draft Development Consent Order (dDCO) (3.1, Rev1)**, to reduce the potential impacts of REP's construction phase in relation to the highway network performance – including reference to a similar type of proposal at North London Heat and Power Project and the Silvertown Tunnel proposals – which is not directly comparable in project type but has been granted through the DCO process and with which TfL are familiar.
  
- 1.5. From video footage recorded as part of the traffic survey counts, it is understood that moderate levels of queueing and congestion are present at the following two junctions during the AM and PM peak hours:
  - Erith Roundabout
  - A206 Queens Road/ James Watt Way



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- *Plate 1: Erith Roundabout 2018 AM Peak Period – Bexley Road (west)*



- *Plate 2: James Watt Way junction 2018 AM Peak Period – A206 (camera facing southbound)*

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- 1.6. In contrast, the three junctions near the REP site on A2016 Picardy Manorway – namely A2016/ Clydesdale Way/ Yarnton Way roundabout, A2016/ Norman Road and A2016/ Anderson Way/ B253 – currently operate with a significant amount of spare capacity. This is shown in **Section 6** of the **Transport Assessment (TA), Appendix B.1** of the **ES (6.3 APP-066)**. Furthermore, as shown in TN007 – Construction Phase Sensitivity Test (dated 23/01/19, issued to TfL on 28/01/19), attached as Appendix A to this note, these three junctions on A2016 Picardy Manorway are expected to operate with spare capacity as assessed during the peak period of construction for REP, and based on the robust assumptions adopted within the **TA, Appendix B.1** of the **ES (6.3, APP-066)** for Month 13 (i.e. the highest level of cumulative workforce and construction traffic, anticipated to be during 2022).
- 1.7. The junctions on Picardy Manorway are priority roundabouts and there is no control linkage to the Erith Roundabout (i.e. the junction of Bronze Age Way (A2016)/Bexley Road/Queens Road) or the Queens Road (A206)/James Watt Way traffic signals. The Erith Roundabout is 2.3km from the Picardy Manorway/Anderson Way junction and there is no evidence of interaction between the operation of these junctions. Consequently, this technical note focuses on Erith Roundabout and A206 Queens Road/ James Watt Way during the above peak construction phase for REP.

## 2. REP TA Assumptions

- 2.1. The detailed assumptions and methodology relating to the REP construction phase trip generation have been set out in **Section 4** of the **TA, Appendix B.1** of the **ES (6.3, APP-066)**. The information provided in the **TA, Appendix B.1** of the **ES (6.3, APP-066)** focuses on a robust reasonable worst-case scenario based on the provisional construction information available at the time of writing.
- 2.2. A summary of the assumptions used in the **TA, Appendix B.1** of the **ES (6.3, APP-066)** to derive the construction trip generation is set out below:
  - The construction phase traffic consists of construction material trips, construction worker trips and also trips associated with the construction of the Electrical Connection. The construction worker traffic assumes a majority of arrivals would occur during the AM network peak and departures during the PM network peak periods;
  - A conservative prediction of 1,097 construction workers are projected during Month 13 of the construction programme, which represents the peak period of construction;
  - The parking provision during Month 13 is stated to be 552 parking spaces at the construction compound – as a peak provision;
  - A car driver mode share of 50% is assumed during Month 13 based on: the level of parking provision; the characteristics of London-based construction worker travel patterns; and measures to promote travel by sustainable modes, which would be promoted through CTMP/CTMPs for the works;

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- As part of the reasonable worst case assessment, as expressed at paragraph 4.3.5 of the **TA, Appendix B.1** of the **ES (6.3, APP-066)** the construction workers are assumed to work between 08:00 – 18:00 on a single shift and there would be no turnover of parking spaces; and
  - Census 2011 data were used to determine the car driver distribution for construction workers.
- 2.3. Based on the assumptions adopted within the **TA, Appendix B.1** of the **ES (6.3, APP-066)**, the quantum of construction peak hour traffic during Month 13 of the construction programme at Erith Roundabout and A206 Queens Road/ James Watt Way is shown below in Table 1. Columns 2 and 3 of Table 1 are the traffic flows for the peak period construction workforce and construction materials associated with the construction of REP. Column 4 of Table 1 is the combined predicted workforce and construction vehicle movements associated the construction of the Electrical Connection at Month 13. As a robust working assumption within the **TA, Appendix B.1** of the **ES (6.3, APP-066)**, this traffic has been assigned to the network during the hour preceding the start of the daily construction working period and the hour following the end of the daily construction working period.

*Table 1: Transport Assessment Construction Peak Hour Traffic Movements (Vehicles)*

Junction	REP Construction Worker	REP Construction Material	Electrical Connection Route	Total Movements
Erith Roundabout	256	4	10	270
A206 Queens Road/ James Watt Way	196	4	11	211

- 2.4. As shown in Table 1, the majority of construction traffic during the assessed hours is associated with construction worker trips.

### 3. Existing Flow Profiles

- 3.1. This section provides a review of the traffic profile during the AM and PM peak periods for Erith Roundabout and A206 Queens Road/ James Watt Way based on the traffic surveys undertaken in April and May 2018.

#### Erith Roundabout

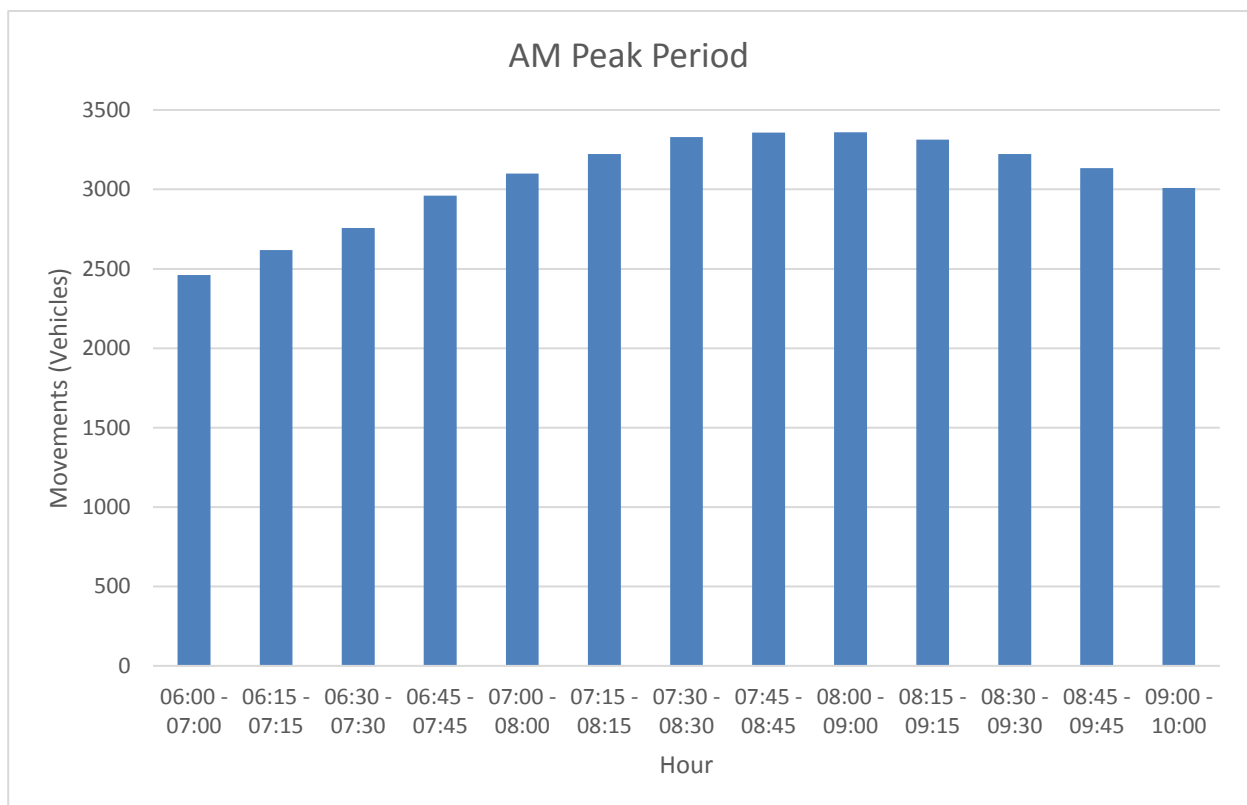
- 3.2. The hourly total junction flows, given in 15-minute increments, is shown in Table 2 (with the peak hour shown in bold) and the profile of the volume of traffic as it builds and diminishes is illustrated in Figures 1 and 2 below.

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Table 2: Erith Roundabout 2018 Total Junction Movements (Vehicles)

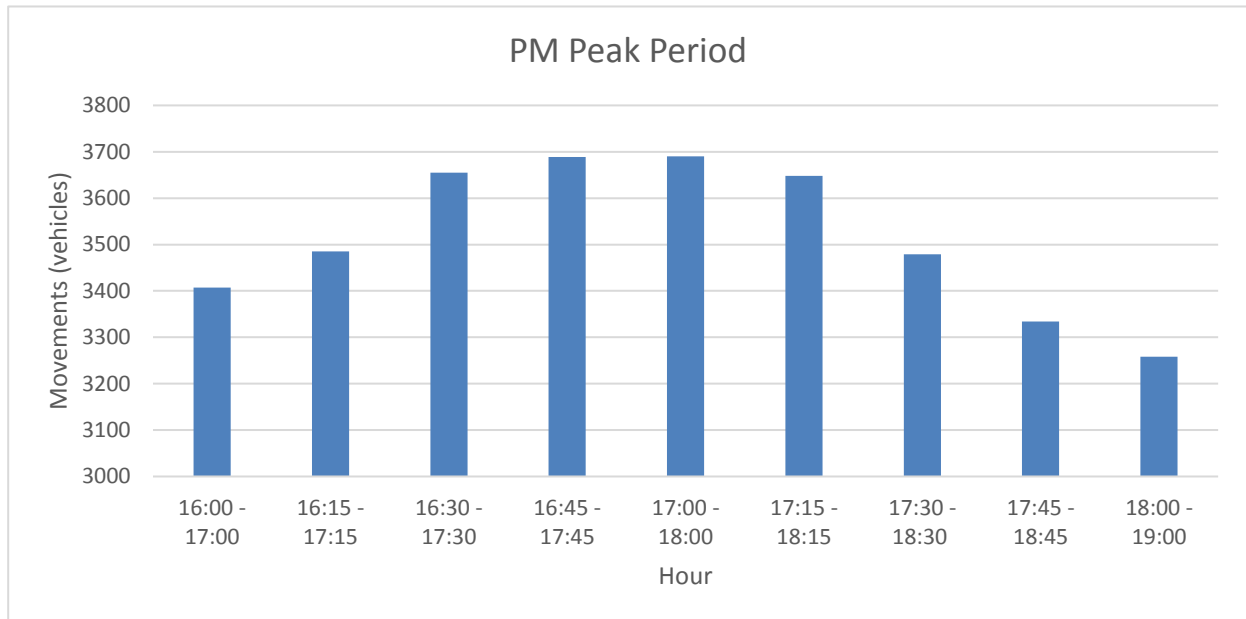
AM Period	Peak	Total Junction Movements	PM Period	Peak	Total Junction Movements
06:00 - 07:00		2460	16:00 - 17:00		3407
06:15 - 07:15		2617	16:15 - 17:15		3485
06:30 - 07:30		2757	16:30 - 17:30		3655
06:45 - 07:45		2960	16:45 - 17:45		3689
07:00 - 08:00		3099	<b>17:00 - 18:00</b>		<b>3690</b>
07:15 - 08:15		3223	17:15 - 18:15		3648
07:30 - 08:30		3329	17:30 - 18:30		3479
07:45 - 08:45		3357	17:45 - 18:45		3334
<b>08:00 - 09:00</b>		<b>3360</b>	18:00 - 19:00		3258
08:15 - 09:15		3314			
08:30 - 09:30		3222			
08:45 - 09:45		3133			
09:00 - 10:00		3008			

Figure 1: Erith Roundabout 2018 AM Peak Period Flow Profile



## TECHNICAL NOTE

Figure 2: Erith Roundabout 2018 PM Peak Period Flow Profile



- 3.3. As indicated above, the observed AM and PM peak hours for Erith Roundabout are between 08:00-09:00 and 17:00-18:00 respectively. Overall, it is evident that the junction flows have a single peak in the AM and PM peak hours and flows are significantly lower prior to 08:00 and after 17:30.
- 3.4. The difference in flow between the AM peak hour of 08:00-09:00 and the 06:00-07:00 hour is 900 vehicles (26.8% reduction).
- 3.5. The difference in flow between the PM peak hour of 17:00-18:00 and the 18:00-19:00 hour is 432 vehicles (11.7% reduction).

### A206 Queens Road/ James Watt Way

- 3.6. The hourly total junction flows, given in 15-minute increments, are shown in Table 3 (with the peak hour shown in bold) and the profile of the volume of traffic as it builds and diminishes is illustrated in Figures 3 and 4 below.

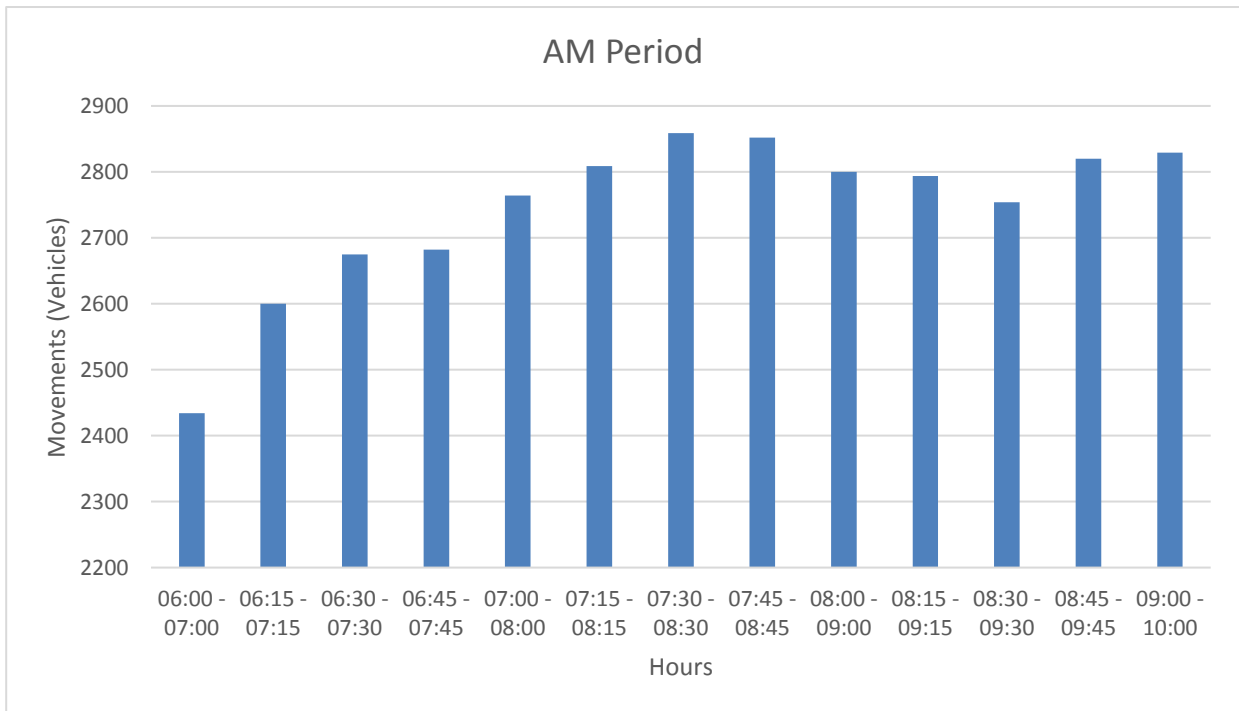
Table 3: A206 Queens Road/ James Watt Way 2018 Total Junction Movements (Vehicles)

AM Period	Peak	Total Junction Movements	PM Period	Peak	Total Junction Movements
06:00 - 07:00		2434	16:00 - 17:00		3305
06:15 - 07:15		2600	16:15 - 17:15		3275
06:30 - 07:30		2675	<b>16:30 - 17:30</b>	<b>3307</b>	
06:45 - 07:45		2682	16:45 - 17:45		3248
07:00 - 08:00		2764	17:00 - 18:00		3215
07:15 - 08:15		2809	17:15 - 18:15		3154
<b>07:30 - 08:30</b>	<b>2859</b>		17:30 - 18:30		3022
07:45 - 08:45		2852	17:45 - 18:45		2935

# TECHNICAL NOTE

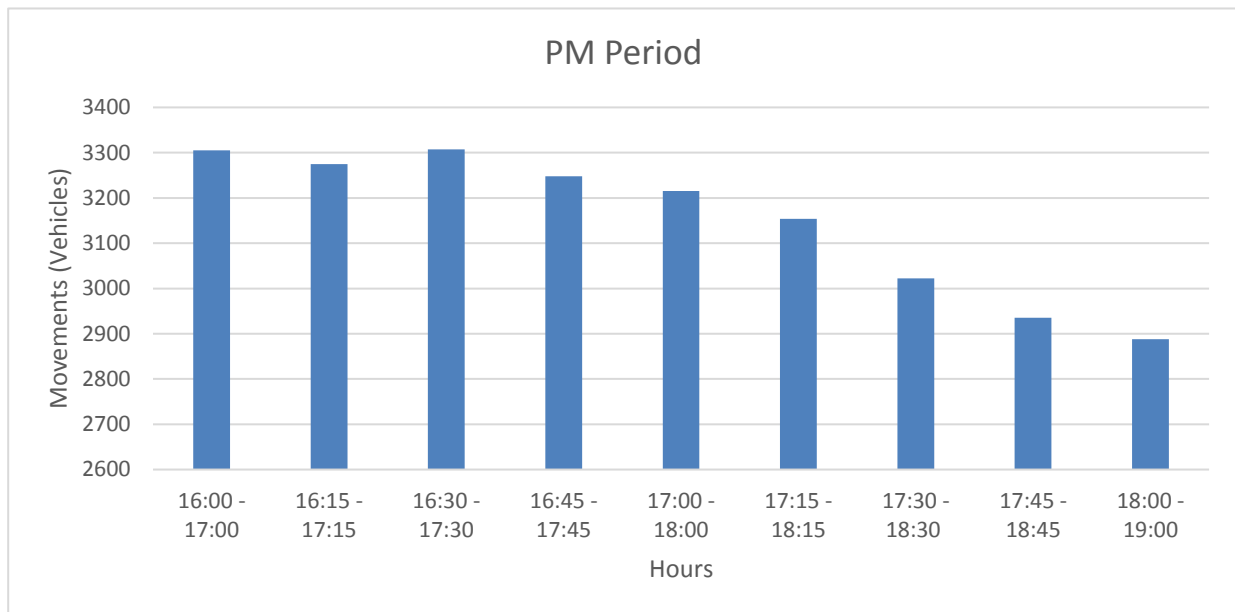
AM Period	Peak	Total Junction Movements	PM Period	Peak	Total Junction Movements
08:00 - 09:00		2800	18:00 - 19:00		2888
08:15 - 09:15		2794			
08:30 - 09:30		2754			
08:45 - 09:45		2820			
09:00 - 10:00		2829			

Figure 3: A206 Queens Road/ James Watt Way 2018 AM Peak Period Flow Profile



## TECHNICAL NOTE

Figure 4: A206 Queens Road/ James Watt Way 2018 PM Peak Period Flow Profile



- 3.7. As indicated above, the observed AM and PM peak hours for A206 Queens Road/ James Watt Way are between 07:30-08:30 and 16:30-17:30 respectively. Similar to Erith Roundabout, the total junction flows increase significantly between the start of the survey at 06:00 to the AM peak hour and reduce significantly between the PM peak hour and 19:00 at the end of the survey period.
- 3.8. The difference in flow between the AM peak hour of 07:30-08:30 and 06:00-07:00 is 425 vehicles (a 14.9% reduction).
- 3.9. The difference in flow between the PM peak hour of 16:30-17:30 and 18:00-19:00 is 419 vehicles (a 12.7% reduction).
- 3.10. This section of the note provides observed information on the profile of traffic volumes during the peak hour periods at the junctions of A2016 Erith Roundabout and at the traffic signal junction of A206 James Watt Way. The information was collected in April and May 2018 to inform the development of **Chapter 6 Transport** of the **ES (6.1, Rev1)** and the **TA, Appendix B.1** of the **ES (6.3 APP-066)**. The data show that each junction has a peaked profile in both the morning and evening.

# TECHNICAL NOTE

## 4. Construction Programme and Workforce

- 4.1. The indicative programme, described at **Section 3.5 Construction and Commissioning of Chapter 3 Project and Site Description (6.1, Rev1)**, is used within **Chapter 6 Transport of the ES (6.1, Rev1)** and the **TA, Appendix B.1 of the ES (6.3, APP-066)** to inform the conservative predictions of construction phase impact. That programme has been informed by the construction phase of the Riverside Resource Recovery Facility (RRRF) and the knowledge and experience of similar projects constructed in the UK and globally by the preferred Principal Contractor, HZI. The CTMP/CTMPs, to be developed and agreed in line with **Requirement 13 of Schedule 2 of the dDCO (3.1, Rev1)** will confirm the detailed programme and the tasks to be carried out during each period of works and the associated workforce projections. The anticipated transport impact mitigation processes and initiatives to be adopted to minimise the impact of induced transport and travel from the construction of REP and the Electrical Connection are illustrated through the updated Outline CTMP (Rev 1), as submitted at deadline 2, which supersedes the **Outline CTMP, Appendix L of the TA, Appendix B.1 of the ES (6.3, APP-066)**. **Paragraph 3.5.5. Chapter 3 Project and Site Description (6.1, Rev1)** states that REP would be constructed over a 36-month programme with the cumulative peak of construction material movement and workforce numbers occurring at Month 13 of that programme.
- 4.2. Aligned with the indicative construction programme, the estimates of the REP construction workforce, including the associated Electrical Connection, are based on the global 'worst case' experience of HZI and in the UK that of the anticipated Electrical Connection contractor, UKPN.
- 4.3. The specific type and nature of this construction project depends upon the Principal Contractor employing an array of specialist contractors and sub-contractors; skilled and semi-skilled labour. Tasks within the programme for a project of this type and scale can require different teams of personnel, with some teams having only a short-term involvement in the project.
- 4.4. HZI advises that it envisages employing over 100 different types of trade, from accountants, administrators and agents to supervisors, surveyors and welders. It is estimated that there will be an average workforce of 837 FTEs during the construction phase (**ES Chapter 14 Socio-economics – 6.1, Rev1**) with a peak of 1,097. At the peak construction period it is anticipated that between 65% and 75% of the workforce will be labour with the remaining being management, design and administration staff.



## TECHNICAL NOTE

- 4.5. In light of the anticipated workforce numbers, at the Applicant's request and having regard to TfL's RR, HZI has been asked to review the proposed Main Temporary Construction Compound, on Norman Road, with a view to determining the 'minimum' appropriate and practicable quantum of parking which could be accommodated on site whilst retaining sufficient space for complementary storage, welfare, circulation and operational space. Taking this, and the review of specific staff requirements, it is concluded that in the region of 275 vehicle parking spaces could be provided (significantly reduced from the previously assessed 552 spaces). Suitable access to the compound would be retained for construction vehicle movements for plant, materials and equipment deliveries. The Applicant is incentivised to minimise parking provision in the interests of finance and land requirements.
- 4.6. A reduced ceiling of 275 vehicle parking spaces equates to just over 30% of average workforce projection, reducing to 25% at the peak level. This reflects: the size and form of the proposed Main Temporary Construction Compound, as identified in the **Works Plans (2.2, Rev1)**; the likely mix of trades and workforce during the construction peak period; and robust discussions between the Applicant and the Preferred Contractor.
- 4.7. It should be noted that the smaller 700,000 tonnes per annum North London Heat and Power Project (NLH&PP) provided at least 225 car and van parking spaces with an undefined number of additional spaces at a neighbouring compound, and 45 large vehicle parking spaces (shuttle buses and crew buses). The TA prepared for the **NLH&PP DCO (Application ref. EN010071, APP-030)** states that the projected peak workforce at NLH&PP was 550 workers. This gives a workforce parking provision of approximately 41% (excluding the unquantified additional parking spaces on the neighbouring compound). A significantly higher ratio of spaces to workers than is proposed for the construction of REP. REP is also a more complex project involving the integration of several different power relation technologies including ERF, anaerobic digestion, battery storage and solar.
- 4.8. An HZI ERF project in the North of England has provided in excess of 350 workforce parking spaces.
- 4.9. The commitment in this section of the note caps on-site workforce parking at 275 spaces and is informed by a pragmatic review of the proposed Main Temporary Construction Compounds and the experiences of the preferred Principal Contractor on similar projects. **Section 5** below sets out the measures to be taken to enable construction work travel to occur within the limit on car parking proposed.

# TECHNICAL NOTE

## 5. Possible Mitigation Measures

- 5.1. The Main Temporary Construction Compound is judged to have a rating of PTAL1a/1b, with Picardy Manorway being PTAL2 and Belvedere Station PTAL3. With the opening of the Elizabeth Line to Abbey Wood, currently expected to be during 2020/21, connectivity in the immediate area and region will be significantly increased once opened. The Applicant would work with the Principal Contractor, key sub-contractors, London Borough of Bexley and TfL to explore opportunities to promote and facilitate commuting by environmentally friendly means. Progress in this matter would be captured in the agreed CTMP for the respective works.
- 5.2. Reflecting the level of accessibility to the compound and the likely working pattern of much of the workforce it is considered essential that an allowance for access by private car is made as REP is not in a city centre location and public transport would not be available or feasible for all employees.
- 5.3. The proposal to provide a maximum of 275 parking spaces is considered to be an appropriate quantum whilst continuing to expect a large proportion of the workforce to travel by public transport, walking or cycling.
- 5.4. The CTMP, secured through **Requirement 13 of Schedule 2 of the dDCO (3.1, Rev1)**, would include possible control measures to reduce peak period vehicle flows associated with the construction of REP in relation to the highway network performance. These initiatives, captured within the updated Outline CTMP (Rev 1), as submitted at deadline 2, which supersedes the **Outline CTMP, Appendix L of the TA, Appendix B.1 of the ES (6.3, APP-066)**, could comprise the following:
  - Reduction in the car-driver mode share for the construction workers through measures such as a reduced car parking provision – phased to reflect the prevailing quantum and make-up of workforce;
  - Minimising commuting movements during the AM and PM peak hours – by scheduling shifts and working hours to periods when network flows are lower and spreading arrivals and departures across a longer window;
  - Allowing flexible working hours where appropriate within the defined working hours identified in **Requirement 12 of Schedule 2 of the dDCO (3.1, Rev1)** and the **Outline Code of Construction Practice (7.5, Rev1)**;
  - reconfirming the profile of the number of personnel on-site during the peak construction process; and
  - Pursuing and managing a robust Construction Worker Travel Plan with the applicable CTMP, agreed with the Local Highway Authority and, as appropriate, TfL.

## TECHNICAL NOTE

- 5.5. Based on the significantly reduced level of parking provision, the construction peak hour traffic during Month 13 at Erith Roundabout and A206 Queens Road/ James Watt Way is as shown in Table 4. Here the total junction flows induced by REP have reduced significantly compared to the original total junction flows shown in Table 1 and repeated at Table 4. Appendix B, of this note, provides the network diagrams showing how the construction peak hour traffic is distributed.

*Table 4: Revised Construction Peak Hour Traffic Flows (Vehicle movements)*

Junction	Construction Worker	Construction Material	Electrical Connection Route	Total Movements	TA Total Movements
Erith Roundabout	129	4	10	<b>143</b>	270
A206 Queens Road/ James Watt Way	99	4	11	<b>114</b>	211

- 5.6. The capped on-site parking provision and the implementation of workforce travel plan initiatives, which are outlined within the updated Outline CTMP (Rev 1), as submitted at deadline 2, which supersedes the **Outline CTMP, Appendix L** of the **TA, Appendix B.1** of the **ES (6.3, APP-066)**, would result in a significant reduction in the number of vehicle movements associated with the construction phase of the REP site when compared to those movements assessed in **Chapter 6 Transport** of the **ES (6.1, Rev1)** and the **TA, Appendix B.1** of the **ES (6.3, APP-066)**.

### 6. Minimising vehicle movements during the AM and PM peak hours

- 6.1. The **TA, Appendix B.1** of the **ES (6.3, APP-066)** is based on the construction workers working between 08:00 – 18:00 on a single shift – as a reasonable worst case assessment to indicate the impact on the network if workers were all to arrive and depart around the network peak periods. This does not include those working on the construction of the Electrical Connection route.
- 6.2. Following discussions with HZI, and by reference to the construction hours provided in **Requirement 12 at Schedule 2** to the **dDCO (3.1, Rev1)** and set out at **Section 3.2** of the **Code of Construction Practice (7.5, Rev1)**, the Applicant's contractor would adopt a construction working day of 07:00 to 19:00 (Monday to Friday) and 07:00-13:00 on Saturday for the main works, with other task teams perhaps operating different hours within that window. Furthermore, there are many other variables which could affect the movement profile and result in a broader peak arrival and departure profile with earlier arrivals in the morning and later departures in the evening. These include:
- Toolbox talks and briefings prior to the start of the construction working day;
  - The need for changing into PPE before and after shifts;
  - Some flexibility due to tasks and co-ordination with other workstream; and
  - Occasional extended pours or other time critical operations.

## TECHNICAL NOTE

- 6.3. Whilst the figures shown in Table 5 assume the workforce would arrive within a single hour period, it is highly improbable that this would be the case in practice. The arrival period would also be prior to the AM network peak period and after the PM peak and the robust assumption for the cumulative vehicle movements (i.e. base traffic plus REP) would be significantly below the level of the peak period.
- 6.4. The **TA, Appendix B.1** of the **ES (6.3, APP-066)**, has assessed a robust scenario for the construction period. Through the capped reduction in workforce travel by car or van and those workers commuting outside the network peak period, the impacts on the network are substantially reduced from those assessed in the **TA, Appendix B.1** of the **ES (6.3, APP-066)**.

### 7. Residual Construction Phase Movements

- 7.1. The arrival and departure pattern for the construction workforce would be such that the majority of movements would occur outside the network peak period, significantly reducing the potential impact on the operation of the network. A robust assumption would be that all workers arrive between 06:00 and 07:00. The flow at that time would be as indicated in Table 5. The figures in Table 5 have been factored to include 2022 TEMPro<sup>1</sup> growth (Factors: 1.026 off peak & 1.0345 for the AM peak) and include the requisite Committed Development flows at that time period, as set out within the **Table 6.2 Committed Developments Assessed** of the **TA, Appendix B.1** of the **ES (6.3, APP-066)**.
- 7.2. Data have been collected for the PM period to 19:00 which show a reducing flow from around 18:00. That data does not cover the predicted workforce egress period, i.e. after 19:00.

Table 5: Revised 2022 AM Peak Period Traffic Movements (Vehicles)

Junction	06:00-07:00			Peak hour Erith Rbt - 08:00-09:00 / James Watt Way -07:30-08:30			
	2022 Base + Comm. Devel.	REP movements	Combined	2022 Base + Comm. Devel.	Difference	2018 Observed	Difference
Erith Roundabout	2525	143	2668	3889	<b>1221</b>	3360	<b>692</b>
A206 Queens Road/ James Watt Way	2498	114	2612	3300	<b>688</b>	2859	<b>247</b>

<sup>1</sup> TEMPro: Trip End Model Presentation Program (TEMPro) v7.2 – Government advised geographic specific forecasts for adjustments to trip ends.

## TECHNICAL NOTE

- 7.3. In Table 5 it is assumed that all of the predicted workforce commuting occurs during 06:00-07:00. These flows are then added to the predicted base traffic for that hour and give combined flows of 2,668 and 2,612 for the Erith Roundabout and James Watt Way, respectively. Comparing those combined flows to the predicted peak hour base + committed development flows shows that the 06:00-07:00 combined flows would be 1,221 and 688 vehicles fewer than the peak hour flows. The current observed 2018 peak hour traffic is 692 and 247 vehicles greater at Erith Roundabout and James Watt Way, respectively, than the predicted 06:00-07:00 combined 2022 traffic flows.
- 7.4. Snapshots have been taken of the operation of these two junctions during periods of flow similar to the predicted 2022 06:00-07:00 traffic flows. For Bexley Road that magnitude of flow is represented by the hour between 06:30-07:30 (observed as 2,757 vehicles) and for James Watt Way by the hour 06:15-07:15 (observed as 2,600 vehicles).
- 7.5. The images, presented at Appendix C, indicate that the junctions are running below capacity without static queueing. Video files of the junction observations can be supplied, as required.
- 7.6. At Erith Roundabout, vehicles were observed to arrive in platoons from the traffic signals at James Watt Way. At that time those vehicles were able to flow through the roundabout with little hindrance and left the junction some seconds before the next platoon. The priority controlled nature of junctions to the north of Erith Roundabout meant that vehicle arrivals were more dispersed on the northern arm of the junction. The traffic load from the east out of Erith was relatively light. Traffic flow from the west on Bexley Road was moderate and intermittently interrupted by the pedestrian crossing immediately west of Erith Roundabout or the operation of the roundabout at Fraser Road (South Circular). Queues that formed on the entry to the roundabout due to the interruption in flow quickly dissipated. Exits from the junction were not blocked, with the exception of those occasions when the pedestrian crossing was called.
- 7.7. The traffic signals at James Watt Way were observed to operate with ample spare capacity. Traffic built on each arm whilst waiting for the next green light. That traffic was able to leave the junction unhindered as there was no congestion downstream of the junction. Traffic demand on the James Watt Way arm was light with only a few vehicles through in each stage.
- 7.8. The observations of the hours identified above show that the junctions would not be saturated at the predicted volume of traffic, including the REP workforce and construction traffic during morning arrivals.

## TECHNICAL NOTE

- 7.9. Video evidence and traffic data are not available for the period after 19:00 but the trend in traffic volume for each junction prior to 19:00 indicates a downward trend, and so it can be confidently assumed that flow through the junctions would continue to decrease. Looking at the trend information it is estimated that base traffic + REP workforce traffic would be similar to the flow through the junctions in the period currently preceding 19:00. Video snapshots of that period are included at Appendix C and indicate that the junction is busy, but traffic continues to flow and the junctions operate without substantial queuing.
- 7.10. Automatic Traffic Counter data for a week in April 2018 have been reviewed for the northern end of Bronze Age Way. The data show a typical daily variation in traffic between the lowest and the highest observed flow for that hour period of 70-150 vehicles northbound (depending on the hour period considered) and a variation of approximately 25-60 vehicles southbound. The summary in Table 6 shows that the variation in flow is similar in magnitude to the peak prediction for REP construction traffic.

*Table 6: AM Peak Period Daily Variation in Traffic Movements (Vehicles)- Bronze Age Way north*

Time	Daily Variation		
	Northbound	Southbound	Two-way
06:00-07:00	100	57	157
06:15-07:15	121	35	156
06:30-07:30	128	51	179
06:45-07:45	152	48	200
07:00-08:00	148	44	192
07:15-08:15	105	38	143
07:30-08:30	94	43	137
07:45-08:45	72	25	97
08:00-09:00	82	53	135

- 7.11. **Sections 5 and 6** of this note establish that the vehicle movements associated with the construction phase of the REP site would be capped on-site for workforce car or van based travel and that those people would commute at periods outside the main network peaks. **Section 7** has shown that applying those movements to the network off peak, when the workforce would be expected to travel to the site, would result in a lesser volume of traffic than the current peak periods. The predicted traffic volumes including the REP construction workforce and materials vehicles are also lower than the projected increased traffic volumes (without REP construction traffic) in the 2022 forecast year.
- 7.12. Periods of traffic flow similar to that predicted for the workforce travel (as set out at paragraph 7.4) have been observed at the junctions of Erith Roundabout and James Watt Way, using the video captured for the traffic count data in April and May 2018. Those periods represent a similar operation of the junctions for the anticipated morning commuting volumes during the peak construction period at the REP site. That video evidence has shown that the junctions continue to operate with few delays or queues. Furthermore, those junctions experience daily variations in traffic volumes which could be equivalent to the projected increase in the REP site construction traffic.

## TECHNICAL NOTE

7.13. Video evidence also suggests that those junctions are expected also to operate within theoretical capacity during the evening commuting period – which would be after the network peak period.

### 8. Summary and Conclusion of Impacts Due to REP Site Movements

- 8.1. The Applicant has committed to substantially reduce the number of parking spaces to be provided within the Main Temporary Construction Compound which will almost halve the number of workers commuting by car or van.
- 8.2. Through detailed consideration of the indicative construction period within **Section 3.5 Construction and Commissioning of Chapter 3 Project and Site Description (6.1, Rev1)** and analysis of the interaction of construction tasks during the peak working period the Principal Contractor and its sub-contractors will seek to profile their workforce numbers to minimise commuting travel on the peak periods of the local road network.
- 8.3. It is shown that predicted peak period construction-related vehicle movements would be substantially lower than the estimates presented in **ES Chapter 6 Transport (6.1, Rev1)** and the **TA, Appendix B.1** of the **ES (6.3, APP-066)**. Furthermore it has been shown that those lesser vehicle movements would be largely on the local network prior to the morning network peak period and after the evening network peak period. During those times the volume of traffic would be at levels similar to periods where the network currently operates without significant delays or queuing – i.e. within theoretical capacity and below the current or predicted peak volumes (excluding the REP site construction traffic).
- 8.4. It is proposed that the reduced on-site parking provision can be captured through the detailed CTMP for the associated works period (to be secured through **Requirement 13** of **Schedule 2** of the **dDCO (3.1, Rev1)**) and that the commitment to this is recognised within the Statement of Common Ground (SoCG) between TfL and the Applicant. This would seek to secure the reduction in parking numbers, from those set out in **Chapter 6 Transport** of the **ES (6.1, Rev1)** and the **TA, Appendix B.1** of the **ES (6.3, APP-066)**, and would allow TfL to agree the parking provision (and associated vehicle movements) as a consultee to the approval process for the CTMP. The construction phase assessment of transport impacts presented in **Chapter 6 Transport** of the **ES (6.1, Rev1)** and the **TA, Appendix B.1** of the **ES (6.3, APP-066)** is considered to remain robust.
- 8.5. The updated Outline CTMP (Rev 1), as submitted at deadline 2, which supersedes the **Outline CTMP, Appendix L** of the **TA, Appendix B.1** of the **ES (6.3, APP-066)** amends the on-site parking provision to refer to a maximum of 275 parking spaces.

## TECHNICAL NOTE

- 8.6. The SoCG would confirm that the assessment of construction traffic impacts presented in ES **Chapter 6 Transport (6.1, Rev1)** and the **TA, Appendix B.1** of the ES **(6.3, APP-066)** are appropriate. It is proposed that this technical note would be appended to the SoCG and the following wording included in the body of the SoCG:

*“TfL acknowledges the REP TA assessment in relation to the construction and decommissioning phase impacts for the REP site is appropriate and robust, further to the revised workforce travel impact information and the reduced on-site parking provision to a maximum of 275 spaces. That revised information is set out and appraised in the technical note TN009 Further Appraisal of Construction Traffic Impacts on A2016/A206 Corridor (Appendix A to this SoCG). This revision is confirmed through the updated Outline CTMP (Rev 1), as submitted at deadline 2, which supersedes the **Outline CTMP, Appendix L** of the **TA, Appendix B.1** of the **ES (6.3, APP-066)**, and subsequently agreed within an appropriate Construction Traffic Management Plan to be agreed with LBB in consultation with TfL. TfL has no objection to the potential effects arising from the construction process for the REP.”*

## 9. Construction of the Electrical Connection

- 9.1. The route of the Electrical Connection is identified in the Application and shown on the **Works Plans (2.2, Rev1)**. That corridor largely follows the line of the A2016/A206 from Norman Road to Bob Dunn Way. Options were identified and included sections of roads through Erith (approximately parallel to the preferred corridor).
- 9.2. The Electrical Connection route has been selected and follows the A2016/A206 corridor. The interface between the construction of the Electrical Connection and the A2016/A206 corridor is considered in technical note reference TN013 “Traffic flows on A2016 Bronze Age Way and A206 Queens Road/Northend Road - Interface with Electrical Connection Construction Works”, which complements this technical note as a response to the Relevant Representation of TfL.

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### DOCUMENT ISSUE RECORD

Technical Note No	Rev	Date	Prepared	Checked	Reviewed (Discipline Lead)	Approved (Project Director)
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# TECHNICAL NOTE

## Appendix A – Technical Note TN007 - Construction Phase Sensitivity Test

[Dated: 23 January 2019)

## TECHNICAL NOTE

**Job Name:** Riverside Energy Park  
**Job No:** 42166  
**Note No:** TN007  
**Date:** 23/01/2019  
**Prepared By:** Morteza M.Nejad  
**Subject:** Construction Phase Sensitivity Test

### Introduction

This technical note provides a review of the maximum capacity of local junctions during the construction phase of the proposed development at Riverside Energy Park (REP).

At the pre-application meeting held on 9<sup>th</sup> October 2018, TfL officers requested that the maximum capacity of the three junctions on Picardy Manorway during the peak construction period in 2022 should be assessed in order to determine if the peak construction traffic, as set out in Section 4 of the REP Transport Assessment (TA), could be accommodated at the local junctions and to subsequently inform discussions on the effective operation of the network during the construction stages. The three local junctions assessed are as follows:

- Junciton 1 - A2016/ Clydesdale Way/ Yarnton Way roundabout (ARCADY)
- Junciton 2 - A2016/ Norman Road (LINSIG)
- Junciton 3 - A2016/ Anderson Way/ B253

### Assumptions and Scenarios Tested

As set out in Section 4 of the REP TA, the construction phase traffic consists of construction material trips, construction worker trips and also trips associated with the construction of the Electrical Connection Route. The peak period of construction is expected to be in the year of 2022 which would be month 13 of the construction programme. This peak in construction related traffic is the period during which the greatest number of construction workers are expected to be required onsite.

It has been projected that approximately 1097 workers would be operating at the worksite at REP at the peak month 13. Of those workers, the current parking proposal allows for 552 parking spaces at the construction compound and has been used as an proxy for car based travel during that period. The construction peak is projected to be short-lived and would half in magnitude within 3 months either side of the peak month.

*Table 1: Illustration of predicted construction workforce numbers per month*

<b>Month</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>
Personnel	0	0	49	50	143	147	156	202	205	377	556	989	1097	696	549
Parking	0	0	43	44	96	99	107	123	126	209	297	501	552	359	291
<b>Month</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>
Personnel	497	575	441	413	341	330	334	289	291	234	207	179	96	91	85
Parking	267	305	244	231	198	194	196	171	171	147	130	110	74	71	67
<b>Month</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>
Personnel	78	108	106	103	99	98	169	83	83	83	83	83	83	83	83
Parking	63	95	93	91	87	86	76	0	0	0	0	0	0	0	0

Construction workers are assumed to work between 08:00 – 18:00, with arrivals taking place between 07:00 – 08:00 and departures between 18:00 – 19:00. This is a worst case assumption as the arrival/ departure of workers and contractors are likely to be spread across a longer arrival and departure period.

There are many variables which would affect the movement profile including:

## TECHNICAL NOTE

- Toolbox talks + briefings;
- changing/PPE in-out;
- flexibility due to tasks + co-ordination with other workstream; and
- extended pours etc

All other key assumptions have been set out in detail in Section 4 of the REP TA.

The following three time periods have been tested for the year of 2022 assuming that 100% of the construction workforce would arrive during the hour tested:

- 06:00 – 07:00
- 07:00 – 08:00
- 07:30 – 08:30

The traffic flows tested include background traffic growth and flows associated with committed developments, as set out in Section 6 of the REP TA.

### Summary of Results

The three time periods stated above have been tested with 100% of the construction traffic. Additionally, for the 07:30-08:30 time period which has the highest level of background traffic, another test has been undertaken in which the construction traffic is proportionally increased until the junction operates above maximum capacity. A summary of the results have been shown in Table 1 below and full modelling outputs provided in Appendix A.

The construction programme would be developed during the lead into the start of construction and would be reflected in the Construction Traffic Management Plan (CTMP). The CTMP would reflect the refined predictions of workforce numbers and set out the measures that could be adopted to reduce further the percentage of the workforce commuting by car and reduce the number of cars using the network during peak times. The CTMP would allow for emerging changes to the local road network, which may include alterations to the A2016 / Bexley Road roundabout.

*Table 2: Summary of Junction Modelling Results*

Time	Junction 1 RFC		Junction 2 DOS		Junction 3 RFC	
	100% construction traffic	152% Construction Traffic	100% construction traffic	225% construction traffic	100% construction traffic	160% Construction Traffic
06:00-07:00	0.61	-	59.8%	-	0.69	-
07:00-08:00	0.78	-	75.2%	-	0.81	-
07:30-08:30	0.82	1.02	77.4%	103.6%	0.83	1.03

It is evident that all three junctions assessed operate with spare capacity with 100% of construction traffic flows during the peak period of construction. The tests show that the junctions reach maximum capacity during the 07:30 – 08:30 time period if the following levels of construction traffic were to be applied:

- Junction 1: 152% of construction traffic – 870 PCUs
- Junction 2: 225% of construction traffic – 2243 PCUs
- Junction 3: 160% of construction traffic – 698 PCUs

Overall, it has been shown that the three junctions on Picardy Manorway are able to operate with no issues during the peak period of construction in the year 2022.

# TECHNICAL NOTE

## Appendix A: Modelling Outputs

<b>Junctions 9</b>
<b>ARCADY 9 - Roundabout Module</b>
Version: 9.0.2.5947 © Copyright TRL Limited, 2017
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk
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Filename: Junction 1\_Failure Test\_152.j9  
 Path: \\pba.int\cbh\Projects\42166 Riverside 2\Transport\5. Drawings & Models\Traffic Modelling\Failure Tests\AM Peak  
 Report generation date: 24/01/2019 11:11:43

- »2022 DS AM - 100% Construction Traffic, 0600 - 0700
- »2022 DS AM - 100% Construction Traffic, 0700 - 0800
- »2022 DS AM - 100% Construction Traffic, 0730 - 0830
- »2022 DS AM - 152% Construction Traffic, 0730 - 0830

**Summary of junction performance**

	0600 - 0700				0700 - 0800				0730 - 0830			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2022 DS AM - 100% Construction Traffic</b>												
1 - A2016 Picardy Manorway	1.7	3.46	0.61	A	3.9	6.22	0.78	A	4.8	7.38	0.82	A
2 - Clydesdale Way	0.1	8.65	0.10	A	0.3	20.69	0.24	C	0.6	32.15	0.38	D
3 - Yarnton Way	0.3	2.62	0.19	A	0.4	3.51	0.28	A	0.6	3.77	0.34	A
4 - A2016 Eastern Way	0.8	3.57	0.41	A	1.2	4.53	0.53	A	1.6	5.47	0.59	A
<b>2022 DS AM - 152% Construction Traffic</b>												
1 - A2016 Picardy Manorway									9.3	13.35	0.90	B
2 - Clydesdale Way									5.4	250.28	1.02	F
3 - Yarnton Way									0.7	4.68	0.39	A
4 - A2016 Eastern Way									2.6	8.25	0.70	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

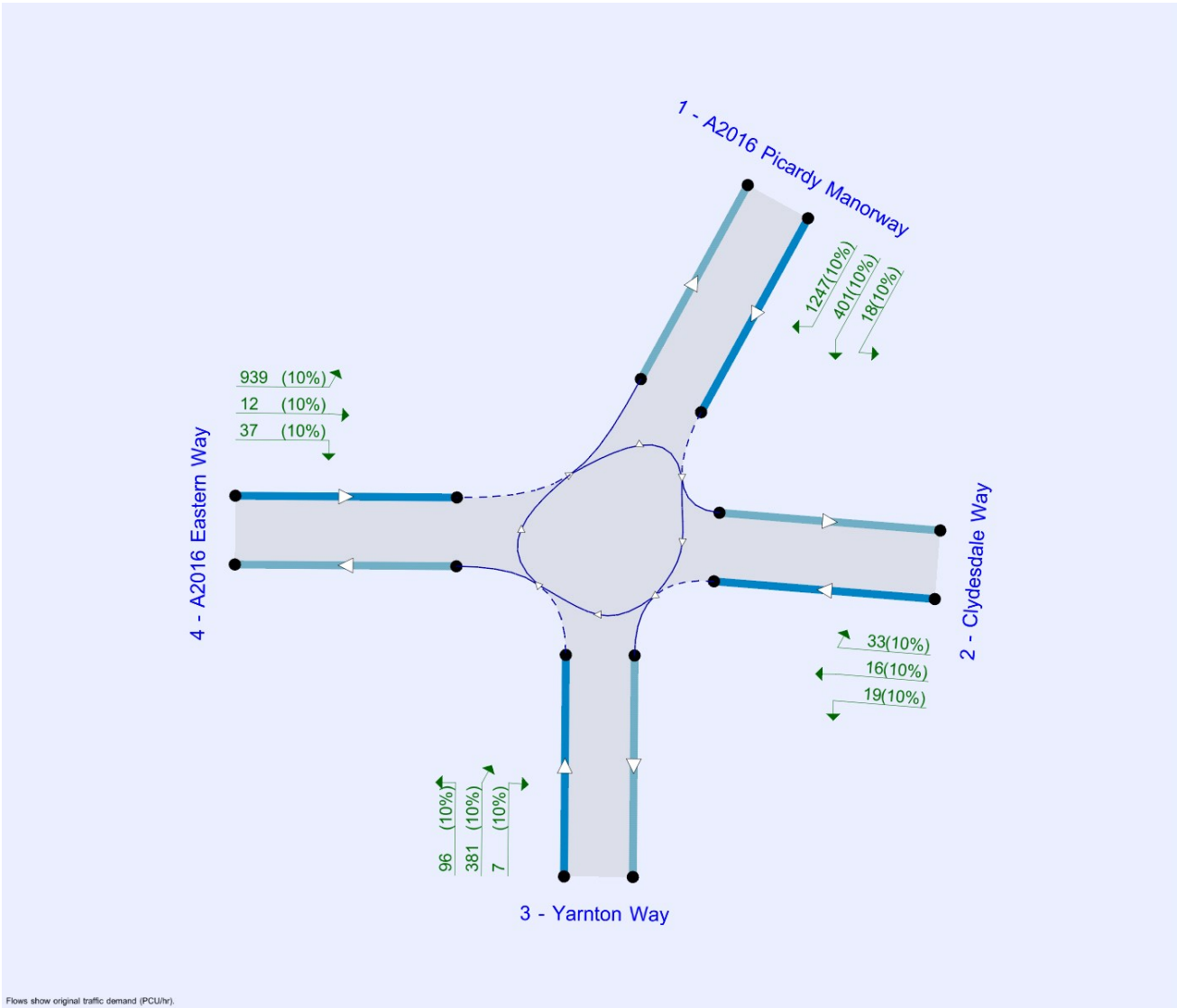
**File summary**

**File Description**

<b>Title</b>	Junction 1 - Sensitivity Test
<b>Location</b>	Picardy Manorway/Eastern Way
<b>Site number</b>	
<b>Date</b>	09/07/2018
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	PBA\jtsmith
<b>Description</b>	

**Units**

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



Flows show original traffic demand (PCU/hr).  
The junction diagram reflects the last run of Junctions.

**Analysis Options**

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

**Demand Set Summary**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 DS AM - 100% Construction Traffic	0600 - 0700	ONE HOUR	05:45	07:15	15
D5	2022 DS AM - 100% Construction Traffic	0700 - 0800	ONE HOUR	06:45	08:15	15
D8	2022 DS AM - 100% Construction Traffic	0730 - 0830	ONE HOUR	07:15	08:45	15
D9	2022 DS AM - 152% Construction Traffic	0730 - 0830	ONE HOUR	07:15	08:45	15

**Analysis Set Details**

ID	Network flow scaling factor (%)
A1	100.000

# 2022 DS AM - 100% Construction Traffic, 0600 - 0700

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1	Standard Roundabout	1, 2, 3, 4	3.48	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	A2016 Picardy Manorway	
2	Clydesdale Way	
3	Yarnton Way	
4	A2016 Eastern Way	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A2016 Picardy Manorway	8.00	11.00	19.0	21.0	59.0	32.0	
2 - Clydesdale Way	4.30	6.00	3.7	10.5	59.0	29.0	
3 - Yarnton Way	10.60	10.60	0.0	23.0	59.0	21.0	
4 - A2016 Eastern Way	7.30	10.90	8.4	21.0	59.0	52.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A2016 Picardy Manorway	0.791	3014
2 - Clydesdale Way	0.508	1450
3 - Yarnton Way	0.858	3333
4 - A2016 Eastern Way	0.678	2474

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 DS AM - 100% Construction Traffic	0600 - 0700	ONE HOUR	05:45	07:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A2016 Picardy Manorway		✓	1657	100.000
2 - Clydesdale Way		✓	47	100.000
3 - Yarnton Way		✓	321	100.000
4 - A2016 Eastern Way		✓	707	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - A2016 Picardy Manorway	2 - Clydesdale Way	3 - Yarnton Way	4 - A2016 Eastern Way
From	1 - A2016 Picardy Manorway	504	17	151	985
	2 - Clydesdale Way	27	0	7	13
	3 - Yarnton Way	246	4	5	66
	4 - A2016 Eastern Way	664	7	13	23

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - A2016 Picardy Manorway	2 - Clydesdale Way	3 - Yarnton Way	4 - A2016 Eastern Way
From	1 - A2016 Picardy Manorway	10	10	10	10
	2 - Clydesdale Way	10	10	10	10
	3 - Yarnton Way	10	10	10	10
	4 - A2016 Eastern Way	10	10	10	10



## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
05:45-06:00	1 - A2016 Picardy Manorway	1247	1247
	2 - Clydesdale Way	35	35
	3 - Yarnton Way	242	242
	4 - A2016 Eastern Way	532	532
06:00-06:15	1 - A2016 Picardy Manorway	1490	1490
	2 - Clydesdale Way	42	42
	3 - Yarnton Way	289	289
	4 - A2016 Eastern Way	636	636
06:15-06:30	1 - A2016 Picardy Manorway	1824	1824
	2 - Clydesdale Way	52	52
	3 - Yarnton Way	353	353
	4 - A2016 Eastern Way	778	778
06:30-06:45	1 - A2016 Picardy Manorway	1824	1824
	2 - Clydesdale Way	52	52
	3 - Yarnton Way	353	353
	4 - A2016 Eastern Way	778	778
06:45-07:00	1 - A2016 Picardy Manorway	1490	1490
	2 - Clydesdale Way	42	42
	3 - Yarnton Way	289	289
	4 - A2016 Eastern Way	636	636
07:00-07:15	1 - A2016 Picardy Manorway	1247	1247
	2 - Clydesdale Way	35	35
	3 - Yarnton Way	242	242
	4 - A2016 Eastern Way	532	532

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A2016 Picardy Manorway	0.61	3.46	1.7	A
2 - Clydesdale Way	0.10	8.65	0.1	A
3 - Yarnton Way	0.19	2.62	0.3	A
4 - A2016 Eastern Way	0.41	3.57	0.8	A

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1247	39	2983	0.418	1244	0.8	2.274	A
2 - Clydesdale Way	35	1262	808	0.044	35	0.1	5.119	A
3 - Yarnton Way	242	1165	2332	0.104	241	0.1	1.893	A
4 - A2016 Eastern Way	532	590	2074	0.257	531	0.4	2.564	A

**06:00 - 06:15**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1490	47	2977	0.500	1488	1.1	2.657	A
2 - Clydesdale Way	42	1510	683	0.062	42	0.1	6.182	A
3 - Yarnton Way	289	1394	2136	0.135	288	0.2	2.143	A
4 - A2016 Eastern Way	636	706	1995	0.319	635	0.5	2.909	A

**06:15 - 06:30**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1824	57	2969	0.615	1822	1.7	3.446	A
2 - Clydesdale Way	52	1848	511	0.101	52	0.1	8.618	A
3 - Yarnton Way	353	1706	1868	0.189	353	0.3	2.613	A
4 - A2016 Eastern Way	778	864	1888	0.412	777	0.8	3.563	A

**06:30 - 06:45**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1824	57	2969	0.615	1824	1.7	3.460	A
2 - Clydesdale Way	52	1851	510	0.102	52	0.1	8.649	A
3 - Yarnton Way	353	1709	1866	0.189	353	0.3	2.617	A
4 - A2016 Eastern Way	778	865	1887	0.413	778	0.8	3.571	A

**06:45 - 07:00**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1490	47	2977	0.500	1492	1.1	2.673	A
2 - Clydesdale Way	42	1514	681	0.062	42	0.1	6.205	A
3 - Yarnton Way	289	1398	2133	0.135	289	0.2	2.149	A
4 - A2016 Eastern Way	636	708	1994	0.319	637	0.5	2.921	A

**07:00 - 07:15**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1247	39	2983	0.418	1249	0.8	2.286	A
2 - Clydesdale Way	35	1267	806	0.044	35	0.1	5.139	A
3 - Yarnton Way	242	1170	2329	0.104	242	0.1	1.899	A
4 - A2016 Eastern Way	532	592	2072	0.257	533	0.4	2.572	A

# 2022 DS AM - 100% Construction Traffic, 0700 - 0800

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1	Standard Roundabout	1, 2, 3, 4	5.69	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 DS AM - 100% Construction Traffic	0700 - 0800	ONE HOUR	06:45	08:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A2016 Picardy Manorway		✓	2082	100.000
2 - Clydesdale Way		✓	54	100.000
3 - Yarnton Way		✓	405	100.000
4 - A2016 Eastern Way		✓	884	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - A2016 Picardy Manorway	2 - Clydesdale Way	3 - Yarnton Way	4 - A2016 Eastern Way
From	1 - A2016 Picardy Manorway	500	18	292	1272
	2 - Clydesdale Way	22	0	13	19
	3 - Yarnton Way	303	6	7	89
	4 - A2016 Eastern Way	799	12	26	47

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - A2016 Picardy Manorway	2 - Clydesdale Way	3 - Yarnton Way	4 - A2016 Eastern Way
From	1 - A2016 Picardy Manorway	10	10	10	10
	2 - Clydesdale Way	10	10	10	10
	3 - Yarnton Way	10	10	10	10
	4 - A2016 Eastern Way	10	10	10	10

## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
06:45-07:00	1 - A2016 Picardy Manorway	1567	1567
	2 - Clydesdale Way	41	41
	3 - Yarnton Way	305	305
	4 - A2016 Eastern Way	666	666
07:00-07:15	1 - A2016 Picardy Manorway	1872	1872
	2 - Clydesdale Way	49	49
	3 - Yarnton Way	364	364
	4 - A2016 Eastern Way	795	795
07:15-07:30	1 - A2016 Picardy Manorway	2292	2292
	2 - Clydesdale Way	59	59
	3 - Yarnton Way	446	446
	4 - A2016 Eastern Way	973	973
07:30-07:45	1 - A2016 Picardy Manorway	2292	2292
	2 - Clydesdale Way	59	59
	3 - Yarnton Way	446	446
	4 - A2016 Eastern Way	973	973
07:45-08:00	1 - A2016 Picardy Manorway	1872	1872
	2 - Clydesdale Way	49	49
	3 - Yarnton Way	364	364
	4 - A2016 Eastern Way	795	795
08:00-08:15	1 - A2016 Picardy Manorway	1567	1567
	2 - Clydesdale Way	41	41
	3 - Yarnton Way	305	305
	4 - A2016 Eastern Way	666	666

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A2016 Picardy Manorway	0.78	6.22	3.9	A
2 - Clydesdale Way	0.24	20.69	0.3	C
3 - Yarnton Way	0.28	3.51	0.4	A
4 - A2016 Eastern Way	0.53	4.53	1.2	A

## Main Results for each time segment

### 06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1567	74	2956	0.530	1563	1.2	2.834	A
2 - Clydesdale Way	41	1609	632	0.064	40	0.1	6.686	A
3 - Yarnton Way	305	1396	2135	0.143	304	0.2	2.162	A
4 - A2016 Eastern Way	666	629	2047	0.325	663	0.5	2.858	A

### 07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1872	88	2944	0.636	1869	1.9	3.673	A
2 - Clydesdale Way	49	1925	472	0.103	48	0.1	9.343	A
3 - Yarnton Way	364	1670	1900	0.192	364	0.3	2.578	A
4 - A2016 Eastern Way	795	752	1964	0.405	794	0.7	3.384	A

### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	2292	108	2929	0.783	2285	3.8	6.073	A
2 - Clydesdale Way	59	2353	255	0.234	59	0.3	20.132	C
3 - Yarnton Way	446	2041	1581	0.282	445	0.4	3.484	A
4 - A2016 Eastern Way	973	920	1850	0.526	971	1.2	4.499	A

### 07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	2292	108	2929	0.783	2292	3.9	6.216	A
2 - Clydesdale Way	59	2360	251	0.237	59	0.3	20.695	C
3 - Yarnton Way	446	2048	1575	0.283	446	0.4	3.506	A
4 - A2016 Eastern Way	973	923	1848	0.527	973	1.2	4.525	A

### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1872	88	2944	0.636	1880	1.9	3.748	A
2 - Clydesdale Way	49	1935	467	0.104	49	0.1	9.509	A
3 - Yarnton Way	364	1680	1891	0.193	365	0.3	2.595	A
4 - A2016 Eastern Way	795	756	1961	0.405	797	0.8	3.407	A

### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1567	74	2955	0.530	1570	1.3	2.865	A
2 - Clydesdale Way	41	1617	628	0.065	41	0.1	6.744	A
3 - Yarnton Way	305	1403	2129	0.143	305	0.2	2.171	A
4 - A2016 Eastern Way	666	632	2045	0.325	666	0.5	2.875	A

# 2022 DS AM - 100% Construction Traffic, 0730 - 0830

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1	Standard Roundabout	1, 2, 3, 4	6.85	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2022 DS AM - 100% Construction Traffic	0730 - 0830	ONE HOUR	07:15	08:45	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A2016 Picardy Manorway		✓	2159	100.000
2 - Clydesdale Way		✓	68	100.000
3 - Yarnton Way		✓	501	100.000
4 - A2016 Eastern Way		✓	956	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - A2016 Picardy Manorway	2 - Clydesdale Way	3 - Yarnton Way	4 - A2016 Eastern Way
From	1 - A2016 Picardy Manorway	497	18	401	1243
	2 - Clydesdale Way	33	0	19	16
	3 - Yarnton Way	381	7	17	96
	4 - A2016 Eastern Way	863	12	37	44

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - A2016 Picardy Manorway	2 - Clydesdale Way	3 - Yarrnton Way	4 - A2016 Eastern Way
From	1 - A2016 Picardy Manorway	10	10	10	10
	2 - Clydesdale Way	10	10	10	10
	3 - Yarrnton Way	10	10	10	10
	4 - A2016 Eastern Way	10	10	10	10

## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	1 - A2016 Picardy Manorway	1625	1625
	2 - Clydesdale Way	51	51
	3 - Yarrnton Way	377	377
	4 - A2016 Eastern Way	720	720
07:30-07:45	1 - A2016 Picardy Manorway	1941	1941
	2 - Clydesdale Way	61	61
	3 - Yarrnton Way	450	450
	4 - A2016 Eastern Way	859	859
07:45-08:00	1 - A2016 Picardy Manorway	2377	2377
	2 - Clydesdale Way	75	75
	3 - Yarrnton Way	552	552
	4 - A2016 Eastern Way	1053	1053
08:00-08:15	1 - A2016 Picardy Manorway	2377	2377
	2 - Clydesdale Way	75	75
	3 - Yarrnton Way	552	552
	4 - A2016 Eastern Way	1053	1053
08:15-08:30	1 - A2016 Picardy Manorway	1941	1941
	2 - Clydesdale Way	61	61
	3 - Yarrnton Way	450	450
	4 - A2016 Eastern Way	859	859
08:30-08:45	1 - A2016 Picardy Manorway	1625	1625
	2 - Clydesdale Way	51	51
	3 - Yarrnton Way	377	377
	4 - A2016 Eastern Way	720	720

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A2016 Picardy Manorway	0.82	7.38	4.8	A
2 - Clydesdale Way	0.38	32.15	0.6	D
3 - Yarrnton Way	0.34	3.77	0.6	A
4 - A2016 Eastern Way	0.59	5.47	1.6	A

## Main Results for each time segment

### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1625	88	2944	0.552	1620	1.3	2.978	A
2 - Clydesdale Way	51	1680	596	0.086	51	0.1	7.255	A
3 - Yarnton Way	377	1375	2152	0.175	376	0.2	2.228	A
4 - A2016 Eastern Way	720	702	1998	0.360	717	0.6	3.087	A

### 07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1941	105	2931	0.662	1938	2.1	3.975	A
2 - Clydesdale Way	61	2010	429	0.143	61	0.2	10.750	B
3 - Yarnton Way	450	1645	1921	0.234	450	0.3	2.692	A
4 - A2016 Eastern Way	859	839	1905	0.451	858	0.9	3.781	A

### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	2377	129	2912	0.816	2367	4.7	7.130	A
2 - Clydesdale Way	75	2455	203	0.369	73	0.6	30.182	D
3 - Yarnton Way	552	2009	1609	0.343	551	0.6	3.739	A
4 - A2016 Eastern Way	1053	1026	1778	0.592	1050	1.6	5.417	A

### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	2377	129	2912	0.816	2377	4.8	7.382	A
2 - Clydesdale Way	75	2465	198	0.379	75	0.6	32.147	D
3 - Yarnton Way	552	2018	1601	0.345	552	0.6	3.773	A
4 - A2016 Eastern Way	1053	1029	1776	0.593	1053	1.6	5.474	A

### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1941	105	2930	0.662	1951	2.2	4.086	A
2 - Clydesdale Way	61	2023	422	0.145	63	0.2	11.089	B
3 - Yarnton Way	450	1658	1910	0.236	451	0.3	2.718	A
4 - A2016 Eastern Way	859	845	1901	0.452	862	0.9	3.820	A

### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1625	88	2944	0.552	1629	1.4	3.017	A
2 - Clydesdale Way	51	1689	592	0.087	52	0.1	7.333	A
3 - Yarnton Way	377	1383	2146	0.176	378	0.2	2.241	A
4 - A2016 Eastern Way	720	705	1996	0.361	721	0.6	3.108	A



# 2022 DS AM - 152% Construction Traffic, 0730 - 0830

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Junction 1	Standard Roundabout	1, 2, 3, 4	14.98	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2022 DS AM - 152% Construction Traffic	0730 - 0830	ONE HOUR	07:15	08:45	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A2016 Picardy Manorway		✓	2382	100.000
2 - Clydesdale Way		✓	68	100.000
3 - Yarnton Way		✓	501	100.000
4 - A2016 Eastern Way		✓	1032	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - A2016 Picardy Manorway	2 - Clydesdale Way	3 - Yarnton Way	4 - A2016 Eastern Way
From	1 - A2016 Picardy Manorway	716	18	401	1247
	2 - Clydesdale Way	33	0	19	16
	3 - Yarnton Way	381	7	17	96
	4 - A2016 Eastern Way	939	12	37	44

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - A2016 Picardy Manorway	2 - Clydesdale Way	3 - Yarrnton Way	4 - A2016 Eastern Way
From	1 - A2016 Picardy Manorway	10	10	10	10
	2 - Clydesdale Way	10	10	10	10
	3 - Yarrnton Way	10	10	10	10
	4 - A2016 Eastern Way	10	10	10	10

## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	1 - A2016 Picardy Manorway	1793	1793
	2 - Clydesdale Way	51	51
	3 - Yarrnton Way	377	377
	4 - A2016 Eastern Way	777	777
07:30-07:45	1 - A2016 Picardy Manorway	2141	2141
	2 - Clydesdale Way	61	61
	3 - Yarrnton Way	450	450
	4 - A2016 Eastern Way	928	928
07:45-08:00	1 - A2016 Picardy Manorway	2623	2623
	2 - Clydesdale Way	75	75
	3 - Yarrnton Way	552	552
	4 - A2016 Eastern Way	1136	1136
08:00-08:15	1 - A2016 Picardy Manorway	2623	2623
	2 - Clydesdale Way	75	75
	3 - Yarrnton Way	552	552
	4 - A2016 Eastern Way	1136	1136
08:15-08:30	1 - A2016 Picardy Manorway	2141	2141
	2 - Clydesdale Way	61	61
	3 - Yarrnton Way	450	450
	4 - A2016 Eastern Way	928	928
08:30-08:45	1 - A2016 Picardy Manorway	1793	1793
	2 - Clydesdale Way	51	51
	3 - Yarrnton Way	377	377
	4 - A2016 Eastern Way	777	777

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A2016 Picardy Manorway	0.90	13.35	9.3	B
2 - Clydesdale Way	1.02	250.28	5.4	F
3 - Yarrnton Way	0.39	4.68	0.7	A
4 - A2016 Eastern Way	0.70	8.25	2.6	A

## Main Results for each time segment

### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1793	88	2944	0.609	1787	1.7	3.401	A
2 - Clydesdale Way	51	1847	512	0.100	51	0.1	8.581	A
3 - Yarnton Way	377	1542	2009	0.188	376	0.3	2.423	A
4 - A2016 Eastern Way	777	866	1887	0.412	774	0.8	3.550	A

### 07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	2141	105	2931	0.731	2136	2.9	4.954	A
2 - Clydesdale Way	61	2208	328	0.186	61	0.2	14.785	B
3 - Yarnton Way	450	1844	1750	0.257	450	0.4	3.046	A
4 - A2016 Eastern Way	928	1035	1772	0.524	926	1.2	4.673	A

### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	2623	128	2912	0.901	2599	8.8	11.847	B
2 - Clydesdale Way	75	2687	85	0.883	63	3.1	147.421	F
3 - Yarnton Way	552	2236	1414	0.390	550	0.7	4.581	A
4 - A2016 Eastern Way	1136	1257	1621	0.701	1131	2.5	7.992	A

### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	2623	129	2912	0.901	2621	9.3	13.347	B
2 - Clydesdale Way	75	2709	74	1.015	66	5.4	250.275	F
3 - Yarnton Way	552	2255	1397	0.395	552	0.7	4.684	A
4 - A2016 Eastern Way	1136	1265	1616	0.703	1136	2.6	8.247	A

### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	2141	106	2930	0.731	2166	3.0	5.347	A
2 - Clydesdale Way	61	2239	313	0.196	82	0.3	18.674	C
3 - Yarnton Way	450	1884	1716	0.263	452	0.4	3.135	A
4 - A2016 Eastern Way	928	1056	1758	0.528	933	1.2	4.831	A

### 08:30 - 08:45

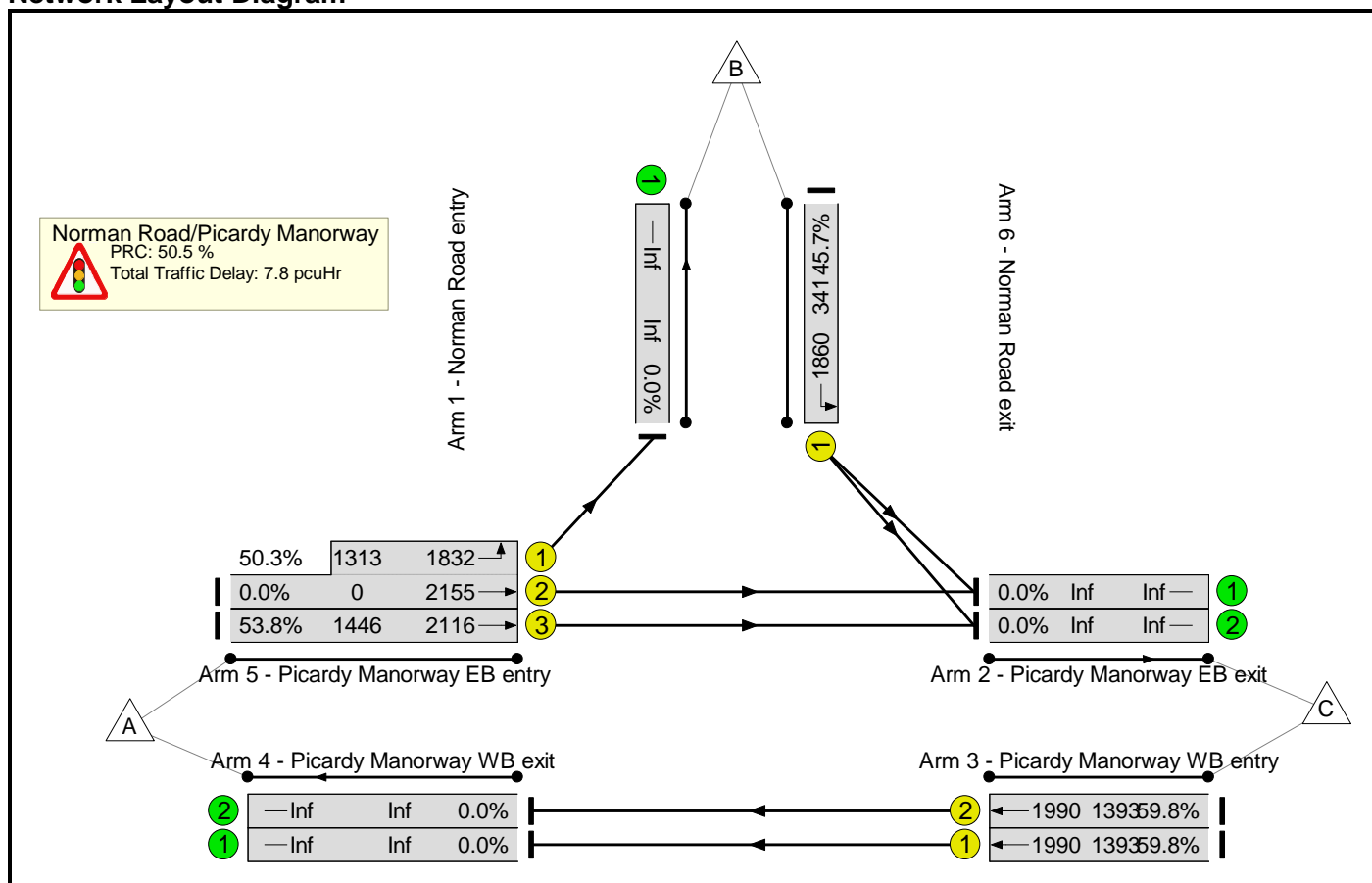
Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1793	88	2944	0.609	1799	1.7	3.471	A
2 - Clydesdale Way	51	1859	505	0.101	52	0.1	8.740	A
3 - Yarnton Way	377	1553	2000	0.189	378	0.3	2.441	A
4 - A2016 Eastern Way	777	871	1883	0.413	779	0.8	3.591	A

Basic Results Summary  
**Basic Results Summary**

**User and Project Details**

Project:	Riverside Energy Park
Title:	
Location:	
File name:	Junction 2_Failure Test_225.lsg3x
Author:	jdymock
Company:	PBA
Address:	
Notes:	Sensitivity Test

**Scenario 1: '2022 DS AM (100% Rd) - 0600-0700'** (FG2: '2022 DS AM (100% Rd)', Plan 1: 'Network Control Plan 1')  
**Network Layout Diagram**



Basic Results Summary

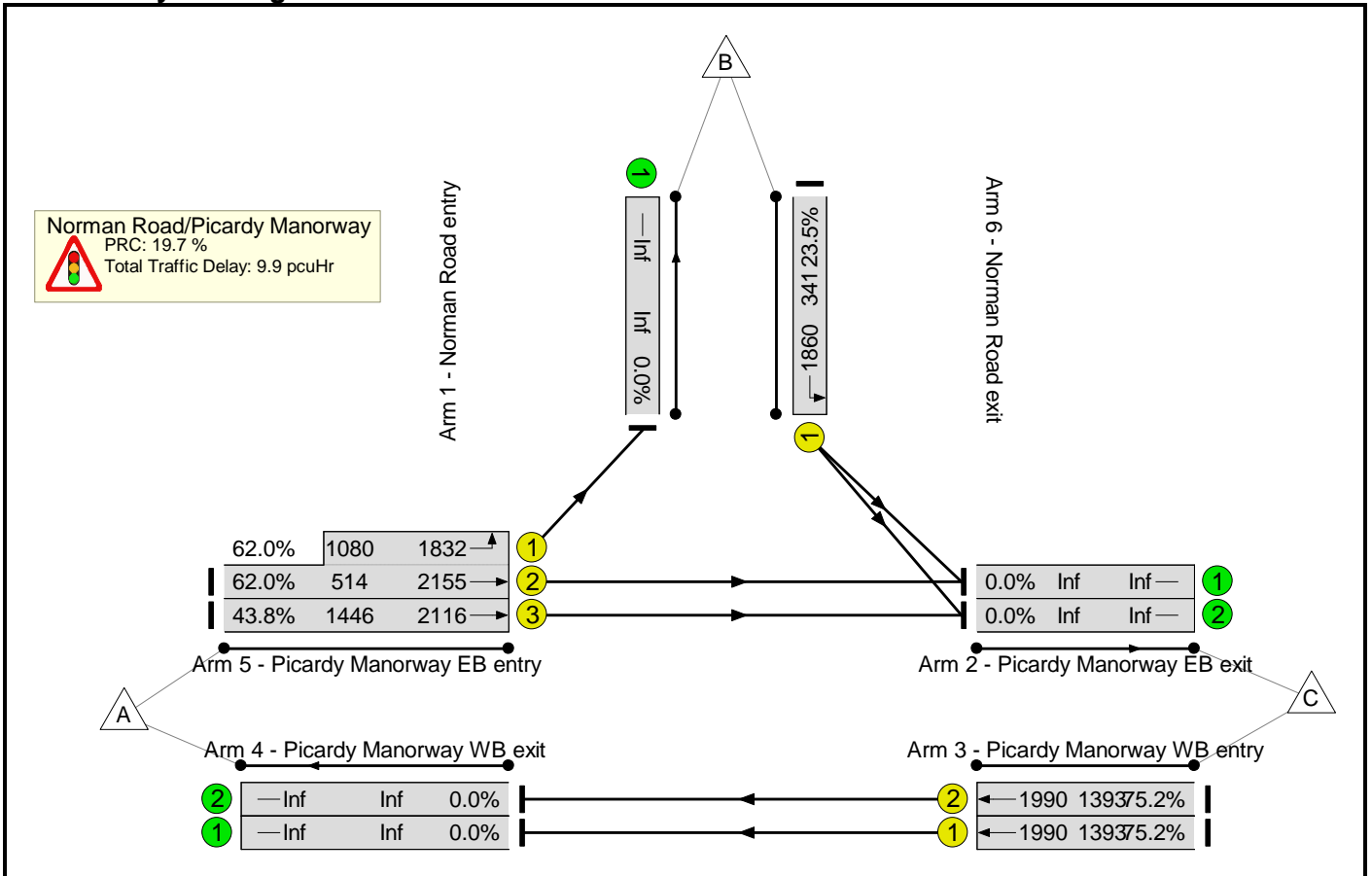
**Network Results**

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
<b>Network</b>	-	-	-		-	-	-	-	-	-	59.8%	0	0	0	7.8	-	-	
<b>Norman Road/Picardy Manorway</b>	-	-	-		-	-	-	-	-	-	59.8%	0	0	0	7.8	-	-	
1/1	Norman Road entry Left	U	B		1	10	-	156	1860	341	45.7%	-	-	-	1.4	31.5	2.7	
3/1	Picardy Manorway WB entry Ahead	U	G		1	41	-	833	1990	1393	59.8%	-	-	-	1.8	7.9	7.7	
3/2	Picardy Manorway WB entry Ahead	U	G		1	41	-	833	1990	1393	59.8%	-	-	-	1.8	7.9	7.7	
5/2+5/1	Picardy Manorway EB entry Ahead Left	U	A E		1	40:42	-	661	2155:1832	0+1313	0.0 : 50.3%	-	-	-	1.2	6.5	5.3	
5/3	Picardy Manorway EB entry Ahead	U	A		1	40	-	778	2116	1446	53.8%	-	-	-	1.6	7.4	7.1	
					C1	Stream: 1 PRC for Signalled Lanes (%):	67.3	Total Delay for Signalled Lanes (pcuHr):				4.18	Cycle Time (s):		60			
					C1	Stream: 2 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):				0.00	Cycle Time (s):		60			
					C1	Stream: 3 PRC for Signalled Lanes (%):	50.5	Total Delay for Signalled Lanes (pcuHr):				3.63	Cycle Time (s):		60			
						PRC Over All Lanes (%):	50.5	Total Delay Over All Lanes(pcuHr):				7.81						

Basic Results Summary

Scenario 2: '2022 DS AM (100% Rd) - 0700-0800' (FG5: '2022 DS AM (100% Rd)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

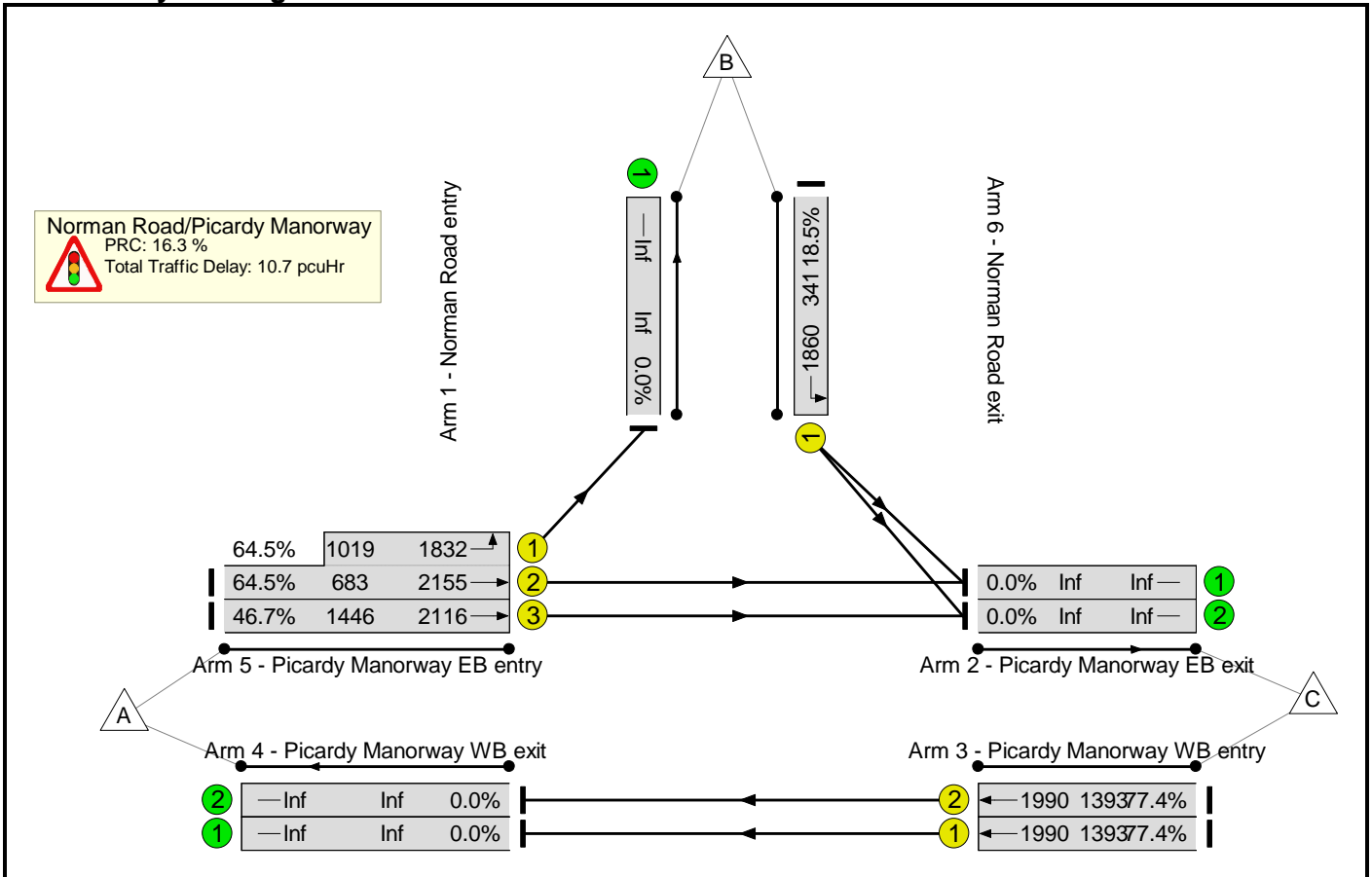
**Network Results**

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
<b>Network</b>	-	-	-		-	-	-	-	-	-	75.2%	0	0	0	9.9	-	-
<b>Norman Road/Picardy Manorway</b>	-	-	-		-	-	-	-	-	-	75.2%	0	0	0	9.9	-	-
1/1	Norman Road entry Left	U	B		1	10	-	80	1860	341	23.5%	-	-	-	0.6	27.8	1.3
3/1	Picardy Manorway WB entry Ahead	U	G		1	41	-	1047	1990	1393	75.2%	-	-	-	3.2	10.9	12.3
3/2	Picardy Manorway WB entry Ahead	U	G		1	41	-	1047	1990	1393	75.2%	-	-	-	3.2	10.9	12.3
5/2+5/1	Picardy Manorway EB entry Ahead Left	U	A E		1	40:42	-	989	2155:1832	514+1080	62.0 : 62.0%	-	-	-	1.8	6.7	5.7
5/3	Picardy Manorway EB entry Ahead	U	A		1	40	-	633	2116	1446	43.8%	-	-	-	1.1	6.5	5.1
		C1	Stream: 1 PRC for Signalled Lanes (%):			45.0		Total Delay for Signalled Lanes (pcuHr):			3.60	Cycle Time (s):			60		
		C1	Stream: 2 PRC for Signalled Lanes (%):			0.0		Total Delay for Signalled Lanes (pcuHr):			0.00	Cycle Time (s):			60		
		C1	Stream: 3 PRC for Signalled Lanes (%):			19.7		Total Delay for Signalled Lanes (pcuHr):			6.31	Cycle Time (s):			60		
			PRC Over All Lanes (%):			19.7		Total Delay Over All Lanes(pcuHr):			9.91						

Basic Results Summary

Scenario 3: '2022 DS AM (100% Rd) - 0730-0830' (FG8: '2022 DS AM (100% Rd)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram





Basic Results Summary

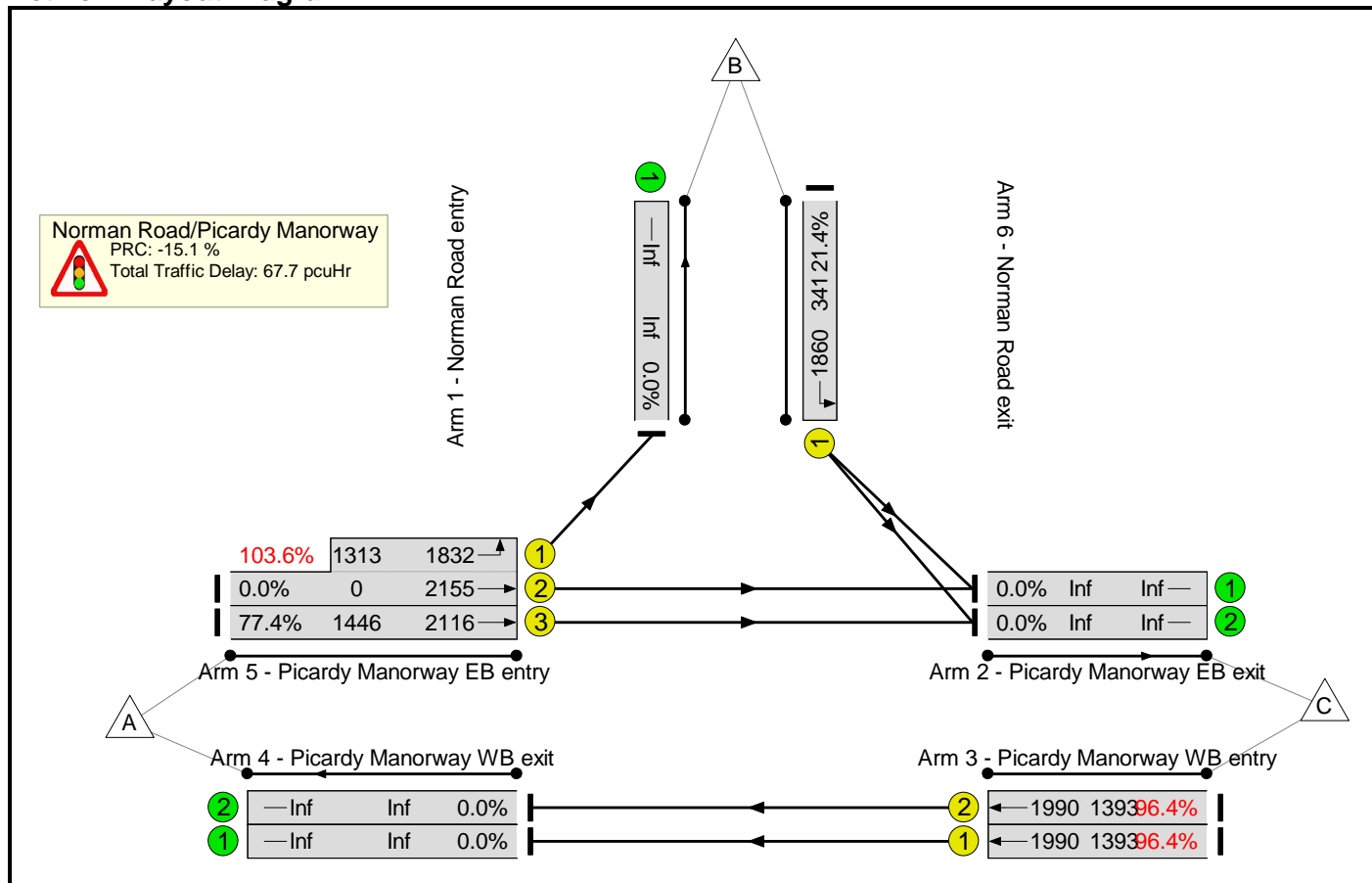
**Network Results**

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
<b>Network</b>	-	-	-		-	-	-	-	-	-	77.4%	0	0	0	10.7	-	-
<b>Norman Road/Picardy Manorway</b>	-	-	-		-	-	-	-	-	-	77.4%	0	0	0	10.7	-	-
1/1	Norman Road entry Left	U	B		1	10	-	63	1860	341	18.5%	-	-	-	0.5	27.2	1.0
3/1	Picardy Manorway WB entry Ahead	U	G		1	41	-	1078	1990	1393	77.4%	-	-	-	3.5	11.5	13.4
3/2	Picardy Manorway WB entry Ahead	U	G		1	41	-	1078	1990	1393	77.4%	-	-	-	3.5	11.5	13.4
5/2+5/1	Picardy Manorway EB entry Ahead Left	U	A E		1	40:42	-	1097	2155:1832	683+1019	64.5 : 64.5%	-	-	-	2.1	6.7	5.6
5/3	Picardy Manorway EB entry Ahead	U	A		1	40	-	675	2116	1446	46.7%	-	-	-	1.3	6.8	5.5
		C1	Stream: 1 PRC for Signalled Lanes (%)			39.6		Total Delay for Signalled Lanes (pcuHr):		3.80	Cycle Time (s):		60				
		C1	Stream: 2 PRC for Signalled Lanes (%)			0.0		Total Delay for Signalled Lanes (pcuHr):		0.00	Cycle Time (s):		60				
		C1	Stream: 3 PRC for Signalled Lanes (%)			16.3		Total Delay for Signalled Lanes (pcuHr):		6.91	Cycle Time (s):		60				
			PRC Over All Lanes (%)			16.3		Total Delay Over All Lanes(pcuHr):		10.71							

Basic Results Summary

Scenario 4: '2022 DS AM (225% Rd) - 0730-0830' (FG9: '2022 DS AM (225% Rd)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

**Network Results**

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
<b>Network</b>	-	-	-		-	-	-	-	-	-	103.6%	0	0	0	67.7	-	-
<b>Norman Road/Picardy Manorway</b>	-	-	-		-	-	-	-	-	-	103.6%	0	0	0	67.7	-	-
1/1	Norman Road entry Left	U	B		1	10	-	73	1860	341	21.4%	-	-	-	0.6	27.5	1.2
3/1	Picardy Manorway WB entry Ahead	U	G		1	41	-	1343	1990	1393	96.4%	-	-	-	12.8	34.3	30.2
3/2	Picardy Manorway WB entry Ahead	U	G		1	41	-	1343	1990	1393	96.4%	-	-	-	12.8	34.3	30.2
5/2+5/1	Picardy Manorway EB entry Ahead Left	U	A E		1	40:42	-	1360	2155:1832	0+1313	0.0 : 103.6%	-	-	-	37.9	100.2	58.6
5/3	Picardy Manorway EB entry Ahead	U	A		1	40	-	1119	2116	1446	77.4%	-	-	-	3.7	11.8	14.1
					C1	Stream: 1 PRC for Signalled Lanes (%):		-15.1	Total Delay for Signalled Lanes (pcuHr):			42.10	Cycle Time (s):		60		
					C1	Stream: 2 PRC for Signalled Lanes (%):		0.0	Total Delay for Signalled Lanes (pcuHr):			0.00	Cycle Time (s):		60		
					C1	Stream: 3 PRC for Signalled Lanes (%):		-7.1	Total Delay for Signalled Lanes (pcuHr):			25.56	Cycle Time (s):		60		
						PRC Over All Lanes (%):		-15.1	Total Delay Over All Lanes(pcuHr):			67.65					

Junctions 9
ARCADY 9 - Roundabout Module
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**Filename:** Junction 3\_Failure Test\_160.j9  
**Path:** \\pba.int\cbh\Projects\42166 Riverside 2\Transport\5. Drawings & Models\Traffic Modelling\Failure Tests\AM Peak  
**Report generation date:** 24/01/2019 11:23:27

- »2022 DS AM - 100% Construction traffic, 0600 - 0700
- »2022 DS AM - 100% Construction Traffic, 0700 - 0800
- »2022 DS AM - 100% Construction Traffic, 0730 - 0830
- »2022 DS AM - 160% Construction Traffic, 0730 - 0830

**Summary of junction performance**

	0600 - 0700				0700 - 0800				0730 - 0830			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2022 DS AM - 100% Construction traffic</b>												
1 - A2016 Picardy Manorway	0.8	2.82	0.42	A								
2 - Anderson Way	0.2	1.97	0.14	A								
3 - A2016 Bronze Age Way	2.4	4.92	0.69	A								
4 - B253 Picardy Manorway	0.7	5.32	0.38	A								
<b>2022 DS AM - 100% Construction Traffic</b>												
1 - A2016 Picardy Manorway					1.0	3.17	0.48	A	1.3	3.71	0.55	A
2 - Anderson Way					0.2	2.13	0.17	A	0.3	2.37	0.20	A
3 - A2016 Bronze Age Way					4.7	8.57	0.81	A	5.2	9.71	0.83	A
4 - B253 Picardy Manorway					2.5	12.81	0.70	B	4.3	18.98	0.80	C
<b>2022 DS AM - 160% Construction Traffic</b>												
1 - A2016 Picardy Manorway									1.4	3.71	0.55	A
2 - Anderson Way									0.3	2.37	0.20	A
3 - A2016 Bronze Age Way									9.4	16.45	0.90	C
4 - B253 Picardy Manorway									28.3	101.15	1.03	F

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

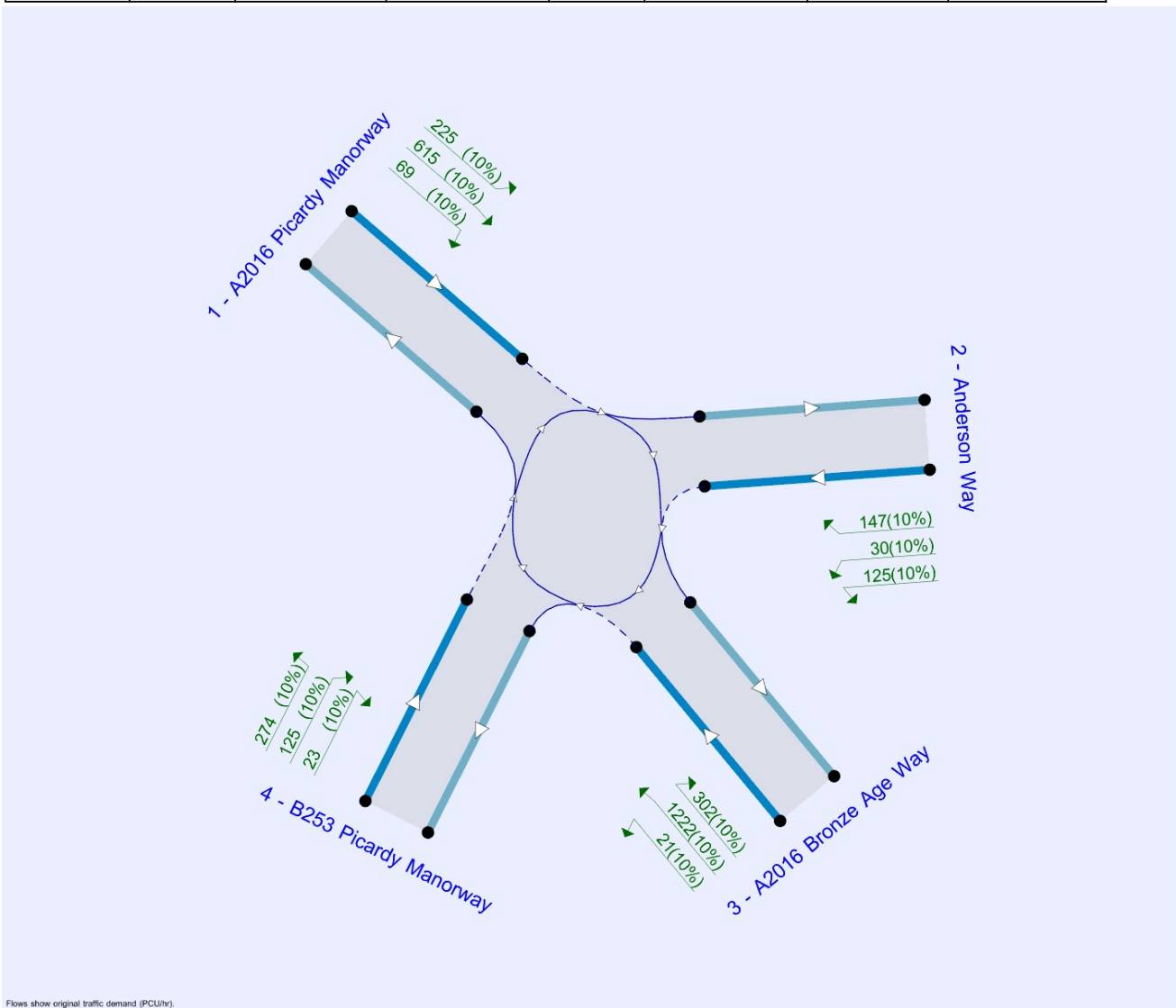
## File summary

### File Description

<b>Title</b>	Junction 3 - Sensivity Test
<b>Location</b>	Picardy Manorway
<b>Site number</b>	
<b>Date</b>	09/07/2018
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	PBA\jtsmith
<b>Description</b>	

## Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 DS AM - 100% Construction traffic	0600 - 0700	ONE HOUR	05:45	07:15	15
D4	2022 DS AM - 100% Construction Traffic	0700 - 0800	ONE HOUR	06:45	08:15	15
D6	2022 DS AM - 100% Construction Traffic	0730 - 0830	ONE HOUR	07:15	08:45	15
D7	2022 DS AM - 160% Construction Traffic	0730 - 0830	ONE HOUR	07:15	08:45	15

### Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2022 DS AM - 100% Construction traffic, 0600 - 0700

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4	4.10	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	A2016 Picardy Manorway	
2	Anderson Way	
3	A2016 Bronze Age Way	
4	B253 Picardy Manorway	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A2016 Picardy Manorway	7.70	10.50	4.9	35.0	62.0	11.5	
2 - Anderson Way	7.50	16.00	8.9	29.0	62.0	24.0	
3 - A2016 Bronze Age Way	7.50	10.50	6.7	35.0	62.0	20.5	
4 - B253 Picardy Manorway	4.50	10.30	30.0	28.6	62.0	20.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A2016 Picardy Manorway	0.764	2857
2 - Anderson Way	0.778	3012
3 - A2016 Bronze Age Way	0.745	2789
4 - B253 Picardy Manorway	0.706	2570

The slope and intercept shown above include any corrections and adjustments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 DS AM - 100% Construction traffic	0600 - 0700	ONE HOUR	05:45	07:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A2016 Picardy Manorway		✓	932	100.000
2 - Anderson Way		✓	302	100.000
3 - A2016 Bronze Age Way		✓	1602	100.000
4 - B253 Picardy Manorway		✓	422	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - A2016 Picardy Manorway	2 - Anderson Way	3 - A2016 Bronze Age Way	4 - B253 Picardy Manorway
From	1 - A2016 Picardy Manorway	23	225	615	69
	2 - Anderson Way	147	0	125	30
	3 - A2016 Bronze Age Way	1222	302	57	21
	4 - B253 Picardy Manorway	274	125	23	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - A2016 Picardy Manorway	2 - Anderson Way	3 - A2016 Bronze Age Way	4 - B253 Picardy Manorway
From	1 - A2016 Picardy Manorway	10	10	10	10
	2 - Anderson Way	10	10	10	10
	3 - A2016 Bronze Age Way	10	10	10	10
	4 - B253 Picardy Manorway	10	10	10	10



## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
05:45-06:00	1 - A2016 Picardy Manorway	702	702
	2 - Anderson Way	227	227
	3 - A2016 Bronze Age Way	1206	1206
	4 - B253 Picardy Manorway	318	318
06:00-06:15	1 - A2016 Picardy Manorway	838	838
	2 - Anderson Way	271	271
	3 - A2016 Bronze Age Way	1440	1440
	4 - B253 Picardy Manorway	379	379
06:15-06:30	1 - A2016 Picardy Manorway	1026	1026
	2 - Anderson Way	333	333
	3 - A2016 Bronze Age Way	1764	1764
	4 - B253 Picardy Manorway	465	465
06:30-06:45	1 - A2016 Picardy Manorway	1026	1026
	2 - Anderson Way	333	333
	3 - A2016 Bronze Age Way	1764	1764
	4 - B253 Picardy Manorway	465	465
06:45-07:00	1 - A2016 Picardy Manorway	838	838
	2 - Anderson Way	271	271
	3 - A2016 Bronze Age Way	1440	1440
	4 - B253 Picardy Manorway	379	379
07:00-07:15	1 - A2016 Picardy Manorway	702	702
	2 - Anderson Way	227	227
	3 - A2016 Bronze Age Way	1206	1206
	4 - B253 Picardy Manorway	318	318

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A2016 Picardy Manorway	0.42	2.82	0.8	A
2 - Anderson Way	0.14	1.97	0.2	A
3 - A2016 Bronze Age Way	0.69	4.92	2.4	A
4 - B253 Picardy Manorway	0.38	5.32	0.7	A

### Main Results for each time segment

#### 05:45 - 06:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	702	381	2566	0.273	700	0.4	2.119	A
2 - Anderson Way	227	591	2552	0.089	227	0.1	1.702	A
3 - A2016 Bronze Age Way	1206	202	2638	0.457	1202	0.9	2.751	A
4 - B253 Picardy Manorway	318	1314	1642	0.194	317	0.3	2.984	A

06:00 - 06:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	838	455	2509	0.334	837	0.5	2.368	A
2 - Anderson Way	271	707	2462	0.110	271	0.1	1.806	A
3 - A2016 Bronze Age Way	1440	242	2609	0.552	1438	1.3	3.379	A
4 - B253 Picardy Manorway	379	1572	1459	0.260	379	0.4	3.662	A

06:15 - 06:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1026	557	2432	0.422	1025	0.8	2.814	A
2 - Anderson Way	333	866	2339	0.142	332	0.2	1.973	A
3 - A2016 Bronze Age Way	1764	296	2568	0.687	1760	2.4	4.874	A
4 - B253 Picardy Manorway	465	1924	1211	0.384	463	0.7	5.286	A

06:30 - 06:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1026	558	2431	0.422	1026	0.8	2.819	A
2 - Anderson Way	333	866	2338	0.142	333	0.2	1.974	A
3 - A2016 Bronze Age Way	1764	296	2568	0.687	1764	2.4	4.920	A
4 - B253 Picardy Manorway	465	1928	1208	0.385	465	0.7	5.324	A

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	838	457	2508	0.334	839	0.6	2.373	A
2 - Anderson Way	271	708	2461	0.110	272	0.1	1.808	A
3 - A2016 Bronze Age Way	1440	242	2609	0.552	1444	1.4	3.412	A
4 - B253 Picardy Manorway	379	1578	1455	0.261	381	0.4	3.690	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	702	382	2565	0.274	702	0.4	2.127	A
2 - Anderson Way	227	593	2551	0.089	227	0.1	1.703	A
3 - A2016 Bronze Age Way	1206	203	2638	0.457	1208	0.9	2.771	A
4 - B253 Picardy Manorway	318	1320	1638	0.194	318	0.3	3.003	A

# 2022 DS AM - 100% Construction Traffic, 0700 - 0800

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4	7.25	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2022 DS AM - 100% Construction Traffic	0700 - 0800	ONE HOUR	06:45	08:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A2016 Picardy Manorway		✓	1045	100.000
2 - Anderson Way		✓	351	100.000
3 - A2016 Bronze Age Way		✓	1828	100.000
4 - B253 Picardy Manorway		✓	657	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - A2016 Picardy Manorway	2 - Anderson Way	3 - A2016 Bronze Age Way	4 - B253 Picardy Manorway
From	1 - A2016 Picardy Manorway	13	244	644	144
	2 - Anderson Way	181	0	125	45
	3 - A2016 Bronze Age Way	1454	284	47	43
	4 - B253 Picardy Manorway	446	159	50	2

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - A2016 Picardy Manorway	2 - Anderson Way	3 - A2016 Bronze Age Way	4 - B253 Picardy Manorway
From	1 - A2016 Picardy Manorway	10	10	10	10
	2 - Anderson Way	10	10	10	10
	3 - A2016 Bronze Age Way	10	10	10	10
	4 - B253 Picardy Manorway	10	10	10	10

## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
06:45-07:00	1 - A2016 Picardy Manorway	787	787
	2 - Anderson Way	264	264
	3 - A2016 Bronze Age Way	1376	1376
	4 - B253 Picardy Manorway	495	495
07:00-07:15	1 - A2016 Picardy Manorway	939	939
	2 - Anderson Way	316	316
	3 - A2016 Bronze Age Way	1643	1643
	4 - B253 Picardy Manorway	591	591
07:15-07:30	1 - A2016 Picardy Manorway	1151	1151
	2 - Anderson Way	386	386
	3 - A2016 Bronze Age Way	2013	2013
	4 - B253 Picardy Manorway	723	723
07:30-07:45	1 - A2016 Picardy Manorway	1151	1151
	2 - Anderson Way	386	386
	3 - A2016 Bronze Age Way	2013	2013
	4 - B253 Picardy Manorway	723	723
07:45-08:00	1 - A2016 Picardy Manorway	939	939
	2 - Anderson Way	316	316
	3 - A2016 Bronze Age Way	1643	1643
	4 - B253 Picardy Manorway	591	591
08:00-08:15	1 - A2016 Picardy Manorway	787	787
	2 - Anderson Way	264	264
	3 - A2016 Bronze Age Way	1376	1376
	4 - B253 Picardy Manorway	495	495

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A2016 Picardy Manorway	0.48	3.17	1.0	A
2 - Anderson Way	0.17	2.13	0.2	A
3 - A2016 Bronze Age Way	0.81	8.57	4.7	A
4 - B253 Picardy Manorway	0.70	12.81	2.5	B

## Main Results for each time segment

### 06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	787	406	2547	0.309	785	0.5	2.246	A
2 - Anderson Way	264	676	2486	0.106	264	0.1	1.781	A
3 - A2016 Bronze Age Way	1376	289	2573	0.535	1371	1.3	3.281	A
4 - B253 Picardy Manorway	495	1485	1521	0.325	493	0.5	3.841	A

### 07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	939	486	2486	0.378	939	0.7	2.558	A
2 - Anderson Way	316	808	2383	0.132	315	0.2	1.914	A
3 - A2016 Bronze Age Way	1643	346	2531	0.649	1640	2.0	4.430	A
4 - B253 Picardy Manorway	591	1776	1316	0.449	589	0.9	5.440	A

### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1151	593	2404	0.479	1149	1.0	3.153	A
2 - Anderson Way	386	989	2243	0.172	386	0.2	2.133	A
3 - A2016 Bronze Age Way	2013	424	2473	0.814	2002	4.6	8.231	A
4 - B253 Picardy Manorway	723	2169	1038	0.697	717	2.4	12.117	B

### 07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1151	597	2401	0.479	1151	1.0	3.165	A
2 - Anderson Way	386	991	2241	0.172	386	0.2	2.134	A
3 - A2016 Bronze Age Way	2013	424	2473	0.814	2012	4.7	8.569	A
4 - B253 Picardy Manorway	723	2178	1031	0.701	723	2.5	12.813	B

### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	939	491	2482	0.379	941	0.7	2.571	A
2 - Anderson Way	316	811	2381	0.133	316	0.2	1.919	A
3 - A2016 Bronze Age Way	1643	346	2531	0.649	1654	2.1	4.568	A
4 - B253 Picardy Manorway	591	1789	1306	0.452	597	0.9	5.635	A

### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	787	409	2545	0.309	787	0.5	2.254	A
2 - Anderson Way	264	678	2484	0.106	264	0.1	1.785	A
3 - A2016 Bronze Age Way	1376	290	2573	0.535	1379	1.3	3.326	A
4 - B253 Picardy Manorway	495	1493	1515	0.326	496	0.5	3.892	A

# 2022 DS AM - 100% Construction Traffic, 0730 - 0830

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4	9.04	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2022 DS AM - 100% Construction Traffic	0730 - 0830	ONE HOUR	07:15	08:45	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A2016 Picardy Manorway		✓	1192	100.000
2 - Anderson Way		✓	372	100.000
3 - A2016 Bronze Age Way		✓	1805	100.000
4 - B253 Picardy Manorway		✓	766	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - A2016 Picardy Manorway	2 - Anderson Way	3 - A2016 Bronze Age Way	4 - B253 Picardy Manorway
From	1 - A2016 Picardy Manorway	12	235	714	231
	2 - Anderson Way	186	0	135	51
	3 - A2016 Bronze Age Way	1427	274	58	46
	4 - B253 Picardy Manorway	530	166	67	3

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - A2016 Picardy Manorway	2 - Anderson Way	3 - A2016 Bronze Age Way	4 - B253 Picardy Manorway
From	1 - A2016 Picardy Manorway	10	10	10	10
	2 - Anderson Way	10	10	10	10
	3 - A2016 Bronze Age Way	10	10	10	10
	4 - B253 Picardy Manorway	10	10	10	10

## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	1 - A2016 Picardy Manorway	897	897
	2 - Anderson Way	280	280
	3 - A2016 Bronze Age Way	1359	1359
	4 - B253 Picardy Manorway	577	577
07:30-07:45	1 - A2016 Picardy Manorway	1072	1072
	2 - Anderson Way	334	334
	3 - A2016 Bronze Age Way	1623	1623
	4 - B253 Picardy Manorway	689	689
07:45-08:00	1 - A2016 Picardy Manorway	1312	1312
	2 - Anderson Way	410	410
	3 - A2016 Bronze Age Way	1987	1987
	4 - B253 Picardy Manorway	843	843
08:00-08:15	1 - A2016 Picardy Manorway	1312	1312
	2 - Anderson Way	410	410
	3 - A2016 Bronze Age Way	1987	1987
	4 - B253 Picardy Manorway	843	843
08:15-08:30	1 - A2016 Picardy Manorway	1072	1072
	2 - Anderson Way	334	334
	3 - A2016 Bronze Age Way	1623	1623
	4 - B253 Picardy Manorway	689	689
08:30-08:45	1 - A2016 Picardy Manorway	897	897
	2 - Anderson Way	280	280
	3 - A2016 Bronze Age Way	1359	1359
	4 - B253 Picardy Manorway	577	577

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A2016 Picardy Manorway	0.55	3.71	1.3	A
2 - Anderson Way	0.20	2.37	0.3	A
3 - A2016 Bronze Age Way	0.83	9.71	5.2	A
4 - B253 Picardy Manorway	0.80	18.98	4.3	C

### Main Results for each time segment

#### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	897	426	2532	0.354	895	0.6	2.416	A
2 - Anderson Way	280	815	2378	0.118	279	0.1	1.886	A
3 - A2016 Bronze Age Way	1359	363	2519	0.540	1354	1.3	3.384	A
4 - B253 Picardy Manorway	577	1468	1533	0.376	574	0.7	4.118	A

#### 07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1072	509	2468	0.434	1071	0.8	2.833	A
2 - Anderson Way	334	974	2254	0.148	334	0.2	2.062	A
3 - A2016 Bronze Age Way	1623	434	2466	0.658	1619	2.1	4.662	A
4 - B253 Picardy Manorway	689	1756	1330	0.518	687	1.2	6.137	A

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1312	620	2384	0.551	1310	1.3	3.684	A
2 - Anderson Way	410	1192	2085	0.196	409	0.3	2.363	A
3 - A2016 Bronze Age Way	1987	531	2393	0.830	1975	5.1	9.221	A
4 - B253 Picardy Manorway	843	2143	1056	0.798	832	4.0	16.881	C

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1312	625	2380	0.552	1312	1.3	3.709	A
2 - Anderson Way	410	1194	2083	0.197	410	0.3	2.366	A
3 - A2016 Bronze Age Way	1987	532	2393	0.831	1987	5.2	9.714	A
4 - B253 Picardy Manorway	843	2154	1048	0.804	842	4.3	18.978	C

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1072	517	2462	0.435	1074	0.9	2.857	A
2 - Anderson Way	334	978	2251	0.149	335	0.2	2.066	A
3 - A2016 Bronze Age Way	1623	435	2465	0.658	1635	2.2	4.839	A
4 - B253 Picardy Manorway	689	1771	1319	0.522	701	1.2	6.532	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	897	429	2529	0.355	898	0.6	2.428	A
2 - Anderson Way	280	818	2376	0.118	280	0.1	1.891	A
3 - A2016 Bronze Age Way	1359	364	2518	0.540	1362	1.3	3.436	A
4 - B253 Picardy Manorway	577	1477	1527	0.378	579	0.7	4.185	A



# 2022 DS AM - 160% Construction Traffic, 0730 - 0830

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4	28.47	D

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2022 DS AM - 160% Construction Traffic	0730 - 0830	ONE HOUR	07:15	08:45	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A2016 Picardy Manorway		✓	1198	100.000
2 - Anderson Way		✓	372	100.000
3 - A2016 Bronze Age Way		✓	1961	100.000
4 - B253 Picardy Manorway		✓	866	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1 - A2016 Picardy Manorway	2 - Anderson Way	3 - A2016 Bronze Age Way	4 - B253 Picardy Manorway
From	1 - A2016 Picardy Manorway	14	235	718	231
	2 - Anderson Way	186	0	135	51
	3 - A2016 Bronze Age Way	1583	274	58	46
	4 - B253 Picardy Manorway	627	166	70	3

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - A2016 Picardy Manorway	2 - Anderson Way	3 - A2016 Bronze Age Way	4 - B253 Picardy Manorway
From	1 - A2016 Picardy Manorway	10	10	10	10
	2 - Anderson Way	10	10	10	10
	3 - A2016 Bronze Age Way	10	10	10	10
	4 - B253 Picardy Manorway	10	10	10	10

## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	1 - A2016 Picardy Manorway	902	902
	2 - Anderson Way	280	280
	3 - A2016 Bronze Age Way	1476	1476
	4 - B253 Picardy Manorway	652	652
07:30-07:45	1 - A2016 Picardy Manorway	1077	1077
	2 - Anderson Way	334	334
	3 - A2016 Bronze Age Way	1763	1763
	4 - B253 Picardy Manorway	779	779
07:45-08:00	1 - A2016 Picardy Manorway	1319	1319
	2 - Anderson Way	410	410
	3 - A2016 Bronze Age Way	2159	2159
	4 - B253 Picardy Manorway	953	953
08:00-08:15	1 - A2016 Picardy Manorway	1319	1319
	2 - Anderson Way	410	410
	3 - A2016 Bronze Age Way	2159	2159
	4 - B253 Picardy Manorway	953	953
08:15-08:30	1 - A2016 Picardy Manorway	1077	1077
	2 - Anderson Way	334	334
	3 - A2016 Bronze Age Way	1763	1763
	4 - B253 Picardy Manorway	779	779
08:30-08:45	1 - A2016 Picardy Manorway	902	902
	2 - Anderson Way	280	280
	3 - A2016 Bronze Age Way	1476	1476
	4 - B253 Picardy Manorway	652	652

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A2016 Picardy Manorway	0.55	3.71	1.4	A
2 - Anderson Way	0.20	2.37	0.3	A
3 - A2016 Bronze Age Way	0.90	16.45	9.4	C
4 - B253 Picardy Manorway	1.03	101.15	28.3	F

## Main Results for each time segment

### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	902	428	2530	0.356	899	0.6	2.425	A
2 - Anderson Way	280	821	2373	0.118	279	0.1	1.890	A
3 - A2016 Bronze Age Way	1476	364	2518	0.586	1470	1.5	3.760	A
4 - B253 Picardy Manorway	652	1586	1450	0.450	648	0.9	4.919	A

### 07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1077	511	2466	0.437	1076	0.8	2.847	A
2 - Anderson Way	334	982	2248	0.149	334	0.2	2.069	A
3 - A2016 Bronze Age Way	1763	436	2464	0.715	1758	2.7	5.571	A
4 - B253 Picardy Manorway	779	1897	1230	0.633	775	1.8	8.618	A

### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1319	608	2393	0.551	1317	1.3	3.675	A
2 - Anderson Way	410	1197	2081	0.197	409	0.3	2.369	A
3 - A2016 Bronze Age Way	2159	533	2392	0.903	2135	8.8	14.248	B
4 - B253 Picardy Manorway	953	2305	942	1.012	892	17.3	52.712	F

### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1319	616	2386	0.553	1319	1.4	3.709	A
2 - Anderson Way	410	1201	2078	0.197	410	0.3	2.373	A
3 - A2016 Bronze Age Way	2159	534	2391	0.903	2157	9.4	16.451	C
4 - B253 Picardy Manorway	953	2326	927	1.029	910	28.3	101.146	F

### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	1077	547	2439	0.442	1079	0.9	2.914	A
2 - Anderson Way	334	995	2238	0.149	335	0.2	2.081	A
3 - A2016 Bronze Age Way	1763	437	2463	0.716	1789	2.8	6.094	A
4 - B253 Picardy Manorway	779	1927	1209	0.644	883	2.1	16.514	C

### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A2016 Picardy Manorway	902	432	2527	0.357	903	0.6	2.439	A
2 - Anderson Way	280	825	2370	0.118	280	0.1	1.893	A
3 - A2016 Bronze Age Way	1476	365	2517	0.587	1481	1.6	3.844	A
4 - B253 Picardy Manorway	652	1597	1442	0.452	657	0.9	5.073	A

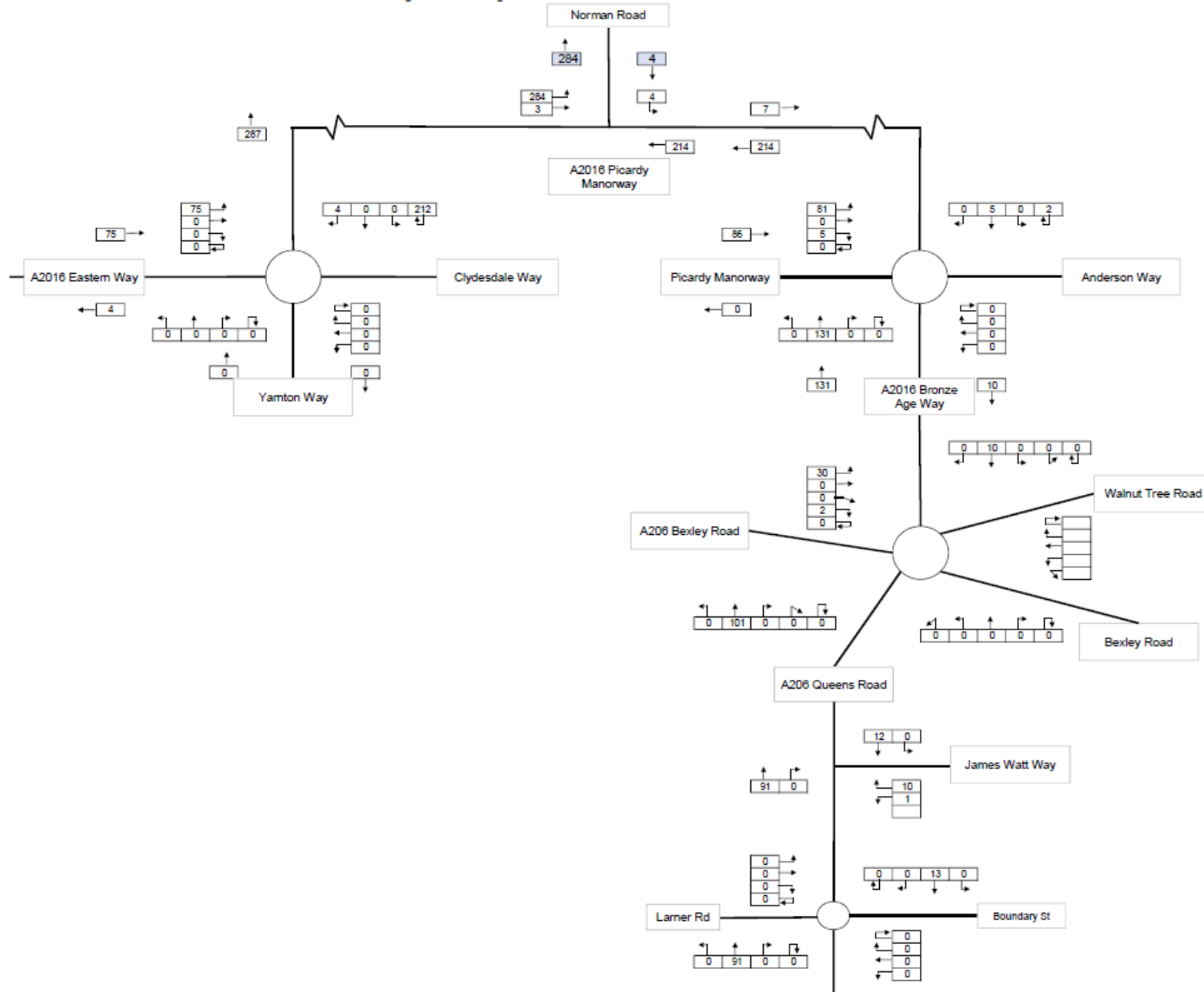
# TECHNICAL NOTE

## Appendix B – Network Distribution Diagrams

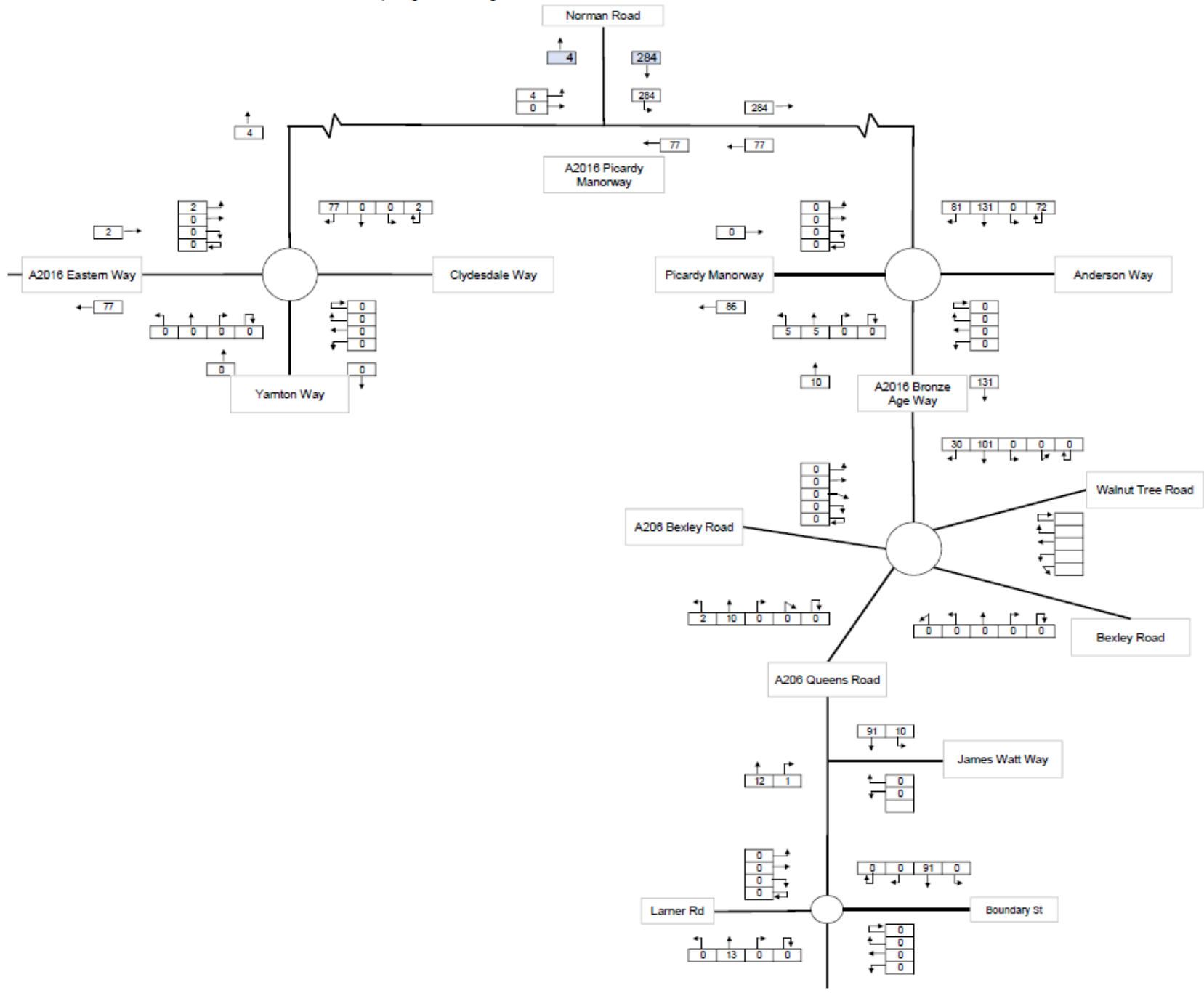
**Construction Traffic Flows - AM Construction Peak Hour 06:00 - 07:00 (in Vehicles)**

- Flows relate to the peak month of construction activity

- Flows include 100% of the REP construction workforce arriving to the site during 06:00-07:00



Construction Traffic Flows - PM Construction Peak Hour 19:00 - 20:00 (in Vehicles)  
 - Flows relate to the peak month of construction activity  
 - Flows include 100% of the REP construction workforce departing the site during 19:00-20:00



## TECHNICAL NOTE

### Appendix C – Junction Utilisation Images

## TECHNICAL NOTE

### Erith Roundabout – Morning Period 06:00 - 07:30

06:00 – Light traffic; no queues



Traffic from James Watt Way arrives at junction and is unimpeded.



Between 06:00 and 07:00 there was no static queueing on both the A2016 and A206 Queens Road.

Queens Road is operating with spare capacity. The flow around the roundabout does not block traffic from entering the junction.



# TECHNICAL NOTE



Traffic which arrives from James Watt Way quickly moves through the junction at 06:45.



# TECHNICAL NOTE

06:00 - A206 Bexley Road Light traffic; no queues



A platoon of vehicles from James Watt Way momentarily impedes traffic exiting from A206 Bexley Road



# TECHNICAL NOTE



At points during the period there were some instances of queuing of approximately 5-10 vehicles when the signal crossing on Bexley Road is called. That traffic quickly dispersed.



## TECHNICAL NOTE

The volume of traffic heading from the Fraser Road starts to build toward the end of the observed period. Traffic continues to move well through the junction – as shown below.



# TECHNICAL NOTE

Erith Roundabout – Evening Period 19:00



Similar to the morning period, traffic was observed to move freely through the junction. Momentary queues would occur on arms and quickly dissipate.



## TECHNICAL NOTE

The volume of traffic through the junction was higher than the morning period but the junction was not congested.



# TECHNICAL NOTE

## James Watt Way Junction – Morning Period 06:00-07:45

A206 – northbound traffic signal demand and end of green phase southbound



A206 – southbound demand prior to green phase and start of build for northbound



Between 06:00 and 07:00, there is demand in both directions with traffic building in readiness for the next green phase. For most cycles observed, the queuing for both directions clears by the end of the green time.



## TECHNICAL NOTE



For the northbound movement towards the end of the observation period, there are some cycles whereby not all vehicles are able to clear the stop line and so there is some minor residual demand.



# TECHNICAL NOTE

James Watt Way arm has light demand before the morning peak



Between 06.00 and 07:00 there is limited queuing for each stage and all vehicles are able to clear the junction each time.



# TECHNICAL NOTE

Demand at signals on James Watt Way clears within green phase



# TECHNICAL NOTE

## James Watt Way Junction – Evening 19:00

After the PM peak, the queue lengths decrease for both directions. Vehicle demand is able to clear in each cycle.



## TECHNICAL NOTE

James Watt Way operates in a similar way after the evening peak to the morning pre-peak period.

