

Riverside Energy Park

Environmental Statement Technical Appendices

APPENDIX:

A.1

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Scoping Report

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1 Introduction

1.1 Overview

- 1.1.1 Cory Environmental Holdings Limited (trading as Cory Riverside Energy) (Cory) intends to apply for consent to build, commission and operate an integrated Energy Park consisting of complementary energy generating development, with an electrical output of up to 96 megawatts (MWe), together with a new connection to the existing electricity network and provision for Combined Heat and Power (CHP) readiness. The proposed development, located in Belvedere in the London Borough of Bexley, would be known as 'Riverside Energy Park' and would be sited adjacent to an existing Energy Recovery Facility (ERF) (referred to as Riverside Resource Recovery Facility (RRRF)) also currently operated by Cory. A location plan and indicative application boundary are provided in **Appendix A** and **B**.
- 1.1.2 This Environmental Impact Assessment (EIA) Scoping Report has been prepared by Peter Brett Associates LLP (PBA) on behalf of Cory in relation to the proposed development.

1.2 Purpose of this Report

- 1.2.1 The proposed development constitutes a project falling within the definition of a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008 by virtue of building, commissioning and operating an onshore generating station with an energy generating capacity of greater than 50 MWe. Consent for the proposed development would therefore require a Development Consent Order (DCO) and the process of EIA is governed by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations').
- 1.2.2 It is considered that the location, scale and nature of the proposed development, notwithstanding the selection criteria in Schedule 3 of the EIA Regulations, may have the potential to give rise to significant effects on the environment. Accordingly, the proposed development is considered to fall within Schedule 2 part 3a of the EIA Regulations and is considered to be an 'EIA development' for the purposes of those Regulations. The DCO application will therefore be accompanied by an Environmental Statement (ES), prepared in accordance with the EIA Regulations.
- 1.2.3 This scoping report has been prepared on behalf of Cory to assist the Secretary of State (SoS) in preparing a Scoping Opinion under the EIA Regulations setting out the scope of the information that should be contained in the ES. It outlines the initial consideration of likely significant environmental effects which the EIA would need to examine and the preliminary scope of the information which would be provided in the ES.
- 1.2.4 The environmental topics which are proposed to be included in the EIA scope, and those which are not, are presented in **Chapters 7 and 8** respectively. Accordingly, this scoping report details how the likely significant environmental effects which have been included in the EIA scope are proposed to be examined and progressed as part of the EIA. The aim of the EIA is to ensure that the development has due regard for the environment, minimises adverse environmental effects and takes advantage of opportunities for environmental enhancement. This scoping report also identifies those topics which are proposed to be scoped out of the EIA as significant effects are not likely, along with the rationale for so-doing.
- 1.2.5 This scoping report provides information to consultees regarding the proposals pursuant to the EIA Regulations and sets out the proposed scope of the EIA and content of the ES.
- 1.2.6 This scoping report constitutes a formal request for a Scoping Opinion under Regulation 10(1) of the EIA Regulations.

1.3 Report Structure

- 1.3.1 This scoping report continues as follows:

- Chapter 2 Proposed Development
- Chapter 3 The Site and the Surrounding Area
- Chapter 4 Regulatory and Policy Background
- Chapter 5 The EIA Process
- Chapter 6 Proposed Scope of the EIA
- Chapter 7 Topics Included in the EIA Scope
- Chapter 8 Topics Not Included in the EIA Scope
- Chapter 9 Summary and Next Steps
- Appendix

2 Proposed Development

2.1 Proposed Development

- 2.1.1 Riverside Energy Park, hereafter referred to as 'REP', would combine a waste Energy Recovery Facility (ERF), battery storage, a roof-mounted solar photovoltaic installation, an anaerobic digestion facility and provision for CHP readiness. REP would generate a nominal rated electrical output of up to 96 MWe. However, after satisfying its own power needs and excluding battery stored power, REP would likely export a lower output to the national electricity network.
- 2.1.2 REP would require a new connection to the existing electricity network as outlined below. The route of the electrical connection, from REP to the electrical connection point, is hereafter referred to as 'the electrical connection route'.
- 2.1.3 Collectively, the REP site, the electrical connection route, and temporary works areas are referred to as the 'application site'.
- 2.1.4 It is anticipated that construction of the proposed development would commence in 2021, with an anticipated operational start date during 2024.
- 2.1.5 A location plan is provided in **Appendix A**, and an Indicative Application Boundary is shown in **Appendix B**. The application site (as currently set by the Indicative Application Boundary) falls within the administrative boundaries of the London Borough of Bexley (LBB), the Royal Borough of Greenwich (RBG), the London Borough of Barking and Dagenham (LBBB), and Dartford Borough Council (DBC).
- 2.1.6 The principal elements of REP are described below.

Energy Recovery Facility

- 2.1.7 A proposed two stream ERF to provide thermal treatment of Commercial and Industrial (C&I) waste, with the potential for municipal solid waste (MSW), utilising moving grate combustion, flue gas treatment and water steam cycle for the production of electricity and heat. It is envisaged that the ERF would likely have a nominal throughput of approximately 655,000 tonnes per annum (tpa). For the purpose of testing a robust scenario in the EIA, an annual maximum throughput of approximately 805,000 tpa will be assumed.
- 2.1.8 The ERF building is anticipated to have the same north-south orientation as the existing RRRF, but arranged such that the stack is located at the northern end. This arrangement would respond to the constrained nature of the available site, offer operational benefits, and enable extensive utilisation of the roof for solar panels.
- 2.1.9 The height of the stack will be determined through detailed dispersion modelling such that the dispersion of flue gases would not result in significant air quality effects on sensitive receptors.

Solar Photovoltaic Installation

- 2.1.10 The proposed layout of REP would enable solar photovoltaic provision to be integrated across a wide extent of the roof, and would be similar to typical roof mounted solar panels.

Battery Storage

- 2.1.11 The battery storage component would supply additional power to the local distribution network at times of peak electrical demand. This facility would be integrated into the main REP building.

Anaerobic Digestion Facility

- 2.1.12 The anaerobic digestion facility would be sized to process up to approximately 40,000 tpa of food and green waste. It is envisaged that this waste would be predominantly sourced from the LBB and delivered to REP by road. Solid digestate, an output of the anaerobic digestion process will be used as a fuel in the ERF to generate electricity, or alternatively it would be transferred off-site for use in the agricultural sector as fertilizer.
- 2.1.13 This facility would be fully integrated into the main REP building, however for reasons of safety the gas flares and bag would be separate from the main REP building (but still sited closely within the REP site).

Combined Heat and Power Connection

- 2.1.14 REP would be CHP enabled with necessary infrastructure within the REP site (heat exchangers, pumps, pressurisation system) included.
- 2.1.15 It is envisaged that the heat connection could service nearby residential developments such as the Thamesmead area, as well as other potential end users. Any CHP infrastructure outside of the application site would not form part of the application for development consent.

The Electrical Connection Route

- 2.1.16 REP would be connected to the existing National Electrical Transmission System (NETS) via a new 132 kilovolt (kV) distribution network connection ('the Electrical Connection'). It is proposed that the Electrical Connection would be routed predominantly via the existing road network and would be underground except for the connection point with REP itself and at the connection point to the NETS. This would necessarily require a new substation within the REP site.
- 2.1.17 There are currently two route options under consideration, to be confirmed through consultation with UK Power Networks (UKPN), who would own and operate the new Electrical Connection, as follows:
- Option 1 – the new cable route would head northwest from REP and follow the existing RRRF Electrical Connection route, to its connection point north of the River Thames at the existing National Grid substation on Renwick Road, Barking. This option would utilise the existing electricity cable tunnel under the river; or
 - Option 2 – the new cables would be routed within the existing road network to a connection point at the existing National Grid Littlebrook Power Station substation, south east of REP.
- 2.1.18 Both Electrical Connection options have been included within the Indicative Application Boundary at this stage. Selection of a single electrical connection point will be confirmed through consultation with UKPN, taking account of their statutory obligations, and therefore a route to a single point of connection to the TENS will ultimately be included within the subsequent DCO application.

Delivery of waste to REP

- 2.1.19 It is proposed to deliver the majority of waste to REP by barge from Waste Transfer Stations (WTS) along the River Thames, utilising the existing jetty as per the existing RRRF. The remainder would be delivered by road. The proportions of the total to be delivered by road and river will be determined through further assessment work.

Removal of by-products from REP

- 2.1.20 Incinerator Bottom Ash (IBA) (approximately 25% of throughput) would be transported by river to the existing IBA Facility at the Port of Tilbury for treatment/recycling, and then onward use as secondary aggregate in the construction sector.
- 2.1.21 Air Pollution Control Residues (APCR) (approximately 3% of throughput) would be taken off site by road in sealed containers to be recycled.

2.2 Construction

- 2.2.1 Details of construction phasing and proposed construction methods are currently being developed. It is envisaged that a draft Construction Environmental Management Plan (CEMP) would be prepared during the course of the assessment work and submitted with the application for development consent. This would set out principles, controls and management measures which would be implemented during construction to manage potential significant impacts. The principles set out in the draft CEMP would be taken into account as part of the EIA.
- 2.2.2 At this stage, it is anticipated that temporary laydown areas will be required for the construction of REP. It is proposed to utilise land south of REP immediately west of Norman Road and/or land to the east of the REP site adjoining Crabtree Manorway North. These areas are included within the Indicative Application Boundary.
- 2.2.3 In order to facilitate construction of REP, temporary works in the River Thames may be required. Cory are currently exploring two potential options for this element of the proposed works. The first would be to install a temporary causeway across the intertidal zone, where self-propelled multi-axle trailers would roll the construction modules off a barge. The second option would include the use of a lift crane, which could be either located on a jetty head constructed in the river or constructed near the river bank, which would directly lift the modules from a barge into the site. Both options would require provision to lift the construction modules over the flood defence wall and the Thames River Path. Some localised dredging may also be required to ensure sufficient vessel access during the tidal cycle.
- 2.2.4 The marine related works would be temporary and limited to the construction phase of the proposed development. In this context, all marine infrastructure would be removed at the end of the construction phase and any riverbed restoration undertaken at this point in time. Accordingly, all impacts associated with the marine works (including the decommissioning of any structures) are considered to occur in the construction phase only.

2.3 Decommissioning

- 2.3.1 For the purpose of the EIA and in order to allow a decommissioning assessment to be presented in the ES, a working assumption has been used that REP has an operational lifetime of 40 years. However, it should be noted that it is common for such developments to be operational for longer periods. In the case of REP, a decision would be made at the appropriate time as to whether it would be 're-powered' after 40 years (depending on the condition of plant items and the nature of the electricity market at that time). As such, the working assumption has been made for the purposes of the ES that after 40 years, the REP generating equipment would be removed and land re-instated to an agreed condition.
- 2.3.2 For the purposes of this request, any decommissioning phase is assumed to be of a similar duration to construction, and therefore environmental effects are considered to be of a similar level to those during the construction phase.

3 The Site and the Surrounding Area

3.1 Site Location and Description

The REP site

- 3.1.1 The REP site comprises approximately 7 hectares (ha) of land located approximately at National Grid Reference (NGR) TQ 49467 80680, accessed off Norman Road, Belvedere, London DA17 6JY in the LBB, immediately to the west of the existing RRRF. This area is referred to within this scoping report as the 'REP site'.
- 3.1.2 The REP site is irregular in shape, and is predominantly used by Cory as an ancillary area for the existing RRRF located at the same address as outlined above.
- 3.1.3 The REP site includes the existing jetty in the River Thames which is currently used for delivery of waste and despatch of some by-products at the existing RRRF. The jetty will be used for the same purpose for the operation of REP.
- 3.1.4 Existing land uses of the REP site include:
- Ash storage containers – container storage on concrete hardstanding;
 - Boundary fencing and associated lighting;
 - Circulation roads;
 - Compounds for the maintenance of operational plant machinery (consisting of concrete hard standing, boundary fencing, lighting, portakabins, metal containers and permanent storage sheds);
 - Car parking; and
 - On-site non-designated Wasteland Habitat Area (WHA).
- 3.1.5 The REP site is accessed from Norman Road which extends south from the site to the A2016/Eastern Way Strategic Road Network (SRN), which runs in an east/west orientation.
- 3.1.6 A Location Plan is detailed in **Appendix A**, and an Indicative Application Boundary is detailed in **Appendix B**.

The Electrical Connection site

- 3.1.7 The Electrical Connection site for Electrical Connection Route Option 1 runs adjacent to the A2016 towards the Thamesmead residential area, before following other routes on the existing road network. An existing tunnel under the River Thames would be utilised to reach the electrical connection point at the existing National Grid Substation on Renwick Road, Barking.
- 3.1.8 The Electrical Connection site for Electrical Connection Route Option 2 would run within the existing road network through the residential areas of Erith, and the northern section of Crayford and Dartford, to the existing electrical connection point at the Littlebrook Power Station substation.

Temporary Laydown areas

- 3.1.9 Temporary laydown areas are proposed on land to the immediate west of Norman Road, which links the REP site with the A2016, and on land to the south-east of the REP site and west of Crabtree Manorway North. Both these temporary laydown areas are brownfield sites situated adjacent to existing industrial/commercial use buildings and are within 0.5 km of the REP site. The temporary laydown areas are shown on the Illustrative Zoning Plan at **Appendix C**.

3.2 The Surrounding Area

- 3.2.1 REP is considered to be consistent with the land uses surrounding the REP site, as the immediate environs on both the northern and southern banks of the River Thames predominantly comprise established industrial areas with relatively tall structures.
- 3.2.2 Immediately to the east of the REP site lies the existing RRRF, a three stream ERF with a maximum consented waste throughput of 785,000 tpa generating up to 72 MWe.
- 3.2.3 Approximately 270 m to the west of REP is the Thames Water Crossness Sewage Treatment Works (STW), which covers an area of approximately 50 ha. One of the largest STW in the UK, this facility serves approximately two million people. A central feature of this STW is the existing facility, located in the north-eastern corner of the site, which burns centrifuged sludge from the STW.
- 3.2.4 To the east, beyond RRRF, lies the Crabtree Industrial Estate. This estate covers an area of approximately 150 ha and is bordered to the north and east by the River Thames. Serviced by the same road network as the REP site, the Crabtree Industrial Estate consists of multiple shed units of varying sizes, the largest being the Lidl Distribution Depot at approximately 3 ha.
- 3.2.5 The Crossness Nature Reserve abuts the REP site's southern and western boundaries, covering an area of approximately 25.5 ha. It forms part of the Erith Marshes Site of Importance for Nature Conservation (SINC) and includes areas of scrub, rough grassland, ponds and ditches.
- 3.2.6 A network of Public Rights of Way (PRoW) surround the REP site, linking Norman Road with the Thames Path to the north. A PRoW originates at the junction of Norman Road and the A2016, which extends northwest through the Crossness Nature Reserve to its border with the Thames Water Crossness STW. From here this PRoW extends north to the Thames Path, and south to the A2016.
- 3.2.7 Located on the northern bank of the River Thames, lies an automobile storage area of approximately 22 ha, the Ford Motor Company Truckfleet Compound (approximately 25 ha), the Dagenham Engine Plant (approximately 22 ha), along with the Eurovia Roadstone and Hanson Asphalt facilities.
- 3.2.8 Multiple tall structures are evident in the immediate environs of the REP site, including stacks and chimneys (such as those at the existing RRRF and the adjoining STW facility), and wind turbines (three being located along the northern bank of the Thames, with one at the adjoining STW facility to the west).
- 3.2.9 The closest residential area to the REP site is Belvedere, which lies approximately 800 m to the south. The residential area of Abbey Wood lies approximately 1,950 m south west and the residential area of Thamesmead lies approximately 1,560 m west.
- 3.2.10 Belvedere train station is located approximately 1.3 km to the south servicing London Cannon Street, Dartford, Gravesend and Gillingham. The Docklands Light Railway also services the area with its connection at Woolwich Arsenal, approximately 6.0 km to the south west.

4 Regulatory and Policy Background

4.1 Introduction

4.1.1 The proposed development will be progressed taking account of policies at the national, regional and local level set out in this chapter.

4.2 National Planning Policy and Guidance

Overarching National Policy Statement for Energy (EN-1) (DECC, 2011)

4.2.1 Part 3 The need for new nationally significant energy infrastructure projects:

- 3.3 The need for new nationally significant electricity infrastructure projects
- 3.4 The role of renewable electricity generation
- 3.7 The need for new electricity network infrastructure
- 3.8 The need for nationally significant gas infrastructure

4.2.2 Part 4 Assessment Principles:

- 4.1 General points
- 4.2 Environmental Statement
- 4.3 Habitats and Species Regulations
- 4.4 Alternatives
- 4.5 Criteria for “good design” for energy infrastructure
- 4.6 Consideration of Combined Heat and Power (CHP)
- 4.8 Climate change adaptation
- 4.9 Grid connection
- 4.10 Pollution control and other environmental regulatory regimes
- 4.11 Safety
- 4.12 Hazardous Substances
- 4.13 Health
- 4.14 Common law nuisance and statutory nuisance
- 4.15 Security considerations

4.2.3 Part 5 Generic Impacts

National Policy Statement for Renewable Energy Infrastructure (EN-3) (DECC, 2011)

4.2.4 Part 2 Assessment and technology-specific information:

- 2.3 Climate Change Adaptation
- 2.4 Criteria for “good design” for energy infrastructure
- 2.5 Biomass and Waste Combustion

National Policy Statement for Electricity Networks Infrastructure (EN-5) (DECC, 2011)

4.2.5 Part 2 Assessment and Technology-Specific Information:

- 2.3 General assessment principles for electricity networks
- 2.4 Climate change adaptation
- 2.5 Consideration of good design

National Planning Policy Framework (DCLG, 2012)

- Chapter 1 Building a strong, competitive economy
- Chapter 10 Meeting the challenge of climate change, flooding and coastal change
- Chapter 11 Conserving and enhancing the natural environment

Planning Practice Guidance (DCLG, 2016)

- Air quality
- Climate change
- Environmental Impact Assessment
- Land affected by contamination
- Natural environment
- Noise
- Renewable and low carbon energy
- Waste

4.2.6 Other relevant national planning policy and guidance documents include:

- National Planning Policy for Waste (DCLG, 2014)
- Energy from waste - A guide to the debate (DEFRA, 2014)

4.3 Regional Planning Policy and Guidance

London Plan (Greater London Authority, 2016)

4.3.1 Chapter 5 London's response to climate change:

- Policy 5.4A Electricity and gas supply
- Policy 5.5 Decentralised energy networks
- Policy 5.6 Decentralised energy in development proposals
- Policy 5.7 Renewable energy
- Policy 5.8 Innovative energy technologies
- Policy 5.9 Overheating and cooling
- Policy 5.10 Urban greening
- Policy 5.11 Green roofs and development site environs
- Policy 5.12 Flood risk management
- Policy 5.13 Sustainable drainage
- Policy 5.16 Waste net self-sufficiency
- Policy 5.17 Waste capacity
- Policy 5.18 Construction, excavation and demolition waste
- Policy 5.19 Hazardous waste
- Policy 5.21 Contaminated land
- Policy 5.22 Hazardous substances and installations

4.3.2 Chapter 6 London's transport:

- Policy 6.11 Smoothing traffic flow and tackling congestion
- Policy 6.12 Road network capacity
- Policy 6.14 Freight

4.3.3 Chapter 7 London's living spaces and places:

- Policy 7.13 Safety, security and resilience to emergency
- Policy 7.14 Improving air quality
- Policy 7.15 Reducing and managing noise, improving and enhancing the acoustic environment and promoting appropriate soundscapes
- Policy 7.19 Biodiversity and access to nature
- Policy 7.20 Geological conservation

- Policy 7.26 Increasing the use of the blue ribbon network for freight transport
- Policy 7.29 The River Thames

4.3.4 Chapter 8 Implementation and monitoring review:

- Policy 8.2 Planning obligations
- Policy 8.3 Community infrastructure levy

London's Wasted Resource – (The Mayor's Municipal Waste Management Strategy 2011)

4.3.5 Chapter 2 Current performance on managing London's municipal waste

4.3.6 Chapter 5 Delivering change - policies and proposals:

- Policy 2: Reducing the climate change impact of London's municipal waste management
- Policy 3: Capturing the economic benefits of municipal waste management
- Policy 4: Achieving high recycling and composting rates resulting in the greatest environmental and financial benefit
- Policy 5: Stimulating the development of new municipal waste management infrastructure, particularly low carbon technologies

4.4 Emerging Regional Planning Policy and Guidance

Draft New London Plan

- 4.4.1 The Greater London Authority (GLA) is preparing a new statutory Development Plan for London. The adopted London Plan sets overall strategic planning for London and provides the policy framework for local plans across London. Its policies need to be given due regard in decisions under the Planning Act 2008 within Greater London.
- 4.4.2 According to the GLA, the New London Plan will undergo consultation between December 2017 and March 2018 with examination in public scheduled for Autumn 2018 and publication of the final London Plan scheduled for Autumn 2019.

Draft London Environment Strategy (2017)

- Chapter 4 Air quality
- Chapter 6 Climate change mitigation and energy
- Chapter 7 Waste

Draft Mayor's Transport Strategy 2017

- 4.4.3 On 21st June 2017 the GLA published a draft of the Mayor's Transport Strategy which sets out policies and proposals to reshape transport in London over the next 25 years. The first consultation on the Mayor's Transport Strategy closed on 2nd October 2017. According to the GLA the Mayor's Transport Strategy will be published in 2018.

4.5 Local Planning Policy and Guidance

Bexley Core Strategy (LBB, 2012)

4.5.1 Chapter 4 Managing the built and natural environment:

- Policy CS01 Sustainable development
- Policy CS08 Adapting to and mitigating the effects of climate change, including flood risk management
- Policy CS09 Using Bexley's resources sustainably
- Policy CS12 Bexley's future economic contribution
- Policy CS13 Access to jobs
- Policy CS15 Integrated transport system
- Policy CS17 Green infrastructure
- Policy CS18 Biodiversity and geology
- Policy CS20 Sustainable waste management

London Borough of Bexley Unitary Development Plan Saved Policies (LBB, 2012)

4.5.2 Chapter 5 Environment:

- Policy ENV40 - contamination and remedial treatment of land
- Policy ENV41 - Air Quality Strategies and preparation of an Air Quality Assessment

4.5.3 Chapter 7 Employment:

- Policy E1 - criteria for proposed industrial and commercial development

4.5.4 Chapter 8 Transport:

- Policy T6 - optimising use of the existing transport network

4.5.5 Chapter 12 Thames-side:

- Policy TS1 - business development areas
- Policy TS13 & 14 - Thames-side Environment
- Policy TS15 - Thames-side Biodiversity

4.5.6 Chapter 14 Minerals and Waste Processing:

- Policy MIN1 - environment, amenity and safety issues

London Borough of Bexley Energy Masterplan (LBB, 2016)

4.5.7 Chapter 4 Energy Supply Appraisal:

- 4.1 Riverside Resource Recovery Facility

4.5.8 Chapter 6 Heat Network Infrastructure Proposals:

- 6.5 Heat Offtake Arrangement from RRR Facility

London Borough of Barking and Dagenham Core Strategy (LBBD, 2010)

- Strategic Objective SO.8
- Strategic Objective SO.9
- Policy CR1 - Climate Change and Environmental Management.
- Policy CR2 - Preserving and Enhancing the Natural Environment
- Policy CR3 - Sustainable Waste Management
- Policy CR4 - Flood Management
- Policy CP2 - Protecting and Promoting our Historic Environment

**London Borough of Barking and Dagenham Site Specific Allocations
DPD (LBBD, 2010)**

4.5.9 Key Regeneration Areas and Significant Housing Sites:

- SSA SM1 Barking Riverside
- SSA SM13 Thames View Regeneration Sites

**London Borough of Barking and Dagenham Development Policies DPD
(LBBD, 2011)**

- Policy BR1 - Environmental Building Standards
- Policy BR5 - Contaminated Land
- BR13 - Noise Mitigation
- BR14 - Air Quality
- BR15 - Sustainable Waste Management
- Policy BC11 - Utilities
- Policy BC12 - Telecommunications
- Policy BP11 - Urban Design
- Policy BP2 - Conservation Areas and Listed Buildings
- Policy BP3 - Archaeology

Royal Greenwich Local Plan Core Strategy with detailed policies (RBG, 2014)

4.5.10 Chapter 3 Spatial Strategy:

- 3.3 The places of Royal Greenwich / locations for strategic development

4.5.11 Chapter 4 Strategic and Detailed Policies

- Policy OS1 Open Space
- Policy OS4 - Biodiversity
- Policy OS(f) - Ecological Factors
- Policy OS(g) - Green and River Corridors
- Policy E1 - Carbon Emissions
- Policy E2 - Flood Risk
- Policy E3 - Residual Flood Risk
- Policy E(c) - Air Pollution
- Policy IM1 - Infrastructure
- Policy IM(a) - Impact on the Road Network
- NC22 - Sites of Importance for Nature Conservation

Dartford Borough Council Core Strategy (DBC, 2011)

4.5.12 Chapter 2 where development will take place:

- CS1 - Spatial Pattern of Development
- CS6 - Thames Waterfront

4.5.13 Chapter 3 managing development:

- CS14 - Green Space
- CS16 - Transport Investment

4.5.14 Chapter 5 sustainable growth:

- CS23 - Minimising Carbon Emissions
- CS24 - Flood Risk
- CS25 - Water Management

Dartford Borough Council Development Policies Plan (DBC, 2017)

- Policy DP3 - Transport Impacts of Development
- Policy DP5 - Environmental and Amenity Protection
- Policy DP11 - Sustainable Technology and Construction
- Policy DP13 - Designated Heritage Assets
- Policy DP20 - Identified Employment Areas
- Policy DP23 - Protected Local Green Space
- Policy DP24 - Open Space
- Policy DP25 - Nature Conservation and Enhancement

4.6 Emerging Local Planning Policy and Guidance

London Borough of Bexley Draft Local Plan

- 4.6.1 The LBB is preparing a Local Plan which will set out policies to guide development across the Borough up to 2040. The call for sites consultation took place between the 19th June and 18th August 2017. The next round of consultation on the preferred approach to Local Plan policies is scheduled to take place in November/December 2017.

5 The EIA Process

5.1 EIA Regulations

- 5.1.1 The process of EIA for projects falling under the Planning Act 2008 is governed by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, the “EIA Regulations”. The EIA Regulations implement EC Directive 2011/92/EU, as amended by Directive 2014/52/EU, into domestic legislation.
- 5.1.2 As set out above in paragraph 1.2.2, REP falls with Schedule 2 part 3a of the EIA Regulations. Given the location, scale and nature of the proposed development, notwithstanding the selection criteria in Schedule 3 of the EIA Regulations, it is considered that REP may have the potential to give rise to significant effects on the environment. This Scoping Report is provided in accordance with Regulation 10 of the EIA Regulations.
- 5.1.3 The EIA Regulations set out the requirements for undertaking an EIA, and Regulation 14 and Schedule 4 detail the required information for inclusion in an ES. For ease of reference, Regulation 10, Regulation 14 and Schedule 4 of the EIA Regulations are presented in **Appendix D**.

5.2 Consultation

- 5.2.1 The Planning Act 2008, and secondary legislation including the EIA Regulations, sets out the statutory requirements for consulting with prescribed consultees and the local community (in Sections 42 and 47 of the Planning Act 2008 respectively).
- 5.2.2 In accordance with its statutory duties, Cory will undertake statutory consultation including the publication of a Preliminary Environmental Information Report (PEIR) during the pre-application phase.
- 5.2.3 The involvement of both statutory and non-statutory stakeholders can result in benefits for all parties, through eliciting environmental information which may not otherwise have come to light, increasing trust and transparency as well as providing an opportunity to address potential concerns. In accordance with Section 49 of the Planning Act 2008, Cory will have regard to any consultation responses and feedback received in the further design development of the REP proposals, and assessment of the likely significant environmental effects.
- 5.2.4 In addition to the statutory requirements, Cory is also intending to undertake prior non-statutory engagement in order to identify any issues earlier in the development process.

5.3 Assessment

- 5.3.1 In general terms the main stages in the EIA are as follows:
- Data Review – draw together and review available data;
 - Scoping – identify significant issues, determine scope of EIA;
 - Baseline Surveys – undertake baseline surveys and monitoring;
 - Preliminary Assessment – initial assessment of likely significant effects, and publication of preliminary assessment in the PEIR;
 - Assessment and Iteration – assess likely significant effects of development, evaluate alternatives, provide feedback to design team on adverse effects, incorporate any necessary mitigation, assess effects of mitigated development; and
 - Preparation of the ES.
- 5.3.2 The proposed scope of the EIA and approach to the assessment of likely significant effects is

set out in **Chapter 6**.

5.4 Mitigation

- 5.4.1 One of the most important functions of the EIA process is to identify ways to mitigate identified adverse environmental effects and identify opportunities that a proposed development may have for environmental improvements. The EIA Regulations require an ES to contain: “A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment”.
- 5.4.2 A hierarchy of methods for mitigating significant adverse effects will be followed, which are, in order of preference:
- Enhancement - opportunities that the proposed development may provide to enhance the local and wider environment (e.g. ecological enhancement or provision of jobs);
 - Avoidance – designing the proposed development in such a way that avoids effects on the environment (e.g. locating sensitive infrastructure above flood levels);
 - Reduction – design the development or employ construction methodologies such that significant effects identified are reduced (e.g. employment of sustainable drainage to mitigate effects of development in flood prone areas); and
 - Compensation – providing off-site enhancement in order to compensate for where onsite mitigation has not been possible (e.g. financial contributions towards local infrastructure).
- 5.4.3 Environmental effects remaining after mitigation measures have been incorporated are termed residual effects and these will be fully described in the ES.

Embedded and Further Mitigation

- 5.4.4 There is a distinction between mitigation that is incorporated or ‘embedded’ into the design of the development (embedded mitigation) and mitigation that is subsequently identified in order to prevent, reduce or offset any remaining significant adverse effects (further mitigation). Embedded mitigation may include, for example, incorporating habitat areas into the proposed development design, or incorporation of appropriate drainage attenuation.
- 5.4.5 Embedded mitigation evolves through the iterative design process and early consideration of the likely significant impacts. The ES will document the embedded mitigation measures which have been employed within the design in response to the identification of potentially significant effects. The ES, within each of the topic chapters as appropriate, will also document the further mitigation that is required to complement the embedded mitigation.
- 5.4.6 A summary of all mitigation measures and how they are secured, either inherently through the project design, or through the implementation of a suitable DCO requirement, will be set out in the ES.

5.5 Monitoring

- 5.5.1 The EIA Regulations require “*the monitoring of any significant adverse effects on the environment of proposed development*”. It is important to note that the Regulations only require the monitoring of significant adverse effects. The ES will therefore ensure that it is clear to the reader which, if any, effects are both adverse and significant and may therefore require monitoring.
- 5.5.2 It is important to note that Regulation 21 (3) of the EIA Regulations state that the SoS should:
- (b) take steps to ensure that the type of parameters to be monitored and the duration of the monitoring are **proportionate to the nature, location and size of the proposed development and the significance of its effects on the environment**; and*

(c) consider, in order to avoid duplication of monitoring, whether any existing monitoring arrangements carried out in accordance with an obligation under the law of any part of the United Kingdom, other than under the Directive, are more appropriate than imposing a monitoring measure.

- 5.5.3 Schedule 4 to the EIA Regulations identifies that an ES should identify “*any proposed monitoring arrangements*”. The ES will therefore provide a schedule of proposed monitoring to clearly identify the monitoring that is proposed in relation to any significant adverse effects that have been identified. Any such monitoring will be proportionate, as noted above.

5.6 Preliminary Environmental Information Report (PEIR)

- 5.6.1 Under Regulation 12 (1)b of the EIA Regulations, the Applicant is required to set out how it intends to publicise and consult on preliminary environmental information relating to the proposed development. Regulation 12 (2) of the EIA Regulations then defines preliminary environmental information as being the information which has been compiled by the applicant, and is reasonably required for the consultation bodies to develop an informed view of the likely significant effects of the development (and of any associated development).

- 5.6.2 In the case of the proposed development, as set out in paragraph 5.2.2 above, PEIR will be published as part of the statutory consultation process which will be undertaken in accordance with the Planning Act 2008.

5.7 Environmental Statement

- 5.7.1 The EIA process will be documented in an ES which will describe the proposed development and set out the policy context; give full details of the EIA methodology and any technical methodologies and data used in support of the assessment; detail any mitigation and enhancement measures that have been employed; present the assessment of likely significant environmental effects and provide a schedule of proposed monitoring arrangements. The ES will present the residual effects, and an assessment of the cumulative effects and impact interactions as described in **Chapter 6** below.

- 5.7.2 In accordance with paragraph 9 of Schedule 4 to the EIA Regulations, a Non-Technical Summary (NTS) of the ES will also be provided.

5.8 Consideration of Alternatives

- 5.8.1 The EIA Regulations require an ES to include “*A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.*”

- 5.8.2 It is a matter for the developer to decide which alternatives it intends to consider. The EIA Regulations do not expressly require that an applicant considers alternatives, although it is widely encouraged at the policy level, both European and domestic, and is a feature of EIA best practice.

- 5.8.3 The ES will fulfil the requirements of the EIA Regulations through identifying the reasonable alternatives considered by the developer and explain the main reasons for the choices made.

5.9 EIA Team

- 5.9.1 Regulation 14 of the EIA Regulations requires that, to ensure the completeness and quality of environmental statements, “*the developer must ensure that the environmental statement is prepared by competent experts*”.

- 5.9.2 In accordance with Regulation 14, the ES will be accompanied by a statement from the

developer outlining the relevant expertise or qualifications of such experts.

- 5.9.3 **Appendix E** contains a table outlining the organisational experience of those who have contributed to this EIA Scoping Report and will contribute to the subsequent ES.

6 Proposed Scope of the EIA

6.1 Technical Scope

- 6.1.1 This technical scope describes the environmental topics that should be addressed by an EIA, in line with the requirements of the EIA Regulations. Schedule 4 sets out that the ES must include a description of the aspects of the environment which are likely to be significantly affected by the proposed development.
- 6.1.2 This requirement and the broad categories set out in Schedule 4, along with others which are considered to have the potential to lead to significant environmental effects, have been interpreted and applied in the context of the proposed development. **Table 6.1** therefore sets out those topics that it is proposed to scope into or out of the EIA. Note that in some instances particular aspects of a given topic are able to be scoped out. Where this is the case it is detailed within the separate topic sections set out in **Chapter 7**.
- 6.1.3 References are provided to demonstrate where these categories have been included within the EIA Scope. **Chapter 7** of this scoping report provides a detailed analysis of the resultant proposed technical scope of the EIA, while **Chapter 8** identifies the topic which is proposed to scope out of the EIA as it has been shown that significant environmental effects are unlikely to occur.

Table 6.1: Technical Scope

EIA Regulations Topic	Scoped in / Scoped out?	Explanation within this Scoping Report
Population	In	Section 7.2 – Transport Section 7.12 – Socio-economics
Human Health	In	Section 7.3 – Air Quality Section 7.4 – Noise and Vibration Section 7.10 – Hydrology, Flood Risk and Water Resources Section 8.8 – Health
Biodiversity (for example Flora and Fauna)	In	Section 7.7 – Terrestrial Biodiversity Section 7.8 – Marine Biodiversity
Land (for example land take)	In	Section 7.11 – Ground Conditions
Soil (for example organic matter, erosion, compaction, sealing)	In	Section 7.10 – Hydrology, Flood Risk and Water Resources Section 7.11 – Ground Conditions
Water (for example hydromorphological changes, quantity and quality)	In	Section 7.7 – Terrestrial Biodiversity Section 7.8 – Marine Biodiversity Section 7.9 – Marine Geomorphology Section 7.10 – Hydrology, Flood Risk and Water Resources
Air	In	Section 7.3 – Air Quality

EIA Regulations Topic	Scoped in / Scoped out?	Explanation within this Scoping Report
Climate	In	Section 8.3 – Climate Change
Material assets	In	Section 7.6 – Historic Environment Section 7.11 – Ground Conditions Section 8.9 – Waste
Cultural heritage, including architectural and archaeological aspects	In	Section 7.6 – Historic Environment
Townscape	In	Section 7.5 – Townscape and Visual Impact Assessment
The inter-relationship between the above factors	In	Section 7.13 – Summary and Impact Interactions
The Risk of Major Accidents and/or Disasters	Out	Section 8.2 – Risk of major accidents and/or disasters

- 6.1.4 The following paragraphs set out the principles for the temporal and spatial scope, and the approach to the assessment of effects, that will be applied to the EIA of the topics identified in **Chapter 7**.

6.2 Temporal Scope

Environmental Baseline

- 6.2.1 As a general principle, environmental effects will be assessed by comparing the predicted state of the environment without the proposed development, with the state of the environment with the proposed development for a particular year. This will include an outline of the likely evolution of the application site without implementation of the development as far as changes from the baseline scenario can be predicted (however the potential for this is limited given majority of the site comprises hard standing and due to the limited construction period of the proposed development).
- 6.2.2 The EIA will take into account approved developments that are likely to come forward during the construction of the proposed development and, where appropriate, these will be factored into the definition of the baseline or identified as receptors at a relevant point in time. Further details on the approach to approved developments are provided in **Section 6.4**.

Duration of Effects

- 6.2.3 Environmental effects will be classified as either permanent or temporary, as appropriate. Permanent changes are those which are irreversible (e.g. permanent landtake) or will last for the foreseeable future (e.g. emissions from generated road traffic).
- 6.2.4 The duration of temporary environmental effects will be defined as short, medium or long term based on the likely durations of the construction and operational phases of the development. These definitions will be considered within the assessment of the likely significant effects and will be set out in the ES.

- 6.2.5 Where environmental effects will be infrequent or intermittent (such as effects related to activities that will not be continuous during construction) this will be noted in the ES and the frequency of these activities will be considered in the assessment.

Construction

- 6.2.6 Certain environmental effects will only occur during construction of the proposed development and will cease once construction activities have completed. These will typically be the temporary effects of the proposed development and will be described as “short-term” or “medium-term”, as appropriate, using the definitions determined to be appropriate and set out in the ES. Examples include, but are not limited to:

- Creation of dust;
- Risk of pollution during construction; and
- Noise from construction activities.

Operation

- 6.2.7 Environmental effects that occur during the operation of REP will typically be permanent or “long-term”. Examples of permanent effects which might occur during the operation of REP include, but are not limited to:

- Changes to key views;
- Changes to the setting of heritage assets; and
- Changes to air quality from operational road traffic.

6.3 Spatial Scope

- 6.3.1 The spatial extent of each of the technical assessments will vary from one to another in accordance with the relevant policy and guidance for the assessment of that topic; in some instances the environmental effects will extend no further than the application site and in other cases the assessment will extend to a buffer beyond the application site. The study area for each technical assessment will be identified and described as appropriate in each of the topic chapters of the ES.

- 6.3.2 Chapters of the ES will assess sites and receptors of local, regional and national importance as appropriate, and in accordance with topic specific legislation and guidance.

6.4 Assessment of Effects

Types of Effects

- 6.4.1 In assessing the significance of effects identified during the EIA, account will be taken as appropriate as to whether effects are:

- Direct Effects – effects that are caused by activities which are an integral part of the proposed development (e.g. land take);
- Indirect Effects – effects arising indirectly from the construction or use of a development (e.g. supply chain effects in construction stage);
- Secondary Effects – are 'knock-on'/once-removed effects arising in consequence of indirect effects (e.g. the decision of firms to locate in a particular area following nearby transport infrastructure upgrades);

- Cumulative Effects – the cumulative effects of the proposed development and other approved local developments;
- In-combination Effects (impact interactions) - many effects that singly may not be significant, but when assessed together may be significant;
- Transboundary Effects – effects caused by a proposed development that are experienced across a boundary between European Economic Area states;
- Short-Term and Medium-Term – Environmental effects that occur during the construction of a proposed development will typically be Short or Medium Term;
- Long-Term – Environmental effects that occur during the operation of a proposed development will typically be Long Term;
- Temporary Effects – Environmental effects that occur during the construction of a proposed development will typically be temporary;
- Permanent Effects – Environmental effects that occur during the operation of a proposed development will typically be permanent;
- Beneficial Effects – effects that have a positive influence on the environment; and
- Adverse Effects – effects that have a negative influence on the environment.

6.4.2 For clarity within the assessment, 'impact' will be used in relation to the outcome of the proposed development (e.g. the removal of habitat or the generation of emissions to air), while the 'effect' will be the consequent implication in environmental terms (continuing the above example, e.g. the loss of a potential bird breeding site or the reduction in local air quality).

Residual Effects

- 6.4.3 The incorporation of mitigation measures, primarily as part of the proposed development design and construction phase, will be reported where appropriate and likely significant residual effects that remain will be described and assessed according to the significance criteria set out in **Table 6.2** below.
- 6.4.4 As noted above, the EIA Regulations require that the ES describes likely significant effects of the proposed development. However, there is no applicable definition of significance and interpretations differ. In accordance with the European Commission's Guidance on Scoping (2001), the EIA will study those effects that will influence decision-making or those where there is uncertainty about their magnitude. This approach is consistent with best practice for EIA in the UK.
- 6.4.5 The significance of an effect is typically the product of two factors, the value of the environmental resource affected and the magnitude of the impact, while consideration may also need to be given to the likelihood of an effect occurring. A significant effect may arise as a result of a slight impact on a resource of national value or a severe impact on a resource of local value. In addition, the accumulation of many non-significant effects on similar local resources geographically spread throughout the proposed development may give rise to an overall significant effect. An example of this might be the loss of ecological habitat of low value at many locations.
- 6.4.6 This approach to assessing and assigning significance to an environmental effect will rely upon such factors as legislative requirements, guidelines, standards and codes of practice, consideration of the EIA Regulations, the advice and views of statutory consultees and other interested parties and expert judgement. The following questions are relevant in evaluating the significance of likely environmental effects:

- Which risk groups are affected and in what way?
- Is the effect reversible or irreversible?
- Does the effect occur over the short, medium or long term?
- Is the effect permanent or temporary?
- Does the effect increase or decrease with time?
- Is the effect of local, regional, national or international importance?
- Is it a beneficial, neutral or adverse effect?
- Are health standards or environmental objectives threatened?
- Are mitigating measures available and is it reasonable to require these?

6.4.7 Specific significance criteria will be prepared as appropriate for each specialist topic, based on the above and the generic criteria set out in **Table 6.2** below.

Table 6.2: Significance criteria

	Significance Level	Criteria
Significant	Substantial	These effects are assigned this level of significance as they represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites and features of national or regional importance. A change at a district scale site or feature may also enter this category.
	Major	These effects are likely to be important considerations at a local or district scale and may become key factors in the decision-making process.
	Moderate	These effects, while important at a local scale, are not likely to be key decision-making issues.
Not significant	Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless they are of relevance in enhancing the subsequent design of the project and consideration of mitigation or compensation measures.
	Negligible	Either no effect or an effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error. Such effects should not be considered by the decision-maker.

6.4.8 Effects that are described as ‘substantial’, ‘major’ or ‘moderate’ are determined to be *significant*; and effects that are described as ‘minor’ or ‘negligible’ are determined to be *not significant* in the context of the EIA Regulations.

Consequential Effects

6.4.9 REP could result in consequential effects, in the form of increased vehicle movements servicing the Waste Transfer Stations (WTS) along the River Thames (which would supply waste by barge).

- 6.4.10 In gaining both the extant planning consents and Environmental Permits, throughput limits were imposed on each WTS. These limits would have been defined through appropriate impact assessment work, including consideration of impacts to the local road networks.
- 6.4.11 Each WTS would be restricted to operate within their approved limits and, as a result, vehicle movements servicing each WTS could not exceed the assessed limits.
- 6.4.12 As no un-assessed effects could occur to the road network surrounding each WTS, consequential effects from REP in this respect are not proposed to be included within the EIA.

Cumulative Effects and Impact Interactions

- 6.4.13 The EIA Regulations require the consideration of the potential impact of inter-relationships and cumulative effects of “existing and/or approved development” with the development.
- 6.4.14 The EIA will consider as appropriate:
- The likely significant cumulative effects of the proposed development and other major local existing and/or approved developments; and
 - The potential for impact interactions leading to an aggregated environmental effect on a receptor being greater than each of the individual effects that have been identified (e.g. local people being affected by noise, dust and increased traffic levels during the construction of the development, where those impacts are greater combined than individually).
- 6.4.15 The assessment of likely significant cumulative effects of the proposed development and other local committed developments will be included within each of the topic chapters of the ES. The list of committed developments to be considered will be agreed in consultation with relevant stakeholders.
- 6.4.16 Potential impact interactions will be assessed within a dedicated chapter of the ES, as it will need to draw together the outcomes of individual discipline assessments.

Transboundary Effects

- 6.4.17 Regulation 32 of the EIA Regulations (Development with significant transboundary effects) applies where an ES is to be provided that, in the opinion of the SoS, shows the development is likely to have significant effects on the environment in another European Economic Area (EEA) State.
- 6.4.18 When this is the case, the SoS must consult with that EEA state and provide information on the description of the development, together with any available information on its possible significant effects on the environment, and information on the nature of the decision which may be taken.
- 6.4.19 It is not anticipated that the proposed development would result in significant transboundary effects due to the location and nature of the development. It is therefore considered that transboundary effects do not need to be considered within the ES.

Limitations, Uncertainty and Difficulties Undertaking the Assessment

- 6.4.20 The prediction of future effects inevitably involves a degree of uncertainty. Where necessary, the ES will describe the principal factors giving rise to uncertainty in the prediction of environmental effects and the degree of the uncertainty.
- 6.4.21 Confidence in predictions will be engendered by employing accepted assessment methodologies, e.g. Guidance for Ecological Impact Assessment by the Institute of Ecology and Environmental Management. Uncertainty inherent within the prediction will be described.

- 6.4.22 Uncertainty also applies to the success or otherwise of measures to mitigate adverse environmental effects. Where the success of a mitigation measure is uncertain, the extent of the uncertainty will be identified in the ES.
- 6.4.23 The ES will identify, in accordance with Schedule 4 of the EIA Regulations, any difficulties that have been encountered in undertaking the assessment.

7 Topics Included in the EIA Scope

7.1 Introduction

7.1.1 This chapter identifies the environmental topics scoped into the EIA, the potential effects and the methodology proposed to undertake the topic assessments. In some instances, the scope of the assessment is based on environmental information already collected (including collection of desk study data, site walkovers and previously conducted survey work) which is informing the emerging design of the proposed development.

7.2 Transport

Introduction

7.2.1 The purpose of the Transport chapter of the ES is to describe (and, where possible, quantify) the likely impact that the proposed development will have on the surrounding transport networks including the River Thames.

7.2.2 This chapter of the ES will be based on a Transport Assessment (TA) and will follow a scope that we will seek to agree with LBB and Transport for London (TfL). It is anticipated that this will include a full multi-modal impact assessment, which will consider the impact of the proposed development on all relevant transport infrastructure surrounding the application site.

7.2.3 An assessment of the proposed development's impacts during construction and operation on the river's capacity (in terms of level of service and level of safety) will be determined in a Navigational Risk Assessment (NRA) to be appended to the ES. The Transport ES chapter will draw on the outcomes of the NRA where relevant.

Baseline Conditions

7.2.4 This section will present the baseline conditions of the local transport infrastructure and networks in the area, comprising:

- RRRF site information
 - Existing plant, operating hours, equipment, parking, storage;
 - Staff information – shift patterns, staff numbers, mode share, postcode data;
 - Trip generation – vehicles and water freight via jetty, permitted trip generation; and
 - Trip distribution – staff postcodes, origins/destination of freight trips generated by RRRF.
- Highway network including TfL Road Network (TLRN) and the Strategic Road Network (SRN)
 - Existing traffic flow data – some collected by WSP in October 2015 and RPS in May 2016, but will need to be supplemented by Automatic Traffic Counts (ATCs) on local highway and more recent data should LBB and TfL consider the existing data to be outdated; and
 - Personal injury collision analysis (most recent 3-year data to be supplied by TfL).
- Public transport

- Rail (Belvedere), Elizabeth line (Abbey Wood); and
- Bus.
- Pedestrian network
- Cycle network
- River network including existing usage and capacity of the River Thames.

Potential Environmental Effects

Construction

- 7.2.5 Construction of REP will generate construction traffic and may require changes to access arrangements for RRRF. The impacts of construction traffic, including that resulting from site workers will be assessed. There may also be some impacts as a result of the Electrical Connection which would be considered where appropriate.
- 7.2.6 Any overlap in construction programme with the demolition / construction of other developments in the locality will also be assessed in terms of cumulative impacts. Potential transport-related environmental impacts during demolition / construction are likely to include:
- Impacts on users of the local road network (including drivers, cyclists and public transport) due to the movement of construction vehicles and temporary changes to local access arrangements;
 - Impacts on other businesses and nearby properties due to increased vehicular traffic on the local highway network, and Norman Road in particular;
 - Impacts on the level of service and level of safety for vessels operating on the River Thames, as caused by vessel trips generated during the construction phase as well as any works within the River Thames; and
 - Impacts on pedestrians due to potential temporary closure of footways.

Operation

- 7.2.7 The majority of impacts are only likely to affect the immediate local area and delivery routes. The impact assessment will also consider the cumulative transport-related impacts from consented developments, to be agreed with LBB.
- 7.2.8 The main transport impacts during the operational phase are likely to be:
- Impacts on the local highway network that may arise due to increased vehicle trips to and from REP associated with both staff and material transport;
 - Impacts on the level of service and level of safety for vessels operating on the River Thames, as caused by vessel trips generated during the operational phase;
 - Impact on pedestrians and users of PRoWs; and
 - Impacts on public transport resulting from additional staff trips.

Method

- 7.2.9 The assessment of individual environmental elements will be carried out drawing from the 'Guidelines for the Environmental Assessment of Road Traffic' (1993) published by the Institute

of Environmental Assessment (IEA), and where appropriate, Volume 11 of the 'Design Manual for Roads and Bridges' (DMRB) 'Environmental Assessment' (2008) published by the former Department of Environment, Transport and the Regions (DETR), now the Department for Transport (DfT). These documents are recommended tools for the appraisal of environmental impacts of transport and travel and they identify appropriate standards for assessment.

7.2.10 The IEA guidelines suggest two broad rules to identify the appropriate extent of the assessment area, as follows:

- Links with all vehicle or Heavy Vehicle traffic flow increases in any assessment year of +30%;
- Links with Medium or High sensitivity receptors with flow increases greater than 10%.

7.2.11 At this stage, it is not anticipated that many links will experience uplifts of more than 10% in either the construction or operational phases. However, the local highway network will be assessed in order to confirm this initial understanding.

7.2.12 The TA will set out the methodology for trip generation and distribution of REP vehicle and river freight trips. This will be based on a recommended best practice approach as set out within TfL's online transport assessment guidance. The assessment will draw from the observed trip characteristics of RRRF given that this represents a good existing dataset from which to determine likely effects of REP.

Assessment Scenarios

7.2.13 The assessment will consider the following scenarios:

- 2017 Baseline (Do Nothing);
- Construction peak year (Do Minimum);
- Opening Year plus 10 years (Do Minimum);
- Construction peak year (Do Something); and
- Opening Year plus 10 years (Do Something).

7.2.14 'Do Minimum' represents the 'without construction/development' scenario and 'Do Something' represents the 'with construction/development' scenario.

7.2.15 The years for peak construction and opening will be clarified during the assessment. Future year background traffic growth will be determined based on the DfT's traffic forecasting tool TEMPro.

7.2.16 Operational scenarios are to be quantified in terms of trip generation. Several modal splits between river and road freight will be assessed; however, to avoid repetition, a hypothetical worst-case assessment will be made in terms of the environmental impacts assuming 100% of waste being delivered by road as river freight trips have lower impacts on the environment. However, the proposal is being brought forward on the basis that it will achieve a modal split by at least 75% by river.

Assessment Criteria

7.2.17 The IEA Guidelines will provide the assessment criteria for this study. The main transport impacts which could arise from REP would relate to the following:

- Severance;

- Driver Delay;
- Pedestrian Delay and Amenity;
- Fear and Intimidation;
- Accidents and Road Safety; and
- Dust and Dirt.

7.2.18 The 'Dust and Dirt' criterion, however, will not be considered within the Transport ES chapter, as this category will be covered within the Air Quality chapter of the ES.

Magnitude of Effects

7.2.19 A scale of magnitude will be outlined in the ES transport chapter. The magnitude of effects will be assessed against a scale divided into negligible, small, medium and large magnitude.

Sensitivity of Receptors

7.2.20 The sensitive receptors will comprise links and junctions of the local and strategic road network and PRoWs in the vicinity of the site, including pedestrian and cycle facilities such as footways and crossing points. The identified sensitive receptors will be rated in terms of their sensitivity on a scale of 'high', 'medium' and 'low'.

Table 7.2.1: Receptor Sensitivity

High Sensitivity	Medium Sensitivity	Low Sensitivity
<ul style="list-style-type: none"> ▪ schools, colleges and other educational institutions (nurseries have been assumed to be included in this category) ▪ retirement / care homes for the elderly or infirm ▪ roads used by pedestrians with no footways ▪ road safety black-spots 	<ul style="list-style-type: none"> ▪ hospitals, surgeries and clinics ▪ parks and recreation areas ▪ shopping areas ▪ roads used by pedestrians with narrow footways 	<ul style="list-style-type: none"> ▪ open space ▪ tourist / visitor attractions ▪ historical buildings ▪ churches ▪ other roads with active frontages and dwellings

Significance of Effects

7.2.21 The significance of transport effects will generally be determined based on the magnitude of impact, receptor sensitivity and professional judgement. This is shown in the following table.

Table 7.2.2: Significance Matrix

		Sensitivity of Receptor		
		High	Medium	Low
Magnitude of Impact	Large	Substantial	Major	Moderate
	Moderate	Major	Moderate	Minor
	Small	Moderate	Minor	Minor
	Negligible	Negligible	Negligible	Negligible

Assumptions

- 7.2.22 There are limitations in the approach proposed to be taken in the TA and Transport chapter of the ES, with work being based on surveyed traffic flow data for selected time periods with data not collected throughout an entire year.
- 7.2.23 There will inevitably be variations to these surveyed flows, with each individual day presenting variances from the recorded flows. Notwithstanding this, such changes will not have a material impact on the findings of these assessments.

7.3 Air Quality

Introduction

- 7.3.1 The assessment will cover the impact of REP at the sensitive receptors in the environment during both the construction and operational phases.
- 7.3.2 Existing local air quality, the likely future air quality in the absence of REP, and the likely future air quality if the development goes ahead, will all be defined. The assessment of construction impacts will focus on the anticipated duration of works. The assessment of operational impacts will focus on the earliest year that the development is likely to be operational to provide a conservative assessment.
- 7.3.3 A human health risk assessment, to assess the risk to human health from potential emissions of persistent organic pollutants, will also be undertaken.

Baseline Conditions

Local Authority and Monitoring

- 7.3.4 The local planning authorities that cover the application site, depending on the final Electrical Connection route, include the LBB, LBBD, RBG and DBC. As part of Local Air Quality Management, the local authorities undertake monitoring of air quality within their areas, publishing the results in Annual Status Reports. In addition to the above local authorities, monitoring data from the London Borough of Havering will also be used in the assessment due to its close proximity to the site.
- 7.3.5 There are four monitoring stations that record concentrations of key pollutants using automatic analysers close to the REP site (less than 4 km). The automatic monitoring sites closest to the REP site are listed in the **Table 7.3.1** below:

Table 7.3.1: Automatic Monitoring Station

Site Name (ID)	X (m)	Y (m)	Local Authority
Belvedere Primary School (BX2)	549980	179064	London Borough of Bexley
Slade Green (BX1)	551864	176379	London Borough of Bexley
Scrattons Farm (BG2)	548043	183320	London Borough of Barking and Dagenham
Thamesmead (BX3)	547323	181231	The Royal Borough of Greenwich

7.3.6 In addition to these, the local authorities operate an extensive network of roadside diffusion tubes measuring nitrogen dioxide concentrations. This data will be reviewed and used in the assessment where there is the potential for cumulative impacts to occur at the monitoring locations.

7.3.7 The whole of LBB, LBBB and RBG were designated as AQMAs (Air Quality Management Areas) with respect to NO₂ and PM₁₀, in 2007, 2008, and 2001 respectively. Where an AQMA is designated, Local Authorities need to prepare Action Plans and work towards meeting the National Air Quality Strategy Objectives.

Receptors

7.3.8 The closest residential areas to the REP site are Belvedere Park to the south, Thamesmead to the west, and the proposed Beam Park development to the northeast. The impact of the development will be ascertained at specific receptor locations within these residential areas as well as locations where peak impacts occur.

7.3.9 In addition, the potential impacts of REP on designated ecological sites will be assessed. For emissions from the combustion plant on site, the screening distances set out in Environment Agency guidance will be used (<https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit>), being:

- 10 km for Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites;
- 2 km for Sites of Special Scientific Interest (SSSI) and local nature sites (ancient woods, local wildlife sites and national and local nature reserves).

7.3.10 For road traffic impacts, assessments will be undertaken where there is a modelled increase in traffic of more than 1,000 Annual Average Daily Traffic (AADT) on a road within 200 m of ecological habitats.

Cumulative Effects

7.3.11 The assessment will consider the other potentially significant sources of pollutants in the vicinity such as RRRF, Crossness Sewage Works, Beckton Sewage Works, East London Sustainable Energy facility in Rainham and Thames Gateway Waste to Energy. Apart from RRRF, the sources that are currently operational will be considered within the measurement of background concentration.

7.3.12 The impacts of REP and RRRF will be subject to dispersion modelling with both plants operating simultaneously. Possible future emission sources which have received planning consent will be reviewed for inclusion in the dispersion modelling.

Potential Environmental Effects

7.3.13 Given the existing conditions of the REP site, the construction and operation of REP has the potential to result in the following effects:

- Increased nitrogen dioxide (NO₂) and fine airborne particle (PM₁₀ and PM_{2.5}) concentrations from road and river traffic during construction and operation;
- PM₁₀ and dust impacts from construction;
- Odour impacts from the receipt and processing of waste;
- Increased pollutant concentrations from waste and gas combustion (gas resulting from anaerobic digestion);
- Increased deposition of metals to soil; and
- Increased NO_x concentrations, nitrogen, sulphur, hydrogen fluoride, ammonia and acid deposition on sensitive ecological receptors.

Method

7.3.14 The Air Quality and Health Assessment will be undertaken with the best available data relating to the operation of REP and a methodology that is consistent with current best practice for the assessment of air quality and human health effects. In general, conservative assumptions will be made regarding the treatment of the emission scenario and exposure of local people to the pollutants emitted. The methodology will be informed by consultation with the local Environmental Health Officers (EHO).

7.3.15 Existing local air quality will be defined within the study area drawing upon monitoring carried out by the Local Authorities in line with the information provided within each Council's Annual Status Reports.

7.3.16 Baseline data for NO_x, PM₁₀, PM_{2.5}, CO, SO₂ will be obtained from Defra background maps. Baseline data for other pollutants released will be obtained by reference to national inventories and monitoring networks. Other major applications in the area will be reviewed for baseline data.

7.3.17 Baseline nitrogen and acid deposition data for ecological habitats will be obtained from the APIS website.

Assessment of Combustion Effects

7.3.18 Emissions from the combustion processes within REP will be modelled using the ADMS 5 atmospheric dispersion modelling programme using 5 years' worth of hourly sequential meteorological data from London City Airport and Heathrow Airport. The proposed stack height will be chosen in accordance with Best Available Techniques and to support no significant environmental effects occurring as a result of combustion plant emissions.

7.3.19 Pollutant concentrations as a result of combustion emissions will be compared to National Air Quality Strategy objectives and Environmental Assessment Levels issued by the Environment Agency. Pollutant deposition rates will be compared to maximum deposition rates published by the Environment Agency. For the impacts on ecological sites, deposition rates will be compared

against site relevant critical loads for the habitats in question. The acceptability of the predicted concentrations and deposition rates will be in accordance with Environment Agency guidance.

- 7.3.20 In order to supplement the assessment of the impacts on air quality from the combustion processes, a human health risk assessment of the impacts of persistent organic pollutants will be undertaken in accordance with Environment Agency guidance.

Assessment of Road Traffic Effects

- 7.3.21 Air quality impacts arising from road and river traffic (during both construction and operation) will be assessed with reference to the guidance issued by the Institute of Air Quality Management (IAQM) and Environment Protection UK (EPUK) in their document: *Land-use Planning & Development Control: Planning for Air Quality January 2017*. Air quality will be assessed at the existing and approved residential properties closest to roads that might be affected by REP traffic. In particular, receptors closest to junctions where traffic emissions are greatest will be assessed.
- 7.3.22 The assessment of operational road and river traffic impacts will be undertaken using the ADMS Roads detailed dispersion model in accordance with the IAQM guidance. The model will be used to predict concentrations at worst case off-site receptors to assess the impacts of additional traffic associated with REP. Model outputs will be verified against local air quality monitoring locations. The modelling will make use of mapped background concentration data provided by Defra and of traffic flow projections. Traffic data will include committed development trip generation to take account of cumulative air quality impacts.

Assessment for Dust and Odour Effects

- 7.3.23 The potential impacts of construction dust will be assessed with reference to the IAQM's Guidance on the Assessment of Dust from Demolition and Construction (June 2016), which is accepted as industry standard guidance on this subject. There are no statutory objectives for dust; it is therefore common practice to provide a qualitative assessment based on the size of the site, regional meteorological conditions and experience of the distances over which impacts may occur. Air quality will be assessed at a range of worst-case receptors which are the existing and approved properties closest to the REP site.
- 7.3.24 The potential for adverse odour impacts from the receipt and processing of waste will be qualitatively assessed in accordance with IAQM 'Guidance on the assessment of odour for planning' and Environment Agency guidance on Environmental Permitting.

7.4 Noise and Vibration

Introduction

- 7.4.1 A noise and vibration assessment for the proposed development will consider likely significant noise and vibration impacts and effects caused by the construction and operation of the proposed development on noise sensitive receptors (NSRs) around the vicinity of the REP site and access routes.

Baseline Conditions

- 7.4.2 The closest NSRs to the REP site are located south of A2016. These include:
- Travelodge London Belvedere Hotel and nearby residences off Clydesdale Way;
 - Hackney House, adjacent to A2016; and
 - Properties along Norman Road (south), North Road and Poppy Close.

- 7.4.3 The other closest NSRs include those within the nearby settlement of Thamesmead.
- 7.4.4 Based on a desktop review of the REP site, the dominant noise source at these receptors is likely to be associated with road traffic along the A2016 Eastern Way.

Potential Environmental Effects

- 7.4.5 The key considerations in relation to the noise and vibration assessment are as follows:
- The effect of noise and vibration impact from fixed/mobile plant associated with the construction phase on nearby NSRs;
 - Construction traffic effects on nearby NSRs; and
 - The effect from the operational phase including plant and development traffic on nearby NSRs.

Method

- 7.4.6 Agreement on the assessment methodology will be sought from the EHO at LBB. Whilst the site boundary extends outside of LBB, the development in these areas is limited to the Electrical Connection route which would be underground. Therefore, noise impacts associated with this aspect of the development are not considered significant and would not be assessed further.
- 7.4.7 A baseline sound survey will be undertaken to establish the current baseline noise levels at locations representative of the NSRs. The location and duration of the sound survey will be agreed with the EHO at LBB.
- 7.4.8 The construction noise and vibration assessment will be undertaken following guidance in BS5228-1:2009+A1:2014 Code of Practice for noise and vibration control on construction and open sites.
- 7.4.9 The exact construction methodologies are unlikely to be defined until the full construction team is appointed, which is likely to be after the submission of the DCO application. However, in the absence of this data, an outline construction programme will be developed based on knowledge and experience of other similar developments, including RRRF. Additionally, the typical make-up of construction equipment will be ascertained in the same way. The quantification of impacts will be undertaken by comparison with relevant guidance and standards such as BS5228, or local legislative requirements. The assessment will outline suitable measures for the mitigation of construction impacts.
- 7.4.10 Operational noise from REP will be assessed using methodology defined in BS 4142:2014 *Methods for rating and assessing industrial and commercial sound*. The assessment will determine the rating level from REP operations and compare these to a baseline noise level at the closest NSRs. For significant effects, noise mitigation measures would be reviewed and specified in the chapter.
- 7.4.11 The assessment of operational noise will incorporate a desk-based 3D acoustic model using Soundplan modelling software. The acoustic model will be used to determine the noise levels at the nearest NSRs based on noise emission data for the proposed operations. The noise emission data will be collected through both relevant suppliers and measurements undertaken at RRRF.
- 7.4.12 It is proposed that the study area for the noise assessment of fixed plant associated with the operational effects will be defined as the region, within 1 km of the REP site. Traffic impacts would be assessed along road links extending further than this defined region with the extent depending on the outcome of the TA. The transport related assessment would determine the likely route of vehicles and assess appropriate road links with regards to change in noise levels.

- 7.4.13 Operational road traffic noise will be assessed using noise prediction procedures as detailed in the Department of Transport and Welsh Offices' 'The Calculation of Road Traffic Noise' (CRTN).
- 7.4.14 Noise levels will be predicted for both 'with' and 'without' development scenarios for an operational design year in line with the Transport Assessment, to allow the determination of the changes in road traffic noise at existing receptors as a result of REP. The significance of these changes will be based on guidance criteria contained in Design Manual for Roads and Bridges Volume 11 Section 3 Part 7 – HD213/11 Noise and Vibration.

7.5 Townscape and Visual Impact Assessment

Introduction

- 7.5.1 This section sets out the proposed approach and methodology for undertaking a Townscape and Visual Impact Assessment (TVIA) for REP.
- 7.5.2 An overview of the townscape and visual baseline data that will be used within the TVIA is provided. Townscape/landscape designations and published townscape/landscape character assessments, which are relevant to the application site, are identified. The proposed viewpoints for the visual assessment and reasoning for their selection are also given. The scope of the TVIA is outlined, and potential likely significant effects identified.
- 7.5.3 This section considers the townscape and visual context of the Electrical Connection routes included within the application site. It should be noted however that the Electrical Connection, except at the point of connection, will be underground, therefore mitigating the potential for significant townscape or visual effects.

Baseline Conditions

Townscape / Landscape Designations

- 7.5.4 Townscapes may be valued at community, local, national or international levels. Existing townscape/landscape designations will be taken as the starting point for the TVIA, and the value of undesignated townscapes will also be considered where appropriate.
- 7.5.5 Relevant designations for the application site and surrounding area are set out in **Table 7.5.1:**

Table 7.5.1: Relevant Designations

Typical Designation and Importance (Value)	Description	Actual Designation Applicable to the Riverside Energy Park Main Site and Surrounding Area
World Heritage Site: International (High)	Unique sites, features or areas of international importance with settings of very high quality.	None on the application site. None within 5km.

Typical Designation and Importance (Value)	Description	Actual Designation Applicable to the Riverside Energy Park Main Site and Surrounding Area
<p>Conservation Areas, curtilage of Grade I, II* and II Listed Buildings; Registered Parks and Gardens of Special Historic Interest (RHPG), Scheduled Monuments.</p> <p>National (High).</p>	<p>Sites, features or areas of national importance with settings of high quality.</p>	<p>The application site, including REP and two options for the Electrical Connection Route, do not lie in any Conservation area. The nearest Conservation Area to the REP site and Electrical Route Connection option 1 is Crossness Conservation Area, approximately 0.8km west, and which contains a number of listed buildings, for example:</p> <ul style="list-style-type: none"> • Crossness Pumping Station and Workshop Range to South West of Main Engine House Crossness Pumping Station; • Electrical Connection Route Option 2 passes within 1km of to Lesney Park Road Conservation Area and Erith Riverside, Conservation Area of Erith and Oak Road Conservation Area of Slade Green;
		<ul style="list-style-type: none"> • Erith War Memorial, Christ Church, Erith Library, Parish Church of St John the Baptist are within the Conservation Areas mentioned above or close to the road A2016 which will be near Electrical Connection Route Option 2. <p>There are no RHPGs within 5km of the application site.</p> <p>There are no Scheduled Monuments within the application site:</p> <ul style="list-style-type: none"> • The nearest Scheduled Monument to the REP site is Lesnes Abbey, Bexley, 1.5km southwest; • A Scheduled Monument within 1km of the Electrical Connection Route Option 1 is a Burial mound on Winns Common, Plumstead, which is also situated 4.6km southwest of the REP site; • A Scheduled Monument Howbury Moated Site, 0.9km northeast offset from Thames Road, will be close to the Electrical Connection Route Option 2.
<p>Long distance paths, London and National Cycle Routes</p> <p>Regional (High/Medium)</p>	<p>Sites, features or areas of regional importance with intact character.</p>	<p>National Cycle Network (NCN) Route 1 connecting Dover and the Shetland Islands - via the east coast of England and Scotland passes along the northern boundary of the REP site and crosses the Electrical Connection Route Option 1 at Linton Mead Road near Thameside Walk. NCN Route 1 will meet and run with Electrical Connection Route Option 2 for a short length along Thames Road.</p> <p>A section of Electrical Connection Route 2 at Bob Dunn Way crosses beneath NCN Route 125.</p>

Typical Designation and Importance (Value)	Description	Actual Designation Applicable to the Riverside Energy Park Main Site and Surrounding Area
<p>Designated Public Open Space</p> <p>Local (Medium) or Regional (High or Medium)</p>	<p>Public open spaces, parks, recreational spaces.</p>	<p>The REP site does not lie in any Designated Public Open Space. The River Thames, Site of Metropolitan Importance for Nature Conservation (M031), is immediately north of the REP site; and Erith Marshes, Site of Metropolitan Importance for Nature Conservation (M041), forms the REP site boundaries to the west and south. Belvedere Dykes, Site of Borough Importance for Nature Conservation (BxB102), is along the east boundary of the REP site.</p> <p>Electrical Connection Route Option 1 will cross M031 and M041, and adjacent to Site of Importance for Nature Conservation (SINCs) BxL07, BxL16 and BxBII02.</p> <p>Electrical Connection Route Option 2 will be adjacent or close to SINCs BxB102, BxBII20, BxL10, BxBII14 and M106.</p> <p>An Area of Metropolitan Open Land, within Greenwich Borough lies 0.8km west of Electrical Connection Route Option 1. Also within Greenwich Borough there are areas of 'Community Open Space' along Carlyle Road, Western Way and Thamesmere, all with 1km of EC1. In the Borough of Bexley, there are areas of Public Open Space within 1km of EC1 to the north and south of Eastern Way. Along the route of EC2, Frank's Park is designated Public Open Space and is situated 0.1km to the west of EC2. Other areas of Public open space within 1km of EC2, include recreational fields south of Frank's Park, and smaller pockets of space east and west of Queen's Road and South Road. In the Borough of Dartford the EC2 route follows the Bob Dunn Way where the Dartford Salt marshes lie north of the road.</p>
<p>Tree Preservation Orders (TPOs)</p>	<p>Protected trees within the Site or on the Site boundaries</p>	<p>None within the application site.</p>

Townscape Character

7.5.6 Relevant townscape character descriptions for the REP site includes those published in:

- National Character Area Profiles (Natural England, 2013): **112: Inner London** and **81: Greater Thames Estuary**
- London's Natural Signatures: The London Landscape Framework (Natural England, 2011): **14: Lower Thames Floodplain**.

Views and Visual Amenity

7.5.7 Potential visual receptors include people who use the PRoW network and cycle routes, people using open spaces and parks, and people using the river corridor, road and rail network, who are visiting, living or working within the study area.

7.5.8 Following an initial review of the application site's context, preliminary proposed viewpoint locations for the assessment of visual effects upon people's views and visual amenity are set out in **Table 7.5.2** and on the Preliminary Viewpoint Location Plan at **Appendix F**. The exact positions of the viewpoint locations may be refined during the assessment process, or the viewpoint locations may be further scoped out where 'no views' of REP are identified during the assessment process. Where changes or further scoping out occurs, this will be documented in the TVIA chapter of the ES. No private views will be assessed in the TVIA.

Table 7.5.2: Proposed Representative Viewpoints for Visual Impact Assessment

Viewpoint Reference	Location	Reasoning for Selection
Sequential Views (to represent effects on the sequence of views when travelling along the route)		
SA-1-East	Thames Path National Trail and National Cycle Network Route 1 travelling eastwards, within 1km of Riverside ERF1	Thames Path National Trail; NCN 1
SA-1-West	Thames Path National Trail and National Cycle Network Route 1 travelling westwards, within 1km of Riverside ERF1	Thames Path National Trail; NCN 1
Representative Views (to represent specific views from a location)		
VP1	Public Right of Way southeast of RRRF	Public Right of Way
VP2	Public Right of Way between Crossness Nature Reserve and Thames Path National Trail	Public Right of Way
VP3	Public Right of Way in Crossness Nature Reserve	Public Right of Way
VP4	Public Right of Way between Crossness Nature Reserve and Eastern Road	Public Right of Way, road network
VP5	Public Right of Way off Picardy Manorway	Public Right of Way, road network
VP6	Public Right of Way at South Mere, west of Erith Marshes	Public Right of Way, part of public open space network
VP7	St. Andrews Close, Thamesmead	Settlement at river edge, near to Thames Path National Trail
VP8	Lesnes Abbey	Scheduled monument, Public Right of Way, public open space network
VP9	Halt Robin Road at northwestern corner of Franks Park, near to Wood Side School	Road network, Green Chain Walk long distance route, access to / from public open space
VP10	Ferry Lane, between Frog Island and Jetty	London Loop long distance route, NCN 13
VP11	Public Right of Way, west of Horse Shoe Corner	Public Right of Way
VP12	Thameside Walk / Thames Path National Trail, northwest of Thamesmere Leisure Centre	Public Right of Way

Viewpoint Reference	Location	Reasoning for Selection
VP13	Roundabout at junction of A202, A2016, Walnut Tree Road and Bexley Road	Road network access to London Loop footpath route
VP14	Barnes Clay	NCN 1 and Public Rights of Way
VP15	Bridleway west of Littlebrook Nature Park	Public Right of Way and public open space network

Potential Townscape and Visual Effects

7.5.9 Potential townscape and visual effects arising from REP are those upon:

- Townscape features;
- Townscape character; and
- People's views and visual amenity.

Townscape Features of the Site

7.5.10 Townscape features of the REP site which will potentially be affected by the proposals include:

- Trees and existing vegetation, boundary treatments and existing hardstanding areas – removal and replacement by new development and replacement landscape planting;
- Urban grain, massing and scale – demolition of existing hardstanding areas, changes to the internal layout, scale of new buildings in context with adjacent buildings; and
- Change to sense of place arising from new buildings, new frontages, structures, site layout, and new landscape planting.

Townscape Character

7.5.11 It is likely that positive or neutral changes will occur to the REP site's townscape character, arising from the new site layout, buildings and structures, and potential new landscape planting within the wider industrial and riverside townscape character.

People's Views and Visual Amenity

7.5.12 Adverse changes to views are likely to arise during the construction period as a result of views of cranes and other construction plant at the REP site; and less visible works to install the Electrical Connection route. There are likely to be adverse changes to local views at operation as a result of the changes to buildings and structures in the townscape; and adverse or neutral changes to medium and long distance views as a result of the new buildings including a stack seen within the urban context.

Method

7.5.13 The proposed methodology for the TVIA is based on professional experience, the Landscape Institute / Institute of Environmental Management and Assessment 'Guidelines for Landscape and Visual Impact Assessment' (3rd Edition, 2013) and Transport Analysis Guidance (WebTAG) Chapter 7: Impacts on Townscape, TAG Unit A3 Environmental Impact Appraisal (December 2015). In addition, the methodology will be based upon Landscape Institute Advice Note 01/11

'Photography and photomontage in landscape and visual impact assessment' (LI, 2011). The TVIA will consider the effects on townscape (including townscape character) and people's views / visual amenity as separate assessment components.

- 7.5.14 The assessment of townscape and visual effects will make comparison with the baseline year of 2017, and will include assessment during the construction period and on completion of the development (i.e. operation). Where appropriate, for example for local views of the REP site, the visual assessment will include a period of 15 years after completion of the development, when any mitigation required has successfully established and settled.
- 7.5.15 A Zone of Theoretical Visibility (ZTV) plan will be created based upon the final plans for REP. The ZTV will show the theoretical extent of the area from which REP is likely to be visible. It is important to note that the ZTV will demonstrate the worst-case scenario; and that, in reality, other built form and other features, such as hedgerows or street trees, are likely to provide additional filtering or reduction of views.
- 7.5.16 Background data will be collected and reviewed to confirm baseline townscape and townscape character information, including topography, townscape planning designations and published sources of townscape character or, where relevant, landscape character. The REP site and surrounding area will be visited to carry out the assessment of townscape and visual effects and to prepare a photographic record to represent the 2018 baseline views from the selected assessment viewpoints.
- 7.5.17 A three-stage assessment process will be adopted for the TVIA, in accordance with the Landscape Institute/Institute of Environmental Management and Assessment guidelines. Firstly, the nature of receptors (sensitivity) will be assessed. Secondly the nature of effects (magnitude) likely to result from REP will be assessed. Lastly, the significance of the identified townscape and visual effects on receptors will be assessed, as required by the European Union Directive 2011/92/EU and UK Country Regulations.

Assessment of Townscape Effects

- 7.5.18 This will assess how REP will affect the components of the urban environment (for example: scale, street trees / landscape planting, urban grain and massing, legibility, public realm), and the key characteristics which contribute to its distinctive character (the 'townscape character').
- 7.5.19 A methodical consideration of each effect upon each identified townscape receptor will be undertaken, in order to determine the significance of effects, as a combination of the sensitivity of the landscape receptor the magnitude of the landscape effect.
- 7.5.20 The value of potentially affected townscape receptors will be assessed, including townscape character and the individual elements or features which contribute to that townscape character. Susceptibility of townscape receptors to change arising from REP is a judgement of the ability for REP to be accommodated without undue consequences for the maintenance of the baseline townscape and/or the achievement of townscape regeneration planning policies and strategies.
- 7.5.21 The assessment of townscape receptor sensitivity will combine judgements on the 'value' attributed to the townscape receptor and the 'susceptibility to change' of that receptor to the specific type of development proposed.
- 7.5.22 The magnitude of a townscape effect will be assessed in terms of its size or scale, the geographical extent of the area influenced and its duration and degree of reversibility.

Assessment of Effects on People's Views and Visual Amenity

- 7.5.23 This will assess how REP will affect the views available to people and their visual amenity. A methodical consideration of visual effects upon each identified visual receptor will be undertaken in order to determine the significance of effects, as a combination of sensitivity of the visual receptor, or viewer and magnitude of the visual effect.

- 7.5.24 The assessment of visual receptor sensitivity will combine judgements on the value attributed to the visual receptor and the ‘susceptibility to change’ of the receptor to the specific type of development proposed. The value assigned to views will have regard to a number of factors, including recognition through planning or heritage assets and/or the popularity of the viewpoint, its appearance in guidebooks, literature or art, on tourist maps, and the facilities provided to enable enjoyment of the view. Susceptibility of people to changes in views is a function of the occupation or activity of the view at a given location and the extent to which a person’s attention or interest may therefore be focussed on a particular view, and the visual amenity experienced.
- 7.5.25 The magnitude of a visual effect will be assessed in terms of its size or scale, the geographical extent of the area influenced and its duration and degree of reversibility.

Townscape and Visual Mitigation Measures

- 7.5.26 Embedded mitigation measures and standard construction and operational management practices, proposed for preventing/avoiding, reducing or, where possible, offsetting or compensating for significant adverse landscape or visual effects, will be described in the TVIA and the project description in the ES.
- 7.5.27 Further townscape and visual mitigation measures, if required, will be described in the TVIA.

Assessment of Significance of Townscape and Visual Effects

- 7.5.28 Significance of townscape and visual effects vary with the location, townscape context and type of proposed development.
- 7.5.29 The significance of townscape and visual effects will be determined from a combination of the receptor sensitivity and the magnitude of effects, as set out in the following table. Minor and negligible levels of significance are identified as ‘not significant’.

Table 7.5.3: Level of Significance of Townscape and Visual Effects

Sensitivity of Receptor	Major Effect	Moderate Effect	Slight Effect	Negligible Effect	Neutral Effect
High	Severe or Major to Severe	Major	Moderate	Minor	Negligible
Medium	Major	Moderate	Minor	Negligible	Negligible
Low	Moderate	Minor	Minor	Negligible	Negligible

- 7.5.30 A severe level of significance is assigned where a landscape or visual effect represents a key factor in the decision-making process. These effects are generally, but not exclusively, associated with altering the integrity of sites and features of national or regional importance. A change at a district scale site or feature may also enter this category, though this is subject to professional judgement and will be proportional to the type and extent of development that is being assessed. Where there is a combination of receptor high sensitivity and a major effect, professional judgement may be applied to determine a ‘major to severe’ level of significance where it is considered that the effect does not represent a key factor in the decision-making process or where the development will have limited effects such that it will not alter the integrity of sites and features of national or regional importance.
- 7.5.31 The above table has regard to guidance in the Guidelines for Landscape and Visual Impact Assessment, (3rd Edition, 2013), at paragraph 5.56, page 92 (significance of landscape effects) and paragraph 6.44, page 116 (significance of visual effects).

7.6 Historic Environment

Introduction

- 7.6.1 The Historic Environment chapter will consider the potential physical and non-physical effects of the proposed development upon known and potential designated and non-designated heritage assets. The Historic Environment chapter will incorporate the results of an archaeological Desk Based Assessment (DBA) and a Geo-archaeological Statement by QUEST.

Baseline Conditions

- 7.6.2 The REP site contains no known designated or non-designated heritage assets. An understanding of the baseline conditions for this area have been informed by the following intrusive archaeological investigations within or immediately adjacent to the REP site:
- Geotechnical monitoring at the former Belvedere Power Station on Norman Road, Bexley (Lawson-Price Environmental 2004);
 - A nine trench archaeological evaluation completed in advance of the construction of the RRRF power plant (Pre-Construct Archaeology 2008) and subsequent deposit modelling which included borehole data from the jetty area (Batchelor *et al* 2008);
 - Geoarchaeological deposit model of the Crossness site in Erith which included the western part of the site (QUEST 2011) and geoarchaeological deposit model of Burts Wharf, 200m east of the site (QUEST 2016). This provides an existing and informed baseline for the REP site. As such, this area is considered to have the potential to contain non-designated prehistoric / paleoenvironmental remains of local significance. Should such deposits be present, they are likely to be relatively deeply buried and associated with below ground deposits of peat and gravel and comprise deposits which have the potential to contain further information on the past landscape, through the assessment/analysis of palaeoenvironmental remains (e.g. pollen, plant macrofossils and insects) and radiocarbon dating. The archaeology of the river bed will also be considered should the final design require localised dredging of the river bed as part of the proposed river works.
- 7.6.3 Land within the application site along Norman Road, to the west of Norman Road and land to the east of the REP site contains no known designated or non-designated heritage assets. This area has not been subject to previous intrusive investigation, however the aforementioned investigation informs the potential for this area. There is potential for non-designated prehistoric / paleoenvironmental remains of local significance within this area of the REP site.
- 7.6.4 The Electrical Connection route Option 1 to the north west contains no designated heritage assets. This route currently crosses greenfield areas (including 20th century parkland at Thamesmead (GLHER MLO103664)), existing road, under the Thames and around the edge of the Barking Power Station. The final assessment of this area is awaiting confirmation from UKPN of which Electrical Connection route is to be taken forward.
- 7.6.5 The Littlebrook Power Station Electrical Connection route Option 2 contains no designated heritage assets. This route primarily respects the line of existing roads and therefore the potential for well-preserved deposits of archaeological interest is negligible. However, final assessment of this area is awaiting confirmation of which Electrical Connection route is to be taken forward.
- 7.6.1 There are no scheduled monuments, registered parks and gardens, battlefields, World Heritage Sites or shipwrecks within 1 km of the REP site that could be significantly affected by the proposed development. The Crossness Conservation Area, located approximately 800 m to the west of the REP site, is a mid-Victorian example of public health engineering with a unique

industrial complex. It is South East London's most important site for industrial archaeology. The key elements that characterise the Conservation Area are the Grade I Listed Crossness Pumping Station comprising the Beam Engine House, Boiler House and Triple Expansion House; the Grade II Listed workshops; and the brick vaulted subterranean reservoir. Other significant buildings include the storm water pumping station/cent. There is a single late 19th/early 20th century Grade II listed coaling jetty on the north bank of the River Thames in Dagenham.

Potential Environmental Effects

Construction effects

- 7.6.2 Construction effects would largely comprise physical impacts upon below-ground non-designated archaeological remains. Such effects may arise from the foundations of new buildings, landscape works, changes to hydrological conditions and requirements such as trenches for new utilities and services. Proposed river works for construction may also include some localised dredging of the river bed.
- 7.6.3 The construction effects of the electrical connection to either Barking or Littlebrook Power Station substations, will be considered in the ES chapter following confirmation of the chosen Electrical Connection route.

Operational effects

- 7.6.4 REP could theoretically have an effect on the setting of the Crossness Conservation Area and its associated three listed buildings and the setting of the coaling jetty on the north bank of the Thames. However, given the nature of the designated remains and the nature of their setting and existing developments in the vicinity of the REP site, the effect on the significance of these designated heritage assets are considered most likely to be low or non-existent.
- 7.6.5 The underground Electrical Connections to either Barking or Littlebrook Power Station substations will not affect the setting of heritage assets, and therefore these operational effects are proposed to be scoped out of the EIA.

Method

- 7.6.6 The Historic Environment chapter will incorporate the results of an archaeological DBA and a Geoarchaeological Statement by QUEST.
- 7.6.7 The DBA will identify and characterise known and potential heritage assets sensitive to impact by REP. The following sources will be consulted to inform the heritage baseline:
- A search of the Greater London Historic Environment Record (GLHER) for known non-designated historic/archaeological remains within 1 km of the application site boundary;
 - Designated assets (scheduled monuments, listed buildings and Registered Parks and Gardens) obtained from Historic England;
 - Areas of importance identified in local planning policy (conservation areas, archaeological priority areas); and
 - Cartographic and documentary research. Heritage planning policy from LBB, LBBDD, RBG and DBC (dependant on the Electrical Connection).
- 7.6.8 In light of the previous geoarchaeological works within and adjacent to the REP site, the Historic Environment chapter will incorporate the results of a Geoarchaeological Statement by QUEST. At this stage it is likely that a DBA of potential geoarchaeological impacts will suffice, using historic borehole data from the site and surrounding area. The assessment will identify

areas where additional borehole data is required and make recommendations for further work, if required. On-going liaison regarding proposed geotechnical works will be undertaken.

7.6.9 Determination of the importance of heritage assets is based on existing statutory designations and, for non-designated archaeological assets, the Secretary of State's non-statutory criteria and professional judgement.

7.6.10 Using this approach, the criteria for establishing the importance of a heritage assets is described in **Table 7.6.1** below.

Table 7.6.1: Determining the Importance of a Heritage Asset.

Importance	Description
International	Archaeological sites or monuments of international importance, including World Heritage Sites. Structures and buildings inscribed as of universal importance as World Heritage Sites. Other buildings or structures of recognised international importance.
National	Ancient monuments scheduled under the Ancient Monuments and Archaeological Areas Act 1979, or archaeological sites and remains of comparable quality, assessed with reference to the Secretary of State's non-statutory criteria. Listed Buildings. Non-designated built assets of national importance, assessed with reference to the Secretary of State's published Principles of Selection for Listing Buildings.
Regional/ County	Archaeological sites and remains which, while not of national importance, score well against most of the Secretary of State's criteria Conservation Areas.
Local	Archaeological sites that score less well against the Secretary of State's criteria. Historic buildings on a 'local list'. Non-designated built assets of local significance.
None	Areas in which investigative techniques have produced negligible or only minimal evidence for archaeological remains, or where previous large-scale disturbance or removal of deposits can be demonstrated.

7.6.11 The Historic Environment chapter of the ES will identify and evaluate the nature and likelihood of the impacts of REP, in both the long and short term, on archaeological and heritage features against clearly defined criteria.

7.6.12 Significance will be assigned to effects relative to the sensitivity of the resource and the magnitude of impact in accordance with best practice.

7.6.13 Archaeological resources are susceptible to a range of impacts during site preparation as well as construction related activities, including:

- Site clearance activities that disturb archaeological remains;

- Excavation that extends into archaeological sequences, for example deep foundations or basements resulting in the removal of the resource;
- Piling activities resulting in disturbance and fragmentation of the archaeological resource; and
- Dewatering activities resulting in desiccation of waterlogged remains and deposits.

7.6.14 The implications, if any, of these actions will be discussed and significance criteria allocated to any identified impact.

7.6.15 In terms of the impacts on built cultural heritage, the impacts of the development can be direct, such as loss or damage to a heritage features, or indirect, including the impact on the setting of a Listed Building. Any such impacts will be discussed and significance criteria applied. The significance of effects will be assessed using the significance criteria set out below.

Magnitude of Impact

7.6.16 Determining the magnitude of impact is based on an understanding of how, and to what extent, REP would impact heritage assets.

7.6.17 The magnitude of the impact is a product of the extent of development impact on an asset. Impacts are rated as High, Medium, Low and Negligible/Neutral. Impacts can be direct or indirect, adverse or beneficial. The criteria for assessing the magnitude of impact are set out in **Table 7.6.2** below.

Table 7.6.2: Magnitude of Impact.

Magnitude	Direct Impacts	Indirect Impacts
High Adverse	Demolition of built heritage assets or demolition within a Conservation Area. Complete removal of an archaeological site.	Radical transformation of the setting of an archaeological monument. Substantially harmful change in the setting of a built heritage asset or Conservation Area.
Medium Adverse	Harmful alteration (but not demolition) of a built heritage asset or alterations to a building in a Conservation Area. Removal of a major part of an archaeological site and loss of research potential.	Less than substantial harm to the setting of a built heritage asset or Conservation Area. Partial transformation of the setting of an archaeological site e.g. the introduction of significant noise or vibration levels to an archaeological monument leading to changes to amenity use, accessibility or appreciation of an archaeological site.
Low Adverse	Alterations to a built heritage asset or Conservation Area resulting in minor harm. Removal of an archaeological site where a minor part of its total area is removed but the site retains a significant future research potential.	Minor harm to the setting of an archaeological monument or built heritage asset or Conservation Area.

Magnitude	Direct Impacts	Indirect Impacts
Negligible/ Neutral	Negligible impact from changes in use, amenity or access. Negligible direct impact to the built heritage asset or Conservation Area.	Negligible perceptible change to the setting of a building, archaeological site or Conservation Area.
Low Beneficial	Alterations to a built heritage asset or Conservation Area resulting in minor beneficial impacts. Land use change resulting in improved conditions for the protection of archaeological remains.	Minor enhancement to the setting of a built heritage asset or Conservation Area. Decrease in visual or noise intrusion on the setting of a building, archaeological site or monument.
Medium Beneficial	Alterations to a built heritage asset or Conservation Area resulting in moderate beneficial impacts.	Significant reduction or removal of visual or noise intrusion on the setting of a building, archaeological site or monument. Improvement of the wider landscape setting of a built heritage asset, Conservation Area, archaeological site or monument.
	Land use change resulting in improved conditions for the protection of archaeological remains plus interpretation measures (heritage trails, etc.)	Improvement of the cultural heritage amenity, access or use of a built heritage asset, archaeological site or monument. Moderate enhancement to the setting of the built heritage asset and Conservation Area.
High Beneficial	Arrest of physical damage or decay to a built heritage asset or structure. Alteration to a built heritage asset or Conservation Area resulting in significant beneficial impact.	Significant enhancement to the setting of a built heritage asset. Conservation Area or archaeological site, its cultural heritage amenity and access or use.

Significance of Impact

7.6.18 The significance of the impact of REP on archaeological and heritage assets is determined by the importance of the asset and the magnitude of impact to the asset. **Table 7.6.3** below presents a matrix that demonstrates how the significance of Effect will be established:

Table 7.6.3: Evaluation of Significance

Magnitude of Impact	High	Medium	Low	Negligible / Neutral
International Importance	Substantial/ Major	Major	Major	Negligible
National Importance	Major	Major/ Moderate	Moderate	Negligible
Regional/County Importance	Major/ Moderate	Moderate/ Minor	Minor	Negligible
Local Importance	Minor	Minor	Negligible	Negligible
Negligible Importance	Negligible	Negligible	Negligible	Negligible

7.6.19 The means by which impacts can be avoided through design will be explored as a priority. If impacts cannot be avoided through design, then alternative strategies, which may include site investigation and recording, will be proposed. The residual effects following the implementation of these measures will then be defined and significance criteria applied.

7.7 Terrestrial Biodiversity

Introduction

7.7.1 This section provides an overview of the scope of terrestrial biodiversity issues likely to require consideration within the Terrestrial Biodiversity chapter of the ES, in order to assess likely significant effects on Terrestrial Biodiversity as a result of REP.

7.7.2 A walkover survey of the REP site was undertaken in September 2017, by an experienced ecologist, during which the broad habitat types were identified. An extended Phase 1 habitat survey of the application site will be undertaken, which in turn will inform the scope of any targeted habitat and species surveys to be undertaken between autumn 2017 and autumn 2018. Wintering bird surveys of the mudflat habitat immediately adjacent to the REP site are already in progress, due for completion in March 2018. The survey extent includes sections of mudflat habitat upstream and downstream of the REP site (up to 1.8 km and 1.25 km from the REP site, respectively), in order to allow consideration of the bird data obtained immediately adjacent to the REP site in the context of the wider surrounds.

7.7.3 The Terrestrial Biodiversity chapter of the ES will set out an assessment of the likely ecological effects associated with REP and the mitigation and/or compensation required to ameliorate any effects and demonstrate that REP will be in accordance with legislation and planning policy.

Baseline Conditions

Designated Areas

7.7.4 A number of nationally designated areas of nature conservation interest are located within 2 km of the application site. The closest of these is the Inner Thames Marshes Site of Special Scientific Interest (SSSI), located approximately 1.4 km north-east of the closest part of the application site. The Inner Thames Marshes sits on the opposite side of the River Thames to REP. Rainham Marshes Local Nature Reserve (LNR) also falls within the westernmost extent

of the SSSI designation. The marshes are the largest remaining expanse of wetland bordering the upper reaches of the Thames Estuary. The SSSI is of particular note for its diverse ornithological interest, especially for the variety of breeding birds and the numbers of wintering wildfowl, waders, finches and birds of prey; wintering teal populations reach levels of international importance. The Marshes also support a wide range of wetland plants and insects with a restricted distribution in the London area, including some that are nationally rare or scarce.

- 7.7.5 Crossness LNR is located immediately adjacent to the western and southern boundaries of the REP site and is the closest LNR to the Indicative Application Boundary. Crossness LNR forms part of a wider Site of Metropolitan Importance for Nature Conservation (Erith Marshes) and is owned and managed by Thames Water. Combined, these designated areas form one of the last remaining areas of grazing marsh in Greater London, and the largest reedbed in Bexley. Other habitats present include a network of ditches and open water, scrub and rough grassland. It is a major site for water voles, and over 130 species of birds have been recorded there, together with some rare invertebrates, including five species of water beetles. Scarce plants known to occur within the area include knotted-hedge parsley and Borrer's saltmarsh grass.
- 7.7.6 Abbey Wood SSSI is located 1.5 km to the south west of the closest part of the application site. The SSSI designation relates to the area's geological, as opposed to biological, interest. However, the wider Abbey Woods, including the SSSI element, is designated as a LNR (i.e. Lesnes Abbey Woods LNR). Comprising extensive ancient woodland and surrounding parkland, Lesnes Abbey Woods is noted for its diverse range of wildlife habitats, plants and flowers. Lesnes Abbey Woods is the second largest park in the LBB and is also afforded a non-statutory designation as a Site of Metropolitan Importance for Nature Conservation.
- 7.7.7 Other statutory designated sites beyond those described above but which lie within 2 km of the application site include: Purfleet Chalk Pits SSSI and West Thurrock Lagoon and Marshes SSSI, both sites lie within 1.5-2km of the Indicative Application Boundary, with the closest part of the application site being the eastern Electrical Connection route. In addition, Ripple LNR and Scrattons Ecopark and Extension LNR also lie just under 2 km from the application site, with the closest part of the application site being Electrical Connection route Option 1.
- 7.7.8 The River Thames, north of the REP site, is also afforded a non-statutory designation, namely The River Thames & tidal tributaries Site of Metropolitan Importance. The designation comprises the whole of the river and its tidal tributaries within the boundary of Greater London. As well as the river channel itself, habitats within the Site of Metropolitan Importance include mudflats, shingle beach, inter-tidal vegetation, islands and the river banks.
- 7.7.9 There are no European designated areas within 10 km of the REP site, with the closest being Epping Forest Special Area of Conservation (SAC), located approximately 12 km from the REP site; this SAC lies just over 9 km from Electrical Connection route Option 1.
- 7.7.10 As referred to in the Air Quality section above, the potential impacts of REP on designated ecological sites will be assessed. For emissions from the combustion plant on site, the screening distances set out in Environment Agency guidance will be used (<https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit>):
- 10 km for SACs, SPAs and Ramsar sites; and
 - 2 km for SSSIs and local nature sites (ancient woods, local wildlife sites and national and local nature reserves).
- 7.7.11 Owing to the distance of the SAC from the REP site, significant indirect effects relating to air quality changes are considered unlikely on Epping Forest SAC (refer to Air Quality section above). However, the consideration of indirect impacts on Epping Forest SAC within the Biodiversity chapter of the ES, and the need for separate Habitat Regulations Assessment Screening, will be discussed and agreed with Natural England as statutory consultee.

7.7.12 Further information on designated areas will be obtained from Greenspace Information for Greater London (GiGL) as part of a detailed desk study review in order to establish the location and designation criteria of other non-statutory designations within the vicinity of the REP site.

Habitats

7.7.13 A walkover survey of the REP site undertaken by an experienced ecologist confirmed it to be dominated by man-made and modified habitats, some of which are of biodiversity interest. An embankment of semi-improved neutral grassland, seeded in 2011, forms the northern boundary of this area. This is proposed to be largely retained as part of REP. Existing non-designated Wasteland Habitat Area (WHA) is located within the central area of the REP site. The WHA, which was implemented approximately six years ago as part of the adjacent RRRF development, comprises a mosaic of tussocky grassland and bare ground (exposed rock), interspersed with introduced shrub planting such as buddleia and pampas grass, as well as scattered young deciduous trees. Stands of dense bramble scrub and young plantation woodland are also present in the south of the REP site. Remaining habitats within the REP site are dominated by hardstanding used for car parking and collections of temporary use buildings and structures (containers and cabins), as well as modern, large sheds. Sections of ditch form the southern and western boundaries of the area, which are dominated by common reed. These ditches connect with a wider network of ditches located within Crossness LNR.

7.7.14 Habitats within the application site, with the exception of the area within the Indicative Application Boundary shown within grassland habitats of Crossness LNR, are again largely man-made / highly modified and comprise existing roads / roadside hardstanding and developed areas.

7.7.15 A full extended Phase I habitat survey of the REP site and all areas within the application site will be undertaken to confirm the distribution and biodiversity value of all the habitats within the future application boundary.

Protected and Notable Species

7.7.16 Existing information on Protected and Notable Species will be obtained from Greenspace Information for Greater London (GiGL) as part of a detailed desk study review in order to establish the known records of any such species within or near to the REP site. The desk study, along with the results of the extended Phase 1 habitat survey, will guide the scope for further targeted species and habitat surveys necessary to confirm the current ecological baseline for the REP site.

7.7.17 The scope of further survey work will also be guided by the nature of the development proposals, focussing survey effort on those ecological features potentially affected by REP. Further information regarding the likely scope of targeted species and habitat surveys is provided in **Table 7.7.1** below.

Table 7.7.1: Likely Scope of Baseline Ecological Survey Work

Ecological Feature	Survey Approach
Terrestrial Habitat Survey	Extended Phase 1 habitat survey of the application site, including recording of locations of Invasive Non Native Species.
Over-Wintering Birds	The REP site lies adjacent to the River Thames Site of Metropolitan Importance, noted, in part, for its bird interest. Wintering bird surveys (i.e. monthly high and low tide counts) are being undertaken to determine the importance and use of the adjacent mudflat habitats by wintering birds associated with the River Thames. The outcome of the surveys will inform assessment of the importance of the adjacent mudflat habitats by wintering birds, and the likelihood of indirect effects as a result of REP. The survey also considers mudflat habitat suitable for wintering birds within 1.8 km

Ecological Feature	Survey Approach
	upstream and 1.25 km downstream of the REP site. Survey work is being undertaken between October 2017 and March 2018. The survey scope may be extended dependent on the final redline and development proposals.
Breeding birds	Breeding bird transect surveys will be undertaken between March 2018 and June 2018 for the REP site location (as a minimum) and any other relevant parts of the proposal, to be confirmed based on the final application boundary, results of the extended Phase 1 habitat survey and consideration of potential impacts of the proposed development. The survey will determine the diversity and breeding territories of breeding birds within the REP site.
Water vole survey (presence/absence)	A water vole survey (presence/likely absence) will be undertaken if applicable, dependent on the final application boundary and occurrence of suitable habitat within it. Suitable waterbodies / ditches will be surveyed twice, in spring and then later summer 2018.
Badger survey	The application site and immediate surroundings will be surveyed for badger activity as part of the extended Phase 1 habitat survey.
Bat survey	A Preliminary Roost Appraisal of trees and structures within the REP site will be undertaken as part of the extended Phase 1 habitat survey and will determine whether or not there are roosting features which may then require emergence/return surveys of buildings (spring/summer 2018) and/or aerial inspection of trees. General bat foraging or commuting activity will be determined for the REP site through transect and static detector recording sessions over the period May-September 2018 inclusive.
Reptiles	The REP site, and areas within the application site, provide opportunities for low numbers of common and widespread reptile species. A presence / likely absence reptile survey of the REP site, and other suitable habitat in the application site (if appropriate), will be undertaken in spring 2018 (March-June).
Invertebrates and targeted botanical survey	Dependent on the application boundary, it may be appropriate to complete targeted surveys for invertebrates and botanical interest in spring / summer 2018. The principal invertebrate and botanical interest is likely to be associated with Crossness LNR. However, given the focus of the development within this area will be limited, such surveys may not be necessary.

Potential Environmental Effects

- 7.7.18 Minimising direct effects arising from land take, and managing construction and operation in order to avoid or minimise indirect effects will reduce the potential for likely significant impacts on ecological features (see below). However, the approach required for site management, mitigation, compensation, enhancement and/or monitoring will be determined in the light of the results of the surveys set out above, and having regard to planning policy requirements and/or the legislative protection afforded to the ecological feature.
- 7.7.19 Having regard to the characteristics of the REP site, the surrounding area and the proposed development, the construction and operation of REP has the potential to result in the following effects:

- Habitat loss, disturbance (including through shading) or fragmentation during site clearance and/or construction;
- Noise and/or visual disturbance during site clearance, construction or operation;
- Dust during site clearance and/or construction;
- Surface water drainage during construction or operation;
- Lighting during construction or operation; and
- Emissions / deposition during operation.

7.7.20 This chapter identifies the likely ecological features and effects of REP which, at this stage, are considered to have the potential to result in significant ecological impacts and thus require detailed assessment through the EIA process. It also confirms the proposed survey approach and assessment methodologies.

7.7.21 The 'Study Area' over which likely significant effects would be expected on the ecological features considered in this chapter is variable, dependent on the sensitivity of the ecological feature and the effects being considered. Good practice guidance, published peer reviewed papers and ecological experience and understanding will all contribute in determining the Study Area for each ecological feature and will be agreed with statutory consultees, as required.

Method

7.7.22 The Terrestrial Biodiversity chapter of the ES will be guided by best practice guidance for ecological impact assessment (EclA) set out by the Chartered Institute of Ecology and Ecological Management (CIEEM, 2016).

7.7.23 As detailed above, the baseline conditions within the REP site will be determined through the completion of survey work during 2017 / 2018. All survey work, an indication as to the scope of which is given in the preceding section, will be undertaken with regard to relevant best practice guidelines. Ecological data obtained to inform the adjacent RRRF planning submission, and gathered post-construction as part of planning condition requirements, will also be reviewed and used to inform baseline conditions, along with any other data secured from GiGL, where relevant.

7.7.24 For the section of the Terrestrial Biodiversity chapter relating to impacts from future climate change scenarios, weather predictions will be obtained through the UK Climate Change Projections (CP09), a service provided by the Environment Agency and the UK Met office. Consideration will then be given to if / how weather variations may impact species and habitats associated with the REP site and its immediate surrounds.

7.7.25 Establishing a comprehensive ecological baseline, and application of the EclA guidelines, will allow a value to be attributed to each ecological receptor in accordance with CIEEM's geographic framework which, for the purpose of the REP site, will be: local, district (Borough), regional (London and the South-East), national (England) and international (European or Worldwide). In order to determine the likelihood of a significant ecological effect, it will be necessary to identify whether an ecological feature is sufficiently valuable for a significant effect upon it to be material in decision-making. Reference will be made to any technical assessments within supporting reports which will be appended to the ES.

7.7.26 Only those ecological features that it is considered could experience significant effects (i.e. impacts that could adversely affect the integrity of the habitat or the favourable conservation status of a species' local population), and which are identified as being of sufficient value to be material to decision-making (i.e. of 'district' (borough) level importance or above), will be classified as being 'Key Ecological Features'. It is these ecological features that will be

considered in the assessment, ensuring the assessment focuses only on those impacts which have the likelihood for being environmentally significant.

- 7.7.27 However, those ecological features which are not valued as being important within the context of the EIA will still warrant consideration during the design and mitigation of the proposed development on the basis of their legal protection and/ or their implications for environmental (and related) policies and plans. Therefore, consideration will separately be given to these (as well as Ecological Features of less than ‘district’ level importance); by cross-reference to a separate Ecological Appraisal Report to demonstrate that the development does not contravene legislation.
- 7.7.28 A logical and transparent assessment of impacts and associated effects on each ‘Important’ ecological feature during the construction and operational phases of REP will be presented in the Terrestrial Biodiversity chapter of the ES. Potential effects on ‘Important’ ecological features will be identified along with the mitigation and/or management or monitoring measures required to prevent, reduce or off-set any significant adverse impacts. Significant beneficial ecological impacts will also be described. The Terrestrial Biodiversity chapter will set out the significance of any residual ecological impacts and clarify whether these are adverse or beneficial. In each case the significance of effect will be expressed in accordance with CIEEM’s geographic frame of reference. The wider ES will use generic significance criteria, based on their importance to the decision-making process, to describe the significance of environmental effects. **Table 7.7.2** provides a means of relating these two approaches and will be included within the Terrestrial Biodiversity chapter of the ES to allow the ecological impact assessment to be integrated into the wider EIA without compromising the CIEEM best practice approach.

Table 7.7.2 Ecological Significance Criteria

EIA Significance level		Generic Environmental Criteria	CIEEM geographical criteria
Significant	Substantial	These effects are assigned this level of significance as they represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites and features of national or regional importance. A change at a district scale site or feature may also enter this category.	Ecological impacts assessed as being significant at regional or higher geographical scales and that have triggered a response in development control terms are considered to represent impacts that overall within this assessment are of severe significance.
	Major	These effects are likely to be important considerations at a local or district scale and may become key factors in the decision-making process.	Ecological impacts assessed as being significant at the borough (district) or county scales and that have triggered a response in development control terms are considered to represent impacts that overall within this assessment are of major significance.
	Moderate	These effects, while important at a local scale, are not likely to be key decision-making issues.	Ecological impacts assessed as being significant at the local scale and that have triggered a response in development control terms will be considered to represent impacts that overall within this assessment are of moderate significance.

EIA Significance level		Generic Environmental Criteria	CIEEM geographical criteria
Not significant	Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless, they are of relevance in enhancing the subsequent design of the project and consideration of mitigation or compensation measures.	Ecological impacts that have been assessed as being significant within the immediate zone of influence and are unlikely to trigger a response in development control terms are considered to represent impacts that overall within this assessment are of minor significance.
	Negligible	Either no effect or effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error. Such effects should not be considered by the decision-maker.	Ecological impacts that have been assessed as not being significant at any geographic level.

7.7.29 The residual impacts of REP, taking into account mitigation, will also be assessed cumulatively in the context of other (relevant) proposed developments within the vicinity of the proposed development (to be agreed with consultees).

7.8 Marine Biodiversity

Introduction

7.8.1 This section identifies the proposed scope of the EIA to assess likely significant effects from the proposed development on marine ecology receptors. Specifically, this includes consideration of likely significant effects on intertidal and subtidal benthic habitats and species, fish and marine mammals.

Baseline Conditions

Designated Areas

7.8.2 The closest internationally designated sites that support marine features (the Thames Estuary and Marshes SPA and Thames Estuary and Marshes Ramsar site) are located approximately 20 km from the proposed development and as such are considered to fall outside of the assessment study area.

7.8.3 The closest nationally designated site that supports marine features (the Inner Thames Marshes SSSI) is located approximately 1.4 km north-east of the closest part of the application site and will therefore be considered as part of the assessment.

7.8.4 The Scheme directly overlaps with the Thames Estuary recommended Marine Conservation Zone (rMCZ) which stretches from Richmond to the wider mouth at Southend and Grain. Four subtidal and intertidal habitats and three species features are considered for designation in this site. The habitat features are: intertidal mixed sediments, subtidal coarse sediment, subtidal sand and subtidal mud. The species features proposed are: tentacled lagoon worm *Alkmaria romijni* and smelt *Osmerus eperlanus* (Balanced Seas, 2011). This rMCZ was included in the second tranche of sites proposed for designation in 2015/16. However, its designation is currently on hold as Defra has indicated a need to better understand the implications of designation of the site on potential developments within the estuary. A formal MCZ assessment is consequently not required at this point of time (MMO, 2013).

Benthic habitats and species

- 7.8.5 The intertidal habitats in the inner and middle sections of the Thames Estuary consists mostly of fine, silty sediment with a few sandy areas. Subtidal habitat in this area consists of mud and scoured gravel sediment. Salinity is generally considered the most significant factor influencing species distributions in estuaries (Attrill, 1998). Changes in the invertebrate composition along the estuary reflect the tolerance that individual species have to variations in salinity (ABPmer, 2013).
- 7.8.6 The estuarine environment within the area of the proposed development has been previously characterised by a relatively limited fauna comprising freshwater species that can tolerate the increased salinity and estuarine species capable of withstanding wide variations in saline conditions. Invertebrate species typically found within the intertidal zone of this area include tubificid oligochaetes such as *Limnodrilus hoffmeisteri* (principally a freshwater species) and *Baltidrilus costatus* (an estuarine species). Other species occurring in the intertidal zone include the estuarine mud shrimp *Corophium lacustre* and marine polychaetes such as *Nereis* sp (ABPmer, 2007; Attrill, 1998; Transport for London, 2016).
- 7.8.7 Species found within the subtidal zone in brackish sections of the Thames Estuary include the scavenging estuarine amphipod *Gammarus zaddachi*, the oligochaete *Tubifex* and non-native mollusc *Potamopyrgus antipodarum* (ABPmer, 2007; Transport for London, 2016).
- 7.8.8 Environment Agency records indicate that the protected tentacled lagoon worm *Alkmaria romijni* has been recorded in close proximity to the application site. The tentacled lagoon worm is nationally scarce and is therefore a protected species under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is also a feature of the Thames Estuary rMCZ. The Wildlife and Countryside Act protection specifically concerns the habitat of the species, whilst the rMCZ considers the protection of the species at the population level. The tentacled lagoon worm is typically found in areas sheltered from waves and low salinity on both intertidal and subtidal mud.
- 7.8.9 In addition, suitable habitat for the lagoon sea slug *Tenellia adspersa* has also been identified in relatively close proximity to the proposed works (Transport for London, 2016). The lagoon sea slug is protected under Schedule 5 of the Wildlife and Countryside Act 1981. The species is also classified as a species of Principal Importance under the Natural Environment and Rural Communities (NERC) Act 2006 and listed as a UK Biodiversity Action Plan (BAP) Priority Species.
- 7.8.10 A number of non-native benthic marine species have been recorded in the Thames including the carpet sea squirt *Didemnum vexillum*, polychaete *Boccardiella ligERICA* and Chinese mitten crab *Eriocheir sinensis* (Transport for London, 2016).

Fish

- 7.8.11 The Thames Estuary supports a diverse fish fauna with over 100 fish species recorded. Fish species with known spawning and nursery locations within the Thames Estuary include herring *Clupea harengus*, lemon sole *Microstomus kitt* and Dover sole *Solea solea*. Other commercially important fish species which also utilise the Thames Estuary for nursery areas include plaice *Pleuronectes platessa*, sprat *Sprattus sprattus* and bass *Dicentrarchus labrax*. The short-snouted seahorse *Hippocampus hippocampus* and long-snouted seahorse *Hippocampus guttulatus* have also both been recorded in the Thames Estuary. Diadromous fish which migrate through the estuary include the European eel *Anguilla anguilla*, European smelt *Osmerus eperlanus*, sea lamprey *Petromyzon maximus*, Atlantic salmon *Salmo salar*, river lamprey *Lampetra fluviatilis* and the twaite shad *Alosa fallax*. The Thames Estuary is also an important area for many shellfish species, with large beds of cockle *Cerastoderma edule*, oyster *Ostrea edulis* and mussel *Mytilus edulis* being present throughout the outer Estuary (Potts and Swaby, 1993; Ellis *et al.*, 2012; ZSL, 2017; ZSL, 2016).

7.8.12 Previous Environment Agency Transitional and Coastal (TraC) fish monitoring undertaken nearby to the proposed development has recorded a range of species with sand goby *Pomatoschistus minutus*, flounder *Platichthys flesus*, 3-spined stickleback *Gasterosteus aculeatus*, common goby *Pomatoschistus microps* and sand smelt *Atherina presbyter* all commonly recorded.

Marine Mammals

7.8.13 Grey seal *Halichoerus grypus* and common seal *Phoca vitulina* breed at haul out sites along the Norfolk coast, Kent coast and Thames Estuary and are regularly recorded foraging in the inner Thames Estuary (ZSL, 2015a; ZSL, 2015b, ZSL, 2015c). The harbour porpoise *Phocoena phocoena* is the only cetacean (whale and dolphin) species recorded with any regularity in the Thames Estuary. Bottlenose dolphin *Tursiops truncatus* is also occasionally recorded (ZSL, 2015a). Other species are considered rare vagrant visitors to the Thames Estuary (Sea Watch Foundation, 2006a; Reid *et al.*, 2003).

7.8.14 Numerous sightings of both common seal and grey seal have been recorded relatively nearby to the application site as part of opportunistic sightings of marine mammals in the Thames compiled by the Zoological Society London (ZSL) since 2004 (ZSL, 2015a). Infrequent sightings of harbour porpoise have also been recorded in the wider area (ZSL, 2015a).

Potential Environmental Effects

7.8.15 The Marine Biodiversity chapter will outline the source-pathway-receptor relationship relating to infrastructure associated with the marine element of the proposed works. The key impact pathways that will be considered include:

- Temporary loss of benthic habitat (and associated species) associated with the footprint of any marine infrastructure and dredging;
- Temporary impacts to benthic habitat and species through changes to the physical environment associated with the presence of marine infrastructure and any potential dredging works;
- Temporary changes in water quality on benthos and fish associated with the installation, use and removal of any marine infrastructure and any potential dredging works;
- Underwater noise impacts on fish and marine mammals associated with the construction (and removal) of marine infrastructure and any potential dredging works; and
- Non-native species transfer and introduction.

7.8.16 **Table 7.8.1** describes potential effects due to the proposed development which are not likely to be significant, based on the current understanding of the proposed scheme design, and therefore have been scoped out of further assessment.

Table 7.8.1 Effects to be scoped out of further assessment

Receptor	Pathway Scoped Out of Assessment	Justification
Benthic species and shellfish.	Noise disturbance.	Studies have indicated that crustacean species are able to respond to a wide frequency bandwidth, although their sensitivity to underwater sound and vibration is very much lower than fish (Parvin <i>et al.</i> 2008). It is therefore considered unlikely that noise levels

Receptor	Pathway Scoped Out of Assessment	Justification
		would adversely affect the benthic community or shellfish found in the vicinity of the proposed development.
Fish and marine mammals.	Temporary habitat loss and change as a result of marine infrastructure.	There is the potential for impacts to fish and marine mammals as a result of temporary habitat loss due to the footprint of marine infrastructure and also indirectly arising from changes to hydrodynamic and sedimentary transport regimes associated with the temporary marine infrastructure. However, the footprint of the proposed works and extent of indirect habitat change only covers a highly localised area that constitutes a very small fraction of the known ranges of local fish and marine mammal populations.
Fish and marine mammals.	Noise disturbance as a result of vessel movement during the marine element of the project.	There is the potential for noise disturbance to fish species as a result of vessel movements. However, vessel noise is unlikely to be discernible above ambient levels in the Thames Estuary.
Fish	Light disturbance	There is the potential for artificial light from lighting on marine infrastructure to modify fish behaviour and potentially disrupt migratory movements. However, the area of river that will be lit as a result of the new temporary infrastructure will only constitute a small fraction of the total width of the river and therefore no disruption or blocking of migratory routes are anticipated.
Marine mammals	Water Quality	Temporary and localised changes in water quality are considered unlikely to produce lethal and sub-lethal effects in these highly mobile species. The potential for accidental spillages will also be negligible during all phases through following established industry guidance and protocols.
Marine mammals	Collision risk/visual disturbance (including light)	Marine mammals are regularly exposed to vessel movements, using the Thames Estuary and routinely avoid collision. As such they are expected to be habituated to high levels of disturbance and light stimuli. Furthermore, vessel movements in the vicinity of the proposed development (associated with the marine works) are

Receptor	Pathway Scoped Out of Assessment	Justification
		mainly expected to be stationary or travelling at low speeds, making the risk of collision very low.

Method

Relevant technical guidance/standards, consultations and information sources

- 7.8.17 The assessment will be completed in accordance with Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2016). Specific assessments will also take in to consideration the latest statutory guidance (e.g. The Protection of Marine European Protected Species from Injury and Disturbance).
- 7.8.18 The following key data sources will be reviewed as part of establishing baseline conditions:
- Sightings and monitoring data on marine mammals compiled by the London Zoological Society (ZSL);
 - Environment Agency benthic, fish monitoring and specific tentacled lagoon worm records data;
 - Data on marine species compiled on the National Biodiversity Network (www.nbn.org.uk); and
 - Marine ecology information collated as part of previous impact assessments for developments in the nearby area (which are known to include habitats that have been identified as suitable for the lagoon seaslug).
- 7.8.19 A benthic grab sampling survey of the subtidal habitats within and nearby to the proposed development may be undertaken if deemed necessary following discussion with the Marine Management Organisation (MMO), Natural England and the Environment Agency. In addition, a Phase 1 Intertidal Habitat Survey will be undertaken (including the collection of intertidal core samples). The purpose of these surveys is to better understand the infaunal invertebrate assemblage occurring in the area and confirm the presence of any nationally rare or protected species (such as the tentacled lagoon worm). No fish or marine mammal surveys are proposed.
- 7.8.20 Consultation will be undertaken with the MMO, Natural England and the Environment Agency to confirm the scope of all survey requirements.
- 7.8.21 The Marine Biodiversity chapter will also be informed by the results of the Marine Geomorphology Assessment and Water Quality Assessment.

Approach to assessment methodology

- 7.8.22 The marine related works are temporary and limited to the construction phase of the proposed development. In this context, all marine infrastructure will be removed at the end of the construction phase and the seabed restored at this point in time. Accordingly, all impacts associated with the marine works (including the decommissioning of any structures) are considered to occur in the construction phase of the project as a whole.

- 7.8.23 An assessment of the potential impacts associated with the proposed development will be undertaken, including all relevant impact pathways that could arise from any phase of the proposed development. The CIEEM (2016) guidelines state that ecological impact assessment is the 'process of identifying, quantifying and evaluating the potential effects of development-related or other proposed actions on habitats, species and ecosystems'. It requires an assessment of likely significant effects on important ecological features, and as such, does not require consideration of effects on every species or habitat that may be present within the site.
- 7.8.24 In order to determine whether there are likely to be significant effects, it is first necessary to identify whether an ecological feature is 'important', and therefore whether an effect upon it could be significant, and thus, material in decision-making. To achieve this, where possible, marine species and their populations will be valued on the basis of a combination of their rarity, status and distribution, using contextual information where it exists. Similarly, the importance of marine habitats will be evaluated against existing selection criteria, wherever possible, such as those developed to aid the designation of SSSIs or non-statutory designated sites.
- 7.8.25 Determination of the significance of the predicted ecological effects will be based on professional judgement having regard to the positive (beneficial) or negative (adverse) nature, extent, magnitude, duration, timing, frequency and reversibility of the impacts assessed. An effect will be determined as being significant when it 'either supports or undermines biodiversity conservation objectives for important ecological features' (CIEEM, 2016). In determining significance, consideration is given to aspects of the structure and function of designated sites and habitats, the conservation status of species, and the likely resilience of ecological features to change.
- 7.8.26 An effect on an important ecological feature may be considered to be significant at a variety of geographic scales from international to less than local. The effect may be significant at the same geographic scale at which the feature is determined to be important, or at a lesser geographical scale, depending on the characterisation of the impact. However, CIEEM (2016) also advocates that significance is expressed using the generic significance criteria typically used for other topics within an environmental statement. This approach has been taken in order to allow integration with the assessment of all environmental impacts. Therefore, the key significance levels for either beneficial or adverse impacts on relevant receptors is summarised in **Table 7.8.2**.

Table 7.8.2 Significance criteria

Significance level	Generic criteria	CIEEM geographical criteria
Severe	These effects are assigned this level of significance as they represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites and features of national or regional importance. A change at a district scale site or feature may also enter this category.	Ecological impacts assessed as being significant at national or higher geographical scales and that have triggered a response in development control terms are considered to represent impacts that overall fit within this assessment, are of severe significance.
Major	These effects are likely to be important considerations at a local or district scale and may become key factors in the decision-making process.	Ecological impacts assessed as being significant at the regional scales and that has triggered a response in development control terms are considered to represent impacts that overall within this assessment are of major significance.

Significance level	Generic criteria	CIEEM geographical criteria
Moderate	These effects, while important at a local scale, are not likely to be key decision-making issues.	Ecological impacts assessed as being significant at the county scale, and that have triggered a response in development control terms, will be considered to represent impacts that overall within this assessment are of moderate significance.
Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless they are of relevance in enhancing the subsequent design of the project and consideration of mitigation or compensation measures.	Ecological impacts assessed as being significant at the local scale, and that have triggered a response in development control terms, will be considered to represent impacts that overall within this assessment are of minor significance.
Negligible	Either no effect or effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error. Such effects should not be considered by the decision-maker.	Ecological impacts that have been assessed as not being significant at any geographic level

7.8.27 With specific respect to the noise assessment, a logarithmic spreading model will be used to predict the propagation of sound pressure with range from any marine piling. This model is represented by a logarithmic equation and will incorporate factors for noise attenuation and absorption losses based on empirical data from coastal environments. This model has been advocated by the UK regulators in a number of EIAs for recent coastal developments. The application of this model is therefore considered appropriate for this study.

7.8.28 A range of available published criteria will be used to assess the potential physiological and behavioural effects of underwater noise on marine mammals, fish and shellfish (namely Southall et al. 2007; Hawkins et al. 2014; Popper et al. 2014; National Oceanic and Atmospheric Administration (NOAA), 2016;). Unpublished criteria, namely dBht (species) proposed by Nedwell et al. (2007), will also be used to provide context as this metric has been used in numerous past EIAs.

Identification of additional mitigation, enhancement and monitoring requirements

7.8.29 Measures may be required to mitigate potentially adverse impacts that have been identified during the assessment phase. Based on an initial broad assessment, underwater noise disturbance impacts to migratory fish during construction have the potential to be significant and could require appropriate mitigation. This might include following soft start procedures for marine piling and for employing seasonal restrictions on the marine works.

Potential risks and limitations of assessment

7.8.30 Data availability could provide a limitation to the assessment and as such benthic surveys have been proposed and will be discussed with the MMO, Natural England and the Environment Agency. This will be used to inform the risk of protected species being located within the study area.

7.9 Marine Geomorphology

Introduction

- 7.9.1 This section identifies the proposed scope of the EIA to assess likely significant effects from the proposed development on marine geomorphology receptors. Specifically, this includes consideration of potential effects on geomorphology, hydrodynamics, waves, sediment dynamics and water/ sediment quality.

Baseline Conditions

- 7.9.2 Any proposed temporary marine works would be located approximately half way along the tidal Thames Estuary (Halfway Reach) on the south bank between Belvedere and Erith Marshes, *circa* 50 km from the open sea beyond Southend. The morphology of the river in this location is a single deep meandering channel with relatively steep subtidal banks leading to ‘fringes’ of muddy intertidal. The river is lined with a significant number of wharves and jetties which locally ‘train’ the main tidal river flows between the jetty faces and produce slower flows on the shallower areas behind.

Geomorphology

- 7.9.3 The geology of the Thames in the vicinity of the proposed works predominantly comprises post glacial Holocene deposits. These comprise interbedded layers of mud, peat, sand and gravels that reflect the changes from river to estuary dominated flows over time, which can be consolidated in character. The bed of the estuary currently comprises predominantly alluvium and intertidal muddy deposits, which are relatively consolidated with the exception of a thin transient layer.
- 7.9.4 The United Kingdom Hydrographic Office (UKHO) Admiralty Chart No. 2151 (“River Thames – Tilbury to Margaret Ness”) shows maximum depths in the main channel opposite the development of between 8 to 9 metres chart datum (mCD). The width of the estuary at this location is approximately 690 m (at MHWS) with intertidal areas of *circa* 100 m width on either side.

Hydrodynamics

- 7.9.5 The hydrodynamic conditions at the application site are primarily influenced by tidal propagation through the Thames Estuary, modified by freshwater flow from the river. Tide level information from UKHO (2016) is provided in **Table 7.9.1** for the closest secondary port locations either side of the application site, i.e. Erith and North Woolwich. The conversion from mCD to metres relative to Ordnance Datum Newlyn (mODN) is -3.28 m for Erith and -3.35 m for Woolwich.

Table 7.9.1: Characteristic tidal levels (metres Chart Datum)

Location	Highest Astronomical Tide (HAT)	Mean High Water Springs (MHWS)	Mean High Water Neaps (MHWN)	Mean Low Water Springs (MLWS)	Mean Low Water Neaps (MLWS)
Erith (Secondary Port)		6.5	5.3	1.6	0.5
North Woolwich (Standard Port)	7.8	7.2	5.9	1.6	0.6

- 7.9.6 In general, the Thames Estuary can be classed as macrotidal (>4 m within Halfway Reach) and Admiralty Tidal Stream data for Halfway Reach shows flows of about 1.5 m/s and 1.25 m/s on the flood and ebb respectively on mean spring tides. The flows only reduce to below

0.75 m/s for an hour either side of both high and low water. Neap flows are approximately 70% of the spring tide rates.

Waves

- 7.9.7 Given the specific location of the part of the application site in the Thames Estuary, wave activity at the site is small, with the worst conditions generated by westerly local winds over a fetch of *circa* 2.5 km. Further wave activity will also result from passing vessels. The bends and narrow cross section of the estuary significantly limit the potential for swell wave activity.

Sediment dynamics

- 7.9.8 The high flow speeds within the estuary mean that the sediment transport rates in the vicinity of the application site are high and there is limited accretion of fine mud sediments in the main channel. Accretion is, however, possible over the intertidal, predominantly over high water, except at the edge of the main channel, although for the most part an equilibrium has been established. This is common throughout the Thames Estuary where the intertidal over time has generally accreted behind fronting jetty structures.
- 7.9.9 Transects measuring the suspended sediment concentrations in 2004 for the Thames Estuary 2100 project (TE2100) showed spring tide width averaged concentrations of over 500 mg/l with peaks approaching 1,000 mg/l in the approximate location of the proposed scheme; the highest concentrations within the estuary.

Water and sediment quality

- 7.9.10 Many standards for water quality are regulated at European Union (EU) level through a range of environmental directives. The most relevant for the proposed development comprise the Water Framework Directive (WFD) (2000/60/EC), the Priority Substances Directive (2008/105/EC and 2013/39/EU), the revised Bathing Water Directive (2006/113/EC) and the Nitrates Directive (91/676/EEC).
- 7.9.11 The WFD (2000/60/EC) came into force in 2000 and establishes a framework for the management and protection of Europe's water resources. It is implemented in England and Wales through the Water Environment (WFD) (England and Wales) Regulations 2003 (the Water Framework Regulations). The overall objective of the WFD is to achieve good status (GS) in all inland, transitional, coastal and ground waters by 2015, unless alternative objectives are set and there are appropriate reasons for time limited derogation.
- 7.9.12 River Basin Management Plans (RBMPs) are a requirement of the WFD, setting out measures for each river basin district to maintain and improve quality in surface and groundwater water bodies where necessary. The Environment Agency published updated RBMPs for England as part of the second cycle (2015 to 2021). The proposed works at Belvedere are located within the Thames Middle transitional water body (ID: GB530603911402) in the Thames river basin district which is reported in the Thames RBMP (Environment Agency, 2016 ¹).
- 7.9.13 The Southend shellfish water, designated under the Shellfish Waters Directive (2006/113/EC), is the closest shellfish water protected area to the proposed development at approximately 30 km to the east; however, it should be noted that the Shellfish Waters Directive was repealed in 2013 and subsumed within the WFD.
- 7.9.14 The revised Bathing Water Directive sets physical, chemical and microbiological standards for bathing waters in the EU. It was introduced to update the (old) Bathing Water Directive (76/160/EEC) to ensure compatibility with the WFD. There are no designated bathing waters in the vicinity of the application site; the nearest bathing water (The Serpentine in Hyde Park) is located greater than 20 km to the west and is discrete from the Thames Estuary.

¹ <https://www.gov.uk/government/publications/thames-river-basin-district-river-basin-management-plan>

- 7.9.15 The Nitrates Directive (91/676/EEC) aims to reduce water pollution from agricultural sources and to prevent such pollution occurring in the future (nitrogen is one of the nutrients that can affect plant growth). Under the Nitrates Directive, surface waters are identified if too much nitrogen has caused a change in plant growth which affects existing plants and animals and the use of the water body. The Thames Middle transitional water body is designated under the Nitrates Directive. There are two surface water Nitrate Vulnerable Zones (NVZs), designated as being at risk from agricultural nitrate pollution, located directly opposite the proposed works (i.e. on the North bank of the estuary).
- 7.9.16 Given the historic and current industrial use of the Thames Estuary it is possible that marine sediments will be contaminated in the vicinity of the application site. EA monitoring in the locality of the REP site, has sampled sediment contaminant concentrations above the Cefas Guidelines Action Level 1 and Level 2.

Potential Environmental Effects

- 7.9.17 The marine related works are temporary and limited to the construction phase of the proposed development. In this context, all marine infrastructure will be removed at the end of the construction phase and the seabed restored at this point in time. Accordingly, all impacts associated with the marine works (including the decommissioning of any structures) are considered to occur in the construction phase of the project as a whole.
- 7.9.18 The Marine Geomorphology chapter will outline the source-pathway-receptor relationship relating to the construction (including any dredging requirement), presence, use of and removal of the temporary marine infrastructure. The key impact pathways that will be considered include:
- Direct morphological change from the presence of the marine infrastructure and any associated dredge;
 - Changes to the hydrodynamic regime;
 - Changes to sediment transport processes (including erosion and deposition); and
 - Changes to water and sediment quality (including suspended sediment concentrations and contaminants).
- 7.9.19 Considerations regarding any changes to habitat extent through construction and removal of the marine infrastructure, as well as subsequent scouring (indirect), will also be made to inform the marine ecology assessment. In addition, consideration will also be given to the requirements of the WFD and any potential to cause a deterioration in status of the Thames Estuary transitional water body (and adjacent water bodies), or prevent the water body from achieving its WFD objectives in the future.
- 7.9.20 Those pathways which can be scoped out of requiring further assessment, based on current scheme assumptions, are summarised in **Table 7.9.2**.

Table 7.9.2. Potential effects scoped out of further assessment

Impact pathway	Rationale
Changes to the wave climate	The complex morphological shape of the Thames Estuary is likely to lead to dissipation of swell waves prior to entering the middle estuary containing the proposed development. Consequently, any wave activity at the site would be a result of local wind-generation and will be small in magnitude. Changes to the localised wave climate within the section of estuary containing the proposed development will be negligible as a result of the marine works.

Impact pathway	Rationale
Changes in quality of bathing waters	The nearest bathing water (The Serpentine in Hyde Park) is located greater than 20 km from the application site. There is no potential for the proposed scheme to cause a significant impact on bathing waters.
Changes in quality of shellfish water protected areas	The nearest shellfish water protected area (Southend shellfish water) is located greater than 30 km from the application site. There is no potential for the proposed scheme to cause a significant impact on shellfish water protected areas.

Method

Relevant technical guidance/standards, consultations and information sources

- 7.9.21 Assessment of potential effects on the local hydrodynamic and morphological regime due to the proposed development will be based on a conceptual understanding of the study area. This will be based on available data sets from any existing field surveys and any relevant previous available modelling results but without the use of new bespoke numerical modelling. Information requests will be made to the Port of London Authority (PLA) to obtain latest bathymetry data.
- 7.9.22 The Environment Agency's "Clearing the Waters for All" process will be used for the WFD assessment. The guidance outlines how to assess the impact(s) of activities in transitional and coastal waters in relation to WFD objectives, setting out the following three discrete stages:
- Screening: excludes any activities that do not need to go through the scoping or impact assessment stages;
 - Scoping: identifies the receptors that are potentially at risk from an activity and need impact assessment; and
 - Impact Assessment: considers the potential impacts of an activity, identifies ways to avoid or minimise impacts, and indicates if an activity may cause deterioration or jeopardise the water body achieving good status.
- 7.9.23 A sediment contamination survey will be undertaken to inform the water and sediment quality assessment. No additional field data will be collected to support the marine geomorphology assessment.

Approach to assessment methodology

- 7.9.24 An assessment of the likely significant effects associated with the proposed development will be undertaken. This will include all relevant impact pathways that could arise from any phase of the proposed development. It is proposed that the EIA methodology will follow the standard source-pathway-receptor approach to impact quantification.
- 7.9.25 The importance of a receptor, as classified in **Table 7.9.3**, is based on its value and rarity to either the ecosystem or to society or the economy, as well as the level of protection it is afforded.

Table 7.9.3. Receptor importance

Receptor Importance	Definition
High	Receptor internationally designated and/or of international ecological importance. Likely to be rare with minimal potential for

Receptor Importance	Definition
	substitution or unable to tolerate change. May also be of high or very high socio-economic importance.
Moderate	Receptor nationally designated and/or of national ecological importance. Likely to be relatively rare. May also be of high socio-economic importance.
Low	Receptor not designated but of local to regional importance; or not designated/of local importance.
Negligible	Receptor only of local importance with a high tolerance to change.

7.9.26 The three main steps that will be used to determine the significance of environmental effects of the proposed development on marine geomorphological receptors are summarised below:

- Step 1 – Identify the potential environmental changes resulting from the proposed development and the receptors (including their respective value) that are likely to be affected, together referred to as the impact pathway.
- Step 2 – Understand the nature of the likely environmental changes in terms of their exposure characteristics, the natural conditions of the marine geomorphological system and the sensitivity of the specific receptors, and the impact of the changes upon them.
- Step 3 – Evaluate the value and vulnerability of marine geomorphology receptors as a basis for assessing the significance of an impact. The key significance levels for either beneficial or adverse impacts will be determined. This determination of significance will also take in to account the influence of all mitigation measures.

Identification of additional mitigation, enhancement and monitoring requirements

7.9.27 Measures may be required to mitigate potentially adverse effects that are identified during the assessment phase. The significance of changes to the hydrodynamic regime and sediment transport processes are anticipated to vary between negligible and moderate (dependent on the final design of the marine works), therefore additional mitigation and monitoring requirements may be identified if necessary/practicable.

Potential risks and limitations of assessment

7.9.28 Data availability could provide a limitation to the assessment (e.g. provision of local flow rates). Should this become apparent, a judgement on the significance of these limitations on the assessment will be made in the context of the final scheme design and the construction/decommissioning method for the installation/removal of the marine infrastructure.

7.10 Hydrology, Flood Risk and Water Resources

Introduction

7.10.1 The ES chapter will assess the likely significant effects of REP upon water resources, hydrology, flood risk and surface water drainage during both the construction and operational phases. The chapter will set out the existing/baseline conditions, summarise the potential direct and indirect impacts of REP, the mitigation measures required to prevent, reduce or offset the impacts and the residual impacts. The ES chapter will be supported by a Flood Risk Assessment (FRA). The FRA will consider whether REP is likely to be affected by current or future flooding from any source and will categorise the site in accordance with the Flood Zones set out in the National Planning Policy Framework and associated Planning Practice Guidance. The FRA will also consider whether the development will increase flood risk elsewhere and the nature of mitigation measures required to deal with development impacts.

Baseline Conditions

- 7.10.2 The principal watercourse in the area is the River Thames (immediately to the north of the REP site) which is tidally influenced along the reach adjacent to the REP site. A network of watercourses, classified as Main River and therefore under the jurisdiction of the Environment Agency, is located to the south of the REP site, outfalling to the River Thames via a branch flowing immediately to the west of the REP site.
- 7.10.3 The Environment Agency (EA) publishes floodplain maps on the internet (<https://flood-map-for-planning.service.gov.uk/>). These maps show the possible extent of tidal flooding associated with a 1 in 200 year event (0.5% probability of occurrence), ignoring the presence of flood defences. Also shown is the possible extent of flooding arising from a 1 in 1,000 year event (0.1% probability).
- 7.10.4 The flood map indicates that the REP site is located within Flood Zone 3 (High Probability – land having a 1 in 200 or greater annual probability of sea flooding). However, the flood map also indicates that the REP site falls within an area that benefits from flood defences. In this instance, the standard of protection afforded by the defences is 1 in 1,000 years.
- 7.10.5 The REP site is currently used predominantly as an ancillary area for RRRF. Uses include ash container storage, compounds for operational plant maintenance activities, a non-designated Wasteland Habitat Area, circulation roads and car-parking. The REP site therefore comprises both permeable and impermeable surfaces and surface water run-off generally infiltrates into the ground or is routed to the watercourses located to the south and west.
- 7.10.6 The EA 'Flood Risk from Surface Water Map' (<https://flood-warning-information.service.gov.uk/long-term-flood-risk>) shows areas that may be susceptible to surface water flooding following an extreme rainfall event. The map highlights a number of corridors within and adjacent to the REP site at high, medium and low risk of surface water flooding. These areas generally coincide with watercourses/ditches/drains and topographical 'low' points across the terrain (i.e. areas where surface water would naturally accumulate following rainfall).

Potential Environmental Effects

- 7.10.7 Construction activities will include the clearance of vegetation, topsoil stripping, establishment of compound areas, excavation and site levelling/re-profiling to create development platforms, preparation of site roads and construction of foundations. Compaction of the ground caused by construction plant and an increase in the extent of impermeable surfaces associated with access roads and compound areas have the potential to impact upon the surface water drainage regime and increase surface water run-off from the REP site.
- 7.10.8 Construction activities also have the potential to give rise to the contamination of surface water resulting from spilled hydrocarbons/petrochemicals from construction plant and the mobilisation of silts and contaminants during earthworks operations.
- 7.10.9 REP is likely to give rise to an increase in the impermeable area within the REP site, associated with site roads and power generation infrastructure, thereby increasing surface water run-off during the operational phase. This has the potential to increase flood risk to existing development/infrastructure/third party assets and land downstream of the REP site.
- 7.10.10 During the operational phase, there is the potential for the contamination of surface water resulting from the flushing of silts and hydrocarbons from areas of hardstanding.
- 7.10.11 The proposals include a new Electrical Connection route (underground) to export power from REP to the National Grid Electricity Transmission System (NETS). Construction activities have the potential to impact upon surface water drainage and water quality. However, during the operational phase, the Electrical Connection will not give rise to impacts upon water resources,

hydrology, flood risk or surface water drainage. It is therefore proposed that consideration of operational impacts associated with the underground Electrical Connection is scoped out of the assessment.

Method

7.10.12 Available existing studies/documents, including evidence base studies undertaken in support of the preparation of the LBB Core Strategy (adopted 2012) and the emerging LBB Local Plan (e.g. Strategic Flood Risk Assessment and Preliminary Flood Risk Assessment), will be reviewed to identify the best available data to be taken forward to inform the EIA/FRA. In addition, the following sources of information will be used to assist with characterising the baseline water environment:

- <https://flood-map-for-planning.service.gov.uk/>;
- <https://flood-warning-information.service.gov.uk/long-term-flood-risk/>;
- <http://maps.environment-agency.gov.uk/wiyby/>; and
- <http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx>.

7.10.13 Consultation with the EA, LBB, LBB D, RBG and DBC will be undertaken to identify and collate data in respect of the baseline water environment, define the scope of investigation/technical work required to inform the FRA and ES chapter, agree assessment methodologies and the design principles to be applied to ensure compliance with the relevant policy, legislation and guidance in respect of flood risk and surface water drainage/management.

7.10.14 A walkover survey will be undertaken to facilitate an understanding of the baseline water environment and the general landform of the REP site and surrounding area and to define the scope/specifications of technical assessments/surveys.

7.10.15 Subject to consultation with the EA, it is anticipated that an assessment of residual flood risk (i.e. associated with breach/overtopping of the flood defences along the northern fringe of the REP site) will be made using data derived through hydraulic modelling analysis and provided by the EA. This information will be used to define peak flood water levels and inform the design/ of REP, including the finished levels of power generation and ancillary infrastructure.

7.10.16 The FRA will assess the existing surface water drainage regime within and in the vicinity of the REP site and identify the current points of outfall for surface water run-off arising from the REP site. A strategy will be devised to control, convey, store and dispose of surface water run-off arising from the REP site during operation. Given the requirement for water for operational processes/activities (i.e. cooling of ash residues), surface water management will be considered as part of an over-arching appraisal of the REP water cycle.

7.10.17 The FRA will include an assessment of the potential impacts of climate change upon flood levels and surface water run-off for the design life of REP, in accordance with EA guidance published in February 2016 (<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>).

Water Framework Directive

7.10.18 Overarching National Policy Statement for Energy (EN-1) requires that an ES prepared in support of a DCO application considers whether the proposed development would have an adverse effect upon the achievement of environmental objectives established under the Water Framework Directive (WFD).

7.10.19 Subject to consultation with the Environment Agency (EA), it is currently anticipated that WFD matters will be addressed using the framework set out in the document titled 'Advice Note

Eighteen: The Water Framework Directive (June 2017) published by The Planning Inspectorate. This sets out a three stage process to be followed during the pre-application phase, comprising screening, scoping and impact assessment. In the first instance, it is therefore anticipated that a WFD screening exercise will be completed and the EA consulted regarding the findings/conclusions and to agree the way forward.

Significance Criteria

7.10.20 The significance of effects will be assessed by considering the sensitivity of receptors (i.e. their importance and ability to tolerate and recover from change) and the likely magnitude of the impact (i.e. its spatial extent and duration). **Table 7.10.1** outlines the criteria that will be used to determine receptor sensitivity.

Table 7.10.1 Sensitivity/Value of Receptor

Sensitivity/value of a Receptor	Description	Example
High	<p>Attribute with a high quality and rarity, local scale and limited potential for substitution.</p> <p>Attribute with a medium quality and rarity, regional or national scale and limited potential for substitution.</p> <p>Attribute highly sensitive to change.</p>	<p>Examples include:</p> <p>Receiving watercourse classified as High or Good Ecological status/potential under WFD</p> <p>Site protected under EU or UK wildlife legislation (SAC, SPA, SSSI). Species protected under EU or UK wildlife legislation</p> <p>Site located within a Groundwater Source Protection Zone (SPZ) inner or outer protection zone (Zone 1), National Planning Policy Framework (NPPF) Flood Risk Vulnerability Classification “Essential Infrastructure” or “Highly Vulnerable”</p> <p>Environment Agency current groundwater quantitative and chemical qualities defined as Good</p> <p>Human receptors (construction workers and future residents)</p>
Medium	<p>Attribute with a medium quality and rarity, local scale and limited potential for substitution.</p> <p>Attribute reasonably tolerant of change.</p>	<p>Examples include:</p> <p>Floodplain providing a moderate volume of storage</p> <p>Receiving watercourse classified as Good or Moderate Ecological status/potential under WFD</p> <p>NPPF Flood Risk Vulnerability Classification “More Vulnerable”</p>
Low	<p>Attribute with a low quality and rarity, local scale and limited potential for substitution.</p> <p>Attribute tolerant of modest change.</p>	<p>Examples include:</p> <p>Environment Agency current river ecological quality defined as Poor / Bad and chemical quality defined as Fail</p> <p>Floodplain with limited existing development.</p> <p>Receiving watercourse classified as Poor Ecological status/potential under WFD</p> <p>NPPF Flood Risk Vulnerability Classification “Less Vulnerable”</p>
Negligible	<p>Attribute of very limited quality and tolerant of substantial change.</p>	<p>Examples include:</p> <p>Floodplain essentially rural in nature, characterised by agricultural land use</p> <p>NPPF Flood Risk Vulnerability Classification “Water Compatible”</p>

7.10.21 The magnitude of change arising as a result of the proposed development will be assessed using the criteria set out in **Table 7.10.2**.

Table 7.10.2: Magnitude of impact

Magnitude of Impact	Description	Example
Large	Results in a loss of attribute and/or quality and integrity of the attribute. Following development, the baseline situation is fundamentally changed.	Examples include: Change in ecological and/or chemical qualities of the surface water. Loss of flood storage/increased flood risk. Large change in: <ul style="list-style-type: none"> ■ water quality of receiving watercourse; ■ NPPF Flood Risk Vulnerability Classification; ■ surface water flood risk; ■ fluvial flood risk; ■ water supply volume; and ■ foul drainage volume.
Moderate	Results in impact on integrity of attribute, or loss of part of attribute. Following development, the baseline situation is noticeably changed.	Examples include: Contribution of a significant proportion of the effluent in the receiving river, but insufficient to change its qualities. Moderate change in: <ul style="list-style-type: none"> ■ water quality of receiving; watercourse; ■ NPPF Flood Risk Vulnerability Classification; ■ surface water flood risk; ■ fluvial flood risk; ■ water supply volume; and ■ foul drainage volume.
Small	Results in some measurable change in attribute's quality or vulnerability. Following development, the baseline situation is largely unchanged with barely discernible differences.	Examples include: Measurable changes in attribute, but of limited extent/duration. Small change in: <ul style="list-style-type: none"> ■ water quality of receiving watercourse; ■ NPPF Flood Risk Vulnerability Classification; ■ surface water flood risk; ■ fluvial flood risk; ■ water supply volume; and ■ foul drainage volume.
Negligible	The impacts are unlikely to be detectable or outside the norms of natural variation.	

7.10.22 The significance of an effect will be assessed based upon the sensitivity of the receptor and the magnitude of the change using the matrix presented at **Table 7.10.3**.

Table 7.10.3: Determining Significance of Effect

		Sensitivity of Receptor			
		High	Medium	Low	Negligible
Magnitude of Impact	Large	Substantial	Major	Moderate	Minor
	Moderate	Major	Moderate	Minor	Negligible
	Small	Moderate	Minor	Minor	Negligible
	Negligible	Minor	Negligible	Negligible	Negligible

7.10.23 In the absence of ‘industry standard’ significance criteria for the consideration of water resources, hydrology and flood risk impacts, a qualitative approach, based upon available knowledge, experience and professional judgement, is employed. The significance criteria that will be used for the purposes of the ES chapter are set out in **Table 7.10.4**.

Table 7.10.4: Hydrology and Flood Risk Significance Criteria

Significance Level	Significance Level Criteria	Typical Examples
Substantial Beneficial	Substantial improvements at catchment scale associated with sites and features of national or regional importance	Fundamental changes to the regional hydrological regime. Fundamental reduction in volume and/or peak discharge of surface water runoff from the Site. Fundamental improvement in surface water quality. Fundamental changes to flow conveyance and floodplain storage.
Major Beneficial	Major improvements at catchment scale	Fundamental changes to the regional hydrological regime. Fundamental reduction in volume and/or peak discharge of surface water runoff from the Site. Fundamental improvement in surface water quality. Fundamental changes to flow conveyance and floodplain storage.
Moderate Beneficial	Improvements at local scale	Moderate changes to the local hydrological regime. Moderate reduction in volume and/or peak discharge of surface water runoff from the Site. Moderate improvement in surface water quality. Moderate changes to flow conveyance and floodplain storage.

Significance Level	Significance Level Criteria	Typical Examples
Minor Beneficial	Limited improvements at local scale	Some noticeable changes to the local hydrological regime. Some noticeable reduction in volume and/or peak discharge of surface water runoff from the Site. Some noticeable improvement in surface water quality. Some noticeable changes to flow conveyance and floodplain storage.
Negligible	No appreciable impact	No noticeable changes to the local hydrological regime. No noticeable change in volume and/or peak discharge of surface water runoff from the Site. No noticeable changes in surface water quality. No noticeable changes to flow conveyance and floodplain storage.
Minor Adverse	Limited detrimental effects at local scale	Some noticeable changes to the local hydrological regime. Some noticeable increase in volume and/or peak discharge of surface water runoff from the Site. Some noticeable deterioration in surface water quality. Some noticeable changes to flow conveyance and floodplain storage.
Moderate Adverse	Detrimental effects at local scale	Moderate changes to the local hydrological regime. Moderate increase in volume and/or peak discharge of surface water runoff from the Site. Moderate deterioration in surface water quality. Moderate changes to flow conveyance and floodplain storage
Major Adverse	Important detrimental effects at catchment scale which may become key factors in the decision-making process	Fundamental changes to the regional hydrological regime. Pollution of potable sources of water abstraction. Fundamental increase in volume and/or peak discharge of surface water runoff from the Site. Fundamental deterioration in surface water quality. Fundamental changes to flow conveyance and floodplain storage.
Substantial Adverse	Substantial detrimental effects at catchment scale	Fundamental changes to the regional hydrological regime.

Significance Level	Significance Level Criteria	Typical Examples
	associated with sites and features of national or regional importance	Pollution of potable sources of water abstraction. Fundamental increase in volume and/or peak discharge of surface water runoff from the Site. Fundamental deterioration in surface water quality. Fundamental changes to flow conveyance and floodplain storage.

7.11 Ground Conditions

Introduction

7.11.1 The ES chapter on ground conditions will establish the baseline conditions at the REP site with reference to geology and ground conditions, in terms of the potential for soil and/or groundwater contamination to exist at the REP site, and also the potential for the REP site to be affected by land instability. The baseline conditions will then be used to assess the likely effects of the proposed development on identified receptors such as human health, the environment and the proposed structures relating to ground conditions, and also the potential for the proposed development to directly contribute to, or be affected by, land instability and geological hazards.

Baseline Conditions

The REP site

7.11.2 A review of historical Ordnance Survey (OS) map records indicates that the majority of the REP site remained undeveloped until the mid 20th Century. From the mid 20th Century there was little significant development on the REP site west of RRRF, although the eastern part is indicated to have been developed as part of a 'Mill' in the mid 20th Century.

7.11.3 The current/recent land use at the REP site includes storage areas for empty containers (for the existing RRRF), a portacabin hire facility, a vegetated habitat area and a plant/equipment/transport maintenance area.

The Surrounding Area

7.11.4 In the areas surrounding the REP site, including areas within the Indicative Application Boundary, the earliest historical OS maps reviewed (1869/1870) indicate very little existing development. The majority of the land is indicated to be part of 'Erith Marshes'.

7.11.5 Although, the land immediately adjacent to the east of the REP site was subject to development in the late 19th Century for the following land uses:

- a 'manure works' (1865);
- 'borate refining' (1896); and
- the 'Belvedere Fish Guano Works' (1897).

7.11.6 From the early to mid 20th century there is little evidence of significant development in the wider area surrounding the REP site. However, from the mid 20th century onwards (specifically between the 1940's and 1960's), there was significant industrial development. A works is shown in one of the proposed temporary construction laydown areas, and a slag/refuse heap

is shown on an area of land to the south of the REP site. Whilst the later maps indicate some redevelopment of parts of the wider area, the general land use remains industrial.

- 7.11.7 In the areas surrounding the REP site there are varied current land uses, predominantly, areas of open land and existing road networks. There are two areas where the Indicative Application Boundary crosses or extends into the River Thames.

Baseline Conditions

- 7.11.8 The historical and current land uses at the REP site and in the areas surrounding, such as the manure works, the Guano works, a Borax works, and sewage works, are potentially contaminative and may have contaminated the surrounding soil and groundwater.
- 7.11.9 The REP may potentially impact the groundwater quality during construction through mobilisation of any potential contamination. In addition, the existence of any soil contamination at the REP site will need to be established and assessed to enable any mitigation or remediation to be determined, for the proposed end use and the protection of human health and other sensitive receptors. Excavations required as part of the proposed development could disturb potentially contaminated material and expose construction workers without appropriate mitigation and/or remediation. It is also known that the adjacent existing RRRF site was remediated prior to development, and a review of available remediation and validation reports for the adjacent site will be included, as described in the method section below.
- 7.11.10 A review of available information indicates that the REP site is underlain by superficial deposits comprising Alluvium and River Terrace Deposits, and it is anticipated that there will be Made Ground deposits overlying these superficial deposits, associated with the limited historical development on the REP site and the significant development/redevelopment of the adjoining site and in the surrounding areas. The superficial deposits are indicated to be underlain predominantly by either London Clay, the Lambeth Group or the Thanet Formation.
- 7.11.11 The majority of the REP site is not located within a groundwater SPZ, however part of Electrical Connection Option 2 crosses through Total catchment, Outer and Inner zones of a groundwater source protection zone located in the Crayford/Dartford area. The superficial deposits at the REP site are classified as Secondary A and Secondary (undifferentiated) aquifers. The solid geology underlying the REP site is a mixture of Unproductive Strata, Secondary A and Principal aquifers. In the area of the REP site the underlying London Clay is considered to be Unproductive Strata and provides separation between the aquifers in the superficial deposits with the deeper aquifers in the strata beneath the London Clay.

Potential Environmental Effects

- 7.11.12 Potential environmental effect's comprise:

- Mobilisation of potential contamination during construction and excavation, affecting controlled waters;
- Creation of pathways during foundation works, affecting controlled waters;
- Exposure of construction workers to potential contamination;
- Introduce higher sensitivity receptors (end users);
- Chemical attack and decay of buried concrete structures;
- Permeation of water supply pipes by potential contaminants and damage to structures by explosion due to ground gases; and

- Introduction of new potential contaminants to the environment.

7.11.13 It is anticipated that due to the historical and current industrial uses in the areas surrounding the REP site, that there will be a baseline level of contamination both in the groundwater and near surface soils at the REP site and in the wider environment. However, whilst it is accepted that this REP site may have some initial environmental liabilities with respect to potential soil and groundwater contamination, it is anticipated that there will be mitigation/remediation options available to enable it to be developed so that it is suitable for the proposed end use.

7.11.14 The proposed development currently includes two options for the Electrical Connection: Option 1 to Barking and Option 2 to Littlebrook. Both options require the underground routing of the Electrical Connection, and would seek to follow existing highways or corridors utilised by the existing RRRF connection if possible. In both cases, this approach is likely to avoid significant new excavations outside the existing highway footprint or make-up and therefore in respect of ground conditions the potential impacts are likely to be insignificant.

Method

7.11.15 The environmental baseline at the REP site, with reference to ground conditions, including potential soil and groundwater contamination, and ground gas, will be determined through the production of a Synopsis Phase 1 Ground Condition Assessment (GCA) that will include a review of existing information/data for the REP site and areas adjacent to it.

7.11.16 The GCA will comprise a ground stability appraisal and a Tier 1 qualitative contamination risk assessment and will confirm the likely ground conditions and environmental setting, and assess the information available to identify potential issues that may have associated environmental liabilities or affect the proposed development. The GCA will comprise (a) a desk based collection of information (b) a site and area reconnaissance and (c) reporting including a Tier 1 Qualitative Risk Assessment, preparation of a preliminary Conceptual Site Model (CSM), and preliminary land stability assessment. The identification of current and historical land use activities on and immediately off site is used to assess the likelihood for ground contamination to be present. Potential effects will be considered separately for each identified pollutant linkage such that any potential impacts are identified and mitigated as required.

7.11.17 The GCA will be undertaken in accordance with CLR 11 Model Procedures for the Management of Contaminated Land (EA, 2004), and the London Borough of Bexley Developers Guide (A Simplified Guide to Planning Applications and Land Contamination, January 2015), together with other relevant policy documents for each of the identified Local Planning Authorities within the application site (LBB, LBBB, RBG and DBC). The GCA will further identify whether additional intrusive ground investigation is required to further refine the environmental baseline. It is anticipated that there should be sufficient existing information available for the greater part of the REP site, so that extensive additional intrusive ground investigation is not anticipated to be required to inform the EIA, and that any requirement for additional ground investigation can be a requirement of the DCO.

7.11.18 The environmental baseline will then be used to assess the likely effects of REP on identified receptors such as human health, the environment and the proposed structures relating to ground conditions, and also the potential for REP to directly contribute to or to be affected by land instability and geological hazards. This assessment will form the ES chapter for ground conditions and will be undertaken in accordance with the EIA Regulations and best practice guidance such as "Guidelines for Environmental Impact Assessment", IEMA 2004.

7.11.19 Once the GCA Report is completed, this will form the evidence base for the PEIR and ES chapter relating to ground conditions. In accordance with the requirements of the EIA Regulations, the ES chapter will identify any likely significant effects of REP on the environment, together with proposed mitigation, and description of any cumulative impacts and residual effects.

7.12 Socio-economics

Introduction

- 7.12.1 The Socio-economics chapter will consider potential socio-economic effects that REP may generate.
- 7.12.2 REP has the potential to create positive employment and business effects as well as potentially negative tourism and recreation effects during the construction and operational phases. An initial assessment of tourism and recreation effects is discussed here, providing the basis for recommendations for what should, and what does not require, to be addressed in more detail in the ES.
- 7.12.3 The project's construction and operational phases are considered unlikely to lead to an increase in migration and any related additional demand for housing and other local community infrastructure facilities (e.g. GPs; hospitals, dentists).

Tourism and Recreation

- 7.12.4 An initial review of the local tourism economy shows that as of 2017, tourism related industries² account for 8% of employment in Bexley, though this is lower than the Greater London average (12%). Day visits to Bexley contribute £173 million per annum, based on some 3.4 million day visits. However, compared to neighbouring authorities, Bexley has a fairly underdeveloped overnight tourism market, attracting £13m per year, or 0.5% of total tourism spend in Greater London. A negligible amount of this is related to holiday spending. Indeed, between 2008 and 2015, tourism trips have dropped dramatically (-32%), in contrast with overall growth in Greater London (+18%)³.
- 7.12.5 An initial desk based review of tourism and recreational facilities in the area has identified some key receptors including, but not limited to:
- Local nature reserves including Crossness Nature Reserve which is situated adjacent to the site;
 - Local visitor attractions including Crossness Pumping Station;
 - A number of golf courses including Shooters Hill Gold Club, Barnehurst Golf Course, and Bexleyheath Golf Club; and
 - Activity centres such as Southmere Boating Centre.
- 7.12.6 Other recreational receptors in the area include National Cycle Routes 1,13, 125, 136 and 137 as well as other local cycle routes and public rights of way. The Transport chapter will assess impacts on pedestrian and cycle networks.
- 7.12.7 Whilst there are a number of local tourism and recreational receptors in the area, the context of the proposed development is an established industrial setting with multiple tall structures present in the surrounding area. As such there are unlikely to be significant adverse impacts on nearby tourism and recreation receptors. It is proposed that assessment of tourism and recreation impacts are therefore be scoped out of the ES.

² Defined by Visit Britain: <https://www.visitbritain.org/economic-impact-and-employment>

³ Visit Britain, *Destination Volume and Value: Local Authority Combined Analysis*, 2016. <https://www.visitbritain.org/destination-specific-research>

Baseline Conditions

7.12.8 Data will be collected to assess the following receptors:

- Labour market (direct and indirect employment, supply chain impacts and Gross Value Added (GVA) impacts).

Labour Market

7.12.9 Socio-economic data will be collected on drive-time catchment areas⁴ from the proposed development and compared to Greater London and national averages. The baseline will provide key indicators and measures of socio-economic activity, including demographic profile, economic activity and industries of employment (including energy, construction and tourism). The assessment will also include a review of relevant economic, policy and strategy documents to establish the context for socio-economic activity and tourism and recreation in the local and wider area. An initial review of socio-economic data⁵ shows the labour market area is characterised by:

- A growing population (9% from 2017-2027), slightly below anticipated growth in Greater London (11%);
- Higher levels of economic activity compared to the national average;
- An increasing dependency ratio to 2027 and to 2037⁶ owing to growth in the population aged 65 and over⁷;
- A slightly higher than average proportion of residents of working age (74% compared to 73% across England), but similar to that of Greater London⁸;
- A highly skilled workforce⁹ and education levels on a par with Greater London¹⁰;
- Higher than average employment in in energy, utilities and resources¹¹ compared to Greater London; and
- Slightly higher construction employment compared to Greater London.¹²

7.12.10 The assessment will include a socio-economic profile of local, wider and regional areas based on drive time catchment areas of 30 minutes, 45 minutes and 60 minutes from REP.

Potential Environmental Effects

7.12.11 Potential environmental effects during the construction and operation phases include:

- Positive socio-economic impacts:

⁴ 30 min, 45 min and 60 minutes.

⁵ Experian 2017, based on 2011 Census data

⁶ Based on an analysis of Experian (2017) age profiles for the wider area (including LB Bexley, LB, Barking & Dagenham, Havering, Greenwich, and Dartford).

⁷ The dependent population is to increase to 133% of 2017 levels.

⁸ Residents aged between 16 and 74 years old.

⁹ 52% of residents in managerial, professional, associate professional or technical occupations

¹⁰ 37% of residents holding Level 4 Qualifications and above

¹¹ 73% compared to 0.61%

¹² 6.7% compared to 6.6%

- Gross and net additional employment;
- Supply chain impacts; and
- GVA impacts.¹³

Method

7.12.12 As there is no formal guidance on the assessment of socio-economic effects, the methodology for socio-economic impact assessment is based on HM Treasury Green Book Appraisal guidance.

Study Area

7.12.13 The socio-economic study area would be as follows:

- **Socio-economic - labour market study area:** The principal socio-economic assessment is based on a 60-minute drive time catchment from the REP site. This is considered to reflect the outer limit that individuals will typically commute on a daily basis. Smaller “local area” (30-minute drive time) and “wider area” (45-minute drive time) catchments will also be used to assess the worst case scenario that labour would be sourced from much smaller areas.

Consultation

7.12.14 Key stakeholders will be contacted by email to inform the proposed socio-economic methodology and assessment. Where possible, a formal confirmation that the method is satisfactory will be obtained.

7.12.15 It is proposed that the following consultees will be contacted (depending on the final electrical connection route):

- Chambers of Commerce (South East London, Barking and Dagenham, Dartford); and
- London Economic Action Partnership.

Assessment Summary

7.12.16 The proposed content of the socio-economic ES chapter is summarised below:

- Labour Market: Scoped in.
- Tourism and Recreation Economy: Scoped out.
- Community: Scoped out

7.13 Summary and Impact Interactions

7.13.1 The EIA Regulations require consideration of the potential impact of inter-relationships of the development.

7.13.2 The EIA will consider as appropriate the potential for impact interactions leading to an aggregated environmental effect on a receptor being greater than each of the individual effects that have been identified (e.g. local people being affected by noise, dust and increased traffic

¹³ Gross value added (GVA) is the measure of the value of goods and services produced in an area, industry or sector of an economy

levels during the construction of the development, where those impacts are greater combined than individually).

7.13.3 Potential impact interactions will be assessed within a discrete chapter of the ES.

8 Topics Not Included in the EIA Scope

8.1 Introduction

- 8.1.1 The ES should be focused, documenting only the assessment of likely significant environmental effects, both adverse and beneficial. Therefore, those effects which are not likely to be significant should not be included in the ES, i.e. they should be scoped out of the EIA, as clearly set out in Planning Practice Guidance (PPG) (Paragraph: 035 Reference ID: 4-035-20140306). This chapter sets out those topics that have been determined not to be significant and therefore are not included in the EIA, as well as those that will be addressed independently in separate assessments.

8.2 Risks of Major Accidents and/or Disasters

- 8.2.1 The EIA Regulations, under Schedule 4, part 8 require the ES to provide:

'A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned'.

- 8.2.2 Where appropriate, this should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.
- 8.2.3 Key environmental risks will be described within chapter 3 of the ES (the Proposed Development), and will provide sufficient information upon which the assessment of such issues can take place. Topic chapters within the ES will consider foreseeable risks during the construction period, from accidents such as fuel spillages and identify how the risk of such events will be minimised.
- 8.2.4 Alongside any development consent for the proposed development issued by the SoS, would sit an Environmental Permit issued by the Environment Agency. It is anticipated that the majority of emergency response plans and contingency measures would be dealt with through the Environmental Permit. In addition, it is considered that the Health and Safety effects arising from accidents and disasters would be dealt with through relevant industry controls.
- 8.2.5 Impacts to human health from emissions to air will be considered as part of the EIA, as outlined in **section 7.3** above.
- 8.2.6 For these reasons, it is considered that sufficient controls would be in place to ensure any effects to the environment resulting from accidents or disasters would be reduced to a level that is not significant. It is therefore considered that this can be scoped out of the ES.

8.3 Climate

- 8.3.1 The EIA Regulations, under Schedule 4, part 4, require the ES to consider 'Climate'. It is proposed that effects from the proposed development on Climate (contributions to greenhouse gases) will be scoped out of the EIA, and that consideration of the impact from climate change on the development from future climate change projections are considered in specific topic chapters where relevant. **Appendix H** contains a technical note which justifies this approach and sets out those topics which are proposed to consider future climate change projections.

8.4 Aviation

- 8.4.1 It is not a requirement under the EIA Regulations to undertake an assessment of likely impacts to aviation resulting from a proposed development.

- 8.4.2 National Policy Statement (EN-1) requires an assessment of potential effects to be set out in the ES when the proposed development may have an effect on civil or military aviation assets.
- 8.4.3 It is considered that sufficient mitigation exists, in the form of consultation with safeguarded airfields and stakeholders, appropriate aviation lighting and highlighting developments on aviation mapping. Coupled with the precedent for existing comparable structures already set in the immediate locality of the REP site, effects to aviation are not anticipated to be significant.
- 8.4.4 Following consultation with relevant aviation stakeholders, a standalone statement in relation to aviation will be submitted as part of the application for development consent.
- 8.4.5 It is therefore proposed to scope aviation out of the EIA.

8.5 Daylight and Sunlight

- 8.5.1 Daylight and sunlight assessments typically consider the effects of a proposed development on levels of light at neighbouring properties and outdoor amenity areas. For REP the closest residential receptors are located approximately 800 m to the south at the Travelodge London Belvedere, Hackney House and properties along Norman Road (south), North Road and Poppy Close.
- 8.5.2 Given the intervening distance from REP, it is not considered that there would be any loss of daylight or sunlight at the closest residential receptors. It is therefore proposed to scope daylight and sunlight out of the EIA.

8.6 Environmental Wind

- 8.6.1 An environmental wind assessment typically assesses the effect of a proposed development on pedestrian comfort and safety as a result of any changes to the local micro climate created by the proposed development. For REP, the relevant receptors would primarily be users of the adjacent Thames Path to the north of the Site, and users of the network of PRoWs adjacent to the site.
- 8.6.2 REP would introduce new massing in the form of new building and a stack. In consideration of the Lawson comfort criteria, receptors are not anticipated to be sitting or standing in the vicinity of REP, and are therefore less sensitive to higher wind speeds. Members of the public using the Thames Path and PRoWs are already exposed to potentially windy conditions including strong gusts given the open context of the environment along the river.
- 8.6.3 Future employees of REP, and existing employees at the existing RRRF, are not considered to be sensitive receptors in terms of environmental wind.
- 8.6.4 It is not considered that REP would result in significant effects to the environment in terms of environmental wind. It is therefore proposed to scope environmental wind out of the EIA.

8.7 Lighting

- 8.7.1 A lighting assessment would typically be undertaken as part of an EIA when there is a likelihood for significant effects to occur to light sensitive receptors.
- 8.7.2 The REP site is located within an existing dense urban environment which will be subject to levels of existing activity, movement and lighting in dark hours/night. The existing RRRF facility has been operating adjacent to the proposed development since 2011, with consent being granted in October 2017 for the delivery of waste by river and road on a 24/7 basis.
- 8.7.3 Given that the existing road network and existing jetty are in permanent operation during hours of darkness, REP is not anticipated to introduce lighting effects which would result in a significant change to the existing conditions during either the construction or operational phases.

- 8.7.4 Furthermore, the closest residential area of Belvedere is situated approximately 800 m to the south of the REP site, as such the opportunity for residential receptors to be affected by lighting from the REP site is limited.
- 8.7.5 The construction of the Electrical Connection may introduce temporary lighting effects within residential areas. However, it is envisaged that the timing of works would be limited and agreed by way of DCO Requirement, therefore preventing the opportunity for significant lighting effects.
- 8.7.6 Impacts from lighting on ecological receptors will be considered within the Terrestrial Biodiversity and Marine Biodiversity chapters of the ES, as outlined in **Section 7.7 and 7.8** above.
- 8.7.7 It is not considered that REP would result in significant effects to the environment in terms of lighting, it is therefore proposed to scope lighting out of the EIA.

8.8 Human Health

- 8.8.1 The EIA Regulations require human health to be considered within the EIA process. For REP, this requirement will be met through the Air Quality chapter and provision of a Health Impact Assessment (HIA) which will be appended to the ES. The ES will signpost to the HIA within an 'Other Considerations' chapter. The proposed scope of the HIA is provided at **Appendix G**. This indicates where the HIA will draw on other assessments that will be undertaken for the EIA including the air quality Human Health Risk Assessment as outlined in **Section 7.3**.

8.9 Waste

- 8.9.1 The EIA Regulations require (under Schedule 4, part 5d) an ES to describe the likely significant effects of the development on the environment resulting from 'the disposal and recovery of waste'.

Construction

- 8.9.2 It is considered that works for the preparation and clearance of the REP site will include top soil stripping along with the clearance of vegetation. It is considered that waste generated during the site preparation and clearance phase would be *de minimis*, not significant and is not proposed to be considered within the ES.
- 8.9.3 It is considered likely that there would be surplus material generated, in the form of spoil and made ground. In addition, there would be an element of off-cuts from construction materials. It is anticipated that the construction of the proposed development would seek to comply with the GLA's target of recycling/reusing 95% of construction, excavation and demolition (DCE&D) waste by 2020.
- 8.9.4 It is proposed that a draft Construction Environmental Management Plan (CEMP) will be prepared in draft to accompany the application for development consent.

Operation

- 8.9.5 During the operational phase, waste generate by the proposed development would consist of IBA, and APCR which would be collected and removed from the REP site.
- 8.9.6 IBA (approximately 25% of throughput) would be collected on the REP site, after which it would be transported by river to the Port of Tilbury for treatment and then onwards for sale and use as secondary aggregate in the construction sector.
- 8.9.7 APCR (approximately 3% of throughput) would be collected on the REP site, after which it would be safely removed by road in sealed containers to be processed and recycled.

- 8.9.8 In addition, there would likely be a small element of general waste in the form of air filters, scrap metal, insulation material, oils and chemicals and general office waste.

- 8.9.9 It is proposed a separate Waste Management Strategy will accompany the application. This Strategy will set the construction and operational waste management principles for the development, identifying the waste expected to arise and the proposed routes for managing those arisings.

9 Summary and Next Steps

9.1 Summary

- 9.1.1 This document has been prepared to provide an overview of the likely significant environmental effects that have been considered in scoping the EIA for REP.
- 9.1.2 This scoping report provides information regarding REP, sets out the intended EIA scope and methodologies for the assessment of likely significant environmental effects, and outlines the content of the ES.
- 9.1.3 The aim is to ensure that REP has due regard for the environment, mitigates adverse environmental effects where possible, and takes advantage of opportunities for environmental enhancement.

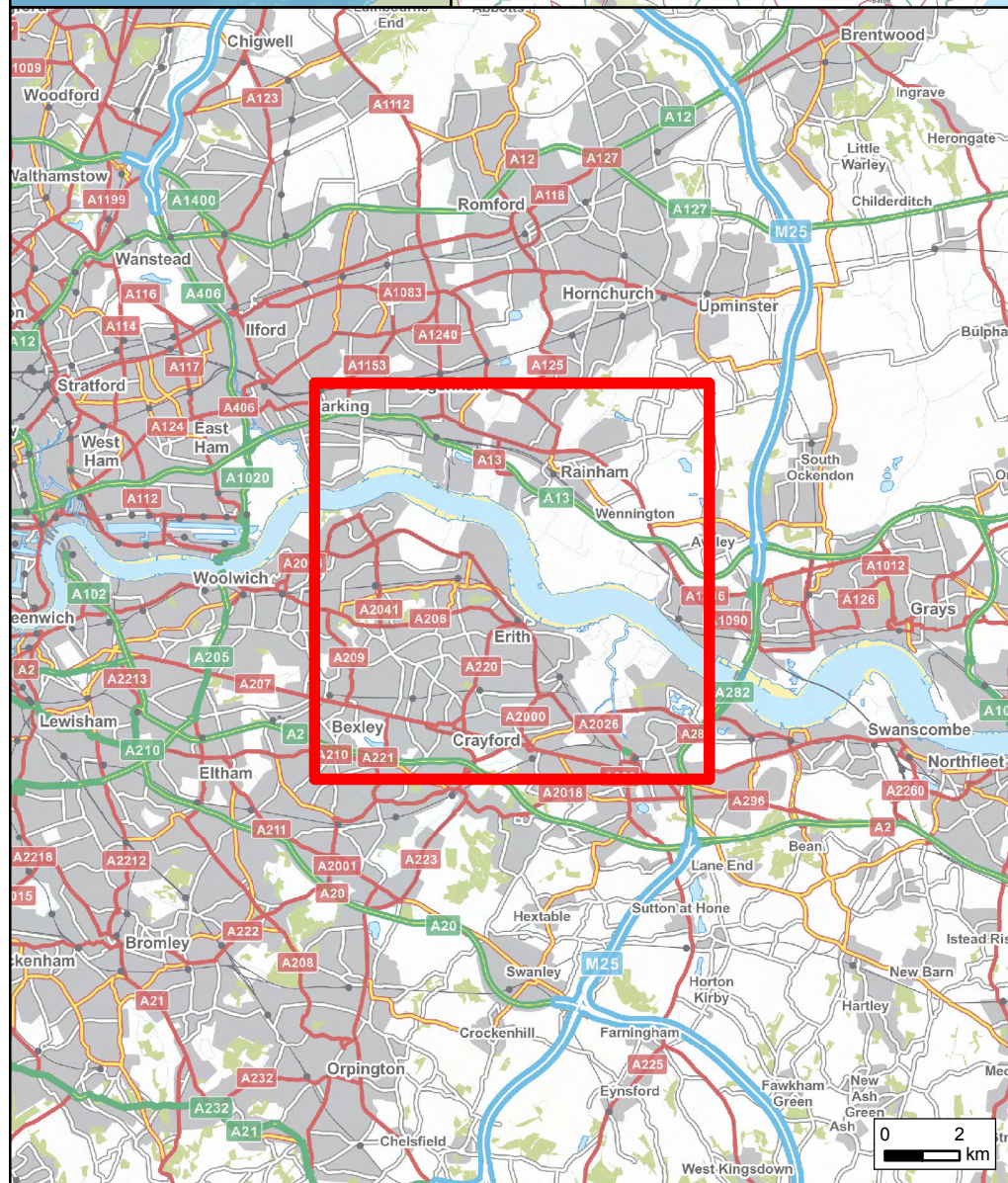
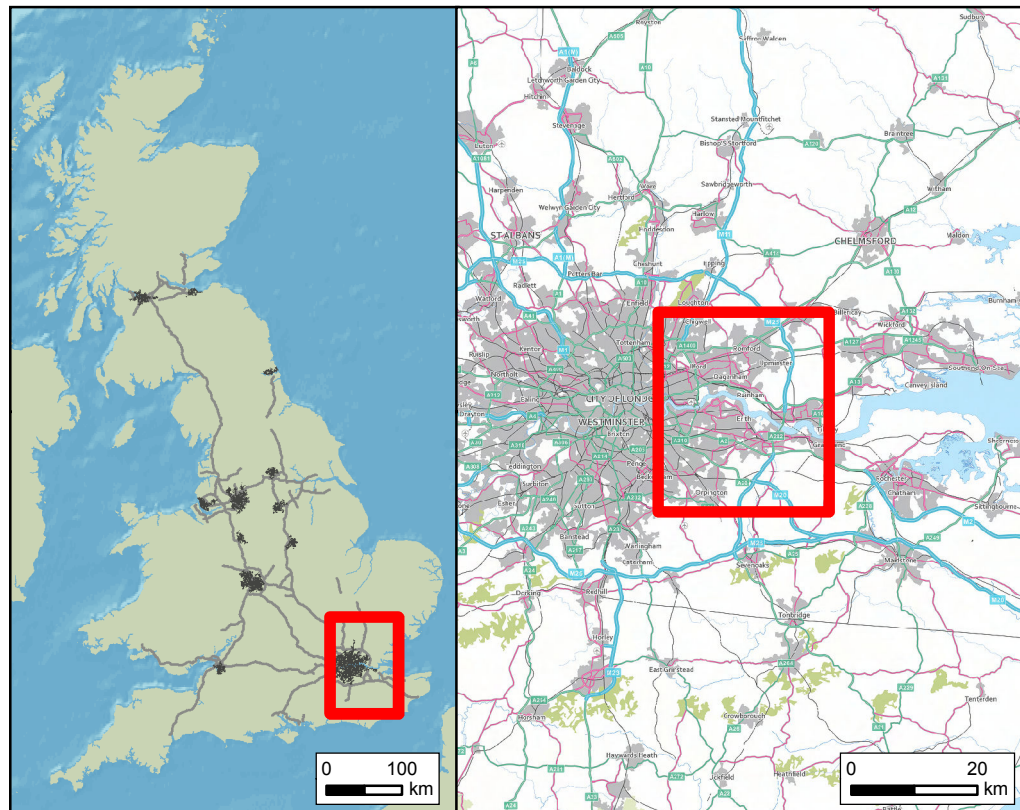
9.2 The Environmental Statement

- 9.2.1 The outcome of the EIA process is the production of an ES to accompany the DCO application. An ES will be prepared in compliance with the EIA Regulations, and that:
- Describes the proposed development;
 - Outlines the reasonable alternatives considered;
 - Describes the baseline environment;
 - Describes the likely significant effects and the methods used to identify significant effects;
 - Describes the measures to mitigate adverse effects;
 - Describes any monitoring arrangements; and
 - Includes a non-technical summary.

9.3 Next Steps

- 9.3.1 The next steps in the EIA process are as follows:
- Receipt of formal Scoping Opinion;
 - Formal consultation on PEIR; and
 - Submission of ES with the DCO application.

Appendix A Site Location Plan



Indicative Application Boundary
 Area not included in Indicative Application Boundary

RIVERSIDE ENERGY PARK

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
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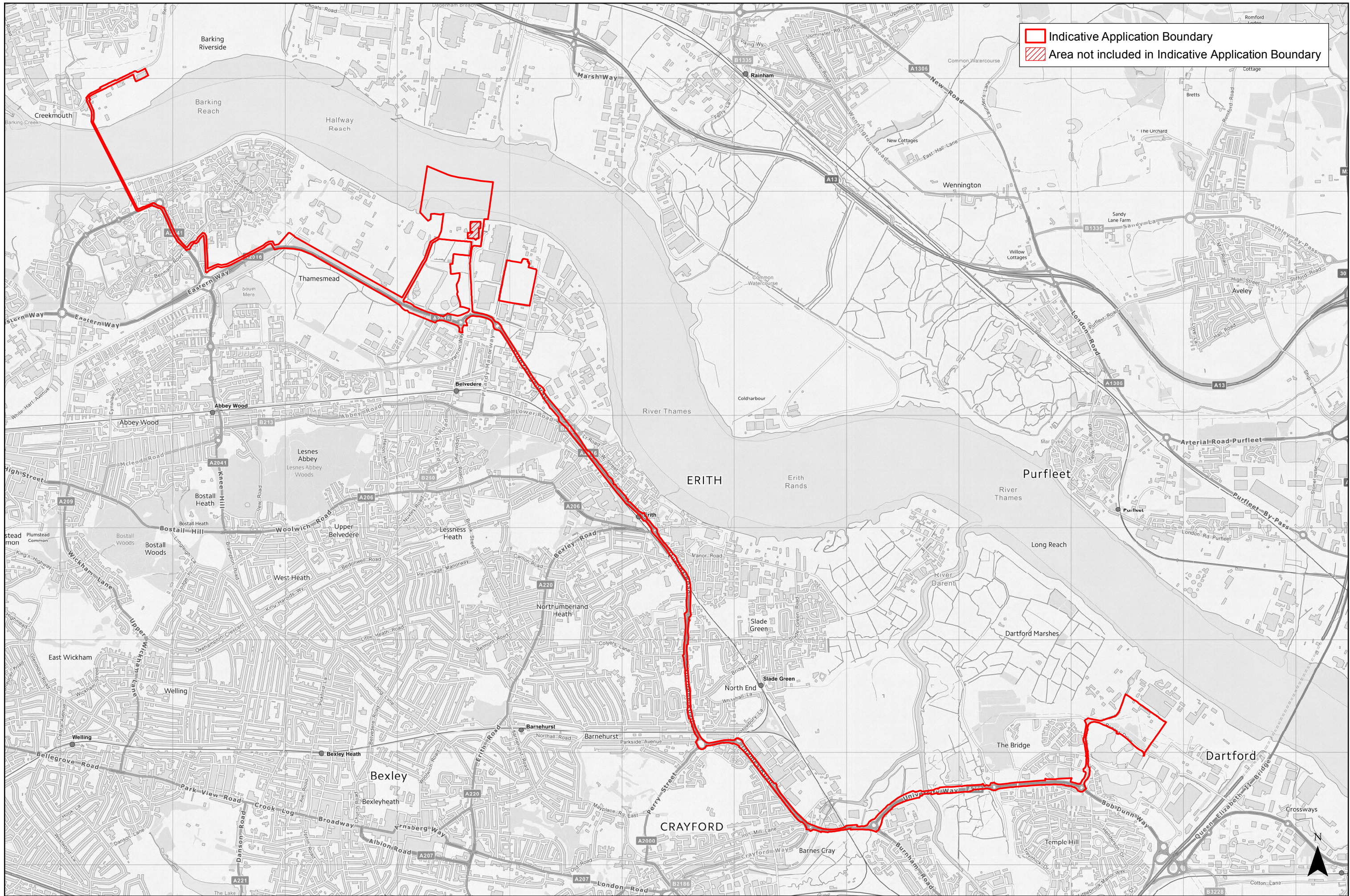


27/11/17
 Drawn: DRL
 Checked: SC

Site Location Plan

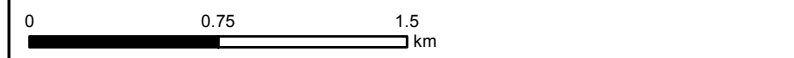
Figure 01 Rev A

Appendix B Indicative Application Boundary



Indicative Application Boundary
 Area not included in Indicative Application Boundary

RIVERSIDE ENERGY PARK



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 Based on Babcock/EDF plan - RRRRL Cable Route Landowners - 2-01-2010 - Drawing NO. Cable Route Plan

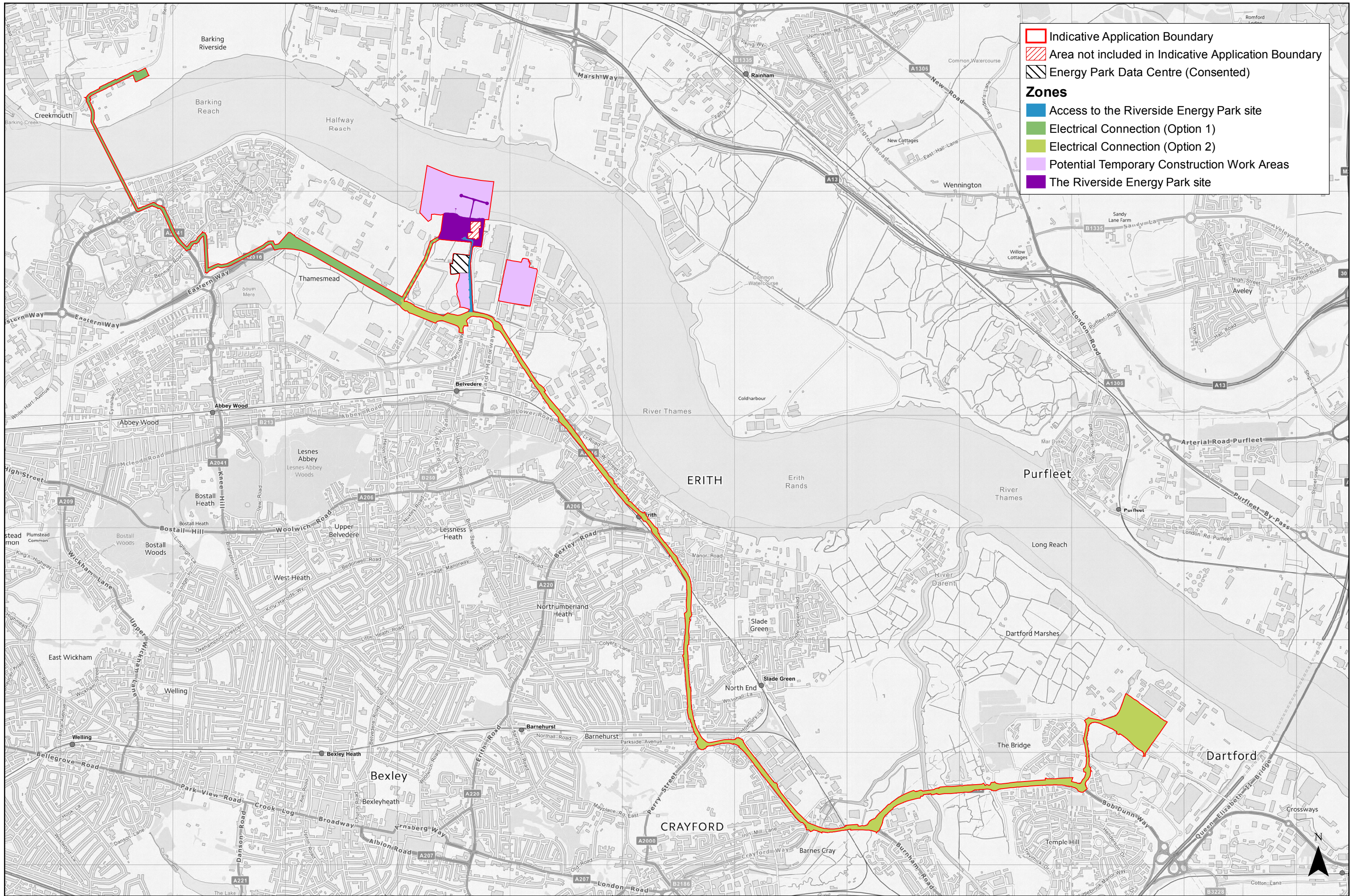


Client

1:30,000 @ A3
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Drawn: CM
Checked: JM

Indicative Application Boundary

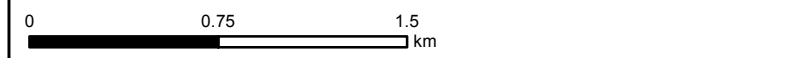
Appendix C Indicative Zoning Plan



Indicative Application Boundary
 Area not included in Indicative Application Boundary
 Energy Park Data Centre (Consented)

Zones
 Access to the Riverside Energy Park site
 Electrical Connection (Option 1)
 Electrical Connection (Option 2)
 Potential Temporary Construction Work Areas
 The Riverside Energy Park site

RIVERSIDE ENERGY PARK



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 Based on Babcock/EDF plan - RRRL Cable Route Landowners - 2-01-2010 - Drawing NO. Cable Route Plan



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Indicative Zoning Plan

Appendix D Regulation 10, 14 (part 1) and Schedule 4 of the EIA Regulations

Regulation 10 extracted from the EIA Regulations

1) A person who proposes to make an application for an order granting development consent may ask the Secretary of State to state in writing their opinion as to the scope, and level of detail, of the information to be provided in the environmental statement.

(2) A person who proposes to make a subsequent application may ask the relevant authority to state in writing its opinion as to the scope, and level of detail, of the further information to be provided in the updated environmental statement.

(3) A request under paragraph (1) must include—

- (a) a plan sufficient to identify the land;
- (b) a description of the proposed development, including its location and technical capacity;
- (c) an explanation of the likely significant effects of the development on the environment; and
- (d) such other information or representations as the person making the request may wish to provide or make.

(4) A request under paragraph (2) must include—

- (a) the reference number of the order granting development consent in respect of which the applicant proposes to make a subsequent application;
- (b) a description of the proposed development, including its location and technical capacity;
- (c) an explanation of the likely significant effects of the development on the environment which were not identified at the time the order granting development consent was made; and
- (d) such other information or representations as the person making the request may wish to provide or make.

(5) When the Secretary of State or the relevant authority, as the case may be, has received a request for a scoping opinion under paragraph (1) or (2), they must, if they consider that they have not been provided with sufficient information to adopt an opinion, notify in writing the person making the request of the points on which they require additional information.

(6) The Secretary of State or the relevant authority must not adopt a scoping opinion in response to a request under paragraph (1) or (2) until they have consulted the consultation bodies, but must, subject to paragraph (7), within 42 days beginning with the date of receipt of that request, or where they have notified the person making the request that they require additional information in order to adopt an opinion, within 42 days of receiving that information, adopt a scoping opinion and send a copy to the person who made the request.

(7) Where a person has, at the same time as making a request for a screening opinion under regulation 8(1), asked the Secretary of State for a scoping opinion under paragraph (1), and the Secretary of State has adopted a screening opinion to the effect that the development is EIA development, the Secretary of State must, within 42 days beginning with the date on which that screening opinion was adopted or, where the Secretary of State has notified the person making the request that they require additional information in order to adopt an opinion, within 42 days of receiving that information, adopt a scoping opinion and send a copy to the person who made the request.

(8) Where a person has, at the same time as making a request for a subsequent screening opinion under regulation 8(2), asked the relevant authority for a scoping opinion under paragraph (2), and the relevant authority has adopted a subsequent screening opinion to the effect that an updated environmental statement is required to enable it to determine a subsequent application, the relevant authority must, within 42 days beginning with the date on which the subsequent screening opinion was adopted or, where it has notified the person making the request that it requires additional information in order to adopt an opinion, within 42 days of receiving that information, adopt a scoping opinion and send a copy to the person who made the request.

(9) Before adopting a scoping opinion the Secretary of State or the relevant authority must take into account—

- (a) any information provided about the proposed development;
- (b) the specific characteristics of the development;
- (c) the likely significant effects of the development on the environment; and
- (d) in the case of a subsequent application, the environmental statement submitted with the original application.

(10) When the Secretary of State or the relevant authority has adopted a scoping opinion in response to a request under paragraph (1) or (2), neither the Secretary of State nor the relevant authority shall be precluded from requiring of the person who made the request additional information in connection with any statement that may be submitted by that person as an environmental statement or an updated environmental statement in connection with an application for an order granting development consent or a subsequent application for the same development as was referred to in the request.

(11) If a consultation body does not within 28 days of being consulted under paragraph (6) respond stating—

- (a) the information it considers should be provided in the environmental statement or the updated environmental statement; or
- (b) that it does not have any comments, the Secretary of State or the relevant authority is entitled to assume that the consultation body in question does not have any comments on the information to be provided in the environmental statement or the updated environmental statement.

Regulation 14 (part 1) extracted from the EIA Regulations

(1) An application for an order granting development consent for EIA development must be accompanied by an environmental statement.

(2) An environmental statement is a statement which includes at least—

- (a) a description of the proposed development comprising information on the site, design, size and other relevant features of the development;
- (b) a description of the likely significant effects of the proposed development on the environment;
- (c) a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;
- (d) a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;

(e) a non-technical summary of the information referred to in sub-paragraphs (a) to (d); and

(f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.

Schedule 4 extracted from the EIA Regulations, setting out the required information for inclusion in the ES.

(1) A description of the development, including in particular:

- (a) a description of the location of the development;
- (b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;
- (c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used;
- (d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases.

(2) A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

(3) A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.

(4) A description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.

(5) A description of the likely significant effects of the development on the environment resulting from, inter alia:

- (a) the construction and existence of the development, including, where relevant, demolition works;
- (b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;
- (c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;
- (d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);
- (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;
- (f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;
- (g) the technologies and the substances used.

The description of the likely significant effects on the factors specified in regulation 5(2) should cover

the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC(a) and Directive 2009/147/EC(b).

(6) A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.

(7) A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.

(8) A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive (c) or Council 2009/71/Euratom (d) or UK environmental assessments may be used for this provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.

(9) A non-technical summary of the information provided under paragraphs 1 to 8.

(10) A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.

Appendix E Table of Organisational Experience

EIA Topic	Organisation	Relevant Expertise
EIA Coordination	Peter Brett Associates LLP	Peter Brett Associates LLP (PBA) is a founder member of the Institute of Environmental Management and Assessment's (IEMA) EIA Quality Mark scheme for quality in EIA. PBA has a dedicated EIA team that specialises in leading the EIA process for development projects, including land development, regeneration, energy and infrastructure projects. Each of PBA's EIA team have suitable academic and professional qualifications, with professional qualifications including Principal EIA Practitioner, Practitioner and Associate membership of IEMA, member of Royal Town Planning Institute and Chartered Environmentalist.
Townscape and Visual	Peter Brett Associates LLP	PBA has a dedicated townscape team that specialises in undertaking townscape and visual impact assessments and appraisals for development schemes, including land development, regeneration, energy and infrastructure projects. PBA's townscape team includes experienced staff, who have relevant academic and professional qualifications, including those who are a Chartered Member of the Landscape Institute (CMLI). In addition, PBA is a Registered Practice of the Landscape Institute and a corporate member of IEMA. The TVIA chapter will be prepared by a chartered landscape architect (CMLI) at PBA.
Noise and Vibration	Peter Brett Associates LLP	The chapter will be prepared by Peter Brett Associates LLP (PBA), sponsor members of the Institute of Acoustics (IOA). PBA has a dedicated acoustics team that specialises in undertaking noise and vibration assessments for development projects, including land development, regeneration, energy and infrastructure projects. PBA typically undertakes in excess of 150 noise and vibration assessments each year. All of PBA's acoustics team have suitable academic and professional qualification, including being registered with the IOA.
Air Quality	Peter Brett Associates LLP	The chapter will be prepared by Peter Brett Associates LLP (PBA). PBA has a dedicated air quality team that specialises in undertaking air quality assessments for development projects, including land development, regeneration, energy and infrastructure projects. PBA typically undertakes in excess of a hundred air quality assessments each year. All of PBA's air quality team have suitable academic and professional qualification, including being registered with the Institution of Environmental Sciences (IES) and Institute of Air Quality Management (IAQM).
Socio-Economics	Peter Brett Associates	PBA has a dedicated planning economics team that specialises in undertaking economic profiling

EIA Topic	Organisation	Relevant Expertise
	LLP	assessments, economic impact assessments and economic appraisals for development schemes, including land development, regeneration and infrastructure projects. PBA's Planning team includes experienced staff, who have relevant academic and professional qualifications, including those who are chartered members of the Royal Institution of Chartered Surveyors (RICS) and Royal Town Planning Institute (RTPI), and members of the Institute of Economic Development (IED). In addition, PBA is a corporate member of RICS and the IED. The SEIA chapter will be prepared by members with these qualifications at PBA.
Archaeology and Cultural Heritage	Orion Heritage	Orion Heritage Limited is an archaeological and heritage consultancy with over 50 years collective experience. The company provides independent advice to the private sector aimed at resolving the often conflicting demands of heritage conservation while also achieving profitable and sustainable development. The Directors bring with them a wealth of experience of providing advice to clients on all stages of the promotion and construction of proposed developments. This ranges from land acquisition/due diligence, through the design and planning application (both outline and detailed) process, to the eventual discharge of archaeological and historic building conditions. This work routinely involves the production of desk-based assessments and historic environment ES chapters for TCP and NSIP schemes, negotiations with local planning authorities, the costing and management of archaeological investigations, and expert witness at public inquiry. Each of Orion's EIA team have suitable academic qualifications professional accreditation (Associate or Member of the Chartered Institute for Archaeologists) and a wealth of EIA experience.
Transport	Peter Brett Associates LLP	PBA has a dedicated transport team that specialises in undertaking transport planning, modelling and appraisal for development schemes, including land development, regeneration and infrastructure projects. PBA's transport team includes experienced staff, who have relevant academic and professional qualifications, including those who hold Transport Planning Professional (TPP) and those who are Chartered Members of the Institute of Highways and Transportation (CMIHT). In addition, PBA holds corporate membership of the Transport Planning Society (TPS) and the Chartered Institute of Highways and Transport (CIHT).
Terrestrial Biodiversity	Peter Brett Associates LLP	PBA Ecology Team works collaboratively with our clients and wider project teams to provide robust and pragmatic ecological advice to support projects through the planning process. Our extensive experience allows us to liaise effectively with

EIA Topic	Organisation	Relevant Expertise
		<p>stakeholders and to determine cost-effective mitigation solutions, aligned with policy and legislative requirements. All members of PBA's ecology team are members of CIEEM (the Chartered Institute of Ecology and Environmental Management), with some more senior members of the team also holding Chartered Ecologist status. As such, we are bound by the Code of Professional Conduct, as set out by CIEEM, in all aspects of the ecological work we do.</p>
Hydrology and Flood Risk	Peter Brett Associates LLP	<p>PBA has a designated Water Management team with many years of experience in, amongst other areas, the assessment of flood risk, hydrology and hydraulic modelling, flood management, the Water Framework Directive, surface water drainage and river engineering. PBA's Water Management team includes experienced staff who have relevant academic and professional qualifications. The authors and reviewers of the document are all experienced engineers and members of chartered institutions such as the Chartered Institution of Water and Environmental Management (CIWEM) and/or the Institution of Civil Engineers (ICE).</p>
Ground Conditions	Peter Brett Associates LLP	<p>PBA has a dedicated geoenvironmental and geotechnical team that specialises in the investigation and assessment of ground conditions for a variety of project types and land development schemes. This includes the assessment of potentially contaminated land, geotechnical and land stability assessments, and the preparation of Environmental Impact Assessments. PBA's geo team includes a variety of experienced and qualified staff who have relevant academic and professional qualifications, including those who are Chartered Engineers, Scientists, Environmentalists and Geologists.</p>
Marine Geomorphology	ABPmer	<p>ABPmer is a specialist marine consultancy with a long history of providing a wide range of advice and support to those wishing to obtain planning permissions, marine licences and consents offshore and at the coast. This includes undertaking supporting assessments such as EIA, HRA, WFD and MCZ as well as stakeholder engagement. Recent experience has ranged across a number of sectors including renewable energy, port developments, aggregates, inter-connectors and habitat creation schemes. ABPmer operates a quality management system (QMS), which is certified to ISO 9001:2015, for the delivery of Environmental Consultancy and Research Services and has the IEMA EIA Quality Mark.</p> <p>ABPmer's environment team includes a variety of experienced and qualified staff who have relevant academic and professional qualifications including those who are Chartered Environmentalists, full members of IEMA, CIEEM and Institute of Fisheries</p>

EIA Topic	Organisation	Relevant Expertise
		Management.
Marine Ecology	ABPmer	<p>ABPmer is a specialist marine consultancy with a long history of providing a wide range of advice and support to those wishing to obtain planning permissions, marine licences and consents offshore and at the coast. This includes undertaking supporting assessments such as EIA, HRA, WFD and MCZ as well as stakeholder engagement. Recent experience has ranged across a number of sectors including renewable energy, port developments, aggregates, inter-connectors and habitat creation schemes. ABPmer operates a quality management system (QMS), which is certified to ISO 9001:2015, for the delivery of Environmental Consultancy and Research Services and has the IEMA EIA Quality Mark.</p> <p>ABPmer has dedicated numerical modelling and physical processes teams which include a variety of experienced and qualified staff who have relevant academic and professional qualifications including those who are Chartered Environmentalists, Chartered Marine Scientists and full members of CIWEM and IMAREST.</p>
Health	Peter Brett Associates LLP	<p>PBA are part of the Institute of Environmental Management and Assessment's (IEMA) working group on health, which forms part of their wider Impact Assessment Network. The group is set up to advance the newly established practice of assessing health in EIA. PBA have been undertaking Health Impact Assessments (HIA) for over 10 years, typically undertaking approximately 5 HIA a year. Practitioners are members of IEMA and are experienced at undertaking EIA and HIA and coordinating with the relevant technical input leads. Practitioners stay abreast of technical practice through attendance at appropriate seminars, conferences and use of appropriate online tools and discussion forums.</p>
Waste	Peter Brett Associates LLP	<p>PBA has worked within the waste management arena for over 20 years and has a dedicated team of professionals who provide expertise in waste policy, waste planning, waste options appraisals and waste technology issues.</p> <p>The team has variety of experienced and qualified staff who have relevant academic and professional qualifications, including those who are Chartered Waste Managers through the Chartered Institute of Waste Management (CIWM) and the Chartered Institution of Water and Environmental Management (CIWEM).</p>
Cumulative Effects and Impact Interactions	Peter Brett Associates LLP	<p>Peter Brett Associates LLP (PBA) is a founder member of the Institute of Environmental Management and Assessment's (IEMA) EIA Quality Mark scheme for quality in EIA. PBA has a dedicated EIA team that specialises in leading the</p>

EIA Topic	Organisation	Relevant Expertise
		EIA process for development projects, including land development, regeneration, energy and infrastructure projects. Each of PBA's EIA team have suitable academic and professional qualifications, with professional qualifications including Principal EIA Practitioner, Practitioner and Associate membership of IEMA, member of Royal Town Planning Institute and Chartered Environmentalist.


Appendix F Proposed Viewpoint Locations

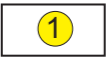


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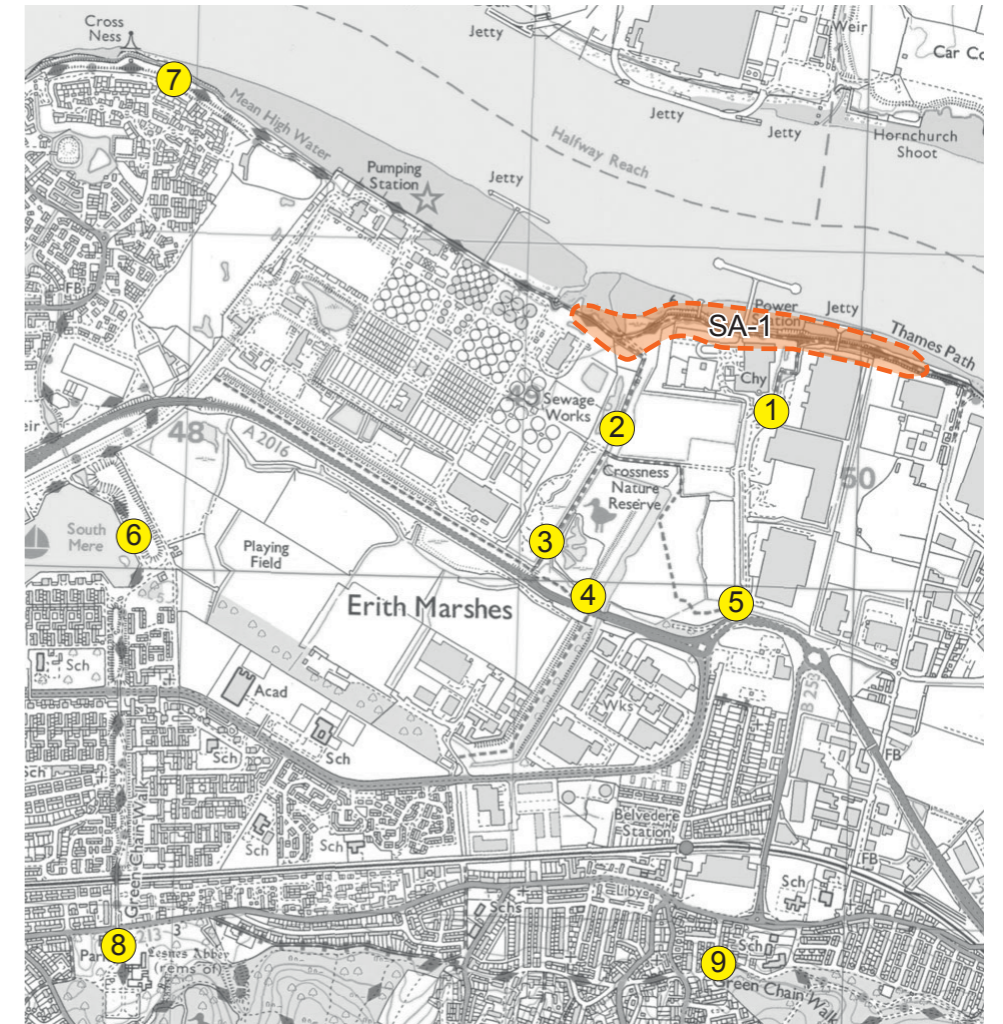
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LEGEND

 Sequential Visual Assessment (east and west)

 Preliminary Viewpoint Locations for Visual Assessment

Insert



RIVERSIDE ENERGY PARK, BELVEDERE

PRELIMINARY VIEWPOINTS PLAN:
TVIA, SCOPING REPORT



CORY RIVERSIDE ENERGY

Drawing Number 42166-3002-01A	Revision	Date	02.11.17
	Scale	AS SHOWN	
	Checked	SL	NJ



Appendix G Proposed Scope of Health Impact Assessment

To: Scoping Consultees
Date: 15th November 2017
Prepared by: Peter Brett Associates
Subject: Health Impact Assessment Scoping Memo

1. Introduction

- 1.1 The Environmental Impact Assessment (EIA) Regulations 2017 require human health to be considered within the EIA process.
- 1.2 For the Riverside Energy Park development (the “Project”), this requirement will be met through provision of a Health Impact Assessment (HIA) which will be appended to the Environmental Statement (ES). The ES will signpost to the HIA in an ‘Other Considerations’ Chapter.
- 1.3 The HIA will draw on the findings of technical chapters of the ES which assess effects relevant to human health as indicated in Table 1 below. In particular, a Human Health Risk Assessment will be presented within the Air Quality Chapter.
- 1.4 The approach to HIA will involve a desk-top investigation of health impacts and will be undertaken by PBA.
- 1.5 Health within the HIA will be defined as *“a state of complete physical, social and mental wellbeing and not simply the absence of disease or infirmity.”* (World Health Organization; Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June 1946, and entered into force on 7 April 1948).

2. Baseline Conditions

- 2.1 The site lies within Belvedere Ward in the London Borough of Bexley. It is immediately adjacent to Thamesmead East Ward and Lesnes Abbey Ward is to the south. Collectively, these wards are referred to as the Belvedere Geographic region.
- 2.2 The residential area of Belvedere lies approximately 800 m to the south with a population of approximately 11,890. The residential area of Abbey Wood lies approximately 1,950 m south west with a population of approximately 15,700, and the residential area of Thamesmead lies approximately 1,560 m west, with a population of approximately 32,000.
- 2.3 Overall, the borough is fairly affluent with lower unemployment than the London average and the health of people in Bexley is generally better than the England average. However, the wards noted above have some of the highest levels of deprivation in the borough, in particular in Thamesmead East Ward. Deprivation often indicates where health inequalities lie. Health priorities in Bexley include obesity (adult and children), diabetes, dementia, addiction (smoking), substance misuse, and children and young people's emotional wellbeing.
- 2.4 Within the HIA, a review will be undertaken to establish the characteristics of the human populations that may be affected by the Project (refer to description of receptors in Method section below) and local priorities for health which are relevant to the Project. Data will be aggregated to an appropriate level (e.g. Ward/Borough) where available and compared to the national context.
- 2.5 Information to be reviewed, to establish the baseline, will include:
 - London Borough of Bexley Joint Strategic Needs Assessment, 2016;

- A Health and Wellbeing Strategy for Bexley (London Borough of Bexley and Bexley Clinical Commissioning Group);
- Public Health England Bexley Health Profile, 2017;
- Labour market statistics as also identified in socio-economics chapter e.g. Nomis;
- Bexley Core Strategy adopted February 2012;
- Public Health England Local Health Information;
- Fair Society, Healthy Lives: A Strategic Review of Health Inequalities in England Post-2010 ('The Marmot Review') (2010);
- Healthy Urban Planning Checklist 3rd Edition (NHS London Healthy Urban Development Unit) April 2017;
- National Planning Policy Framework, 2012 and relevant Planning Practice Guidance;
- Consultation with the public and stakeholders (discussed in the Method section below);
- Baseline for other relevant topics in the EIA (refer to para **Table 1** below).

3. Potential Effects

3.1 As part of the basis for HIA, it is recognised that health and wellbeing can be affected by multiple determinants as indicated in **Figure 1**.

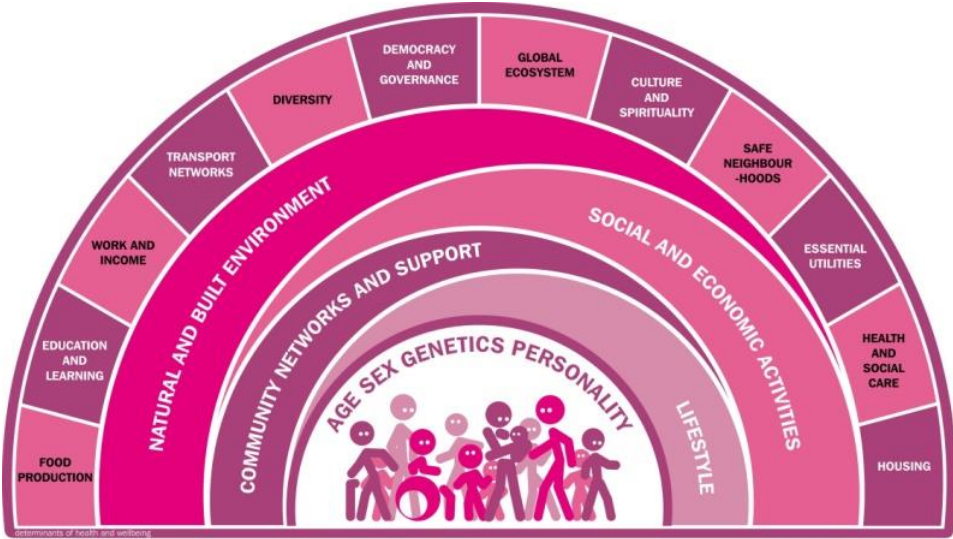


Figure 1: The Determinants of Health and Wellbeing (Peter Brett Associates (Adapted from Dahlgren G and Whitehead (1991). Policies and strategies to promote social equity in health; Institute of Future Studies; Stockholm)).

3.2 In planning for the Project it is understood that health is not only about avoiding harm through compliance with safety measures, but also through avoiding environmental pollution and contributing to the factors that improve wellbeing. This will include access to jobs and issues of energy security. It is however recognised that the opportunities for healthy place-making may not be as great for a development of this type as, for instance, planning the regeneration of a town centre or the development of a significant area of new housing.

- 3.3 Using the information gathered from the baseline and from consultation, the HIA will establish a set of 'health and wellbeing objectives', tailored to the local context and the Project. Whilst it is acknowledged that this is not an urban project (which would include proposed residential dwellings), at this stage, the structure of the Healthy Urban Planning Checklist from London's Healthy Urban Development Unit has been used as a basis to provide a framework for consideration of determinants. The potential for the project to affect the determinants is noted in **Table 1** below which forms the proposed scope of health issues for the Project.

MEMO

Table 1 Scoping Health Issues

Theme	Planning issue	Scoping	Links to ES Topics
Healthy Housing	Housing design and accessible housing	Scoped out	Scoped out
	Healthy living	Excess deaths are recorded in winter due to cold housing conditions associated with fuel poverty, which particularly affects the elderly. The Project has the potential to have a beneficial effect on energy supply and security in the long term.	Links to wider application
	Housing mix and affordability	Scoped out	Scoped out
Active travel	Promoting Walking and Cycling.	Levels of walking and cycling can affect physical activity, which in turn can affect mental and physical health outcomes including prevalence of cardiovascular disease and obesity. The Project has the potential to disrupt existing walking and cycling routes (e.g. the Thames Path) during construction but also to promote walking and cycling for new employees at Riverside Energy Park.	Transport (refer to Section 7.2 of ES Scoping Report)
	Safety	Transport accidents and safety have direct links to health and injury. The Project has the potential to affect the volume of traffic on the wider network and therefore transport accidents will be considered.	Transport (refer to Section 7.2 of ES Scoping Report)
	Connectivity	Connectivity can affect the ability of people to access services and social networks and can encourage walking and cycling – with associated mental health and physical health outcomes. The Project has potential effects on the connectivity of existing transport routes during construction and also the connectivity of workers to their place of employment and surrounding facilities.	Transport (refer to Section 7.2 of ES Scoping Report)
	Minimising car use	Links with health will be considered with respect to walking and cycling (as noted above) and air quality (as noted below).	Transport, Air Quality (refer to Sections 7.2 and 7.3 of ES Scoping Report)

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Theme	Planning issue	Scoping	Links to ES Topics
Healthy environment	Air Quality	Poor air quality is linked to incidence of chronic lung disease (chronic bronchitis or emphysema) and heart conditions and asthma levels among children. The Project has the potential to affect air quality through construction activities, transport emissions and waste combustion.	Air Quality (refer to Section 7.3 of ES Scoping Report)
	Odour	Foul odours can cause stress and anxiety and can prevent people using outdoor spaces for physical activity and relaxation. There are potential odour impacts from the receipt and processing of waste.	Air Quality (refer to Section 7.3 of ES Scoping Report)
	Noise	Noise pollution can have a detrimental impact on health resulting in sleep disturbance, cardiovascular and psycho-physiological effects. The Project has the potential to affect noise and vibration levels during both construction and operation.	Noise and Vibration (refer to Section 7.4 of ES Scoping Report)
	Contaminated land and water	Contamination of land and water bodies poses direct health risks due to toxicity from inhalation and ingestion of pollutants. The Project has the potential to disturb existing contamination, increase the deposition of metals to soil and contaminate water resources.	Ground Conditions; Air Quality; Hydrology, Flood Risk and Water Resources (refer to Section 7.11, 7.3 and 7.10 of ES Scoping Report)
	Biodiversity / Open space	Access to open/green space and nature can lead to more physical activity and reduce levels of heart disease, strokes and other ill-health problems that are associated with both sedentary and stressful lifestyles. No significant effects on publicly accessible natural spaces are anticipated, therefore this is scoped out of assessment. However, any effects on assets, such as the Thames Path, will be considered within the promotion of walking and cycling.	Terrestrial Biodiversity, Transport (refer to Section 7.7 and 7.2 of ES Scoping Report)
	Play space / local food growing	Scoped out	Scoped out
	Flood Risk	Flood risk of the Project will be considered with respect to energy security and safety of workers.	Hydrology, Flood Risk and Water Resources (refer to Section 7.10 of ES Scoping Report)

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Theme	Planning issue	Scoping	Links to ES Topics
	Visual Amenity	Attractive neighbourhoods contribute to a 'sense of place' and wellbeing. Evidence shows that people are more likely to walk and cycle in attractive spaces. Visually intrusive features can cause stress. The Project has the potential to affect the visual amenity of the area for residents and pedestrians.	Townscape and Visual (refer to Section 7.5 of ES Scoping Report)
Vibrant neighbourhoods	Healthcare services	Scoped out	Scoped out
	Education	Education increases employment opportunities and the capacity to earn, while integrating learning about the importance of a healthy lifestyle including exercise and diet. The Project has the potential to affect training opportunities. Where educational facilities are considered as receptors to other affects e.g. noise / air quality – these will be considered.	Socio-economics, Noise and Vibration, Air Quality (refer to Sections 7.12, 7.4 and 7.3 of ES Scoping Report)
	Social cohesion / Access to social infrastructure	Social capital is associated with better levels of health, better educational attainment, better chances of employment and lower crime rates. The Project has the potential to involve the local community to maintain social cohesion e.g. through the Belvedere Community Forum.	Socio-economics (refer to Section 7.12 of ES Scoping Report)
	Crime reduction and community safety	Mental illness exacerbated through isolation, lack of social contact and fear of crime. The Project has the potential to affect the fear of crime in particular through the introduction of construction workers at the site.	Links to wider application
	Local employment and healthy workplaces	Access to employment can have an effect on both physical and mental health through enhanced social integration, self-esteem, physical activity and income. The Project has the potential to affect local employment levels both during construction and operation.	Socio-economics (refer to Section 7.12 of ES Scoping Report)
	Access to local food shops	Scoped out	Scoped out
	Public buildings and spaces	Scoped out	Scoped out

MEMO

4. Method

- 4.1 The final set of health and wellbeing objectives will be used as the basis of a systematic assessment of the emerging development proposals. They will be used to test the Project and identify where action should be taken to avoid adverse effects, as well as to secure potential benefits.
- 4.2 Given the multidisciplinary nature of HIA and the political, economical, technical and practical considerations which feed into the judgement of significance, it is not considered appropriate to develop significance criteria for human health within the EIA generic significance criteria framework (i.e. minor, moderate and major categories). Therefore, to assist decision making and to ensure that the health assessment is not inconsistent with the EIA, effects will be categorised solely into significant and not significant effects. Significant likely effects will be reported where there is likely to be an unmitigated effect on the physical, social or mental wellbeing of a group of receptors (outlined below). These will be categorised into long term and short term effects. Where significant effects are reported for environmental disciplines assessed in the EIA, which use health criteria as their basis e.g. air quality / contamination / noise / transport, these will be reviewed in relation to this health threshold.

Receptors and Vulnerable Groups

- 4.3 The HIA will identify likely significant effects of the Project on the health of:
- Existing residents and communities in the local area. This will include residents in Belvedere, Thamesmead and Lesnes Abbey Wards but may also include those across the River Thames and the wider area if effects are anticipated;
 - Receptors within proposed communities i.e. consented planning applications;
 - Community users identified for assessment within the ground conditions, noise, air quality, transport and visual amenity assessments e.g. schools / care homes / pedestrians; and
 - Construction workers and workers at the operational site. Although it should be noted that health and safety of workers does not fall within the remit of the HIA, it will reference where risks are addressed.
- 4.4 The temporal scope of the assessment will consider impacts as necessary at construction and also of the Project once complete. The future baseline will be considered which will include receptors in proposed communities and how the health of existing and proposed communities may change in the future e.g. due to climate change.
- 4.5 The HIA will also look at how different groups are likely to be affected in different ways, and therefore how health and social inequalities might be reduced or widened by the Project, with a particular focus on vulnerable groups that may be inequitably affected by the development. Given the nature of the Project, these are likely to include younger and older people in the existing local residential communities, and those that are unemployed. It is not anticipated that the Project will have any disproportionate effects on those with disabilities, so this vulnerable group will be scoped out of the assessment.

Consultation

- 4.6 The process of preparing the proposals will include consultation and engagement with the local population, stakeholders for the Boroughs, as well as technical consultation related to the assessment of environmental effects. It is not intended to undertake any specific consultation for the HIA (other than through the EIA scoping process), but to integrate health and community issues into the wider consultation programme.

MEMO

Major Accidents and Disasters

- 4.7 Consideration of major accidents and disasters in relation to human health has been proposed to be scoped out of assessment. Refer to Section 8.2 of the ES Scoping Report

Monitoring

- 4.8 Where significant effects are identified on human health, a schedule of proposed monitoring will be proposed within the ES.

Appendix H Climate Change Technical Note

**Climate Change Scoping Memo
Riverside Energy Park**

To: Scoping Consultees
Date: 22/9/17
Prepared By: Jonathan Riggall
Subject: Climate Change Scoping Memo

Introduction

The following technical note sets out Peter Brett Associates LLP's (PBA) approach to the assessment of climate change within the Environmental Impact Assessment (EIA) for Riverside Energy Park.

This technical note focuses on the application of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('the EIA Regulations 2017') requiring:

5. A description of the likely significant effects of the development on the environment resulting from:

(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;

There is no national or European guidance on the application of 5 (f) (Schedule 4) of EIA Regulations 2017.

The Institute of Environmental Management and Assessment (IEMA) has produced two guidance documents¹ on the assessment of the impact from and to development from climate change. The documents do not give definitive approaches to the scoping of climate change and do not give guidance on the assessment of significance.

This note sets out PBA's suggested approach to screening and scoping climate change based on the EIA Regulations 2017 and takes into consideration the IEMA Guidance.

This note does not set out the science, relationship or justification relating to the link between greenhouse gas (GHG) emissions and climate change.

¹ EIA Guide to Climate Change Resilience and Adaptation (November 2015)
EIA Guidance on assessing greenhouse gas emission and significance



Climate Change Scoping Memo Riverside Energy Park

Screening and Scope of Climate Change for Riverside Energy Park

The screening of the technical assessment of climate change falls into two separate parts which are different both in nature, methodology and outcome.

1. The first consideration is the impact from climate change on the development based on future climate change projections.
2. The second consideration is the impact of the development on climate change.

These are considered separately below.

1. Impacts from future climate change scenarios

Overarching National Policy Statement for Energy EN-1, Section 4.8 sets out the need to consider the effects of climate change on the development. This requirement is also noted in National Policy Statement for Renewable Energy Infrastructure EN-3, Section 2.3.

Linked to climate change, future potential adverse weather may have direct and indirect impacts on the Riverside Energy Park development. Future climate change predictions are provided through the UK Climate Change Projections (CP09) a service provided by the Environment Agency and the UK Met office.

The future weather scenarios form part of the future baseline scenario which the EIA topic assessments will need to consider. Table 1.1 below sets out how it is proposed that the technical chapters that will consider changing weather scenarios in the Environmental Statement (ES), with justification of the proposed approach.

ES Subject	Screening requirement	Justification
Air quality	No	Waste incineration directive (200/76/EC) and Industrial Emissions Directive (2000/76/EC) appraise emissions and set requirements for future emission predictions.
Transport	No	Impact of weather on transport outside the site is beyond the control of the development and not proportional to the development scale
Noise & Vibration	No	Weather unlikely to impact the noise and vibration effects of the development
Biodiversity	Yes	Weather variations may impact species and habitats on site and within the local area.
Water (hydrology and hydrogeology)	Yes	Weather patterns may impact flood risk
Ground Conditions	No	Weather unlikely to impact geological environment
Townscape and Visual Impact Assessment	No	Weather unlikely to impact townscape and visual impact beyond effects on habitats (addressed through Biodiversity)
Historic Environment	No	Weather variations are not considered to impact historic assets
Socio-economics	No	Impact of weather on socio-economic factors outside the site is beyond the control of the development control and not proportional to the development scale
Health	Yes	Changing weather patterns have the potential to impact human health onsite.
Waste	No	Weather is unlikely to impact waste generated from the construction or operation of Riverside Energy Park



2. Impacts on Climate Change

The IEMA guidance identifies a direct correlation between GHG emissions and climate change. It suggests therefore the impact of a development on climate change should be based on its potential to emit greenhouse gases.

The IEMA guidance also notes that any GHG emissions should be considered significant.

The guidance also notes that whilst there is a consensus that greenhouse gases contribute to global warming, the science behind global warming is far greater than just atmospheric quantum of greenhouse gases.

This is important when considering whether the assessment of GHG emissions at a local level is proportionate to the complexity of an assessment of climate science and its associated global variables.

The proportionality of the EIA is a key consideration to ensure the ES is measured in its scope; the requirement of the EIA Regulations is that the EIA should be focused on “likely significant effects” only, and not all effects of development. For impact on climate change the IEMA guidance references proportionality against the context of the development in National, Sector and Local GHG emissions.

A carbon emission assessment has been completed for the existing Riverside Resource Recovery Facility (RRRF), which was reviewed and ratified by the Carbon Trust on 1st March 2017². The study showed that the energy from waste plant provides a carbon saving of 212kg CO₂ per tonne of waste when compared to the counterfactual end waste disposal route of landfill.

From a national, sector and local GHG emissions perspective the study shows a positive impact in reducing GHG emission, when compared to a landfill alternative.

Based on the above consideration of GHG emissions, a proportional assessment would conclude there to be no significant increases in emissions compared to an alternative of landfilling.

The IEMA guidance suggests where there is unlikely to be an impact above the defined context that a qualitative assessment of GHG emissions would be appropriate.

In light of the development having a limited impact on the national, sector and local context, and therefore is not likely to have a significant effect on climate change, we have scoped the impact on climate change out of the EIA. However, a qualitative assessment of GHG emissions will be undertaken and submitted as an appendix to the Design and Access Statement.

² <http://www.coryenergy.com/carbon-efficiency/less-carbon/>



Scoping Opinion

SCOPING OPINION:

Proposed Riverside Energy Park

Case Reference: EN010093

Adopted by the Planning Inspectorate (on behalf of the Secretary of State for Communities and Local Government) pursuant to Regulation 10 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

January 2018

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APPENDIX 1: CONSULTATION BODIES FORMALLY CONSULTED

**APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF
REPLIES**

1. INTRODUCTION

1.1 Background

- 1.1.1 On 27 November 2017, the Planning Inspectorate (the Inspectorate) on behalf of the Secretary of State (SoS) received a scoping request from Cory Environmental Holdings Limited (the Applicant) under Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) for the proposed Riverside Energy Park (the Proposed Development).
- 1.1.2 In accordance with Regulation 10 of the EIA Regulations, an Applicant may ask the SoS to state in writing its opinion *“as to the scope, and level of detail, of the information to be provided in the environmental statement”*.
- 1.1.3 This document is the Scoping Opinion (the Opinion) provided by the Inspectorate on behalf of the SoS in respect of the Proposed Development. It is made on the basis of the information provided in the Applicant’s report entitled ‘Riverside Energy Park Belvedere – EIA Scoping Report’ (the Scoping Report). This Opinion can only reflect the proposals as currently described by the Applicant. The Scoping Opinion should be read in conjunction with the Applicant’s Scoping Report.
- 1.1.4 The Applicant has notified the SoS under Regulation 8(1)(b) of the EIA Regulations that they propose to provide an Environmental Statement (ES) in respect of the Proposed Development. Therefore, in accordance with Regulation 6(2)(a) of the EIA Regulations, the Proposed Development is EIA development.
- 1.1.5 Regulation 10(9) of the EIA Regulations requires that before adopting a scoping opinion the Inspectorate must take into account:
- (a) *any information provided about the proposed development;*
 - (b) *the specific characteristics of the development;*
 - (c) *the likely significant effects of the development on the environment;*
and
 - (d) *in the case of a subsequent application, the environmental statement submitted with the original application.*
- 1.1.6 This Opinion has taken into account the requirements of the EIA Regulations as well as current best practice towards preparation of an ES.
- 1.1.7 The Inspectorate has consulted on the Applicant’s Scoping Report and the responses received from the consultation bodies have been taken into account in adopting this Opinion (see Appendix 2).
- 1.1.8 The points addressed by the Applicant in the Scoping Report have been carefully considered and use has been made of professional judgement

and experience in order to adopt this Opinion. It should be noted that when it comes to consider the ES, the Inspectorate will take account of relevant legislation and guidelines. The Inspectorate will not be precluded from requiring additional information if it is considered necessary in connection with the ES submitted with the application for a Development Consent Order (DCO).

- 1.1.9 This Opinion should not be construed as implying that the Inspectorate agrees with the information or comments provided by the Applicant in their request for an opinion from the Inspectorate. In particular, comments from the Inspectorate in this Opinion are without prejudice to any later decisions taken (eg on submission of the application) that any development identified by the Applicant is necessarily to be treated as part of a Nationally Significant Infrastructure Project (NSIP) or associated development or development that does not require development consent.
- 1.1.10 Regulation 10(3) of the EIA Regulations states that a request for a scoping opinion must include:
- (a) *a plan sufficient to identify the land;*
 - (b) *a description of the proposed development, including its location and technical capacity;*
 - (c) *an explanation of the likely significant effects of the development on the environment; and*
 - (d) *such other information or representations as the person making the request may wish to provide or make.*
- 1.1.11 The Inspectorate considers that this has been provided in the Applicant's Scoping Report. The Inspectorate is satisfied that the Scoping Report encompasses the relevant aspects identified in the EIA Regulations.
- 1.1.12 In accordance with Regulation 14(3)(a) where a scoping opinion has been issued in accordance with Regulation 10, an ES accompanying an application for an order granting development consent should be based on "*the most recent scoping opinion adopted (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion)*".
- 1.1.13 The Inspectorate notes the potential need to carry out an assessment under The Conservation of Habitats and Species Regulations 2017. This document must be coordinated with the EIA, to avoid duplication of information between assessments.

1.2 The Planning Inspectorate's Consultation

- 1.2.1 In accordance with Regulation 10(6) of the EIA Regulations the Inspectorate has consulted the consultation bodies before adopting a scoping opinion. A list of the consultation bodies formally consulted by the Inspectorate is provided at Appendix 1. The consultation bodies have been notified under Regulation 11(1)(a) of the duty imposed on them by

Regulation 11(3) of the EIA Regulations to make information available to the Applicant relevant to the preparation of the ES. The Applicant should note that whilst the list can inform their consultation, it should not be relied upon for that purpose.

- 1.2.2 The list of respondents who replied within the statutory timeframe and whose comments have been taken into account in the preparation of this Opinion is provided, along with copies of their comments, at Appendix 2, to which the Applicant should refer in undertaking the EIA.
- 1.2.3 The ES submitted by the Applicant should demonstrate consideration of the points raised by the consultation bodies. It is recommended that a table is provided in the ES summarising the scoping responses from the consultation bodies and how they are, or are not, addressed in the ES.
- 1.2.4 Any consultation responses received after the statutory deadline for receipt of comments will not be taken into account within this Opinion. Late responses will be forwarded to the Applicant and will be made available on the Inspectorate's website. The Applicant should also give due consideration to those comments in carrying out the EIA.

1.3 Article 50 of the Treaty on European Union

- 1.3.1 On 23 June 2016, the United Kingdom (UK) held a referendum and voted to leave the European Union (EU). On 29 March 2017 the Prime Minister triggered Article 50 of the Treaty on European Union, which commenced a two year period of negotiations regarding the UK's exit from the EU. There is no immediate change to legislation or policy affecting national infrastructure. Relevant EU Directives have been transposed into UK law and those are unchanged until amended by Parliament.

2. THE PROPOSED DEVELOPMENT

2.1 Introduction

2.1.1 The following is a summary of the information on the Proposed Development and its site and surroundings prepared by the Applicant and included in their Scoping Report. The information has not been verified and it has been assumed that the information provided reflects the existing knowledge of the Proposed Development and the potential receptors/resources.

2.2 Description of the Proposed Development

2.2.1 The Applicant's description of the Proposed Development, its location and technical capacity is provided in Chapters 2 of the Scoping Report.

2.2.2 The Proposed Development would comprise a waste Energy Recovery Facility (ERF), battery storage, a roof-mounted solar photovoltaic installation, an anaerobic digestion facility and provision for combined heat and power (CHP) readiness (collectively termed the Riverside Energy Park (REP)). It would require a new connection to the existing National Electrical Transmission System via a 132kv distribution network connection and a new substation; temporary laydown areas; temporary marine infrastructure (either a temporary causeway or a lift crane); and potentially dredging of the river bed.

2.2.3 The proposed application site is shown on Appendix A of the Scoping Report.

2.2.4 The REP would be located on 7ha of land located off Norman Road, Belvedere, London DA17 6JY and is immediately west of an existing ERF which is currently operated by the Applicant. It is irregular in shape and is predominantly used by the Applicant as an ancillary area for the existing Riverside Resource Recovery Facility (RRRF). The REP also includes an existing jetty in the River Thames which is currently used for delivery of waste and despatch of some by-products at the existing RRRF.

2.2.5 The Scoping Report currently identifies the following two underground route options for the electrical connection, which primarily follow existing road networks:

- (i) Option 1 – connection at the existing National Grid substation on Renwick Road, Barking (this option will include access through an existing electricity cable tunnel under the River Thames); or
- (ii) Option 2 – connection to the existing National Grid Littlebrook Power Station substation.

2.2.6 The route options are depicted in Appendix C of the Scoping Report.

- 2.2.7 The application site also includes two temporary laydown areas which would be sited: (i) on land to the immediate west of Norman Road; and (ii) on land to the south-east of the REP site and west of Crabtree Manorway North. These areas are shown on Appendix C of the Scoping Report. Both these temporary laydown areas are brownfield sites situated adjacent to existing industrial/commercial use buildings and are within 0.5km of the REP site.

2.3 The Planning Inspectorate's Comments

Description of the Proposed Development

- 2.3.1 The description of the Proposed Development within the Scoping Report is relatively high level (at this stage) which does affect the level of detail possible in the Inspectorate's comments. The Inspectorate expects that at the point of application, the description of the Proposed Development will be sufficiently developed to include further details regarding the design, size and locations of the different elements of the Proposed Development. This should include the footprint and heights of both temporary and permanent structures and land-use requirements for all phases and elements of the Proposed Development. Where flexibility is sought the ES should clearly set out the maximum parameters that would apply.
- 2.3.2 Appendix C of the Scoping Report includes an Indicative Zoning Plan which identifies access, electrical connection options, temporary construction work areas, and the REP site. Whilst this approach is acceptable for the scoping process, the Inspectorate expects a more detailed plan depicting all land use within the REP site itself to be provided within the ES.
- 2.3.3 With this in mind, the Scoping Report indicates that there would be a 'main REP building' within which the ERF, the battery storage component, the anaerobic digestion facility (except the gas flares and bag) and the CHP infrastructure would all be located (with the solar photovoltaics installed on this building). The ES should detail the footprint and height of this building. Should flexibility be required, maximum parameters of the building should be detailed within the ES and taken into account in relevant assessments. A figure identifying the locations of individual elements within the main REP building would aid the readers understanding of the Proposed Development.
- 2.3.4 The dimensions of the solar photovoltaic provision across the roof should be identified within the ES.
- 2.3.5 The Inspectorate notes that the stack height will be determined through dispersion modelling. The ES should identify the location and dimensions of the stack. Should flexibility be required, any limits of deviation should be taken into account in the dispersion modelling and any other relevant assessments for example landscape and visual.

- 2.3.6 The Scoping Report also indicates that the application site extends around (but excludes) the existing resource recovery facility. The ES should detail the proposed use of land within these areas and identify whether there would be any interdependencies between the two facilities.
- 2.3.7 The Scoping Report states that the anaerobic digestion facility gas flares and bag would be located outside of the main REP building. The Inspectorate also assumes that the new substation would be located outside of the main REP building. The locations and dimensions of these elements should be identified within the ES.
- 2.3.8 The Applicant should describe any production process, including energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used. The likely significant effects associated with any particular technologies or substances proposed to be used should be described and assessed.
- 2.3.9 With the above comment in mind, the Scoping Report states that the solid digestate of the anaerobic digestion facility would either be used as fuel in the ERF or as a fertilizer in the agricultural sector. The Scoping Report does not explain what happens to the biogas product; this should be detailed within the ES and the implications on all technical assessments considered.
- 2.3.10 The Scoping Report identifies existing land use within the application site which includes container storage on concrete hardstanding, fencing, lighting, roads, compounds and car parking. Any requisite demolition that would take place as part of the Proposed Development should be described and assessed within the ES.
- 2.3.11 Paragraph 2.2.3 of the Scoping Report identifies the potential for dredging during the construction phase "*to ensure sufficient vessel access during the tidal cycle*". The ES should delineate the areas that would be dredged and identify the likely quantities of material that would be dredged, along with the frequencies of these activities. The likely method of disposal for dredged material should be described and any resultant activities should be taken into account within the assessment (e.g. vessel movements).
- 2.3.12 The Scoping Report currently identifies two options for temporary works within the River Thames which would facilitate construction of the REP; (i) a causeway across the intertidal zone, or (ii) a lift crane on a jetty head constructed in the river or near the river bank. The ES should clearly describe these works and provide details of the construction and use of any causeway or jetty.
- 2.3.13 The Proposed Development includes a battery storage component which would be integrated within the main building. The ES should confirm the output of the facility and detail how it will interact with the ERF.

- 2.3.14 The terms 'ERF building' and 'main REP building' appear to have been used interchangeably within the Scoping Report. In order to avoid the potential for confusion, the Applicant is advised to use consistent terminology when describing the elements of the Proposed Development within the ES.

Alternatives

- 2.3.15 The EIA Regulations require that the Applicant provide 'A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects'.
- 2.3.16 The Inspectorate would expect to see a discrete section in the ES that provides details of the alternatives considered and the reasoning for the selection of the chosen option(s), including a comparison of the environmental effects.

Flexibility

- 2.3.17 The Applicant's attention is drawn to the Inspectorate's Advice Note 9 'Using the 'Rochdale Envelope'¹, which provides additional details on the recommended approach.
- 2.3.18 The Applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the Proposed Development have yet to be finalised and provide the reasons. At the time of application, any Proposed Development parameters should not be so wide-ranging as to represent effectively different Proposed Development. The development parameters will need to be consistently and clearly defined in both the draft DCO (dDCO) and in the accompanying ES. It is a matter for the Applicant, in preparing an ES, to consider whether it is possible to robustly assess a range of impacts resulting from a large number of undecided parameters. The description of the Proposed Development in the ES must not be so wide that it is insufficiently certain to comply with the requirements of Regulation 14 of the EIA Regulations.
- 2.3.19 It should be noted that if the Proposed Development changes substantially during the EIA process and prior to submission of the DCO application the Applicant may wish to consider requesting a new scoping opinion.

¹ Advice Note nine: Using the Rochdale Envelope. 2012. Available at:
<https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

3. EIA APPROACH

3.1 Introduction

- 3.1.1 This section contains the Inspectorate's specific comments on the scope and level of detail of information to be provided in the Applicant's ES. General advice on the presentation of an ES is provided in the Inspectorate's Advice Note 7 'Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping'² and associated appendices.
- 3.1.2 Aspects/matters are not scoped out unless specifically addressed and justified by the Applicant, and confirmed as being scoped out by the Inspectorate. The ES should be based on the Scoping Opinion in so far as the Proposed Development remains materially the same as the Proposed Development described in the Applicant's Scoping Report. The Inspectorate has set out in this Opinion where it has/has not agreed to scope out certain aspects or matters on the basis of the information available at this time. The Inspectorate is content that this should not prevent the Applicant from subsequently agreeing with the relevant consultees to scope such aspects/matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the aspects/matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.
- 3.1.3 Where relevant, the ES should provide reference to how the delivery of measures proposed to prevent/minimise adverse effects is secured through DCO requirements (or other suitably robust methods) and whether relevant consultees agree on the adequacy of the measures proposed.

3.2 Relevant National Policy Statements (NPSs)

- 3.2.1 Sector-specific NPSs are produced by the relevant Government Departments and set out national policy for NSIPs. They provide the framework within which the Examining Authority (ExA) will make their recommendation to the SoS and include the Government's objectives for the development of NSIPs. The NPSs may include environmental requirements for NSIPs, which Applicants should address within their ES.
- 3.2.2 The relevant designated NPSs are:
- Overarching NPS for Energy (EN-1);

² Advice Note seven: Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping. Available from: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

- NPS for Renewable Energy Infrastructure (EN-3); and
- NPS for Electricity Networks Infrastructure (EN-5).

3.3 Scope of Assessment

General

3.3.1 The Inspectorate recommends that in order to assist the decision-making process, the Applicant uses tables:

- To demonstrate how the assessment has taken account of this Opinion;
- To identify and collate the residual effects after mitigation for each of the aspects, including the relevant interrelationships and cumulative effects;
- To set out the proposed mitigation and/or monitoring measures including cross-reference to the means of securing such measures (eg a dDCO requirement);
- To describe any remedial measures that are identified as being necessary following monitoring; and
- To identify where details are contained in the Habitats Regulations Assessment (HRA) report (where relevant), such as descriptions of European sites and their locations, together with any mitigation or compensation measures, are to be found in the ES.

Baseline Scenario

3.3.2 The ES should include a description of the baseline scenario with and without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge. The Inspectorate welcomes the Applicant's proposal to consider the future baseline within the ES, as detailed in section 6.2 of the Scoping Report.

Forecasting methods or evidence

3.3.3 The ES should contain the timescales upon which the surveys which underpin the technical assessments have been based. For clarity, this information should be provided either in the introductory chapters of the ES (with confirmation that these timescales apply to all chapters), or in each aspect chapter.

3.3.4 The Inspectorate expects the ES to include a chapter setting out the overarching methodology for the EIA, which clearly states which effects are 'significant' and 'non-significant' for the purposes of the EIA. Any departure from that methodology should be described in individual aspect assessment chapters.

- 3.3.5 The ES should include details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.
- 3.3.6 The Proposed Development is anticipated to have a nominal throughput of approximately 655,000 tonnes per annum (tpa); however the EIA will assess a maximum throughput of approximately 805,000tpa (paragraph 2.1.7 of the Scoping Report). The ES should explain why this is considered a relevant maximum throughput for the assessment and how this has been determined.
- 3.3.7 The Scoping Report states that any CHP infrastructure outside of the application site would not form part of the application for development consent. To the extent that it is possible, the ES should assess the likely significant cumulative effects of any such works in accordance with advice contained in the Inspectorate's Advice note seventeen: Cumulative effects assessment.
- 3.3.8 The Applicant is currently exploring two options for the temporary works within the River Thames; a temporary causeway or a lift crane. The Scoping Report does not state whether the DCO application will retain both options or opt for a single option. The ES should ensure that the significant effects associated with these options are assessed.
- 3.3.9 The Scoping Report confirms that a cumulative effects assessment will be presented within the ES. At this stage, no information is provided as to the plans or projects which will be included in the assessment; these should be agreed with the local authority. In this regard, the Inspectorate notes that Dartford Borough Council's response identifies a number of other proposed developments in the vicinity; the Inspectorate recommends that these are included within the cumulative effects assessment.

Residues and emissions

- 3.3.10 The EIA Regulations require an estimate, by type and quantity, of expected residues and emissions. Specific reference should be made to water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases, where relevant. This information should be provided in a clear and consistent fashion and may be integrated into the relevant aspect assessments.
- 3.3.11 With regards to the residues and emissions described above, the Scoping Report has not considered the potential effects of heat. The Scoping Report does not describe the cooling processes for the Proposed Development, however the Inspectorate understands from a site visit on 1 December 2017 that air cooling would likely be utilised. On the basis that industry standard cooling would be in place (which does not result in any discharges to the River Thames), the Inspectorate is of the view that

significant effects are unlikely, however considers that this should be confirmed in the ES.

- 3.3.12 Radiation effects have not been addressed within the Scoping Report, however the Inspectorate is content that, given the nature of the Proposed Development, these do not need to be assessed for the Proposed Development.

Mitigation

- 3.3.13 Any mitigation relied upon for the purposes of the assessment should be explained in detail within the ES. The likely efficacy of the mitigation proposed should be explained with reference to residual effects. The ES should also address how any mitigation proposed is secured, ideally with reference to specific DCO requirements or other legally binding agreements.

Vulnerability of the development to risks of major accidents and/or disasters

- 3.3.14 The ES should include a description of the potential vulnerability of the Proposed Development to risks of major accidents and/or disasters, including vulnerability to climate change, which are relevant to the Proposed Development. Relevant information available and obtained through risk assessments pursuant to European Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.
- 3.3.15 The ES should also consider whether the Proposed Development itself has the potential to cause accidents or disasters during construction or operation and identify how these would be minimised. Any potential resultant likely significant environmental effects should be assessed within the ES along with the likely measures that will be employed to prevent and control such matters.
- 3.3.16 The Applicant has addressed this aspect within Section 8.2 of the Scoping Report. The Inspectorate's comments are provided within Table 4.12 of this Opinion.

Transboundary effects

- 3.3.17 Schedule 4 Part 5 of the EIA Regulations requires a description of the likely significant transboundary effects to be provided in an ES.
- 3.3.18 Regulation 32 of the EIA Regulations inter alia requires the Inspectorate to publicise a DCO application on behalf of the SoS if it is of the view that the proposal is likely to have significant effects on the environment of

another EEA state, and where relevant, to consult with the EEA state affected.

- 3.3.19 The Scoping Report concludes that the Proposed Development is not likely to have significant impacts on another European Economic Area (EEA) State and proposes that transboundary effects do not need to be considered within the ES. The Inspectorate notes the Applicant's conclusion, however recommends that, for the avoidance of doubt, the ES details and justifies this conclusion.

A reference list

- 3.3.20 A reference list detailing the sources used for the descriptions and assessments must be included in the ES.

3.4 Confidential Information

- 3.4.1 In some circumstances it will be appropriate for information to be kept confidential. In particular, this may relate to information about the presence and locations of rare or sensitive species such as badgers, rare birds and plants where disturbance, damage, persecution or commercial exploitation may result from publication of the information. Where documents are intended to remain confidential the Applicant should provide these as separate paper and electronic documents with their confidential nature clearly indicated in the title, and watermarked as such on each page. The information should not be incorporated within other documents that are intended for publication or which the Inspectorate would be required to disclose under the Environmental Information Regulations 2014.

4. ASPECT BASED SCOPING TABLES

4.1 Transport

(Scoping Report section 7.2)

Study area - The assessment area will be determined following Institute of Environmental Assessment (IEA) guidelines and will include:

- links with all vehicle or Heavy Vehicle traffic flow increases in any assessment year of +30%; and
- links with Medium or High sensitivity receptors with flow increases greater than 10%.

Methodology - The assessment would follow the 'Guidelines for the Environmental Assessment of Road Traffic' (1993) published by the Institute of Environmental Assessment (IEA), and where appropriate, Volume 11 of the 'Design Manual for Roads and Bridges' (DMRB).

Trip generation and distribution will be determined following Transport for London's online transport assessment guidance. Future year background traffic growth will be determined based on the Department for Transport's traffic forecasting tool TEMPro.

A worst-case assessment of operational traffic will be made assuming 100% of waste being delivered by road. The assessment will consider severance; driver delay; pedestrian delay and amenity; fear and intimidation; and accidents and road safety.

The ES chapter will be supported by a Transport Assessment and a Navigational Risk Assessment.

Potential Impacts - The Scoping Report states that during construction and operation, the Proposed Development would generate road traffic movements on the local road network and vessel movements within the River Thames.

Temporary changes to local access arrangements and the temporary closure of footways would be required during operation. During operation, there could be impacts on public transport resulting from additional staff trips.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	7.2.17	Dust and Dirt	The Applicant proposes to exclude the 'Dust and Dirt' criterion (from the IEA guidelines) from the Transport assessment as dust will be covered in the Air Quality chapter of the ES. The Inspectorate is content with this approach.
	Para	Other points	Inspectorate's comments
2	7.2.5	The electrical connection	The Scoping Report states that impacts from the electrical connection will be considered where appropriate. The Inspectorate considers that the ES should

			assess the impacts during construction of the electrical connection, particularly if any road closures are required.
3	7.2.6 & 7.2.8	Impacts of vessels	The Scoping Report has identified the potential for impacts on the level of service and level of safety for vessels on the River Thames during both construction and operation. No information has been provided as to how these impacts will be assessed, although it is noted that a Navigational Risk Assessment will be appended to the ES. The ES should set out the methodology used to undertake this assessment and to identify significant effects.
4	7.2.6 & 7.2.8	Users of Public Rights of Way (PRoW)	Any permanent closures/diversions of PRoWs should be identified within the ES for both the main REP site and the electrical connection. The potential effects of such closures/diversions should be assessed with appropriate cross referencing to other relevant aspect assessments such as those for noise, air quality and visual impacts.
5	7.2.6 & 7.2.8	England Coast Path	The Applicant's attention is drawn to the comments of Kent County Council regarding the proposed England Coast Path which is scheduled for completion by 2020. Any anticipated impacts to the national walking route should be assessed within the ES.
6	7.2.9	Assessment methodology	The Scoping Report explains that both IEA and DMRB guidance will be used to inform the assessment methodology for onshore transportation. It should be clear within the ES precisely how this guidance is utilised for the assessment.
7	7.2.10	Study area	The ES should confirm and justify whether the study areas for the construction and operational phase are the same. The study area for non-motorised users should also be identified and justified.
8	7.2.12 & 7.2.16	Trip generation and distribution	The ES should set out and justify the assumptions made in calculating trip generation and distribution data for both vehicle and river trips. The Inspectorate notes that although a modal split of at least 75% of waste being delivered by river is

			the ambition for the Proposed Development, the ES will assess a worst-case of 100% of waste being delivered by road in the operational phase. The Inspectorate considers this to be a sensible approach to the assessment. The Inspectorate also expects the ES to adopt a worst case scenario for the assessment of the construction phase.
9	2.1.12	Anaerobic digestion solid digestate	The Scoping Report states that solid digestate from the anaerobic digestion process would be used as a fuel within the ERF or would be transferred off-site for use in the agricultural sector as fertiliser. The Inspectorate notes that the solution for addressing the digestate could have implications on the transport assessment; a worst case scenario should therefore be described, justified and assessed in this regard.
10	n/a	Mitigation	The Scoping Report does not make reference to any mitigation for potential traffic impacts. The Applicant is advised to consider whether construction/operational traffic management plans would be appropriate. If such plans are relied upon to mitigate significant effects, the Inspectorate would expect draft versions of the plans to be provided with the application.
11	n/a	Cumulative effects	The response from Dartford Borough Council identifies ongoing improvements to A282 Junction 1A. These works should be taken into account within the cumulative effects assessment. Similarly, Kent County Council state that there is a significant amount of planned development within Dartford Borough Council administrative area. The Inspectorate recommends that the Applicant consults with both authorities to agree a list of projects and/or plans to be considered within the assessment.

4.2 Air Quality

(Scoping Report section 7.3)

Study area - For road traffic impacts, assessments will be undertaken where there is a modelled increase in traffic of more than 1,000 Annual Average Daily Traffic (AADT) on a road within 200m of ecological habitats.

The ES will assess impacts from combustion on designated ecological sites within 10km for Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites; and 2km for Sites of Special Scientific Interest (SSSIs), ancient woods, local wildlife sites and national and local nature reserves (LNRs).

Methodology - Atmospheric dispersion modelling will be used to predict combustion emissions; these will be compared to relevant objectives, rates and critical loads. An assessment of the risk to human health from potential emissions of persistent organic pollutants will be undertaken.

Air quality impacts from road and river traffic (during both construction and operation) will be assessed with reference to the Institute of Air Quality Management (IAQM) guidance and Environment Protection UK (EPUK): Land-use Planning & Development Control: Planning for Air Quality January (2017).

Dust will be assessed with reference to the IAQM's Guidance on the Assessment of Dust from Demolition and Construction (June 2016) and odour impacts will be qualitatively assessed in accordance with IAQM 'Guidance on the assessment of odour for planning' and Environment Agency guidance on Environmental Permitting.

Potential Impacts - The Scoping Report identifies the potential for the Proposed Development to generate nitrogen dioxide (NO₂), fine airborne particles (PM₁₀ and PM_{2.5}), dust and odour from construction, road and river traffic, the receipt and processing of waste, and the combustion process. This could result in effects on residential receptors and designated ecological sites.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	n/a	n/a	The Applicant has not proposed to scope out any matters from this aspect.
	Para	Other points	Inspectorate's comments
2	7.3.4	Baseline conditions	The Scoping Report proposes to utilise data from local authority monitoring stations and roadside diffusion tubes to establish the environmental baseline. The Applicant is recommended to discuss with the relevant councils whether this information is sufficient or whether site specific surveys are necessary.
3	7.3.7	Air Quality Management Areas (AQMAs)	The London Borough of Bexley (LBB), the Royal Borough of Greenwich (RBG) and the London Borough of Barking and Dagenham (LBBD) are designated as AQMAs with

			respect to NO ₂ and PM ₁₀ . If there is the potential for a significant effect on the AQMAs and their Action Plans, this should be assessed within the ES.
4	7.3.11	Baseline conditions	The Scoping Report states that operational facilities will be considered within the measurement of background concentrations, with the exception of the existing RRRF. The Scoping Report does not explain why the existing RRRF will not be included in the background concentrations. Given that the existing RRRF is operational, the Inspectorate considers that its emissions should be considered within the environmental baseline.
5	7.3.14	Emission scenario	The ES should explain and justify the 'conservative' emissions scenario to be used within the assessment.
6	7.3.20	Human health risk assessment	The Scoping Report does not propose a methodology for the human health risk assessment. The methodology should be clearly described within the ES.
7	n/a	Study area	The Scoping Report does not identify a study area for the assessment of combustion effects on human receptors or for the assessment of dust and odour effects. These should be identified and justified within the ES.

4.3 Noise and Vibration

(Scoping Report section 7.4)

Study area - The study area for noise impacts from the operation of the REP will be of an area within 1km of the REP site. The study area for noise impacts from traffic will depend on the outcome of the transport assessment.

Methodology - Baseline noise levels will be established through a noise survey to be undertaken at representative locations.

The construction noise and vibration assessment will be undertaken following guidance in BS 5228-1:2009+A1:2014 Code of Practice for noise and vibration control on construction and open sites.

Operational noise from the REP will be assessed using methodology defined in BS 4142:2014 Methods for rating and assessing industrial and commercial sound.

Operational road traffic noise will be assessed using noise prediction procedures as detailed in the Department of Transport and Welsh Offices' 'The Calculation of Road Traffic Noise' (CRTN). A 3D acoustic model will be produced.

The significance of changes in noise levels will be based on guidance criteria contained in DMRB Volume 11 Section 3 Part 7 – HD213/11 Noise and Vibration.

Potential Impacts - The Scoping Report identifies the potential for noise and vibration impacts from fixed/mobile plant associated with the construction phase, construction traffic and the operational plant and traffic.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	7.4.6	Noise impacts associated with the electrical connection route	<p>The Scoping Report states that noise impacts associated with the underground connection route are not considered significant and will not be assessed. The Inspectorate notes that both electrical route options would be constructed at locations in proximity to residential properties. In the absence of a justification for the conclusion of no likely significant effects, the Inspectorate does not consider that noise impacts during construction can be scoped out of the ES.</p> <p>The Inspectorate does however agree that noise impacts from the electrical connection during operation are not likely to be significant and can be scoped out of the ES.</p>
2	n/a	Operational vibration	<p>The Scoping Report makes no reference to the potential for impacts from vibration during the operational phase. For the avoidance of doubt and taking into account the nature and location of the Proposed Development, the Inspectorate is content</p>

			to scope out operational vibration impacts from the REP.
	Para	Other points	Inspectorate's comments
3	7.4.2	Sensitive receptors	The noise and vibration chapter has only identified human sensitive noise receptors. The ES should also assess impacts from noise and vibration to ecological receptors (where relevant) and should appropriately cross refer to the assessment of impacts on biodiversity.
4	7.4.15	Vibration from heavy goods vehicles (HGVs)	It is unclear from the Scoping Report whether the Applicant intends to assess the impact of vibration from HGVs. The ES should assess any likely significant effects, based on the traffic model and known HGV movements.
5	7.4.12	Study area - operation	The Scoping Report does not clearly establish whether the study area for operational noise from the REP is from the boundary of the application site or to be taken from a centre point. The ES should clearly explain the approach to establishing the study area and the Applicant should ensure that it is sufficient to capture the extent of the likely impacts.
6	7.4.12	Study area - construction	The Scoping Report has not identified a study area for the assessment of noise and vibration from construction. The ES should clearly explain the approach to establishing the study area and the Applicant should ensure that it is sufficient to capture the extent of the likely impacts.

4.4 Townscape and Visual Impact Assessment

(Scoping Report section 7.5)

Study area - The study area has not been identified within the Scoping Report. However, a zone of theoretical visibility (ZTV) will be established to demonstrate a worst case scenario of the extent of the area from which the REP would be visible.

Methodology - The assessment will be based on professional experience and follow the Guidelines for Landscape and Visual Impact Assessment (GLVIA) (2013), and Transport Analysis Guidance (WebTag) Chapter 7: Impact on Townscape (2015). The methodology will also be based on Landscape Institute Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment (2011).

The baseline will be established through a desk based study. A site visit will be undertaken to prepare a photographic record of the baseline year, from selected viewpoints.

The assessment will make comparison to a baseline year during both construction and operation.

For local views, the assessment will include a period 15 years after completion of the Proposed Development to take into account the establishment of mitigation.

Potential Impacts - The Scoping Report identifies potential effects on townscape features, townscape character, and people's view and visual amenity, during both the construction and operation of the Proposed Development.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	7.5.3	Electrical connection	The Scoping Report does not explicitly request to scope out the operational effects of the electrical connection. However, it states that as the electrical connection would be located underground, the potential significant townscape or visual effects would be mitigated. For the avoidance of doubt, the Inspectorate considers that significant effects during operation from the electrical connection are unlikely and an assessment of impacts for this matter can be scoped out of the ES.
	Para	Other points	Inspectorate's comments
2	7.5.7	Study area	The Scoping Report refers to 'the study area'; however this has not been defined. The study area should be sufficient to capture the extent of the likely impacts and should be described and justified within the ES. The Inspectorate advises that the study area is agreed with relevant consultees.

3	7.5.8; Table 7.5.2	Viewpoints	<p>The Scoping Report proposes representative viewpoints and states that the exact location of viewpoints may be refined or further scoped out if no views are identified. Where viewpoints are screened out, it would be useful for the ES to clarify that there would be no view. The Inspectorate also advises that the final list of representative viewpoints and photomontages should be agreed with the relevant planning authorities.</p> <p>The Inspectorate is unclear whether views affecting Crossness conservation area and associated listed buildings will form part of the assessment, and considers these viewpoints should be included. Such an assessment has also been requested by Historic England in their scoping consultation response.</p>
4	7.5.13	Guidance	<p>The Scoping Report states that Transport Analysis Guidance (WebTag) Chapter 7: Impact on Townscape (2015) has been used to inform the proposed assessment methodology. The Inspectorate notes that this guidance is an 'appraisal methodology' intended for the development of business cases, applicable to highways and public transport interventions and not necessarily for the purposes of undertaking EIA. The Applicant should take care to ensure that the methodology applied is sufficient to identify and assess the likely significant effects from the Proposed Development.</p>
5	7.5.14	Mitigation	<p>It is noted that the future year scenario will provide assessment of the residual townscape and visual effects, once any necessary mitigation has been established and settled. The assessment should take into account the potential uncertainties in the establishment of planting.</p>
6	7.5.14; 7.5.16	Baseline year	<p>The Scoping Report identifies both 2017 and 2018 as the baseline year in paragraphs 7.5.14 and 7.5.16 respectively. The baseline year that has been used for the assessment should be clarified within the ES.</p>
7	7.5.15	ZTV	<p>The ES should describe the model used, provide information on the area covered</p>

			and the timing of any survey work and the methodology used to inform the ZTV.
8	7.5.16	Method	To support a robust impact assessment, the Proposed Development should be illustrated using plans and visualisations which highlight those features which would result in changes to landscape character and visual amenity. Cross sections and photomontages are likely to be useful for this purpose.
9	7.5.18	Conservation area	The Scoping Report notes various components of the urban environment that will be assessed within the ES. The Inspectorate also requires that the setting of the conservation area is included in the assessment as an urban environment component. The Applicant's attention is drawn to Historic England's scoping consultation response in this regard, with particular reference to the London Borough of Bexley's conservation area appraisal and management plan to help establish significance and sensitivities of assets.
10	7.5.26	Mitigation measures	The design and materials to be used in the construction of the Proposed Development should be given careful consideration to minimise the potential landscape and visual impacts.
11	7.5.31	Guidance	The Scoping Report states that the significance criteria has been developed with regard to GLVIA (2013). The Inspectorate considers that methodology for assessing the conservation area as a component of the townscape character should also be informed by Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets, as requested by Historic England in their consultation response.

4.5 Historic Environment

(Scoping Report section 7.6)

Study area - The Scoping Report does not define the anticipated study area for this assessment.

Methodology - The assessment will incorporate results from an archaeology desk based assessment and a geo-archaeological statement.

The heritage baseline will be informed by the following sources:

- Greater London Historic Environment Record within 1km of the application boundary;
- designated assets obtained from Historic England;
- areas of importance identified by local planning policy; and
- cartographic and documentary research.

The determination of the importance of heritage assets will be based on statutory and non-statutory designations, the Secretary of State's non-statutory criteria and professional judgement. The significance of effects will be assessed relative to the sensitivity of the resource and the magnitude of impact.

Potential Impacts - The Scoping Report identifies potential impacts upon below ground non-designated archaeological remains during construction, and potential impacts on the setting of Crossness Conservation Area, including its associated three listed building, and the coaling jetty during operation.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	7.6.4	Setting of Crossness Conservation Area, associated listed buildings, Lesnes Abbey Scheduled Monument and of the coaling jetty during operation	<p>The Scoping Report states that effects on these heritage assets are likely to be low or non-existent, given the nature of these designated remains, the nature of their setting, and the existing developments in the vicinity of the application site. It is unclear whether the Applicant is proposing to scope out an assessment of impacts to these assets from the ES.</p> <p>The Inspectorate does not consider that sufficient justification has been provided to justify there would be no likely significant effects. Therefore, the Inspectorate does not agree to scope out an assessment on these receptors from the ES. Historic England in their scoping consultation response, has also recommended an assessment that gives particular consideration to impacts on Crossness Conservation Area, associated listed buildings, and Lesnes Abbey Scheduled Monument.</p>

2	7.6.5	Electrical connection effect on setting of heritage assets during operation	The Scoping Report states that during operation, the underground electricity connection would not affect the setting of heritage assets and therefore will not be assessed within the ES. The Inspectorate agrees significant effects during operation associated with the electrical connection are unlikely and agrees that this matter can be scoped out.
	Para	Other points	Inspectorate's comments
3	7.6.1; 7.6.7	Study area	<p>The Scoping Report does not identify a study area for this aspect. The study area should be described and justified within the ES.</p> <p>The Inspectorate notes that a 1km search area surrounding the site has been applied to identify a number of heritage assets and archaeological remains.</p> <p>The ES should provide a robust justification of why the study area and 1km search area is appropriate and sufficient to capture all heritage assets which could experience impacts on their setting.</p> <p>To support this justification, the Applicant is advised to refer to the ZTV developed for the Townscape and Visual Impact Assessment.</p>
4	7.6.7	Consultation	The ES should clearly state who has been consulted to inform the assessment. The Inspectorate advises that the local authority historic environment advisers and local studies library are consulted. This has also been requested by Historic England and Kent County Council in their responses.
5	7.6.8	Surveys	<p>Previous geo-archaeological works and data used within the assessment should be clearly referenced within the ES.</p> <p>The Scoping Report does not propose any archaeological field surveys and evaluations, however the Inspectorate notes Historic England's consultation response which identifies the need for archaeological field surveys and evaluations, should they prove necessary. The Inspectorate recommends that the need (and if necessary, the scope) for such work is agreed with Historic England and</p>

			Kent County Council.
6	7.6.9; Table 7.6.1; Table 7.6.2	Assessment methodology	The ES should clearly explain how the significance of effect has been determined. It should be clear how professional judgement has been applied.
7	7.6.9	Importance of heritage assets	The Scoping Report states that for non-designated archaeological assets, the Secretary of State's non-statutory criteria would be utilised. The Inspectorate is not clear what criteria this is referring to; this should be clarified within the ES. All guidance that has informed the assessment of effects should be identified within the ES and should be sufficient to identify and assess the likely significant effects from the Proposed Development.
8	7.6.13	Site Preparation	The Scoping Report states that archaeological resources are susceptible to a range of impacts during site preparation as well as construction related activities. The ES should clearly set out where the assessment of site preparation activities has been included within the assessment of the construction phase of the Proposed Development.
9	n/a	Marine archaeology	This chapter of the Scoping Report has focussed primarily on land-based archaeology. The ES should also assess the potential for effects to archaeology within the marine environment.

4.6 Terrestrial Biodiversity

(Scoping Report section 7.7)

Study area - The Scoping Report states that the study area will be variable dependent on the sensitivity of the ecological feature and the effects being considered.

The ES will assess impacts from combustion on designated ecological sites within 10km for SACs, SPAs and Ramsar sites; and 2km for SSSIs, ancient woods, local wildlife sites and national and local nature reserves.

Methodology - The baseline will be established through a desk study and site surveys. An extended Phase 1 habitat survey will be undertaken, which will inform the scope of any targeted habitat and species surveys. Wintering bird surveys are in progress.

The assessment will be undertaken in accordance with guidance from the Chartered Institute of Ecology and Ecological Management (CIEEM, 2016).

Potential Impacts - The Scoping Report identifies the potential for the following effects:

- habitat loss, disturbance (including through shading) or fragmentation during site clearance and/or construction;
- noise and/or visual disturbance during site clearance, construction or operation;
- dust during site clearance and/or construction;
- surface water drainage during construction or operation;
- lighting during construction or operation; and
- emissions/deposition during operation.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	n/a	n/a	The Applicant has not proposed to scope out any matters from this aspect.
	Para	Other points	Inspectorate's comments
2	Table 7.7.1	Surveys	The Scoping Report has identified the likely scope of ecology surveys. This has primarily focussed on the REP site. Although the electrical connection routes are primarily located in built-up areas, both route options appear to pass through undeveloped land. In addition, the southernmost temporary construction area is located close to the Crossness LNR and adjacent to fields. The Inspectorate expects full consideration to be given to the entire application site and to the mobility of species. It is recommended that the Applicant agrees its

			approach to survey work with Natural England and the local authority.
3	7.7.10	Designated sites	The Scoping Report states that in relation to effects from combustion plant emissions, designated ecological sites will be screened in based on the buffer zones of 10km for European sites and 2km for SSSIs. The Inspectorate recommends that relevant screening distances are discussed and agreed with the Environment Agency and should be based on the extent of likely impact.
4	7.7.21	Study area	The Inspectorate notes that the study area will be variable dependent on the sensitivity of the ecological feature and the effects being considered. The ES should clearly set out and justify the study areas applied to each receptor and effect.

4.7 Marine Biodiversity

(Scoping Report section 7.8)

Study area - The Scoping Report does not define the anticipated study area for this assessment.

Methodology - The baseline will be established through a desk study; a Phase 1 Intertidal Habitat Survey; and, if deemed necessary by relevant consultees, a benthic grab sampling study.

The assessment will be undertaken in accordance with guidance from the Chartered Institute of Ecology and Ecological Management (CIEEM, 2016) and relevant statutory guidance.

A logarithmic spreading model will be used to predict the propagation of sound pressure from piling. The physiological and behavioural effects of underwater noise on marine mammals will be assessed with reference to both published and unpublished criteria.

Potential Impacts - The Scoping Report identifies the potential for the following impacts from the construction and presence of marine infrastructure and potential dredging:

- benthic habitat loss and changes to the physical environment;
- temporary changes in water quality;
- underwater noise impacts; and
- non-native species transfer and introduction.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	7.8.4	Marine Conservation Zone assessment	<p>The Scoping Report states that the application site overlaps with the Thames Estuary recommended Marine Conservation Zone (rMCZ), whose designation is currently on hold. Therefore, the Applicant considers a formal MCZ assessment is consequently not required at this point of time (MMO, 2013).</p> <p>The response from Natural England explains that the former Thames Estuary rMCZ has now been split into two separate sites (i) Upper Thames which stretches from Richmond Bridge to Battersea Bridge and (ii) Swanscombe which stretches from The Queen Elizabeth II Bridge to Columbia Wharf/ Grays respectively. The Upper Thames Estuary rMCZ is proposed as it is an important area for smelt. The Proposed Development is not situated within the boundary of either site, however smelt are</p>

			<p>a migratory species found along the whole of the tidal Thames and could be impacted by sediment plumes and under water noise. Natural England explains that these sites are not currently a material consideration, but the sites and features that are put forward to public consultation will become a material consideration at that stage.</p> <p>The Inspectorate considers that designation of the rMCZ is likely and therefore the ES should assess impacts on the rMCZ and its features.</p>
2	Table 7.8.1	Benthic species and shellfish - noise disturbance	<p>The are you Scoping Report states that crustacean sensitivity to underwater sound and vibration is very much lower than fish and that noise levels are unlikely to adversely impact the benthic community of shellfish. The Scoping Report has not provided existing and predicted noise levels or details of marine construction and noise generating activities. In the absence of detail of the marine construction works, the Inspectorate does not agree that this matter can be scoped out and recommends that the Applicant agrees the approach with the Marine Management Organisation.</p>
3	Table 7.8.1	Fish and marine mammals - temporary habitat loss and change as a result of marine infrastructure	<p>The Scoping Report states that the footprint of the proposed works and extent of indirect habitat change only covers a highly localised area that constitutes a very small fraction of the known ranges of local fish and marine mammal populations. However, the area of habitat loss and its importance to species has not been detailed within the Scoping Report. As such the Inspectorate does not agree to scope this out of the ES.</p>
4	Table 7.8.1	Fish and marine mammals – noise disturbance from vessel movement	<p>The Scoping Report states that vessel noise is unlikely to be discernible above ambient levels in the Thames Estuary. The Inspectorate agrees that significant effects are unlikely and that this can be scoped out of the ES.</p>
5	Table 7.8.1	Fish – light disturbance	<p>The Scoping Report states that the area of river that will be lit as a result of the new temporary infrastructure will only constitute a small fraction of the total width of the river and therefore no disruption or blocking of migratory routes are</p>

			anticipated. No information on the importance of the affected area as a migratory route or the lux levels of lighting has been provided within the Scoping Report. In the absence of such information, the Inspectorate does not agree that this can be scoped out of the ES.
6	Table 7.8.1	Marine mammals – water quality	The Scoping Report states that the potential for accidental spillages will be negligible during all phases through following established industry guidance and protocols. The Scoping Report states that temporary and localised changes in water quality are unlikely to produce lethal and sub-lethal effects in these highly mobile species. The Inspectorate agrees that significant effects are unlikely and that this can be scoped out of the ES.
7	Table 7.8.1	Marine mammals – collision risk and visual disturbance	The Scoping Report asserts that marine mammals are expected to be habituated to high levels of disturbance and light stimuli. Furthermore, vessel movements in the vicinity of the proposed development (associated with the marine works) are mainly expected to be stationary or travelling at low speeds, making the risk of collision very low. The Inspectorate agrees that significant effects are unlikely and that this can be scoped out of the ES.
	Para	Other points	Inspectorate’s comments
8	7.8.2 & 7.8.30	Study area	These paragraphs of the Scoping Report refer to ‘the study area’; however this has not been defined. The ES should clearly explain the approach to establishing the study area and the Applicant should ensure that it is sufficient to capture the extent of the likely impacts.
9	7.8.17	Guidance	The Scoping Report refers to statutory guidance ‘e.g. The Protection of Marine European Protected Species from Injury and Disturbance’. The Inspectorate notes that this guidance document is for Scottish inshore waters. The Applicant should take care to ensure any statutory guidance referred to is relevant and applicable.
10	7.8.18	Key data sources	The Marine Management Organisation’s response highlights the Cefas spawning maps, the Cefas young fish survey and The

			Fish Atlas of the Celtic Sea, North Sea and Baltic Sea. The Inspectorate advises that these resources are used to help establish the baseline environment.
11	7.8.18-9	Fish and marine mammal surveys	No fish or marine mammal surveys are proposed. The Scoping Report proposes to utilise data from the London Zoological Society, Environment Agency, the National Biodiversity Network and previous impact assessments for nearby developments. The Inspectorate recommends that the Applicant agrees the level of necessary survey effort with relevant consultees including Natural England, the Environment Agency and the Marine Management Organisation.
12	7.8.22	Seabed restoration	The ES should detail how the seabed would be restored following the removal of marine infrastructure that is required for the construction phase. The aims of the restoration should be clear. The ES should provide details of any necessary pre- and post-construction coastal monitoring arrangements with any necessary defined triggers for intervention and restoration.
13	7.8.27	Logarithmic spreading model	The ES should identify the logarithmic spreading model and the piling parameters that have been utilised. A worst case assessment should be allowed for.
14	7.8.28	Unpublished criteria	Where unpublished criteria are relied upon within the assessment of underwater noise impacts, this should be fully justified.
15	n/a	Remobilisation of contaminated sediment	The Inspectorate agrees with the Marine Management Organisation that the potential remobilisation of contaminated sediment should be assessed within the ES.
16	n/a	Receptors	The Inspectorate notes from the Marine Management Organisation's response that the Thornback ray is an important species in the Thames estuary. This species has not been identified within the Scoping Report; the Inspectorate considers the potential impacts on this species should be assessed.
17	n/a	Inter-relationships	The assessment of impacts to marine mammals should consider inter-related impacts of a minor nature.

4.8 Marine Geomorphology

(Scoping Report section 7.9)

Study area - The Scoping Report does not define the anticipated study area for this assessment.

Methodology - The baseline will be established through available data sets from existing field surveys and any relevant previous available modelling results. No new bespoke numerical modelling is proposed. Bathymetry data will be requested from the Port of London Authority and a sediment contamination survey will be undertaken.

The assessment will utilise a source-pathway-receptor approach.

The Environment Agency's "Clearing the Waters for All" process will be used for the Water Framework Directive assessment of the Thames Estuary transitional water body.

Potential Impacts - The Scoping Report identifies the potential for direct morphological change and changes to the hydrodynamic regime, sediment transport processes, and water and sediment quality.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	7.9.17	Operational phase – impacts associated with temporary marine works	<p>The Inspectorate understands that all temporary structures in the River Thames would be removed following completion of construction of the REP. On that basis, the Inspectorate agrees that significant effects during operation of the REP (i.e. following removal of the structures) are unlikely and can be scoped out of the ES.</p> <p>However, for the avoidance of doubt, the Inspectorate would expect the effects of decommissioning of the temporary structures and reinstatement of habitats to be assessed. The Inspectorate does not therefore agree that the decommissioning of temporary structures can be scoped out.</p>
2	Table 7.9.2	Changes to the wave climate	<p>The Scoping Report states that the complex morphological shape of the Thames Estuary is likely to lead to dissipation of swell waves prior to entering the middle estuary containing the Proposed Development. Consequently, any wave activity at the site would be a result of local wind generation and will be small in magnitude. The Inspectorate considers that a jetty or causeway has the potential to generate a wave shadow and that the impacts of this on intertidal sediments, for example</p>

			erosion or accretion around the structure, should be considered within the ES. As the Scoping Report does not provide details of the proposed structures in the River Thames, the Inspectorate does not agree that sufficient information is available to agree to scope out impacts from changes to wave climate.
3	Table 7.9.2	Changes in quality of bathing waters and shellfish water protected areas	<p>The nearest bathing water (The Serpentine in Hyde Park) is located at a distance greater than 20km from the Proposed Development. The nearest shellfish water protected area (Southend shellfish water) is located greater than 30km from the application site.</p> <p>The distances of these areas from the Proposed Development are noted, however the Scoping Report has not demonstrated there is no pathway for effect (e.g. via the deposition of emissions), or that the concentrations of pollutants would not be at level to impact on these areas. Therefore the Inspectorate does not agree to scope out these matters.</p>
	Para	Other points	Inspectorate's comments
4	7.9.9	Suspended sediment concentrations	The Inspectorate notes that the suspended sediment concentrations for the Thames Estuary are based on data collected in 2004. The Applicant should ensure that up-to-date information is utilised, or provide justification within the ES as to why data of this age is considered to be suitable and relevant.
5	7.9.21	Baseline environment	The Scoping Report proposes to utilise existing field surveys and modelling results. The ES should clearly identify the sources of the information used to inform the assessment.
6	7.9.21	Study area	This paragraph of the Scoping Report refers to 'the study area'; however this has not been defined. The study area should be described and justified within the ES.
7	7.9.23	Sediment contamination study	The Inspectorate recommends that the scope of the study is agreed with relevant consultees including the Environment Agency and the Marine Management Organisation.

8	7.9.28	Limitations	The Scoping Report states that where data availability limits the assessment, a judgement on significance of these limitations will be made. Any such judgements should be fully explained and reasoned within the ES.
9	n/a	Jetty design	The design of the proposed temporary marine works should be provided within the ES and used to inform the scope of hydrodynamic assessments.

4.9 Hydrology, Flood Risk and Water Resources

(Scoping Report section 7.10)

Study area - The Scoping Report does not define the anticipated study area for this assessment.

Methodology - The baseline will be established through a desk study, a walkover survey and consultation with the Environment Agency and local authorities. A qualitative approach including the use of professional judgement will be employed for the assessment.

The ES chapter will be supported by a Flood Risk Assessment (FRA). Subject to consultation with the EA, the Applicant proposes to undertake hydraulic modelling to define peak flood water levels.

An assessment of the effects of the Proposed Development on the environmental objectives of the Water Framework Directive will be undertaken in accordance with the framework of the Inspectorate's Advice note eighteen: The Water Framework Directive.

Potential Impacts - The Scoping Report identifies the potential for increases in impermeable surfaces and potential impacts on surface water and flood risk, and contamination of surface water during both construction and operation.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	7.10.11	Electrical connection – operational phase	The Scoping Report states that operation of the electrical connection will not give rise to impacts upon water resources, hydrology, flood risk or surface water drainage. The Inspectorate agrees that given the location and operational nature of the electrical connection, significant effects during operation are unlikely and this can be scoped out of the ES.
	Para	Other points	Inspectorate's comments
2	7.10.6	Water requirements	The Scoping Report states that water would be required for operational activities such as cooling of ash residues, however does not identify the source of this water. The source and quantity of all water required for the Proposed Development should be identified within the ES. If abstraction is necessary for either the construction or operational phase, the ES should provide the likely abstraction rates. Similarly, any discharges required for the Proposed Development should be detailed; the ES should identify the location of any discharge points and the quantity and

			composition of the discharge.
3	7.10.16	Surface water strategy	The Inspectorate welcomes that a surface water strategy will be devised. A draft version should be provided with the ES.
4	7.10.16	FRA – electrical connection	Paragraph 7.10.11 of the Scoping Report notes that the electrical connection construction activities have the potential to impact upon surface water drainage and water quality. No reference is made to the potential for flood risk from the construction of the electrical connection and the Scoping Report does not identify the flood risk/flood zone within the area of the electrical connection route. However, the Inspectorate notes from the EA flood maps that both options cross Flood Zone 3. The Applicant should consider the flood risk implications of the construction of the electrical connection within the ES.
5	7.10.17	Climate Change	The Inspectorate welcomes the consideration of climate change upon flood levels and surface water run-off. This should include the anticipated UKCP18 projections where appropriate.
6	7.11.9	Groundwater	The Ground Conditions chapter of the Scoping Report identifies the potential for impacts on groundwater quality; this has not been identified within the Hydrology, Flood Risk and Water Resources chapter. The ES should include appropriate cross-referencing between the two chapters.
7	n/a	Existing flood defences	The Scoping Report refers to a flood defence wall over which construction modules would be lifted. The ES should identify the locations of the flood defences and detail whether any works are required to them and, if so, the potential impacts from these works should be assessed. The ES should assess the potential impacts of the Proposed Development on the existing flood defences, in particular any effects resulting from changes to the hydrodynamic and sedimentary regime from the temporary marine infrastructure.
8	n/a	Study area	The Scoping Report does not identify a study area for this aspect. The study area should be described and justified within the

			ES.
9	n/a	Water quality and the Water Framework Directive	The assessment should take into account emissions to air from the Proposed Development and the potential implications of deposition on the quality of watercourses.

4.10 Ground Conditions

(Scoping Report section 7.11)

Study area - The Scoping Report does not define the anticipated study area for this assessment.

Methodology - The environmental baseline will be determined through the production of a Synopsis Phase 1 Ground Condition Assessment (GCA) undertaken in accordance with CLR 11 Model Procedures for the Management of Contaminated Land (EA, 2004), and the London Borough of Bexley Developers Guide (A Simplified Guide to Planning Applications and Land Contamination, January 2015)). This will comprise a desk based study; a site and area reconnaissance; a Tier 1 Qualitative Risk Assessment; a preliminary Conceptual Site Model (CSM); and a preliminary land stability assessment.

Potential effects will be considered separately for each identified pollutant linkage such that any potential impacts are identified and mitigated as required.

The need for additional intrusive ground investigation will be determined by the GCA.

The assessment of significant will follow the IEMA Guidelines for Environmental Impact Assessment (2004).

Potential Impacts - The Scoping Report identifies the following potential impacts:

- mobilisation of potential contamination and creation of pathways during construction;
- exposure of construction workers to potential contamination;
- chemical attack and decay of buried concrete structures;
- permeation of water supply pipes by potential contaminants and damage to structures by explosion due to ground gases; and
- introduction of new potential contaminants to the environment.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	7.11.14	Electrical connection	<p>The Scoping Report explains that the electrical connections would follow existing highways or corridors utilised by the existing RRRF connection if possible; this would avoid excavations outside the existing highway footprint or make-up and therefore impacts are unlikely to be significant.</p> <p>The Scoping Report does not explicitly request to scope out the assessment of impacts from the electrical connection. However, for the avoidance of doubt, the Inspectorate is content that these works are unlikely to result in significant effects</p>

			and for this matter to be scoped out of the ES.
	Para	Other points	Inspectorate's comments
2	7.11.13	Mitigation/ remediation options	All proposed mitigation and/or necessary remediation should be described within the ES.
3	7.11.19	Assessing significance	The method for assessing the significance of potential effects has not been identified within the Scoping Report. This should be included within the ES.
4	7.7.6	Abbey Wood SSSI	The Terrestrial Ecology chapter of the Scoping Report identifies Abbey Wood SSSI as a geological designation, however this site is not considered within the Ground Conditions chapter of the Scoping Report. The potential for effects on this designation should be assessed within the ES.
5	n/a	Study area	The Scoping Report does not identify a study area for this aspect. The study area should have regard to the potential for the mobilisation of contaminants and should be described and justified within the ES.

4.11 Socio-economics

(Scoping Report section 7.12)

<p>Study area - The assessment will include a socio-economic profile of local, wider and regional areas based on drive time catchment areas of 30 minutes, 45 minutes and 60 minutes</p> <p>Methodology - The baseline and socio-economic context will be established by review of relevant economic, policy, and strategy documents and data collection from the study area.</p> <p>The assessment will be based on HM Treasury Green Book Appraisal guidance. The Chambers of Commerce and London Economic Action Partnership are proposed to be consulted regarding the assessment methodology.</p> <p>Potential Impacts - The Scoping Report considers the potential effects from construction and operation on:</p> <ul style="list-style-type: none"> • gross and net additional employment; • supply chain impacts; and • gross value added impacts. 			
ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	7.12.3	Community	<p>The Scoping Report states that the construction and operation of the Proposed Development are unlikely to lead to an increase in migration, and as a result is unlikely to create an additional demand on housing and other local community infrastructure facilities.</p> <p>As the Scoping Report has scoped in the potential effect on gross and net additional employment, the Inspectorate considers that there is potential for an increase in migration during construction and operation, and sufficient evidence has not been provided to scope out the assessment on housing and community infrastructure.</p>
2	7.12.4-7	Tourism and recreation	<p>The Scoping Report states that the transport chapter of the ES will assess impacts on pedestrian and cycle networks. The Inspectorate notes that that the Townscape and Visual Impact Assessment will assess the visual amenity from a number of recreational facilities including Public Rights of Way, Crossness Nature Reserve, and National Cycle Network Route.</p> <p>Therefore, the Inspectorate agrees that the</p>

			effects of tourism and recreations will be sufficiently addressed in other chapters of the ES, and does not need to be specifically assessed in the socio-economic chapter.
	Para	Other points	Inspectorate's comments
3	7.12.9	Labour Market	The ES should set out the sources of the socio-economic data collected as part of the assessment.
4	7.12.11	Potential environmental effects	The Inspectorate advises that the types of jobs generated by the Proposed Development should be considered in the context of the available workforce in the area and advises that this applies equally to the construction and operational stages.
5	7.12.12	Method	The Inspectorate notes that the HM Treasury Green Book, is guidance for central government. The Applicant should take care to ensure that the methodology applied is sufficient to identify and assess the likely significant effects from the Proposed Development.
6	n/a	Significance criteria	The methodology for assessing the significance of potential effects has not been identified within the Scoping Report; this should be clearly explained within the ES.

4.12 Risks of Major Accidents and/or Disasters

(Scoping Report section 8.2)

The Scoping Report states that the key environmental risks will be described within chapter 3 of the ES (the Proposed Development).
Aspect chapters within the ES will consider foreseeable risks during the construction period, from accidents such as fuel spillages and identify how the risk of such events will be minimised.
The Environmental Permit is anticipated to deal with the majority of emergency response plans and contingency measures.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	8.2.6	Effects to the environment resulting from accidents or disasters	<p>The Applicant considers that sufficient controls would be in place to ensure any effects to the environment resulting from accidents or disasters would be reduced to a level that is not significant and has therefore proposed to scope out this out of the ES.</p> <p>The Inspectorate notes the proposal in paragraph 8.2.3 to consider foreseeable risks in other aspect chapters. The Inspectorate therefore agrees that a separate standalone assessment is not required.</p>

4.13 Climate

(Scoping Report section 8.3)

Table 1.1 of Appendix H of the Scoping Report confirms that the impacts of climate change on the Proposed Development (i.e. changing weather scenarios) will be considered within the following technical chapters of the ES:

- Terrestrial Biodiversity;
- Hydrology, Flood Risk and Water Resources; and
- Health.

The ES will not consider impacts of the Proposed Development on climate change.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	8.3.1	Contribution to greenhouse gasses and the effects on climate	<p>Appendix H of the Scoping Report explains that a carbon emissions assessment for the existing Riverside Resource Recovery Facility showed that the energy from waste plant provides a carbon saving of 212kg CO₂ per tonne of waste when compared to disposal via landfill. The Scoping Report states that report was reviewed and ratified by the Carbon Trust. The Applicant therefore concludes that there would be no significant increases in emissions compared to an alternative of landfilling for the Proposed Development.</p> <p>The Inspectorate understands that there are no viable alternatives to the treatment of the waste proposed to be handled by the Proposed Development. On this basis, the Inspectorate considers that significant effects are not likely and agrees that this can be scoped out of the ES.</p> <p>The Inspectorate notes that a qualitative assessment of greenhouse gas emissions will be submitted as an appendix to the Design and Access Statement. As relevant, this should be included within the ES.</p>
2	8.3.1	Impact of climate change on the Proposed Development	<p>Table 1.1 of Appendix H of the Scoping Report scopes out changing weather scenarios from all technical chapters of the ES except:</p> <ul style="list-style-type: none"> • Terrestrial Biodiversity; • Hydrology, Flood Risk and Water Resources; and • Health.

			The Inspectorate agrees with the justifications provided in Table 1.1 to scope out climate change from the other technical chapters and is content with the Applicant's proposed approach.
	Para	Other points	Inspectorate's comments
3	8.3.1	Climate projections	The Inspectorate welcomes the proposal to consider climate change projections in relevant aspect chapters. This should include the anticipated UKCP18 projections where appropriate.

4.14 Aviation

(Scoping Report section 8.4)

The Scoping Report proposes to scope out the potential impacts on aviation.			
ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	8.4.1-5	Aviation	<p>The Scoping Report states that sufficient mitigation exists, in the form of consultation with safeguarded airfields and stakeholders appropriate aviation lighting and highlighting developments on aviation mapping. In addition, the Applicant considers that there is the precedent for existing comparable structures already set in the immediate locality of the application site.</p> <p>The Scoping Report states that it is not a requirement under the EIA Regulations to undertake an assessment of likely impacts to aviation and explains that a standalone statement in relation to aviation will be provided with the application.</p> <p>Although the height of the flue stack has not been determined at this stage, the Inspectorate considers it unlikely that an energy from waste plant in this location would have a significant effect on aviation and therefore agrees to scope this out of the ES.</p>

4.15 Daylight and Sunlight

(Scoping Report section 8.5)

The Scoping Report proposes to scope out the potential impacts on daylight and sunlight.			
ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	8.5.1	Daylight and sunlight	The Scoping Report identifies the closest residential receptors as being located approximately 800m to the south at the Travelodge London Belvedere, Hackney House and properties along Norman Road (south), North Road and Poppy Close. The Inspectorate agrees that, given the distance, the Proposed Development would not result in the significant loss of daylight or sunlight at the closest residential receptors and that this can be scoped out of the EIA.

4.16 Environmental Wind

(Scoping Report section 8.6)

The Scoping Report proposes to scope out the potential impacts of changes to environmental wind.			
ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	8.6.1-4	The effects on pedestrian comfort and safety as a result of any changes to the local micro climate	<p>The Scoping Report identifies relevant receptors as users of the adjacent Thames Path to the north of the site and users of the network of PRoWs adjacent to the site. The Applicant notes that receptors are not anticipated to be sitting or standing in the vicinity of REP and are therefore less sensitive to higher wind speeds. In addition, users of the Thames Path and PRoWs are already exposed to potentially windy conditions including strong gusts given the open context of the environment along the river.</p> <p>The Inspectorate agrees that the Proposed Development is unlikely to result in significant effects to the environment in terms of environmental wind and it can therefore be scoped out of the EIA.</p>

4.17 Lighting

(Scoping Report section 8.7)

<p>The Scoping Report proposes to scope out an assessment of the impacts of lighting on human receptors. Impacts from lighting on ecological receptors will be assessed within the Terrestrial Biodiversity and Marine Biodiversity chapters.</p>			
ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	8.7.1-7	Lighting effects on human receptors	<p>The Scoping Report notes that the Proposed Development is located within an existing dense urban environment which is subject to levels of existing activity, movement and lighting in dark hours/night. It states that the Proposed Development is not anticipated to introduce lighting effects which would result in a significant change to the existing conditions during either the construction or operational phases and that the closest residential area is situated approximately 800m to the south of the application site. The Inspectorate agrees that impacts from construction and operation on human receptors can be scoped out of the ES.</p> <p>The Scoping Report acknowledges that the construction of the electrical connection may introduce temporary lighting effects within residential areas. However, it states that the timing of works would be limited and agreed by way of DCO Requirement, therefore preventing the opportunity for significant lighting effects. The Inspectorate agrees that effects on human receptors from lighting during the construction phase of the electrical connection would be short lived and are unlikely to be significant; as such this can be scoped out of the ES.</p> <p>For the avoidance of doubt, the Inspectorate expects the potential effects on lighting on terrestrial ecological receptors to be assessed within the ES, as proposed in paragraph 7.7.19 of the Scoping Report. The Inspectorate's comments on effects of lighting on marine ecological receptors are provided in section 4.7 of this Scoping Opinion.</p>

4.18 Human Health

(Scoping Report section 8.8)

The Scoping Report confirms that human health will be considered within the Air Quality chapter and in a Health Impact Assessment (HIA) which will be appended to the ES. The ES will signpost to the HIA within an 'Other Considerations' chapter.

The HIA will consider 'health and wellbeing objectives' as set out in the Healthy Urban Planning Checklist from London's Healthy Urban Development Unit.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	8.8.1	Health	<p>As noted above, the Applicant intends to assess impacts to human health within the ES. On the basis that human health is addressed within relevant chapters of the ES, the Inspectorate agrees that a separate assessment is not required.</p> <p>The Inspectorate considers that impacts to human health from noise and vibration should also be considered.</p>
2	Appendix G Table 1	Health and wellbeing objectives	<p>The Applicant proposes to scope out the following 'health and wellbeing objectives' from the HIA:</p> <ul style="list-style-type: none"> • housing design and accessible housing; • housing mix and affordability; • play space/local food growing; • healthcare service; • access to local food shops; and • public buildings and spaces. <p>No justification has been provided within the table; however, given the nature and scale of the Proposed Development, the Inspectorate does not consider that significant effects to health and well-being from these matters is likely and therefore agrees that these can be scoped out.</p>
3	Appendix G Para 4.5	Vulnerable groups – individuals with disabilities	<p>The Scoping Report states that the Proposed Development is not anticipated to have a disproportionate impact on individuals with disabilities. The Inspectorate considers that in the absence of information on vulnerable groups in the</p>

			locality, it is premature to scope out this matter at this stage.
	Para	Other points	Inspectorate's comments
4	Appendix G Para 4.2	Assessment methodology	The Scoping Report states that it is not considered appropriate to develop significance criteria for human health within the ES due to the multidisciplinary nature of HIA. Effects will be categorised solely into significant and not significant effects. The Inspectorate is content with this approach but emphasises the need for thorough and clear justifications for the conclusions that are presented within the ES.
5	n/a	Electric and magnetic fields (EMF)	The ES should assess impacts to human receptors from exposure to EMF associated with the Proposed Development where these impacts may result in significant environmental effects.

4.19 Waste

(Scoping Report section 8.9)

The Scoping Report states that construction would seek to comply with the GLA's target of recycling/reusing 95% of construction, excavation and demolition waste. The Scoping Report explains that waste generated during the operational phase would consist of:

- incinerator bottom ash (IBA) – to be transported by river to the Port of Tilbury for treatment and onwards sale;
- air pollution control residues (APCR) – to be removed by road; and
- general waste e.g. air filters, scrap metal, insulation material, oils, chemicals and office waste.

The Applicant proposes to provide a Waste Management Strategy with the application which will set the construction and operational waste management principles for the development, identifying the waste expected to arise and the proposed routes for managing those arisings.

ID	Para	Applicant's proposed matters to scope out	Inspectorate's comments
1	8.9.2-4	Construction phase waste	The Scoping Report states that works for the preparation and clearance of the REP site will include top soil stripping along with the clearance of vegetation. It concludes that waste generated during the site preparation and clearance phase would be <i>de minimis</i> . However, this appears to be contradicted by paragraph 8.9.3 which states that " <i>It is considered likely that there would be surplus material generated, in the form of spoil and made ground.</i> " The Scoping Report also identifies the potential for off-cuts from construction materials. The Inspectorate acknowledges that the construction of infrastructure projects is inevitably going to generate waste. The consequential effects from handling the waste should be addressed within relevant aspect chapters of the ES (e.g. transport).
2	8.9.5-8.9.9	Operational phase waste	The Inspectorate considers that operational 'general waste' (in the form of air filters, scrap metal, insulation material, oils and chemical and office waste) are unlikely to result in significant environmental effects and agrees that this can be scoped out of the ES. With regard to the digestate, IBA and APCR, the Inspectorate expects that the

			resultant road and vessel movements would be factored into the transport assessment and other related aspects (e.g. air quality and noise).
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5. INFORMATION SOURCES

5.0.1 The Inspectorate's National Infrastructure Planning website includes links to a range of advice regarding the making of applications and environmental procedures, these include:

- Pre-application prospectus³
- Planning Inspectorate advice notes⁴:
 - Advice Note Three: EIA Consultation and Notification;
 - Advice Note Four: Section 52: Obtaining information about interests in land (Planning Act 2008);
 - Advice Note Five: Section 53 Rights of Entry (Planning Act 2008);
 - Advice Note Seven: Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping;
 - Advice Note Nine: Using the 'Rochdale Envelope';
 - Advice Note Ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects (includes discussion of Evidence Plan process);
 - Advice Note Twelve: Transboundary Impacts
 - Advice Note Seventeen: Cumulative Effects Assessment; and
 - Advice Note Eighteen: The Water Framework Directive.

5.0.2 Applicants are also advised to review the list of information required to be submitted within an application for Development as set out in The Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 (as amended).

³ The Planning Inspectorate's pre-application services for applicants. Available from: <https://infrastructure.planninginspectorate.gov.uk/application-process/pre-application-service-for-applicants/>

⁴ The Planning Inspectorate's series of advice notes in relation to the Planning Act 2008 process. Available from: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

APPENDIX 1: CONSULTATION BODIES FORMALLY CONSULTED

TABLE A1: PRESCRIBED CONSULTATION BODIES⁵

SCHEDULE 1 DESCRIPTION	ORGANISATION
The Health and Safety Executive	Health and Safety Executive
The National Health Service Commissioning Board	NHS England
The relevant Clinical Commissioning Group	Barking and Dagenham Clinical Commissioning Group
	Greenwich Clinical Commissioning Group
	Bexley Clinical Commissioning Group
	Dartford, Gravesham and Swanley Clinical Commissioning Group
Natural England	Natural England
The Historic Buildings and Monuments Commission for England	Historic England - Greater London; South East
The relevant fire and rescue authority	London Fire Brigade
	Kent Fire and Rescue Service
The relevant police and crime commissioner	Mayor's Office for Policing and Crime
	Kent Police and Crime Commissioner
The Environment Agency	The Environment Agency - Kent, South London and East Sussex; Hertfordshire & North London
The Maritime and Coastguard Agency	Maritime & Coastguard Agency
The Maritime and Coastguard Agency – Regional Office	The Maritime and Coastguard Agency - London
The Marine Management Organisation	Marine Management Organisation (MMO)
The Civil Aviation Authority	Civil Aviation Authority
The Relevant Highways Authority	Kent County Council

⁵ Schedule 1 of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (the 'APFP Regulations')

SCHEDULE 1 DESCRIPTION	ORGANISATION
	London Borough of Havering
	London Borough of Barking and Dagenham
	Royal Borough of Greenwich
	London Borough of Bexley
The relevant strategic highways company	Highways England - South East
Transport for London	Transport for London
Trinity House	Trinity House
Public Health England, an executive agency of the Department of Health	Public Health England
Relevant statutory undertakers	See Table 2 below
The Crown Estate Commissioners	The Crown Estate
The Secretary of State for Defence	Ministry of Defence

TABLE A2: RELEVANT STATUTORY UNDERTAKERS⁶

STATUTORY UNDERTAKER	ORGANISATION
The relevant Clinical Commissioning Group	Barking and Dagenham Clinical Commissioning Group
	Greenwich Clinical Commissioning Group
	Bexley Clinical Commissioning Group
	Dartford, Gravesham and Swanley Clinical Commissioning Group
The National Health Service Commissioning Board	NHS England
The relevant NHS Trust	London Ambulance Service NHS Trust
The relevant NHS Foundation Trust	South East Coast Ambulance Service NHS Foundation Trust
Railways	Network Rail Infrastructure Ltd

⁶ 'Statutory Undertaker' is defined in the APFP Regulations as having the same meaning as in Section 127 of the Planning Act 2008 (as amended)

STATUTORY UNDERTAKER	ORGANISATION
Railways	Highways England Historical Railways Estate
Road Transport	Transport for London
Dock and Harbour authority	Port of London Authority
Civil Aviation Authority	Civil Aviation Authority
Licence Holder (Chapter 1 Of Part 1 Of Transport Act 2000)	NATS En-Route Safeguarding
Universal Service Provider	Royal Mail Group
Homes and Communities Agency	Homes and Communities Agency
The relevant Environment Agency	Environment Agency - Kent, South London and East Sussex; Hertfordshire & North London
The relevant water and sewage undertaker	Essex and Suffolk Water
	Southern Water
	Thames Water
The relevant public gas transporter	Cadent Gas Limited
	Energetics Gas Limited
	Energy Assets Pipelines Limited
	ES Pipelines Ltd
	ESP Connections Ltd
	ESP Networks Ltd
	ESP Pipelines Ltd
	Fulcrum Pipelines Limited
	GTC Pipelines Limited
	Independent Pipelines Limited
	Indigo Pipelines Limited
	Quadrant Pipelines Limited
	National Grid Gas Plc
	National Grid Gas Plc
	Scotland Gas Networks Plc
Southern Gas Networks Plc	
Wales and West Utilities Ltd	
The relevant electricity generator with CPO Powers	RWE Generation UK Plc (Littlebrook Power Station)

STATUTORY UNDERTAKER	ORGANISATION
	Energetics Electricity Limited
	Energy Assets Power Networks
	ESP Electricity Limited
	G2 Energy IDNO Limited
	Harlaxton Energy Networks Limited
	Independent Power Networks Limited
	Leep Electricity Networks Limited
	The Electricity Network Company Limited
	UK Power Distribution Limited
	Utility Assets Limited
	Utility Distribution Networks Limited
	Southern Electric Power Distribution Plc
	UK Power Networks Limited
The relevant electricity transmitter with CPO Powers	National Grid Electricity Transmission Plc
	National Grid Electricity Transmission Plc

TABLE A3: SECTION 43 CONSULTEES (FOR THE PURPOSES OF SECTION 42(1)(B))⁷

LOCAL AUTHORITY⁸
London Borough of Havering
London Borough Barking and Dagenham
Royal Borough of Greenwich Council
London Borough of Bexley
Dartford Borough Council
Thurrock Council
Gravesham Borough Council

⁷ Sections 43 and 42(B) of the PA2008

⁸ As defined in Section 43(3) of the PA2008

LOCAL AUTHORITY⁸
Sevenoaks District Council
Epping Forest District Council
Brentwood Borough Council
London Borough of Redbridge
Tower Hamlets Council
London Borough of Bromley
London Borough of Newham
London Borough of Lewisham
Kent County Council
Essex County Council
Medway Council
Surrey Council
East Sussex County Council

THE GREATER LONDON AUTHORITY

The Greater London Authority (GLA) have also been identified as a consultation body under the EIA Regulations because the proposed application is within Greater London.

TABLE A4: NON-PRESCRIBED CONSULTATION BODIES

ORGANISATION
Royal National Lifeboat Institution

APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

Consultation bodies who replied by the statutory deadline:

Civil Aviation Authority
Dartford Borough Council
ESP Gas Group Ltd
Health and Safety Executive
Highways England
Historic England
Kent County Council
London Borough of Bexley
London Borough of Havering
London Fire and Emergency Planning Authority
Marine Management Organisation
Maritime and Coastguard Agency
Medway Council
Ministry of Defence
National Grid
NATS (En Route) Public Limited Company
Natural England
Port of London Authority
Public Health England
Royal Borough of Greenwich
Royal Mail
SGN
Southern Water
Surrey County Council
The Crown Estate
Trinity House
Wales and West Utilities

From: [Jiggins Craig](#)
To: [Riverside Energy Park](#)
Subject: Riverside Energy Park - EN010093-000004 (Attention of Hannah Pratt)
Date: 18 December 2017 14:54:57
Attachments: [CAP168Ed10Feb2014-Extract-LightingofObstacles.pdf](#)
[CAP393Ed5-ANO2016ExtractsLightingArticles.pdf](#)

Dear Hannah

I have looked at the EIA Scoping notification and consultation document on the website and the main area that may be of concern is the height of the flue stack, which at this time has not been indicated here. Because of that, all I can do is provide some guidance which may/may not be required once the height of the stack has been determined.

Aviation Warning Lighting

In the UK, the need for aviation obstruction lighting on 'tall' structures depends in the first instance upon any particular structure's location in relationship to an aerodrome. If the structure constitutes an 'aerodrome obstruction' it is the aerodrome operator that with review the lighting requirement (part of the safeguarding process). For civil aerodromes, they will, in general terms, follow the requirements of CAP 168 - Licensing of Aerodromes. This document can be downloaded from the Civil Aviation CAA website at <http://publicapps.caa.co.uk/docs/33/CAP168LicensingofAerodromes.pdf> - Chapter 4 refers to obstacles and obstacle lighting (I have included an extract from CAP168).

Away from aerodromes Article 222 of the UK Air Navigation Order applies (CAP 393 published on our website at: http://publicapps.caa.co.uk/docs/33/CAP393Ed5Am1_OCT2016.pdf – to get there quickly, open the document and search for 'Lights and Lighting'. Article 222 requires that for en-route obstructions (ie away from aerodromes) lighting only becomes legally mandated for structures of a height of 150m or more above ground level.

Typically, structures less than 150m above ground level and away from the immediate vicinity of an aerodrome are not routinely lit for civil aviation purposes. However, structures of lesser high might need aviation obstruction lighting if, by virtue of their location and nature, they are considered a significant navigational hazard.

Note that if the structure is to be 150m or higher, the lighting specification set out in Article 222 becomes a statutory requirement. In this latter case, any proposal to seek a lighting specification at odds with Article 222 should involve the CAA at the earliest convenience (0207 453 6559 / craig.jiggins@caa.co.uk).

Crane Operations

Cranes, whether in situ temporarily or long term are captured by the points heighted above. Note that if a crane is located on top of another structure, it is the overall hgt (structure + crane) than is relevant. Temporary structures such as cranes can be notified through the means of a Notice to Airmen (NOTAM). If above a hgt of 300ft (91.4m) above ground level, the developer must ensure that the crane operator contacts the CAA's Airspace Regulation (AR) section on ARops@caa.co.uk or 02074536599.

For cranes below this hgt the developer must ensure that the crane operator contacts Low Flying Operations at RAF Wittering CAS-ASLFOSOpsLF@mod.uk / 01780 146 208. However, in this case that is not necessary as no military low-flying routinely takes place in this location.

If the crane is to be in place for in excess of 90 days it should be considered a permanent structure and will need to be notified as such: to that end the developer should also contact the DGC (see above). Additionally, any crane of a hgt of 60m or more will need to be equipped with aviation warning lighting in line with CAA guidance concerning crane operations which is again available at <http://publicapps.caa.co.uk/docs/33/CAP%201096%20In%20Focus%20-%20Crane%20Ops.pdf>

Due to the unique nature of operations in respect of altitudes and potentially unusual landing sites, it would be sensible for you to establish the related viewpoints of local emergency services Air Support Units through the National Police Air Service (NPAS) organisation via email npas.obstructions@npas.pnn.police.uk;

Due to the unique nature of operations in respect of altitudes and potentially unusual landing sites, it would be sensible for you to establish the related viewpoints of local emergency services Air Support Units through the **relevant Air Ambulance Units** - <https://associationofairambulances.co.uk/member/london-ambulance-service-nhs-trust/>

I would also recommend that this proposal should be brought to the attention of the Safeguarding Department within the MoD's Defence Infrastructure Organisation, email: DIO-safeguarding-statutory@mod.uk, to ensure that military aircraft safety is taken into consideration.

Finally, I would strongly recommend that London City airport is advised of this proposal.

Regards

Craig

Craig Jiggins

ATM Technical Specialist
Safety and Airspace Regulation Group (SARG) - Airspace Regulation
Civil Aviation Authority

020-7453 6559

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We cannot accept any liability for any loss or damage sustained as a result of software viruses. You must carry out such virus checking as is necessary before opening any attachment to this message.

- 4.100 Marker boards alternating with flags or cones, as described in paragraph 4.9.3 of chapter 7, should be used to delineate an unserviceable portion of a grass aerodrome.

Lighting of obstacles

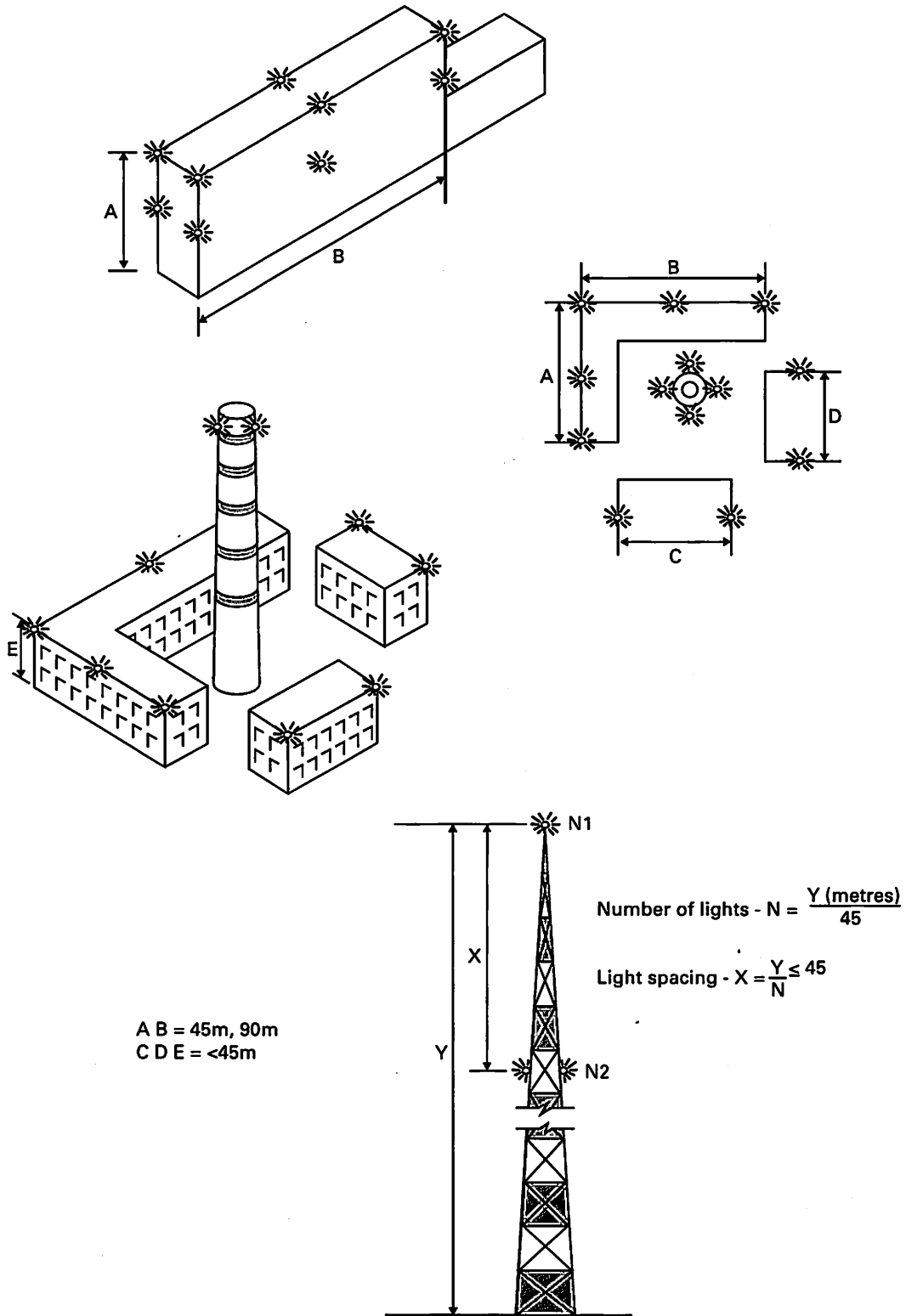
- 4.101 Obstacle lights should be used to indicate the existence of objects which are to be lit as follows:
1. Low intensity steady red obstacle lights should be used on obstacles less than 45 m high, except that medium intensity steady red lights should be used to light such obstacles as an elongated structure, an obstacle in the outer area of the approach or high ground adjacent to the aerodrome circuit. There are two types of low intensity obstacle lights for fixed obstacles: Group A and Group B (see table 6A.1).
 - a) Low intensity Group A lights should be used for obstacles on the movement area where Group B lights may cause dazzle.
 - b) Low intensity Group B lights should be used away from the movement area or in areas on the movement area with high levels of background illuminance.
 2. Medium intensity red steady obstacle lights should be used on obstacles between 45 m and less than 150 m in height.
 3. Medium intensity steady red obstacle lights should be used to indicate the presence of:
 - a) an obstacle if its height is 150 m or more; or
 - b) a tower supporting overhead wires, cables etc. of any height where an aeronautical study indicates such lights to be essential for recognition of the presence of the obstacle.
- 4.102 However, where an aeronautical study conducted by the CAA concludes that greater conspicuity of the obstacle through the use of a higher specification light is required, the use of a high intensity flashing white obstacle light will be considered by the CAA.
- 4.103 The combination of white and red obstacle lights should not be used at the same time to light an obstacle.

Location of obstacle lights (figure 4.18)

4.104 The top light

1. Except in the case of a chimney or other similar structure, one or more lights should be located at the top of the obstacle. The lights should be so arranged as to indicate the highest points or edges of the obstacle relative to the obstacle limitation surface. If two or more edges are of the same height, the edge nearest the flight path should be lit. On facing sides of groups of obstacles, lights may be omitted with the approval of the CAA, and the group treated as one solid obstacle.
2. In the case of a chimney or other similar structure, the top light should be placed between 1.5 m and 3.0 m below the top in order to reduce the effects of discolouration or corrosion from the exhaust fumes.
3. In the case of a guyed tower or antenna where it is not possible to locate an obstacle light on the top because of the weight of equipment involved, such a light should be located at the highest practicable point acceptable to the CAA.
4. In the case of a wind turbine, obstacle lights should be installed on the highest point of the nacelle in such a manner as to provide an unobstructed view for aircraft approaching from any direction.

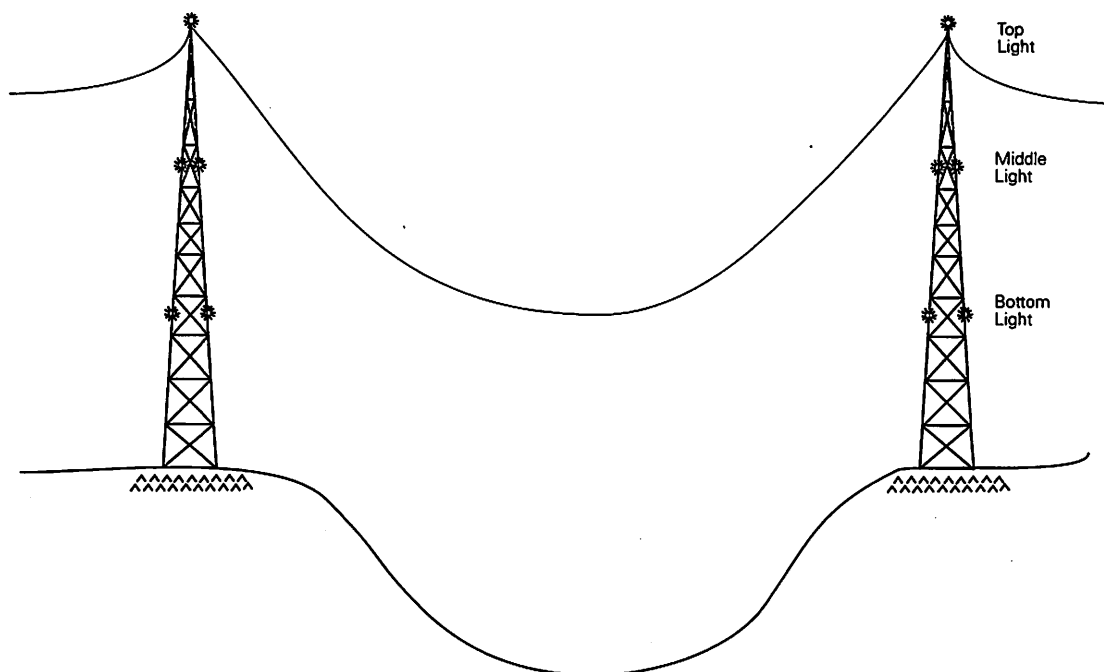
Figure 4.18 Lighting of objects



Intermediate lights

- 4.105 Where the top of an obstacle is more than 45 m above the level of the surrounding ground, additional lights should be provided at intermediate levels. These additional lights should be spaced as equally as practicable between the top light and ground level as follows:
1. when low or medium intensity obstacle lights are used the spacing should not exceed 52 m;
 2. where deemed necessary by an aeronautical study, the spacing of high intensity flashing white obstacle lights on an obstacle other than a tower supporting overhead cables or wires should not exceed 105 m;
 3. where obstacle lights are used on a tower supporting overhead wires or cables (figure 4.19) they should be located at three levels:
 - a) on the top of the tower;
 - b) on the tower at the lowest level of the catenary of the wires or cables; and
 - c) at approximately mid-way between these two levels.
 4. at each level the lights should be arranged to give full cover in azimuth.

Figure 4.19 Example of intermediate lighting



Lighting of unserviceable parts of the movement area

4.106 Unserviceable parts of the movement area of an aerodrome used at night should be lit as follows:

1. to delineate unsafe areas, lights should be spaced at intervals of not more than 7.5 m;
2. to close off unserviceable sections of runways or taxiways, lights should be spaced at intervals of not more than 3 m.

Note: The normal runway and taxiway lighting within the unserviceable area should be suppressed.

4.107 A light used to mark unserviceable parts of the movement area should consist of a steady red light of sufficient intensity to ensure conspicuity, considering adjacent lights and the general level of illumination against which it would normally be viewed. It should have a minimum intensity of not less than 10 cd.

Lighting of vehicles

4.108 The responsibility for marking and lighting vehicles used on the movement area must be determined between the licence holder and the operators of the vehicles. Licence holders are responsible for ensuring that vehicles on the movement area are lit and/or marked as required, irrespective of ownership.

4.109 The specification for yellow flashing vehicle obstacle lights is given in chapter 6, appendix A, table 6A.1. Strobe lighting is unacceptable. Obstacle lights for 'Follow-me' vehicles only shall have characteristics described in figure 6A.19.

4.110 The lights specified should be fitted at the highest point of the prime mover vehicle.

4.111 The highest point of trailers should be fitted with steady red lights of not less than 10 cd.

4.112 Obstacle lights on vehicles should be switched on whenever the vehicles are within the movement area; however, the number of vehicles displaying flashing lights should be restricted to the operational minimum.

4.113 Aerodrome ambulances, fire and rescue appliances should, in addition, carry blue flashing lights for use while carrying out emergency duties.

4.114 In conditions where emergency vehicles not normally based at an aerodrome are called upon for assistance, flashing blue lights, where fitted, should be operated within the movement area.

Light characteristics (see chapter 6, appendix A, table 6A.1)

Low intensity obstacle lights

4.115 On fixed obstacles, low intensity lights should be steady red and omnidirectional.

Medium intensity obstacle lights

4.116 Medium intensity obstacle lights should be steady red light.

High intensity obstacle lights

4.117 High intensity obstacle lights should be flashing white lights.

Replacement of lamps

4.118 Unserviceable lamps should be replaced as soon as possible and in any event within 24 hours. Periodic replacement of all lamps is advisable – the active life being deemed to be 80% of the rated lamp life. Where such preventive maintenance cannot be arranged, tungsten lamps may be underrun on voltage down to a minimum of 90% of rated voltage, provided that the specified output can be met. This procedure should increase lamp life to about 400% of the rated lamp life. When this procedure is used, preventive replacement should be carried out after the increased interval. The requirements for periodic change of lamps may, however, be varied or waived where fittings having acceptable performance and proved life are used.

Note: NOTAM action should be taken to promulgate unserviceabilities.

Periods of illumination of obstacle lighting

4.119 High intensity flashing white obstacle lights should be lit at all times throughout the day and night.

4.120 Steady red medium and low intensity obstacle lights should be lit:

1. on and adjacent to an aerodrome from 30 minutes before sunset to 30 minutes after sunrise during the hours of availability notified in the UK AIP or by NOTAM;
2. on en route obstacles from 30 minutes before sunset to 30 minutes after sunrise. Should switching present problems, these lights may remain lit continuously.

The Air Navigation Order 2016 and Regulations

Published for the use of those concerned with air navigation,
but not to be treated as authoritative (see Foreword)

CAP 393



CHAPTER 2

Lights and lighting

Aeronautical lights

221.—(1) Except with the permission of the CAA and in accordance with any conditions subject to which the permission may be granted, a person must not establish, maintain or alter the character of—

- (a) an aeronautical beacon within the United Kingdom; or
- (b) any aeronautical ground light (other than an aeronautical beacon) at a national licensed aerodrome, or which forms part of the lighting system for use by aircraft taking off from or landing at such an aerodrome.

(2) In the case of an aeronautical beacon which is or may be visible from the waters within an area of a general lighthouse authority, the CAA must not give its permission for the purpose of this article except with the consent of that authority.

(3) A person must not intentionally or negligently damage or interfere with any aeronautical ground light established by or with the permission of the CAA.

Lighting of en-route obstacles

222.—(1) The person in charge of an en-route obstacle must ensure that it is fitted with medium intensity steady red lights positioned as close as possible to the top of the obstacle and at intermediate levels spaced so far as practicable equally between the top lights and ground level with an interval of not more than 52 metres.

(2) The person in charge of an en-route obstacle must, subject to paragraph (3), ensure that by night the lights required to be fitted by this article are displayed.

(3) In the event of the failure of any light which is required by this article to be displayed by night the person in charge must repair or replace the light as soon as reasonably practicable.

(4) At each level on the obstacle where lights are required to be fitted, sufficient lights must be fitted and arranged so as to show when displayed in all directions.

(5) In any particular case the CAA may direct that an en-route obstacle must be fitted with and must display such additional lights in such positions and at such times as it may specify.

(6) A permission may be granted for the purposes of this article for a particular case or class of cases or generally.

(7) This article does not apply to any en-route obstacle for which the CAA has granted a permission to the person in charge permitting that person not to fit and display lights in accordance with this article.

(8) In this article, an “en-route obstacle” means any building, structure or erection, the height of which is 150 metres or more above ground level, but it does not include a building, structure or erection—

- (a) which is in the vicinity of a national licensed aerodrome or an EASA certificated aerodrome; and
- (b) to which section 47 of the Civil Aviation Act 1982 (warning of presence of obstructions near licensed aerodromes) applies.

Lighting of wind turbine generators in United Kingdom territorial waters

223.—(1) Subject to paragraph (10), this article applies to any wind turbine generator—

- (a) the height of which is 60 metres or more above the level of the sea at the highest astronomical tide; and
- (b) which is situated in waters within or adjacent to the United Kingdom up to the seaward limits of the territorial sea.

(2) Subject to paragraph (3) the person in charge of a wind turbine generator must ensure that it is fitted with at least one medium intensity steady red light positioned as close as reasonably practicable to the top of the fixed structure.

(3) If four or more wind turbine generators are located together in the same group, with the permission of the CAA only those on the periphery of the group need be fitted with a light in accordance with paragraph (2).

(4) Subject to paragraph (5), the light or lights required by paragraph (2) must be so fitted as to show when displayed in all directions without interruption.

(5) When displayed—

- (a) the angle of the plane of the beam of peak intensity emitted by the light must be elevated to between three and four degrees above the horizontal plane;
- (b) not more than 45% or less than 20% of the minimum peak intensity specified for a light of this type is to be visible at the horizontal plane;
- (c) not more than 10% of the minimum peak intensity specified for a light of this type is to be visible at a depression of 1.5 degrees or more below the horizontal plane.

(6) Subject to paragraph (7), the person in charge of a wind turbine generator must ensure that by night, any light required to be fitted by this article is displayed.

(7) In the event of the failure of any light which is required by this article to be displayed by night the person in charge of a wind turbine generator must repair or replace the light as soon as reasonably practicable.

(8) If visibility in all directions from every wind turbine generator in a group is more than 5km the light intensity for any light required by this article to be fitted to any generator in the group and displayed may be reduced to not less than 10% of the minimum peak intensity specified for a light of this type.

(9) In any particular case the CAA may direct that a wind turbine generator must be fitted with and display such additional lights in such positions and at such times as it may specify.

(10) This article does not apply to any wind turbine generator for which the CAA has granted a permission to the person in charge permitting that person not to fit and display lights in accordance with this article.

(11) A permission may be granted for the purposes of this article for a particular case or class of cases or generally.

(12) In this article—

- (a) “wind turbine generator” is a generating station which is wholly or mainly driven by wind;
- (b) the height of a wind turbine generator is the height of the fixed structure or if greater the maximum vertical extent of any blade attached to that structure; and
- (c) a wind turbine generator is in the same group as another wind turbine generator if the same person is in charge of both and—
 - (i) it is within 2km of that other wind turbine generator; or
 - (ii) it is within 2km of a wind turbine generator which is in the same group as that other wind turbine generator.

Lights liable to endanger

224.—(1) A person must not exhibit in the United Kingdom any light which—

- (a) by reason of its glare is liable to endanger aircraft taking off from or landing at an aerodrome; or
- (b) by reason of its liability to be mistaken for an aeronautical ground light is liable to endanger aircraft.

(2) If any light which appears to the CAA to be a light described in paragraph (1) is exhibited, the CAA may direct the person who is the occupier of the place where the light is exhibited or who has charge of the light, to take such steps within a reasonable time as are specified in the direction—

- (a) to extinguish or screen the light; and
- (b) to prevent in the future the exhibition of any other light which may similarly endanger aircraft.

(3) The direction may be served either personally or by post, or by affixing it in some conspicuous place near to the light to which it relates.

(4) In the case of a light which is or may be visible from any waters within the area of a general lighthouse authority, the power of the CAA under this article must not be exercised except with the consent of that authority.

Lights which dazzle or distract

225. A person must not in the United Kingdom direct or shine any light at any aircraft in flight so as to dazzle or distract the pilot of the aircraft.

PART 9

Documents and records

Aircraft continuing airworthiness record system for non-EASA aircraft

226.—(1) In addition to any other log books required to be kept by or under this Order, aircraft continuing airworthiness records must be kept for non-EASA aircraft registered in the United Kingdom, comprising of—

- (a) an aircraft log book;
- (b) a separate engine log book or engine module log cards for each engine fitted in the aircraft; and
- (c) a separate propeller log book for each variable pitch propeller fitted to the aircraft; and
- (d) log cards for any service life limited component, as appropriate.

(2) The continuing airworthiness records must include the information specified in Schedule 7.

(3) Each entry in the continuing airworthiness records—

- (a) must be made—
 - (i) in the case of a certificate of release to service, as soon as practicable, but in no case more than 30 days after the date on which the maintenance was completed;
 - (ii) in all other cases, as soon as practicable after the occurrence to which it relates, but in no event more than 7 days after the expiration of the national airworthiness review certificate in force for the aircraft at the time of the occurrence;
- (b) must be made on each occasion that any overhaul, repair, replacement, modification, maintenance or inspection is undertaken on the engine or propeller;
- (c) must be clear and accurate; and
- (d) where it is necessary to correct an earlier entry in the aircraft continuing airworthiness records, must be made in a manner that clearly shows the original entry.

(4) Any document which is incorporated by reference in the continuing airworthiness records is deemed, for the purposes of this Order, to be part of the continuing airworthiness records.

(5) It is the duty of the operator of every aircraft for which continuing airworthiness records are required to be kept to—

- (a) keep them or cause them to be kept in accordance with this article; and

Planning Inspectorate
3D Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Please ask for: Sonia Bunn
Direct Line: (01322) 343620
Direct Fax: (01322) 343047
E-mail: Sonia.bunn@dartford.gov.uk
DX: 142726 Dartford 7
Your Ref: **EN010093-00004**
Our Ref: DA/17/02011/OBB
Date: 22nd December 2017

Dear Sir,

Town and Country Planning Act 1990

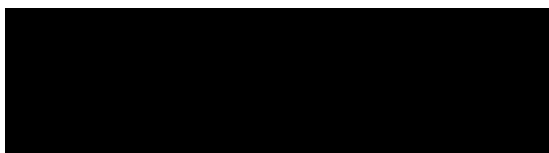
Consultation on an application under Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017(the EIA Regulations) Regulations 10 and 11 for scoping opinion as to the information to be provided in an Environmental Statement (ES) relating to the Development.

Riverside Energy Park

I refer to the above application which has now been considered by the Borough Council and wish to thank you for the opportunity to comment thereto.

The Council welcomes the opportunity to comment on the Scoping Report submitted in relation to the Riverside Energy park and would request that the attached detailed comments are taken into consideration when issuing the Scoping Opinion.

Yours faithfully



DIRECTOR OF REGENERATION

Dartford Borough Council response to scoping consultation
Application for Riverside Energy Park
DCB ref: 17/02011/OBB

Transport

The Council would like to understand whether the traffic impacts will extend to Dartford Borough, which given that several strategic interchanges, including the Dartford Crossing, are located in the Borough, is very likely. In this case the cumulative impacts of development in the DBC should also be assessed.

Traffic generation and routing of vehicles to the development via junction 1a of the M25, will result in increased traffic on local roads in Dartford and together with the reassessment of vehicles at times of congestion could have a wider impact.

Construction traffic will be particularly likely to use the strategic road network in Dartford which is already under significant stress and this impact should be considered. Improvements to A282 Junction 1A are currently ongoing and are likely to impact/ be impacted by the proposed development.

Although the proposal indicates that much of the waste comes from London the Council would like to understand the potential traffic impacts of any waste that does not come from west of the site but comes from the east or uses the Dartford Crossing.

Other transport impacts that should be addressed include the social impact of increased traffic in an already congested area which appear to be considered through the assessment criteria for the Transport Assessment outlined on pgs 29-30 but the Council would request that the study area includes Dartford Borough.

Construction impacts of Option 2

Local Road Network: Construction and operational impacts of the development on Dartford's local road network must be assessed. Construction impacts could be substantial along Bob Dunn Way, particularly if the undergrounding of cables involves road closures. This will particularly affect local traffic from the Bridge site, for which there is only one access point off Bob Dunn Way. Operational impacts will likely include through traffic using the Borough's road network to transport waste to REP.

In addition reduction in capacity on the local road network, as a result of any construction work in the carriageway, which provides a key feeder road to the Dartford crossing may result in impact on the wider strategic network and could result in vehicles diverting into Dartford town centre network. This impact should also in the Council's opinion be assessed

Air Quality

The impact of increased traffic on air quality in the wider area should be considered, particularly on the AQMAs at Dartford Crossing (A282: Dartford Tunnel Approach Road) and Dartford town centre which will be impacted on by increase traffic using the strategic road network and diverting traffic if there is congestion.

Air quality issues arising from the increase in vehicular traffic during both construction and operation should also be addressed and this should include traffic impacts as set out above.

The Council is willing to assist and provide further information to the applicant with regard to the air quality issues at these AQMA and on the local and strategic road network.

The Council would draw PINs attention to the fact that the Port of London Authority is also currently consulting on its own Air Quality Strategy for the Tidal Thames, which should be taken into account in any assessment.

Cumulative Development Impacts

There are several schemes in the vicinity of the proposed works that could further impact on the local area. The cumulative impact of these developments will need to be taken into account, particularly in relation to transport impacts. Such developments include:

- Extant permission exists for mineral extraction at Joyce Green Quarry. Current planning applications are being considered by KCC to bring the site back into use for mineral extraction, which may have a 10 year lifespan if approved. This site will access Bob Dunn Way via Joyce Green Lane.
- The emerging KCC Minerals Site Allocations Plan includes two potential site allocations in the vicinity of Joyce Green Quarry, which will again require access to Bob Dunn Way.
- The Bridge development site is currently subject to further applications that will potentially increase the level of residential development in this location by an additional 190 units, leading to further pressure on the highway network.
- There are other potential development sites in and around Dartford Town Centre that have the potential to cumulatively impact on the local road network over both the construction and operational phases of the development.

Other issues

Ongoing function of Littlebrook Substation

The status of Littlebrook Substation is unknown. The adjacent power station was decommissioned in 2015 and the new owners are actively considering redevelopment options. Will the substation still be operational in 2021 when construction is due to begin on REP? Given the current pre-app discussions, could this proposal compromise the redevelopment of the wider site?

The impact of the proposal on redevelopment of the adjacent brownfield land at Littlebrook Power Station is something the Council consider should be assessed.

From: [KSLPlanning](#)
To: [Riverside Energy Park](#)
Cc: [REDACTED]
Subject: RE: Riverside Energy Park - EIA Scoping notification and consultation
Date: 29 November 2017 16:43:15
Attachments: [image001.gif](#)
[image002.gif](#)
[image003.gif](#)
[image004.gif](#)
[image005.gif](#)
[image006.gif](#)

Dear Sir/Madam,

EN010093-000004 - Riverside Energy Park, Belvedere

Thank you for consulting the Environment Agency on the above proposal which we received as a valid consultation on 28 November 2017. It is now being progressed under our reference number SL/2017/117720/01 and the case officer is Joe Martyn.

We will aim to respond within 21 days of receipt, but if you require urgent comments please email kslplanning@environment-agency.gov.uk quoting our reference number above.

Kind regards,

Tim Charlton

Planning Advisor

Environment Agency | Kent & South London | South London Sustainable Places team

kslplanning@environment-agency.gov.uk

020 3024 8327 | +44 20 3024 8327 | 48327

3rd Floor, Seacole Building, 2 Marsham Street, London, SW1P 4DF



[cid:image006.gif@01D36839.4E970120](#)



From: Riverside Energy Park [mailto:RiversideEP@pins.gsi.gov.uk]

Sent: 28 November 2017 10:24

To: KSLPlanning <KSLPLANNING@environment-agency.gov.uk>; HNL Sustainable Places <HNLsustainablePlaces@environment-agency.gov.uk>; KSLPlanning <KSLPLANNING@environment-agency.gov.uk>

Subject: Riverside Energy Park - EIA Scoping notification and consultation

Dear Sir/Madam

Please see attached correspondence on the proposed Riverside Energy Park.

Please note the deadline for consultation responses is 26 December 2017. This deadline is a statutory requirement that has been triggered by submission of the Applicant's scoping report and cannot be extended.

From: [ESP Utilities Group Ltd](#)
To: [Riverside Energy Park](#)
Subject: Your Reference: Riverside Energy Park. Our Reference: PE133632. Plant Not Affected Notice from ES Pipelines
Date: 08 December 2017 14:34:25
Attachments: [ESN017080 P_Engineering_ESP_ESN016000 - ESN017999 ESN017080 Erith Park Drawings Proposal 2017-01-06 Variation 1 B9647223-3 AWH2778-3 Gas Drawing A0 \(.pdf](#)
[UKP3157 - DWG301 - Rev1 - Site Layout and Cable Routes - iDNO - \(Sheet 3\).pdf](#)
[UKP1326 - DWG301 - Rev7 - Site Layout and Cable Routes.pdf](#)
[MN 209080-JB-003 - IDNO LV Design - P1.pdf](#)

Riverside Energy Park
The Planning Inspectorate

8 December 2017

Reference: Riverside Energy Park

Dear Sir/Madam,

Thank you for your recent plant enquiry at (Riverside Energy Park).

I can confirm that ESP Gas Group Ltd has no gas or electricity apparatus in the vicinity of this site address and will not be affected by your proposed works. **But, there are gas and electricity networks nearby. Proposal drawings and final as-laid drawings are enclosed.**

ESP are continually laying new gas and electricity networks and this notification is valid for 90 days from the date of this letter. If your proposed works start after this period of time, please re-submit your enquiry.

Important Notice

Please be advised that any enquiries for ESP Connections Ltd, formerly known as British Gas Connections Ltd, should be sent directly to us at the address shown above or alternatively you can email us at: PlantResponses@espipelines.com

Yours faithfully,

Alan Slee
Operations Manager



Bluebird House
Mole Business Park
Leatherhead
KT22 7BA
☎ 01372 587500 📠 01372 377996

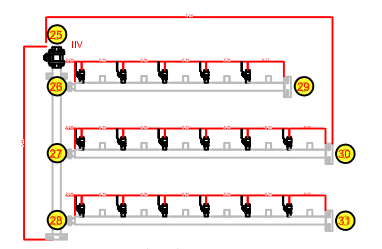
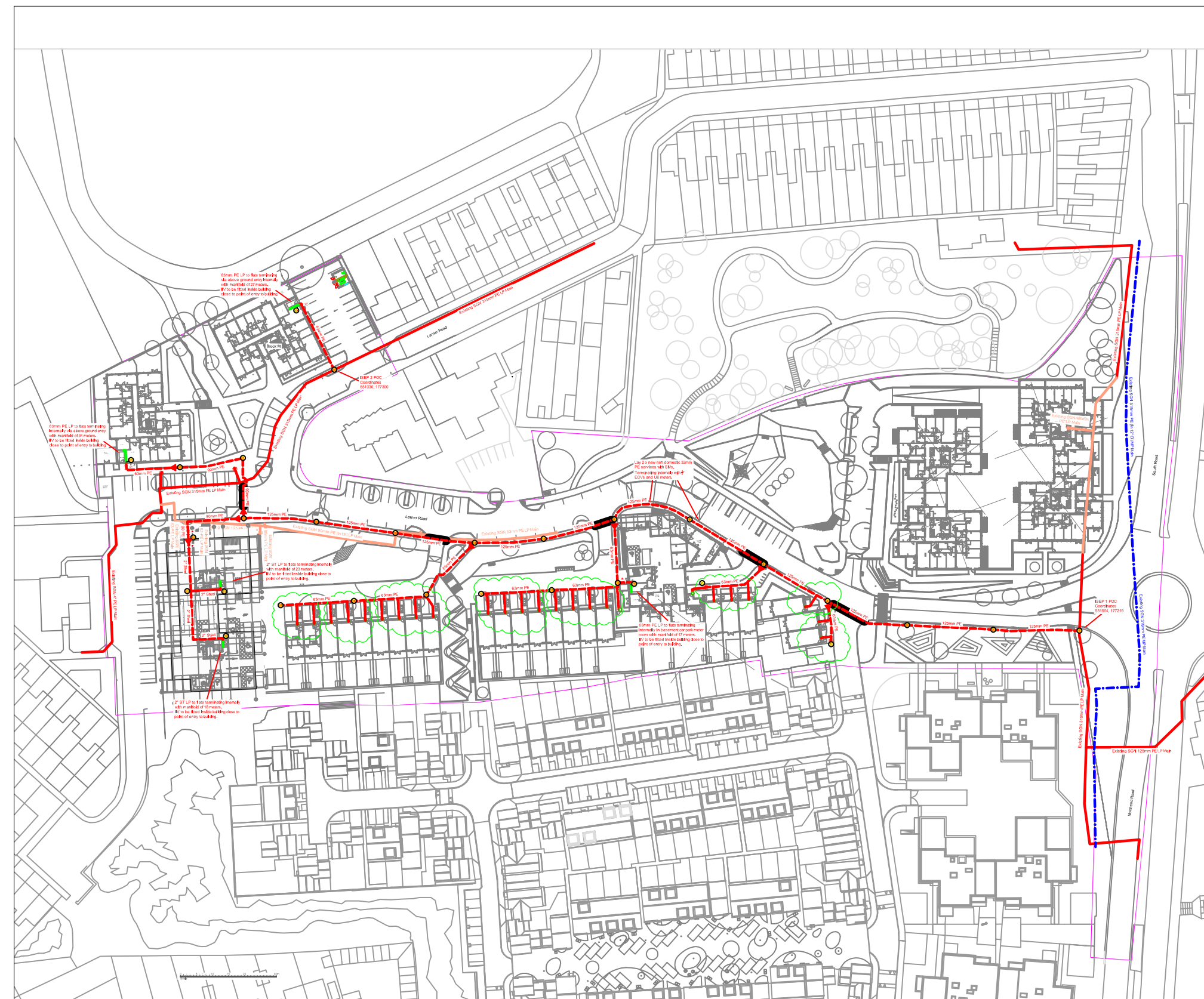
<http://www.espug.com>

The information in this email is confidential and may be legally privileged. It is intended solely for the addressee. Access to this email by anyone else is unauthorised. If you are not the intended recipient, any disclosure, copying, distribution or any action taken or omitted to be taken in reliance on it, is prohibited and may be unlawful.

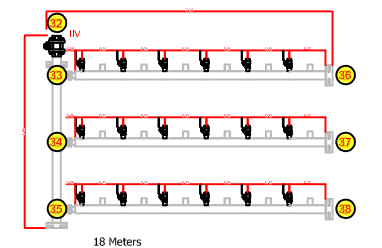


Please consider the environment before printing this e-mail

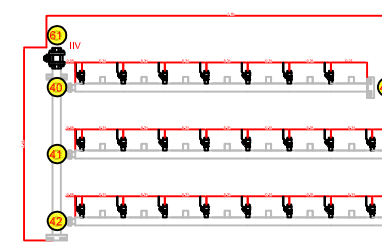
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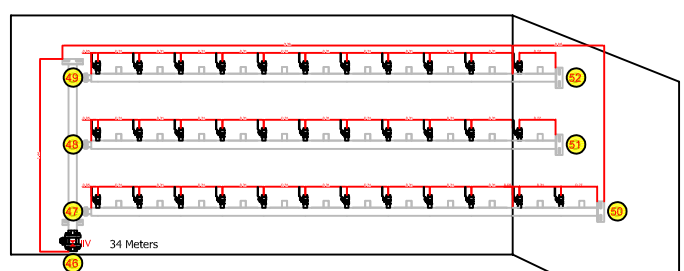
17 Meters (Includes Community Centre & Nursery)



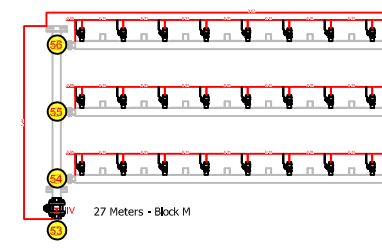
18 Meters



23 Meters



34 Meters



27 Meters - Block M

Manifold Schematics

2" steel riser with 1" steel laterals and 50mm long 1/2" steel offtakes for each meter.
 ALLOW FURTHER 1/2 METRE ABOVE HEIGHT SHOWN FOR METER INSTALLATION

IV to be fitted inside building close to point of entry to building. Alternatively a building entry tee with an integral valve operable only by a special key.

Please refer to table Supporting Above Ground Network Pipelines on this drawing for pipe support spacing.

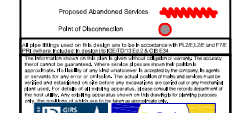
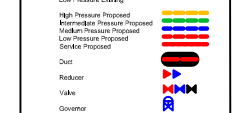
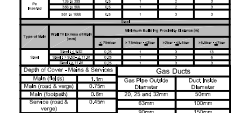
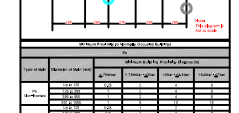
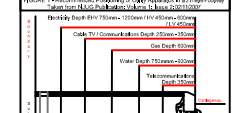
The information provided in this drawing is for the use of the client and is not to be used for any other purpose. The client is responsible for ensuring that the information is accurate and up-to-date. The client is also responsible for ensuring that the information is used in accordance with the relevant regulations and standards. The client is also responsible for ensuring that the information is used in accordance with the relevant regulations and standards.



Standard Size	Material	Minimum Unsupported Length (m)	Minimum Spacing (m)	Minimum Height (m)
150mm	PE	20	2.0	2.0
125mm	PE	15	1.5	1.5
100mm	PE	10	1.0	1.0
75mm	PE	5	0.5	0.5
50mm	PE	3	0.3	0.3

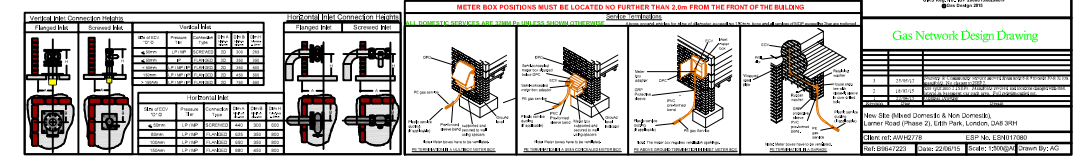
Material	Minimum Spacing (m)	Minimum Height (m)
PE	2.0	2.0
Steel	1.5	1.5
Copper	1.0	1.0
Aluminum	0.5	0.5

Material	Minimum Spacing (m)	Minimum Height (m)
PE	2.0	2.0
Steel	1.5	1.5
Copper	1.0	1.0
Aluminum	0.5	0.5



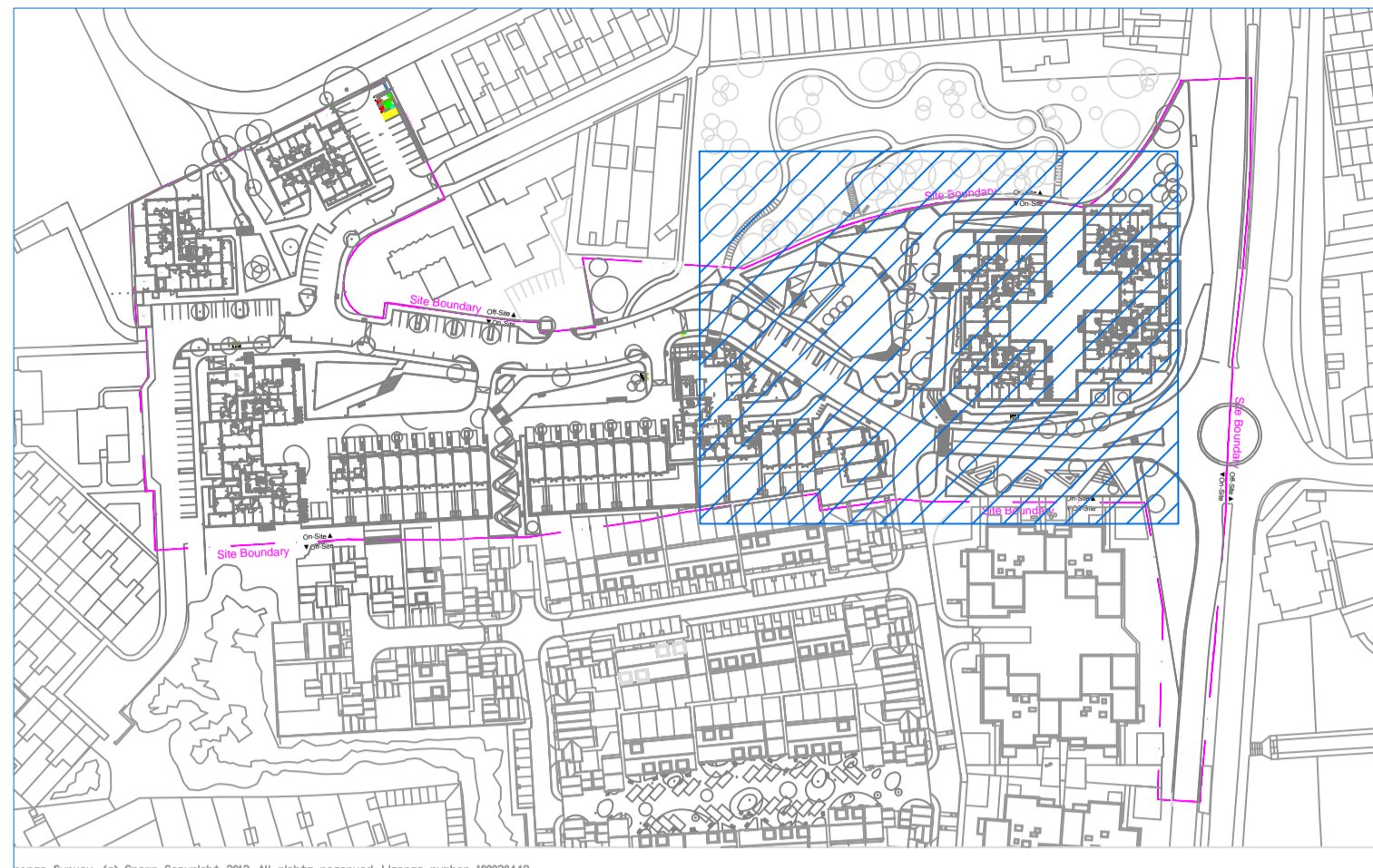
ISEP 1 - Network Design:	
Mains Design Pressure and Velocity	
Source Pressure	25 mBar
Peak Flow	91.0 m ³ /hr
Minimum Velocity	0.38 m/s
Minimum Pressure	22.34 mBar
Pressure Drop	2.66 mBar
Parent Man Operator	315mm PE
Parent Man Dia	315mm
Parent Man Material	PE
Connection	Branch Saddle Connection
POC Coordinates	551564 177219
Downstream Main	125mm PE

ISEP 2 - Network Design:	
Mains Design Pressure and Velocity	
Source Pressure	24 mBar
Peak Flow	22.4 m ³ /hr
Minimum Velocity	7.86 m/s
Minimum Pressure	22.99 mBar
Pressure Drop	1.31 mBar
Parent Man Operator	315mm PE
Parent Man Dia	315mm
Parent Man Material	PE
Connection	63mm Top Outlet Service Tee
POC Coordinates	551330 177300
Downstream Main	63mm PE



Gas Network Design Drawing

Scale 1:100

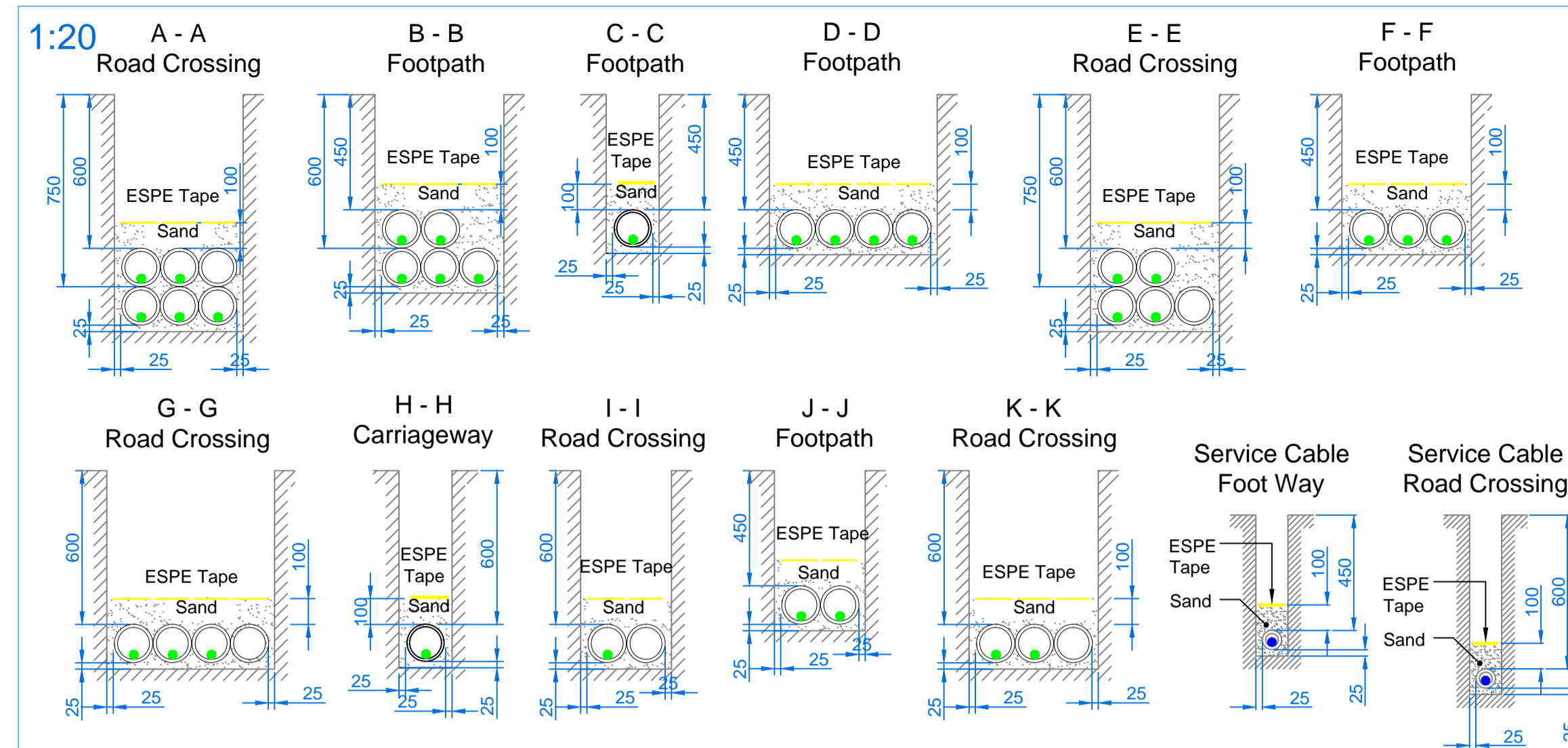


Key Plan

Site Address: Larner Road - Phase 2 Erith Park
London. DA8 3RH

Cable Installation Data			
Cable Type	Max Pulling Tension	Minimum Bending Radius	Minimum Duct Size
300mm ² Al Waveform 3c	7000N	850mm	125mm
185mm ² Al Waveform 3c/ LSOH	7000N	700mm	125mm
185mm ² Al Waveform 4c/ LSOH	7000N	800mm	125mm
95mm ² Al Waveform 3c/ LSOH	3000N	550mm	125mm
95mm ² Al Waveform 4c/ LSOH	3000N	600mm	125mm
35mm ² Al Hybrid 1Ph /LSOH	Manual	125mm	50mm
35mm ² Al Hybrid 3Ph /LSOH	Manual	210mm	50mm

Cable Data

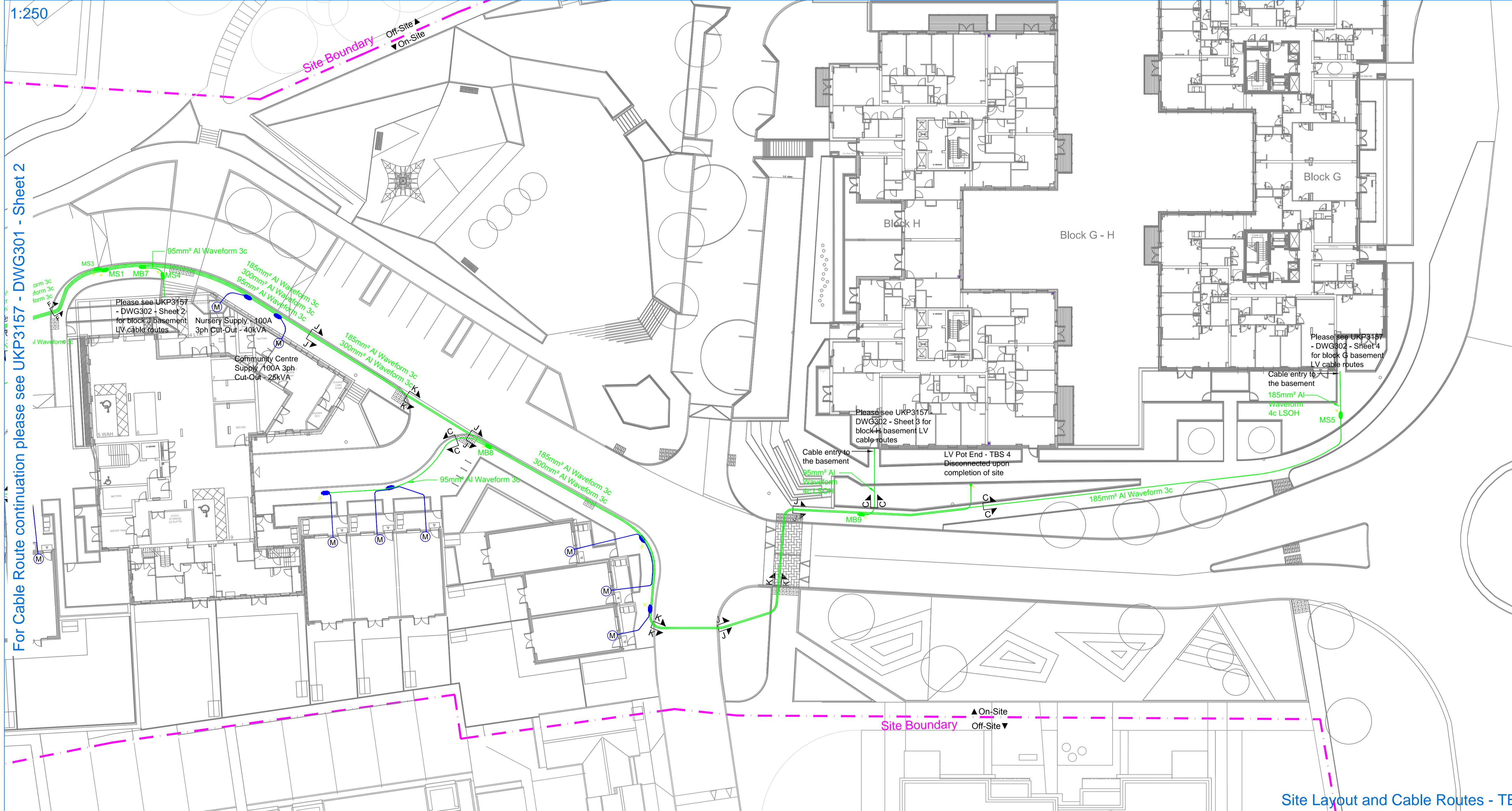


Trench Cross Sections

Excavation, installation of ducting/warning Tape and reinstatement will be carried out in accordance with the ESPE G81 and NRSWA requirements.

Sections service cable apply to all relevant service cable areas

Legend	
	New LV Cable
	Service Cable
	HV Point of Connection
	LV Breech Joint
	LV Straight Joint
	Pot End
	Service Joint
	Metering Point
	Site Boundary
	DNO Equipment
	Earthing
	MSDB
	Streetlight
	HDCO



Site Layout and Cable Routes - TBS

For Project Scope and Material Specifications, please refer to UKP3157 - iDNO Project Information Document

1	LV cable route amendment	21/08/15	GJ
REV	AMENDMENT	DATE	BY
River View House Bonds Mill Estate Stonehouse Gloucestershire GL10 3RF			
Client	Wates		
Project	Larner Road - Phase 2		
Title	Site Layout and Cable Routes - iDNO		
Planning Engineer	Jonathan Stock	Contact No	08452 577 105
Project Manager	Antony Harding	Contact No	08452 577 105
Drawn By	CH	Checked By	AF
Date	05/03/2015		
Scale	As Shown	Sheet No.	3/3
Original Size	A1		
Drawing No.	UKP3157 - DWG301		Rev
			1
For Design Approval			

Not for Construction

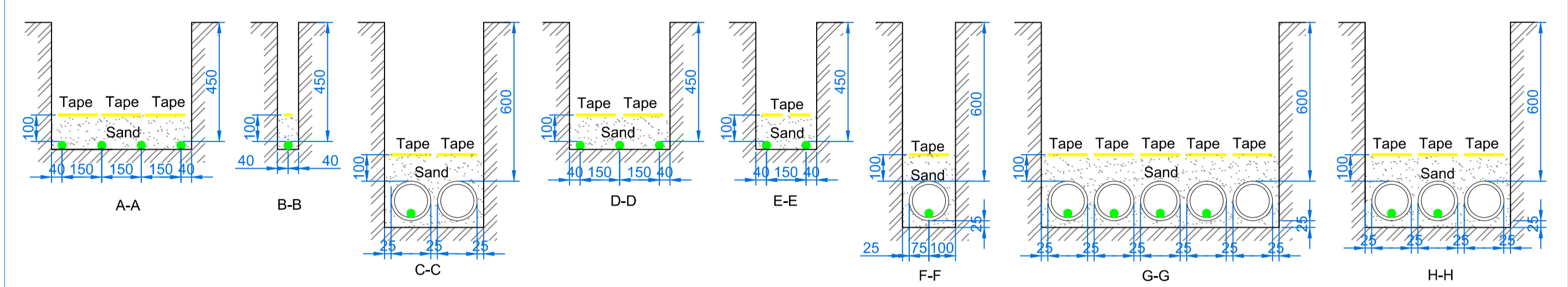
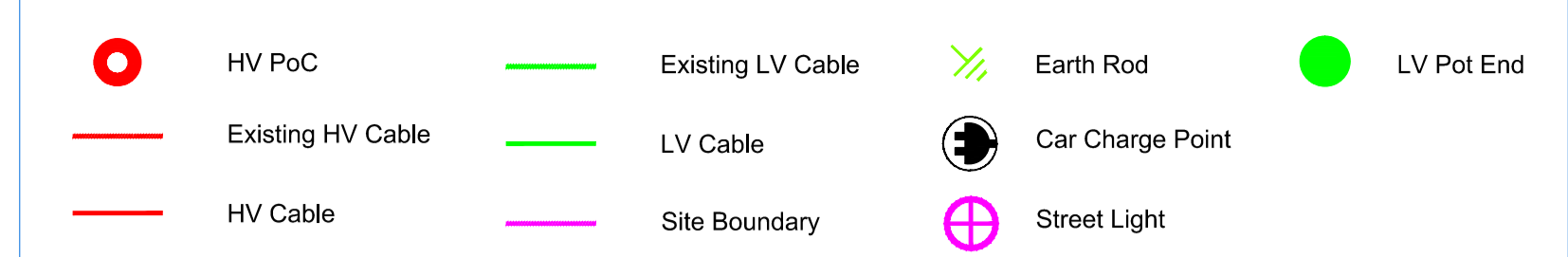
● Site

Site Address: Larner Road, Erith DA8 3RH

NOTE:
For cable installation phasing see UKP1326 - DWG306 to DWG311.
This drawing is to be read in conjunction with UKP1326 - DWG201 to DWG206.

Material Specification			
Material	Specification	Supplier	Standard
Substation	Transformer LV Fuse Cabinet 6 way Pillar 1 MVA Transformer 11/0.433kV, Unit	Schneider	ENATS 37-02 ENATS 35-01
Fuses	92mm Industrial Fuse-Link 630A	Cooper Bussmann	BS88
Ducting	125mm Twin Walled Rigidduct	Polytype	ENATS 12-24
Tile Tape	Tile Tape for use up to 22kV	Centriforce	04040C
LV Mains Cable	300mm ² Al Waveform	Prysmian	BS7870
	185mm ² Al Waveform		
	95mm ² Al Waveform		
Service Cable	35mm ² Al Hybrid 1ph	Prysmian	BS7870
	35mm ² Al Hybrid LSOH 1ph & 3ph		
Joints	Service Joints	Sicame Electrical	BS7888
	300-95mm ² LV Breech Joints		
Cut Out	100A Single Phase CutOut	WT Henleys	BS7657
MSDB	24, 15, 10 Way 1J & 2J MSDBs with Removable Link	Lucy	-
LV Earthing	70mm Copper	-	-
Earthing	Earth Rod	-	-
Earthing	UKPN Spec. Earth Nest	As per DNO spec.	TBC

LV Cable Installation Data				
Cable Type	Max Pulling Tension	Minimum Bending Radius (On Route)	Minimum Bending Radius (At Term)	Minimum Duct Size
300mm ² Al Waveform	7000N	850mm	850mm	125mm
185mm ² Al Waveform	7000N	700mm	680mm	125mm
95mm ² Al Waveform	3000N	550mm	510mm	125mm
35mm ² Al Hybrid	Manual	125mm	-	50mm



Cable Trench Cross Sections

Scope:
UK Power Solutions are to provide a new supply from a HV PoC to a new development at Larner Road, Erith, London DA8 3RH

Supply Capacity & Loads:
A capacity of 1000kVA has been reserved and is available at the UKPN point of connection.
The calculated demand for the development at Larner Road is 940kVA and has been derived from the following demands:
140 x Houses @ 2kVA - 280kVA
203 x Apartments @ 1.5kVA - 305kVA
8 x Landlord Supplies @ 10kVA - 80kVA
1 x Energy Centre Supply @ 160kVA
34 x Street Lights @ 0.1kVA - 3.4kVA
1 x Home Zone Feeder Pillar @ 8.7kVA
16 x Car Charging Points @ 7.7kVA - 131kVA
2x Temporary Building Supplies @ 300kVA & 500kVA

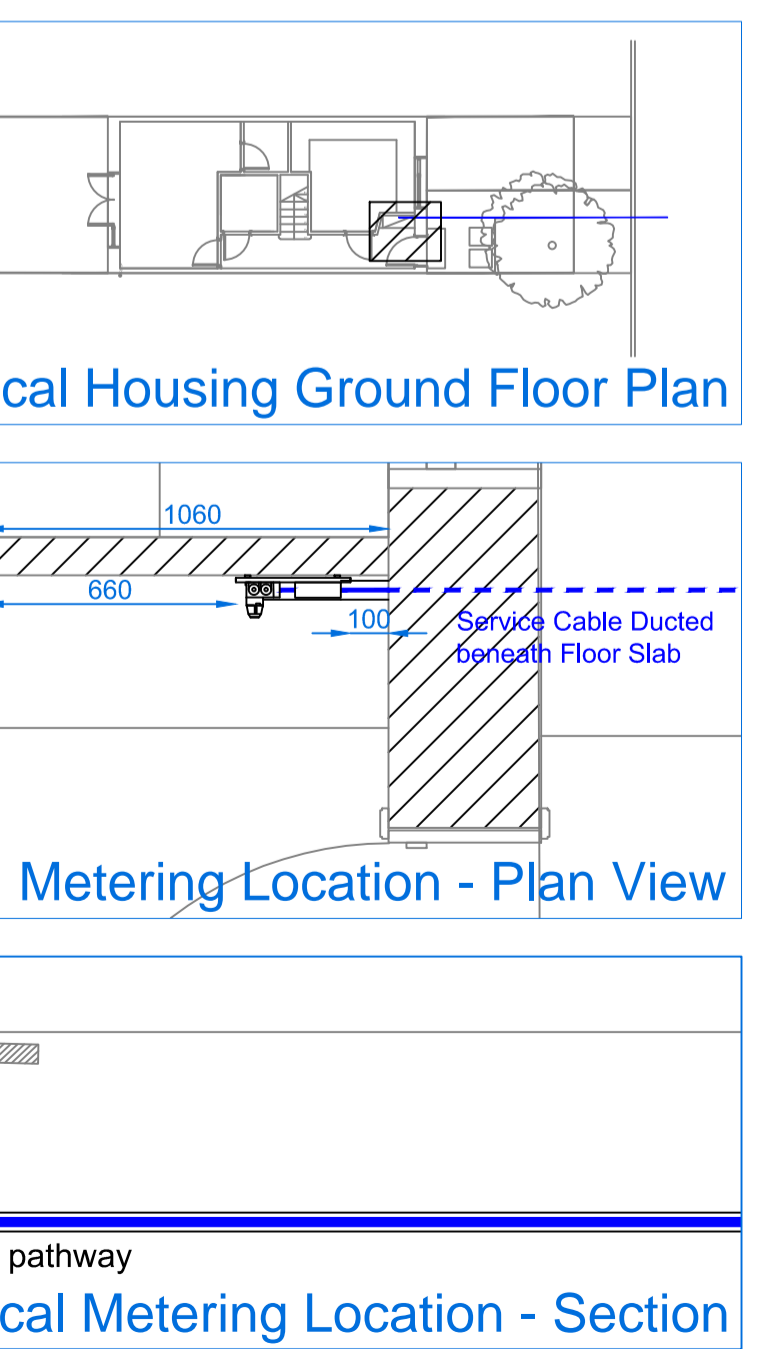
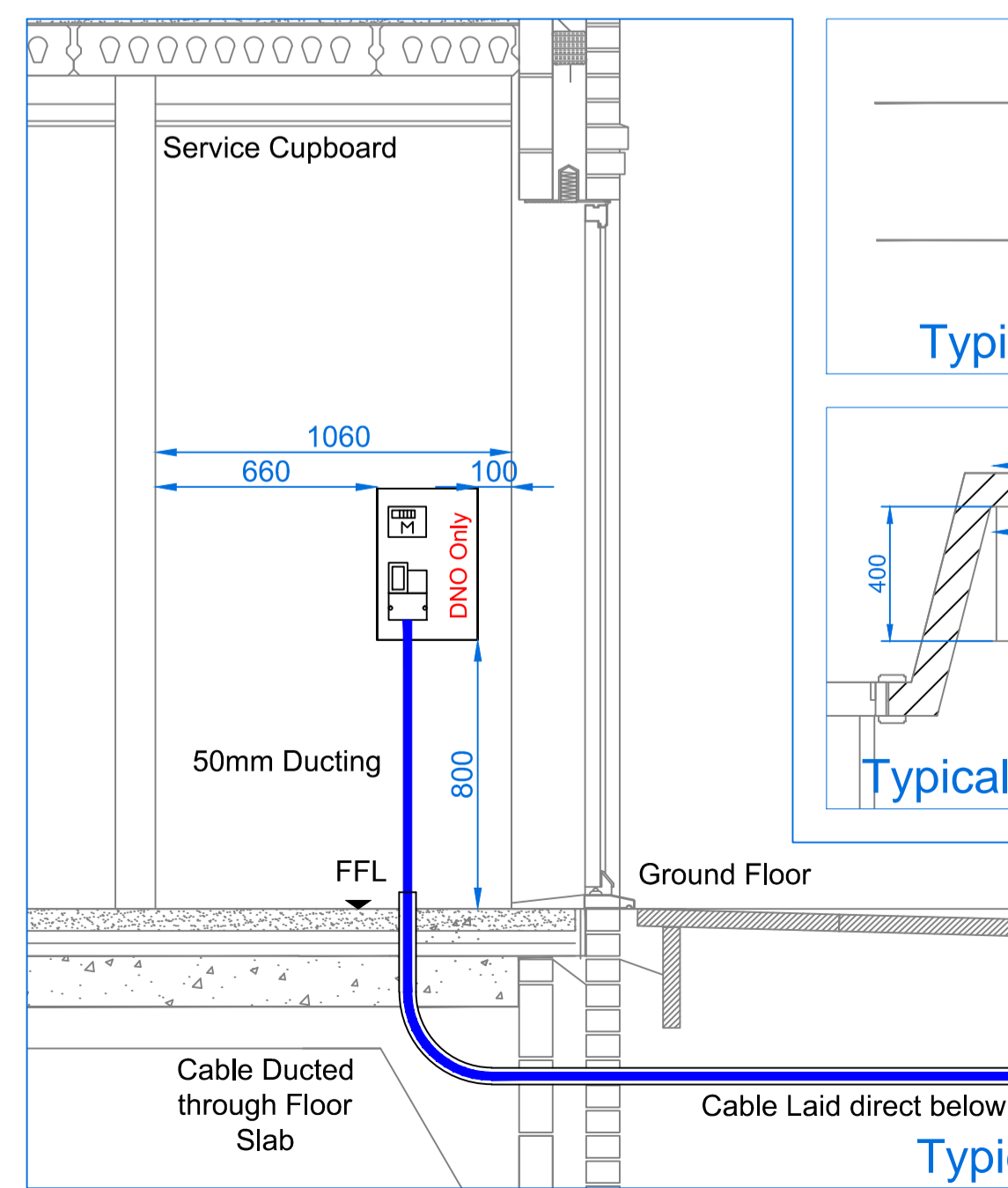
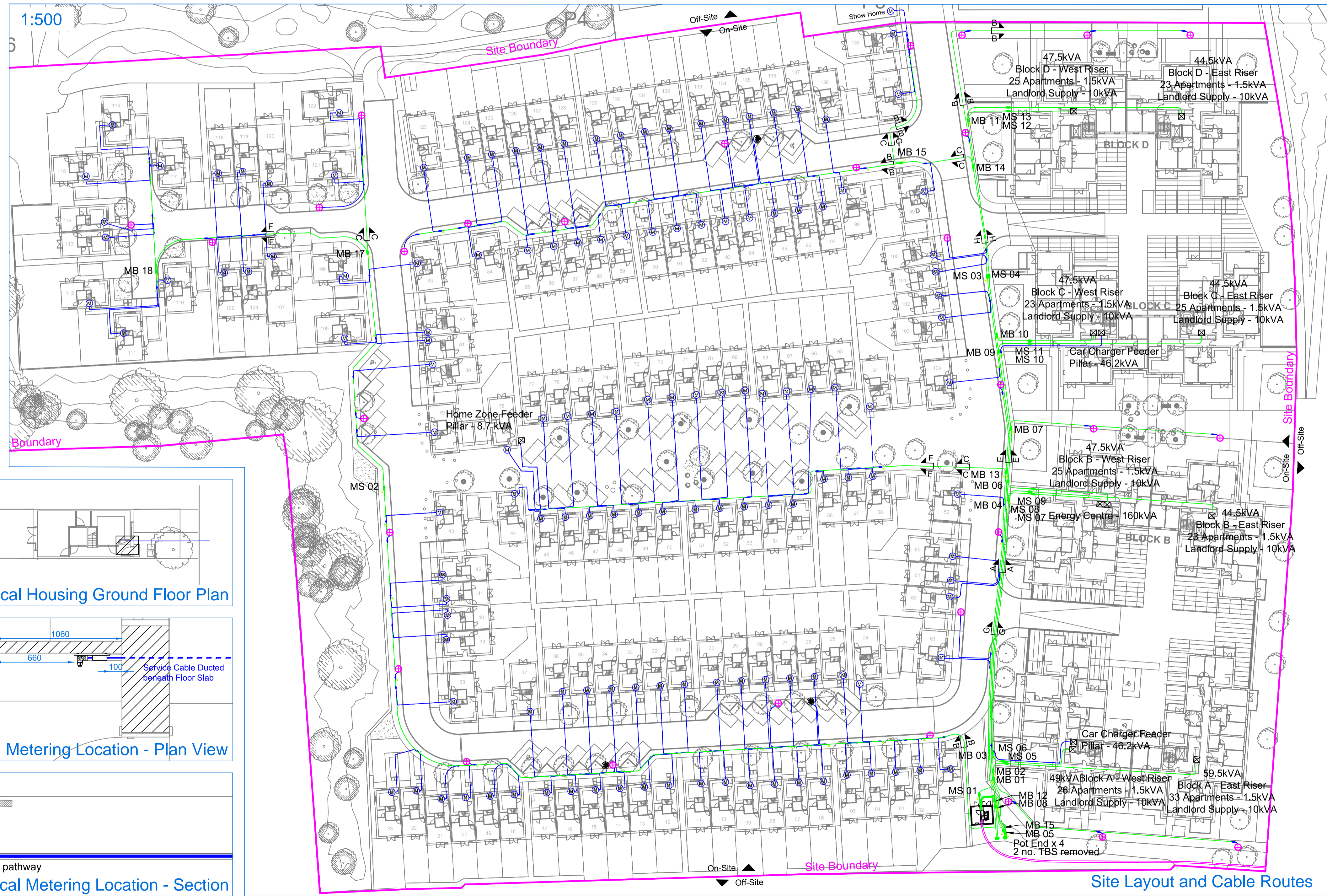
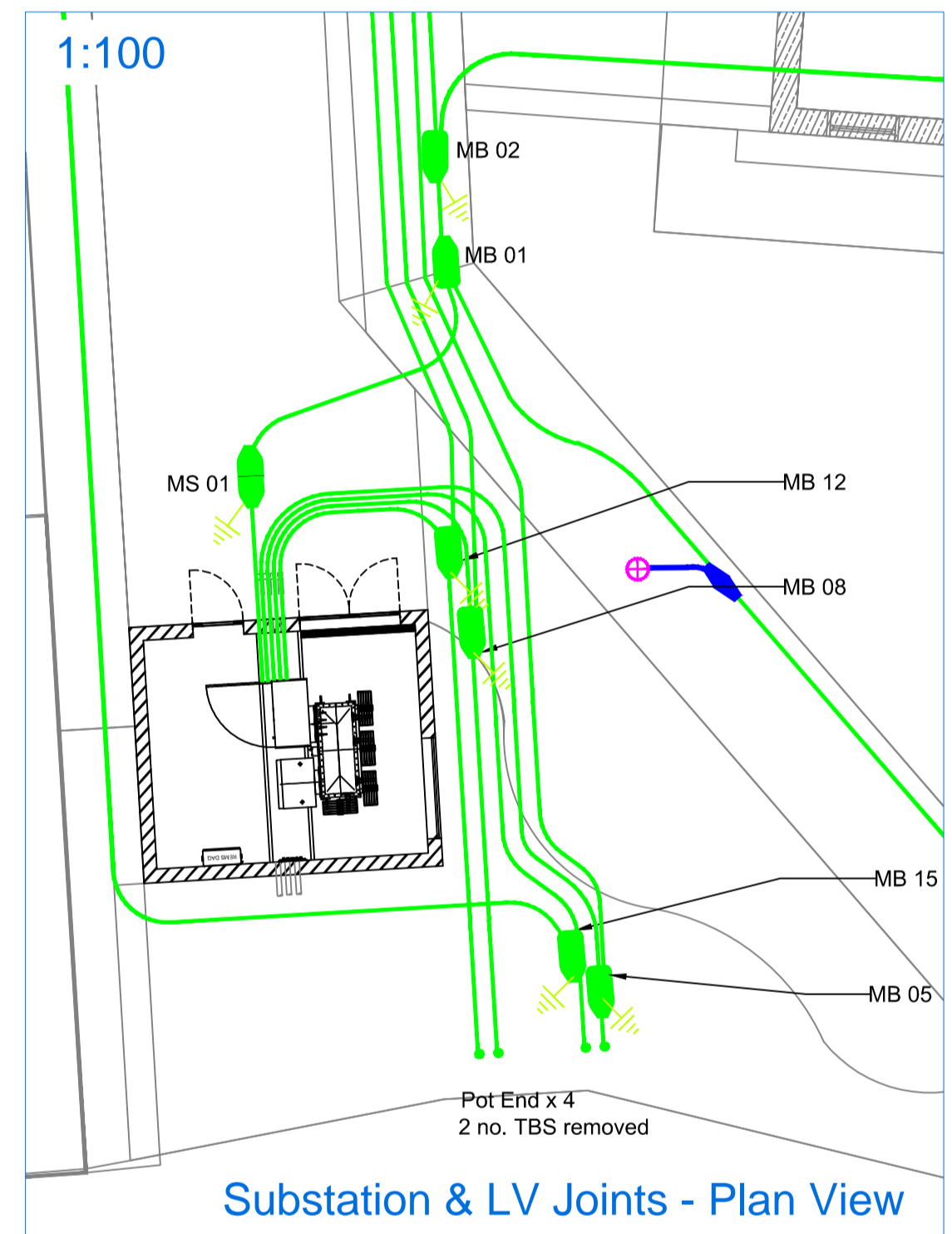
Supply Exit Points:
The supply exit point of the TBS supplies will be the outgoing terminals of the customers Service Termination Cubicle MCCB and will be CT metered via a WAGO metering unit.
The supply exit points of the housing, apartments landlord supplies and street light feeder pillar will be the outgoing terminals of the 100A 1ph & 3ph cut-outs and will be whole current metered.
The supply exit point of the energy centre landlord supply will be the outgoing terminals of the 400A Heavy Duty Cut-Out and will be CT metered.

Disturbing Loads:
Please refer to UKP1326 - DWG200

HV Point of Connection:
The HV Point of Connections shall be made via to a Looped connection for the new iDNO owned substation.
Grid Reference: TQ5177SW
ESPipeline Reference: ESPE0417
UKPN Ref: 401232444

LV Cable:
300, 185, 95mm² 3-Core Al waveform & 35mm² Al Hybrid Cable will be utilised to install throughout the LV Network. All LV cable will be installed according to the relevant trench cross section detail.

Temporary Building Supply:
2 no. TBS of 400kVA will be provided.
The supply exit point of the TBS will be the outgoing terminals of the service termination cubicle

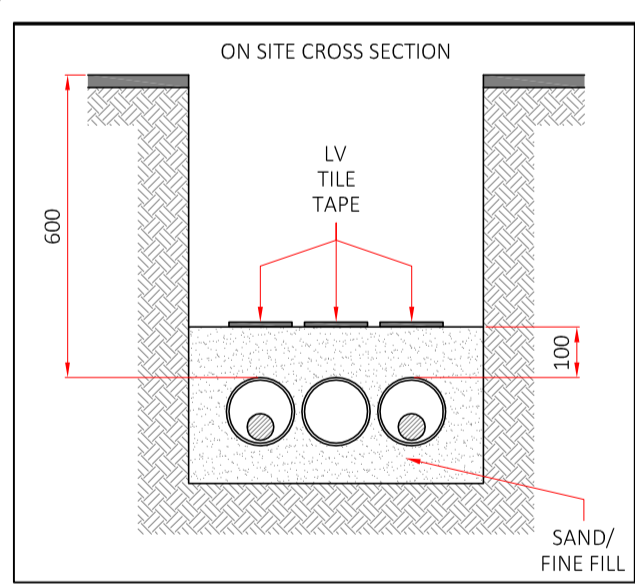
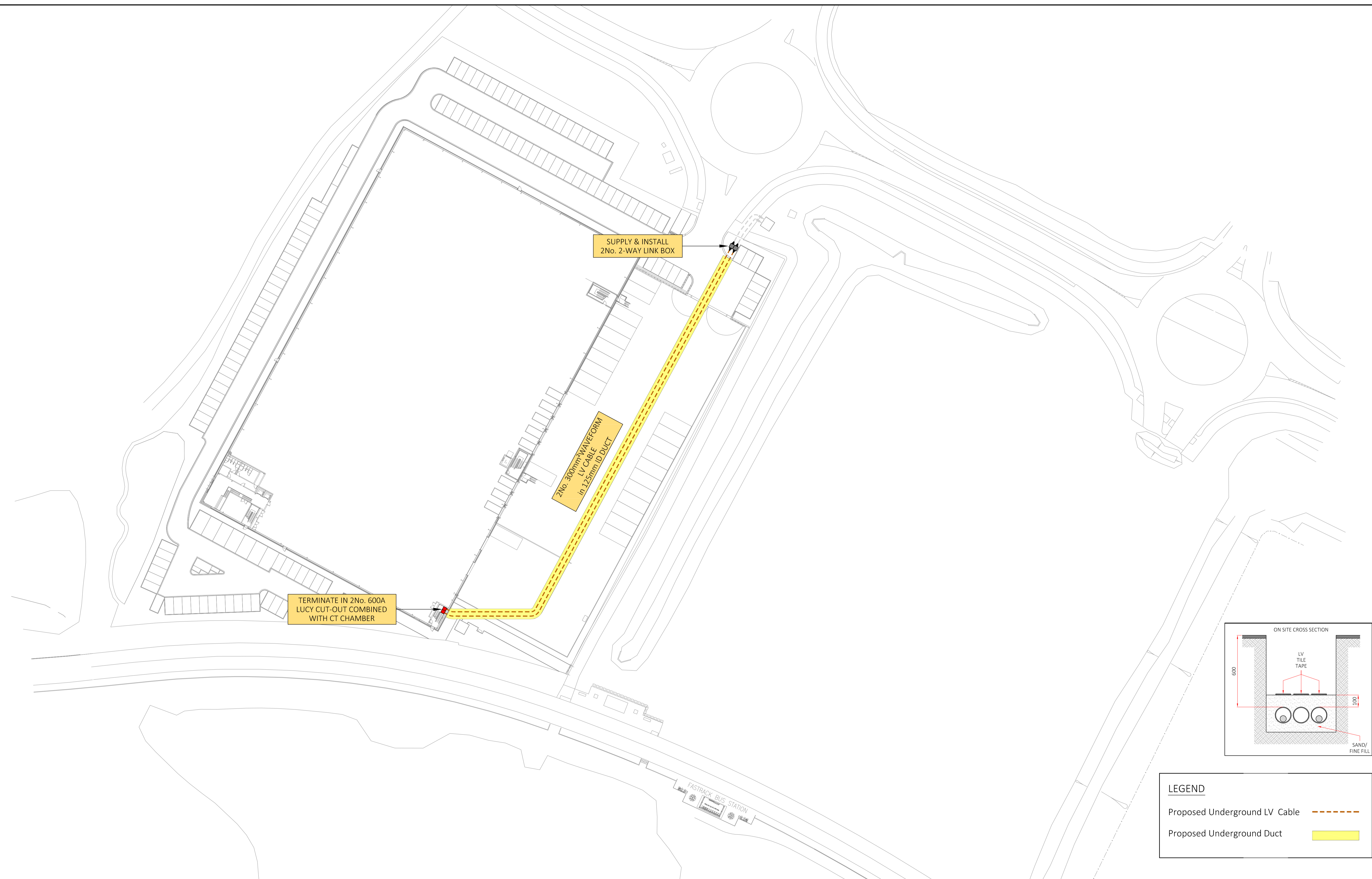
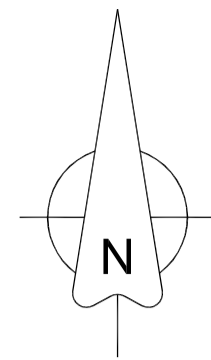


REV	AMENDMENT	DATE	BY
7	LV Route Amended	06/05/15	CH
6	LV Route Amended	16/03/15	JS
5	LV Route Amended	05/03/15	CH
4	Design Approved	25/09/13	CH
3	Block C Riser Amendments	14/08/13	KT
2	TBS Relocated	21/07/13	JS
1	Cut-out Locations Verified	28/06/13	JR

UKPOWER SOLUTIONS

River View House
Bonds Mill Estate
Stonehouse
Gloucestershire
GL10 3RF

Client	Wates			
Project	Larner Road			
Title	Site Layout & Cable Route			
Planning Engineer	Jonathan Stock	Contact No.	01453 793964	
Project Manager	TBC	Contact No.	TBC	
Drawn By	CH	Checked By	AW	
Scale	As Shown	Sheet No.	1/1	
Original Size	A1	Date	29/05/2013	
Drawing No.	UKP-EC-SITE-61-301		Rev	7
Drawing Status	Design Approved			



LEGEND	
Proposed Underground LV Cable	-----
Proposed Underground Duct	██████████

Site Address:

Notes:

Rev:	Date:	Details:	Eng:	Chk'd:



Matrix Networks LTD
6500 Daresbury Park
Warrington
Cheshire
WA4 4GE
Tel: 0844 7400074
Fax: 0844 7400075

• electricity • water • gas • telecoms • renewables

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Client: WINVIC CONSTRUCTION			
IDNO: ESP ELECTRICITY			
Drawn By: JLR	App: -	SCALE @ A1	1:500
Eng: JB	Date: 25.02.14	SCALE @ A3	1:1000
Status: FOR APPROVAL			

Drawing Title: LITTLEBROOK MANOR WAY DARTFORD PROPOSED LV DESIGN - IDNO	
Drg No: MN209080-JB-003	Rev: P1

CEMHD Policy - Land Use Planning
NSIP Consultations
Building 2.2, Redgrave Court
Merton Road, Bootle
Merseyside, L20 7HS

Your ref: EN010093
Our ref: 4.2.1.6203
HSE email: NSIP.applications@hse.gov.uk

FAO Hannah Pratt
The Planning Inspectorate
Bristol
BS1 6PN
By e-mail

15/12/17

Dear Ms Pratt

**PROPOSED RIVERSIDE ENERGY PARK (the project)
PROPOSAL BY CORY ENVIRONMENTAL HOLDINGS LIMITED (the applicant)
INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 (as amended) – Regulations 10 and 11**

Thank you for your letter of 28th November 2017 regarding the information to be provided in an environmental statement relating to the above project. HSE does not comment on EIA Scoping Reports but the following information is likely to be useful to the applicant.

HSE's land use planning advice

Will the proposed development fall within any of HSE's consultation distances?

The red line indicative application boundary of the development falls with the consultation zones of:

Littlebrook D Power station (HSE ref H3052)
Henkel Ltd. (HSE ref H3322)
Nufarm UK Ltd Crabtree Manorway (HSE ref H0260)
Calor Gas, Burts Wharf Industrial Estate (HSE ref H4298).

HSE may advise against the development depending on what was proposed within the consultation zones.

There are currently no pipelines within the development. If in the intervening period we are notified of a change to this situation, the Applicant would need to seek advice from us.

Hazardous Substance Consent

The presence of hazardous substances on, over or under land at or above set threshold quantities (Controlled Quantities) may require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. The substances, alone or when aggregated with others, for which HSC is required, and the associated Controlled Quantities, are set out in The Planning (Hazardous Substances) Regulations 2015.

Hazardous Substances Consent would be required if the site is intending to store or use any of the Named Hazardous Substances or Categories of Substances and Preparations at or above the controlled quantities set out in schedule 1 of these Regulations.

Explosives sites

HSE has no comment to make as there are no licensed explosive sites in the vicinity.

Waste

In respect of waste management the applicant should take account of and adhere to relevant health and safety requirements. More details can be found on HSE's website at: <http://www.hse.gov.uk/waste/index.htm>.

Electrical Safety

No comment from a planning perspective

Please send any further electronic communication on this project directly to the HSE's designated e-mail account for NSIP applications. Alternatively any hard copy correspondence should be sent to:

Mr Dave Adams (MHPD)
NSIP Consultations
2.2 Redgrave Court
Merton Road, Bootle,
Merseyside L20 7HS

Yours sincerely,



Dave Adams
(CEMHD4 Policy)

From: [Gregory, Andree](#)
To: [Riverside Energy Park](#)
Cc: [REDACTED]
Subject: #4118 Response EIA Scoping Report EN010093-00004 Riverside Energy Park, Normal Road, North Belvedere, DA17 6JY
Date: 15 December 2017 12:19:26

For the attention of: Hannah Pratt

Site: Riverside Energy Park, Normal Road, North Belvedere, DA17 6JY

Development: EIA Scoping Report

Your Reference No: EN010093-00004

Highways England's Ref No: 5266

Dear Hannah Pratt,

Thank you for your consultation letter dated 28th November 2017 on the above EIA scoping request for an integrated Energy Park consisting of complementary energy generating development, with an electrical output of up to 96 megawatts, together with a new connection to the existing electricity network and provision for Combined Heat and Power readiness. Highways England has been appointed by the Secretary of State for Transport as strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the strategic road network (SRN). The SRN is a critical national asset and as such Highways England works to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

Highways England have no comment on whether an EIA is required; but if it is (or is produced voluntarily), it should be compatible and consistent with the Transport Assessment and also contain information on all transport related effects including noise, vibration and air quality.

In the case of this proposed development, Highways England is interested in the potential impact that the development might have upon the M25, in particular Junction 1A. We are interested as to whether there would be any adverse safety implications or material increase in queues and delays on the strategic road network as a result of development.

The method of assessment for the EIA should be in line with Highways England's recommended method of drawing upon the information presented in the required Transport Assessment.

Highways England should also be included in the discussions for the Transport Assessment scope. We are happy to attend any meetings. Any assessment should be undertaken in accordance with the DfT Circular 02/2013 "The Strategic Road Network and the Delivery of Sustainable Development" outlining how Highways England will engage with developers including assessment

requirements to deliver growth and safeguard the operation of the SRN. This includes a robust assessment of the vehicular impacts “with” and “without” development for the horizon year (full occupation) and the end of the Local Plan period to examine the net impact of non-consented development. Any modelling will also need to accurately reflect the Local Plans of neighbouring authorities.

We would be happy to liaise with the applicant’s consultants in particular in advance of their submission of Transport Scope.

I trust you find these comments useful. Please do not hesitate to contact me if you require further information

Andree Gregory

Spatial Planning Administrator

Tel: +44 (0) 300 470 1256

Highways England | Bridge House | 1 Walnut Tree Close | Guildford | Surrey | GU1 4LZ

Web: <http://www.highways.gov.uk>

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[england](https://www.gov.uk/government/organisations/highways-england) | info@highwaysengland.co.uk

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Historic England

Our ref: PL00237362

Hannah Pratt
Senior EIA and Land Rights Advisor
The Planning Inspectorate
3D Eagle Wing
Temple Quay House
2 The Square
Bristol BS1 6PN

By email: RiversideEP@pins.gsi.gov.uk

20 December 2017

Dear Sir/Madam

Consultation on EIA scoping report for Development Consent Order for Riverside Energy Park

Thank you for consulting Historic England on the EIA scoping report for the Development Consent Order for the Riverside Energy Park.

As the Government's statutory adviser, Historic England is keen to ensure that conservation and enhancement of the historic environment is fully taken into account at all stages and levels of the planning process. Accordingly, we have reviewed this consultation in the context of the National Planning Policy Framework (NPPF) and its core principle that heritage assets be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life for this and future generations.

In broad terms, we welcome the approach to historic environment considerations set out in the scoping report and consider that this is an appropriate and proportionate assessment of the likely significant effects of the development. We would, however, make the following detailed comments on the text.

We welcome the identification of the Crossness Conservation Area, associated listed buildings and Lesnes Abbey as heritage assets potentially affected by the development within table 7.5.1. While we note that the proposed development is at some distance from these assets and that the local area has been predominantly industrial in character for some time, we would suggest that the assessment of any effects on the setting of these assets is underplayed in the methodology as set out.

In terms of table 7.5.2, we note that visual impacts affecting Lesnes Abbey have been included. It is not however apparent if views affecting the Crossness conservation area and



Historic England, 4th Floor, Cannon Bridge House, Dowgate Hill, London EC4R 2YA
Telephone 020 7973 3700 Facsimile 020 7973 3001
HistoricEngland.org.uk

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Correspondence or information which you send us may therefore become publicly available.



the listed buildings within it will form part of this assessment. If this is not the case, we recommend that they should be included.

We also recommend that potential effects on the setting of the conservation area should be reflected in the assessment methodology – the conservation area is an important component of townscape character and should be explicitly referenced at paragraph 7.5.18. The London Borough of Bexley’s conservation area appraisal and management plan will help establish the significance and sensitivities of these assets and should be referenced in the environmental statement.

Historic England would recommend that the methodology for assessing setting reflects the Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (<https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/>). We would encourage the adoption of the staged approach to the assessment of setting as outlined at paragraph 12 of our advice. This document should also be reflected at paragraph 7.5.31 of the scoping document.

Paragraph 7.6.1 indicates that a desk-based assessment and a geo-archaeological statement will form part of the Historic Environment Chapter. We recommend that this text is amended to include reference to archaeological field surveys and evaluations should they prove necessary.

Section 7.6.7 lists sources to be consulted for the archaeological desk-based assessment report. We recommend that this is extended to include Local Studies Library and any other readily accessible evidence held elsewhere. Section 7.6.13 lists the potential scope of ground impact work represented by the scheme – we would suggest the addition of possible attenuation tanks. We suggest that table 7.6.2 be amended to refer to the *significance* of heritage assets in relation to direct and indirect impacts. This would reflect the terminology of the NPPF.

Finally, we note that the proposed development straddles administrative boundaries. We would therefore stress that it will be important to engage with relevant historic environment expertise at local government level as the proposals progress.

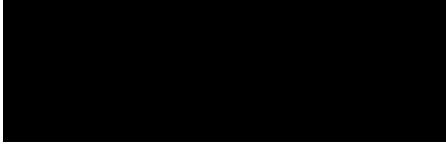
Please note that this advice is based on the information that has been provided to us and does not affect our obligation to advise on, and potentially object to any specific development proposal which may subsequently arise from these documents, and which may have adverse effects on the environment.



Historic England

I trust these comments are helpful. Please do not hesitate to contact me should you require any further information or clarification.

Yours sincerely



Tim Brennan MRTPI

Historic Environment Planning Adviser

E-mail: tim.brennan@HistoricEngland.org.uk

DD: 020 – 7973 3744



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Hannah Pratt
EIA & Land Rights Advisor – Environmental
Services Team
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Environment, Planning & Enforcement

Invicta House
County Hall
MAIDSTONE
Kent ME14 1XX

Phone: 03000 419618
Ask for: Alexander Payne
Email: alexander.payne@kent.gov.uk

BY EMAIL ONLY

21 December 2017

Dear Ms Pratt,

Re: Proposed application for the granting of a Development Consent Order (DCO) for the Riverside Energy Park, Belvedere

Thank you for your letter dated 28 November 2017, providing Kent County Council (KCC) with the opportunity to inform the Secretary of State on the information to be provided in the Environmental Statement (ES) relating to the proposed Riverside Energy Park (REP), Belvedere.

The County Council has reviewed the Scoping Report submitted by the applicant and for ease of reference, provides a commentary structured under the chapter headings used in the report.

4.5 Local Planning Policy and Guidance

The application boundary shown in Appendix B includes parts of Kent and includes roads such as the A206 Bob Dunn Way and Rennie Drive for which Kent is the Local Highway Authority. Accordingly, all KCC policies should therefore be referenced in Chapter 4, such as the Local Transport Plan 4: Delivering Growth Without Gridlock.

7.2 Transport

Highways and Transportation

Paragraph 7.2.8 (p28) states “the majority of impacts are only likely to affect the immediate local area and delivery routes.” However, KCC advises that the nearest point of access to the A282/M25 strategic road network is on local roads through Kent, including the A206 Bob Dunn Way. Therefore, there is likely to be an impact on this route which may require assessment, particularly given that even a modest increase in traffic (especially HGVs) will have a substantial impact on traffic conditions and the associated environmental impacts. There is a significant amount

of planned development within the boundary of Dartford Borough Council (DBC), which needs to be taken into account as part of the cumulative assessment.

The assessment of the transport related environmental effects follows the correct guidance, as noted in paragraphs 7.2.9-11 (p28-29). However, KCC requests that the applicant considers the impacts on the links through Kent's road network to Junction 1A of the M25, as it is likely these will be used by a significant proportion of the traffic associated with the development, in order to access the strategic road network.

Whilst paragraph 7.2.15 (p29) states that the industry standard software TEMPRO will be used to forecast traffic growth, KCC has found that for recent planning applications in Dartford, the model underestimates the quantum of development set out in DBC's Core Strategy (2011). KCC requests confirmation that Dartford's high levels of growth are to be correctly forecasted as part of the assessment of this proposal.

The transporting of goods using the River Thames during the construction and operational phases is supported, although there is some uncertainty regarding the split between river and road transport during the operational phase. Whilst there is a target for 75% of all trips to and from the site to use river transport during the operational phase, there is still uncertainty regarding the use of the river and the proposed sensitivity test assuming 100% of trips by road, is essential.

Public Rights of Way (PRoW)

The Indicative Zoning Plan indicates that the proposed development is unlikely to have a significant impact on Kent's PRoW network, as the site is located in the neighbouring London Borough of Bexley (LBB). However, the Electrical Connection Route (ECR) Option Two passes through the KCC boundary and would likely affect the following PRoWs: DB1, DB2, DB3, DB5, DB8, DB50 and DB56.

The Scoping Report states that this ECR would be predominantly routed along the existing road network and underground; however the impacts of this connection on the PRoW network would still need to be considered. This element of the project has the potential to cause severe disruption to the PRoW network and path users during the construction phase of the project. KCC requests that the applicant will need to consider the potential effects of the project on the PRoW network and its users, by assessing the noise, air quality, drainage and visual impacts. Moreover, PRoW users should be considered when identifying the sensitivity receptors.

During the pre-construction phase, excavation works may be required to evaluate ground conditions. The results of these investigations may influence and determine the final design of the project, but the process of collecting the data may cause disruption to PRoW network. Consequently, KCC requests that consideration be given to the impacts on the PRoW network during the pre-construction design stage of the project, in addition to the construction and operational phases.

In order to monitor path use before, during and after the construction phase of the project, it is requested that people counters are installed on PRoW network at key

gateway locations. Data obtained from these counters can be used to assess the impact of the project. KCC recommends that electronic people counter sensors are installed (instead of manual surveys) as these counters will be able to operate 24 hours a day and capture sporadic path users.

Temporary path closures may be required during the construction phase so that engineering works can be completed safely. KCC recommends path closures are minimised and popular routes are kept open where possible. Where temporary closures are required, convenient diversion routes should be provided to reduce disruption to path users. Robust information boards explaining temporary access restrictions should be considered for paths that will be closed for long periods. The KCC PRoW & Access Service would be happy to discuss the process for temporarily closing paths with the applicant.

Path extinguishments and long term severance of routes should be avoided, in order to prevent fragmentation of the PRoW network. Important access links between residential neighbourhoods, industrial employment areas, community facilities and open green space for outdoor recreation, should be preserved.

The County Council is currently working in partnership with Natural England to establish the England Coast Path. This is a new national trail walking route that will eventually circumnavigate the entire English coastline. These Coastal Access rights are likely to be in effect during the construction phase of this project, as the Coast Path is scheduled for completion by 2020.

The intention is to align the trail alongside the River Thames but the Coast Path may have to be aligned further inland towards Dartford as there is no pedestrian crossing infrastructure at the mouth of the River Darent. The applicant should therefore engage with Natural England (who is leading on the development of the England Coast Path) and consider the impacts on the new national trail.

The KCC PRoW & Access Service would welcome future engagement with the applicant to discuss the potential impacts and consider appropriate mitigation to ensure that the PRoW network is not adversely affected by the development.

7.6 Historic Environment

Only part of the development is within the KCC boundary and therefore the comments below relate to the associated impacts in this area.

In reference to paragraph 7.6.2 (p43), KCC recommends a review of the Kent Historic Environment Record (HER) to ensure all of the most up to date fieldwork assessments are considered. The Littlebrook Power Station site has been subject to several phases of fieldwork by Museum of London Archaeology.

KCC considers the suggested sources of data list in paragraph 7.6.7 (p44) for the Desk Based Assessment (DBA) are too limited. The Kent HER must be consulted, as well as recent geotechnical reports for nearby development schemes in Kent. There also needs to be a detailed review of early OS maps and documentary accounts, LiDAR, aerial photographs and any other geophysical surveys nearby.

The proposed method to undertake an archaeological DBA and a separate geo-archaeological Statement is welcomed. However, the geo-archaeological issues may be of greater significance and KCC requests a full geo-archaeological DBA is undertaken, including advice from relevant specialists. There have been several phases of geo-archaeological work undertaken within this area and all of these will need to be referenced with clear assessment of the potential impact of the proposed development.

The geo-archaeological assessment will need to include baseline geological data, topographical data and review and consideration of geotechnical and geophysical work. The reporting needs to provide a Deposit Model clearly showing the predicted deposits of archaeological interest based on a robust assessment of existing data and the proposed impact of the development. KCC recommends that any geotechnical fieldwork undertaken is inclusive of specialist geo-archaeological fieldwork. The results of the geo-archaeological assessment of geotechnical surveys will also hopefully be incorporated into the main geo-archaeological assessment. The results should also be clearly demonstrated in the Deposit Model.

The Heritage Assessment would need to include consideration of historic landscapes as KCC considers it insufficient to refer historic landscape issues in the Townscape and Visual Impact Assessment (TVIA) section. Although much of the development seems to be within the built environment, there are Kent HER suggestions of former historic landscape features and the study of early OS maps suggests there is potential for historic footpaths, banks and ditches to be encountered, as well as possible Bronze Age barrows and Anglo-Saxon boundary banks. As such, KCC recommends the need for a Historic Landscape Assessment to be completed and it should be incorporated into the Historic Environment section and not the TVIA section.

7.7 Terrestrial Biodiversity

As the majority of the proposed development is outside of KCC's boundary, comments are provided for the part of ECR Option Two at the Littlebrook Power Station. Currently, the Scoping Report focuses on the surveys that are to be carried out within the London Borough of Bexley boundary and there is no reference to the potential impacts in and around the Littlebrook Power Station site, should this connection point be chosen.

The range of surveys that have been listed within the report are comparable to the surveys that may have to be completed at Littlebrook Power Station site. KCC has previously commented on a Scoping Opinion for the Littlebrook Power Station site, in which surveys carried out on the site have identified the following:

- A population of reptiles was found in different areas of the development site;
- A small population of water voles was recorded in Little Powder Creek, which runs adjacent to the site to the west;
- Three Schedule 1 bird species were present on site: Black Redstart, Peregrine Falcon and Cetti's Warbler (although the Black Redstart and

Peregrine Falcon are likely to be nesting on the buildings which are not in the redline boundary of this application);

- Bat activity transects identified low levels of foraging activity; and
- A good diversity of invertebrates was present on site.

Any proposed construction work at the Littlebrook Power Station site would need to be informed by detailed up to date survey information. Similarly, the connection route between the two sites would have to require, at a minimum, an Ecological Scoping Survey to be carried out, to ensure any ecological impacts associated with that work can be mitigated.

7.10 Hydrology, Flood Risk and Water Resources

Consultation will need to be undertaken with KCC as the Lead Local Flood Authority for the part of ECR Option Two that is located within the boundary of Dartford Borough Council and the applicant will need to give consideration to Dartford Surface Water Management Plan – Stage 2 (Nov 2016)¹.

Within section 7.10 (p65-73) of the Scoping Report, there has been an intensive assessment of the impact upon surface water drainage and water quality for both the construction and operational phases. However, there is no mention of KCC as Lead Local Flood Authority or of the KCC Drainage and Planning Policy Statement (June 2017)². Despite the majority of the site falling within the London, KCC would recommend that reference is made to the Drainage and Planning Policy Statement for consideration of drainage submissions to support the DCO.

As part of the Flood Risk Assessment, any identified flood risk or surface water management issues should be appropriately considered, with appropriate mitigation recommended wherever necessary.

Minerals and Waste

The Scoping Report does not explicitly discuss the mineral and waste impacts of the proposed development; however, the proposed development has significant ramifications for waste management in both London and Kent. KCC understands that the waste input would come entirely from London and that materials, having been sourced, segregated and transported from transfer stations to the Riverside Energy Park (REP) facility, would be used for energy recovery. This is in line with the waste hierarchy requirements, as detailed in the National Planning Policy for Waste 2014 (NPPW).

The County Council regards this as an appropriate way to manage London's waste, provided that the non-organic residual wastes from commercial and industrial and Local Authority Collected Waste streams are incapable of further reuse or recycling.

¹ <https://www.kent.gov.uk/about-the-council/strategies-and-policies/environment-waste-and-planning-policies/flooding-and-drainage-policies/surface-water-management-plans/dartford-surface-water-management-plan>

² <https://www.kent.gov.uk/about-the-council/strategies-and-policies/environment-waste-and-planning-policies/flooding-and-drainage-policies/surface-water-management-plans/dartford-surface-water-management-plan>

This does not apply to the organic fractions that are proposed to be recycled via anaerobic digestion technology. The use of photovoltaics, district heating systems and a battery storage component to supplement electrical power to the grid during high peak demand periods are all positive sustainable elements of the proposed development that is supported by the County Council.

The Kent Minerals and Waste Local Plan 2013-30 (KMWLP) was adopted in July 2016. It includes specific sustainable waste management objectives (Policy CSW1: Sustainable Development) and the strategy for waste management in Kent is to ensure sufficient capacity for Kent to maintain net self-sufficiency in managing waste arisings and includes some residual non-hazardous waste from London (Policy CSW 4: Strategy for Waste Management Capacity).

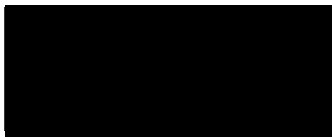
The proposed REP would make a positive contribution to ensuring that more of London's waste is managed within London; enabling Kent's waste management capacity to address Kent's needs to help achieve net self-sufficiency over the plan period. Furthermore, the proposal is entirely in line with similar objectives of the London Plan to attain net self-sufficiency in waste management (Policy 5.16 p206), as well as the emerging London Plan (Policy S18, p347).

KCC is responsible for safeguarding all the economic minerals within Kent, to prevent them from being sterilised by other forms of development. The ECR Option Two passes through a Mineral Safeguarding Area (MSA) as defined in the KMWLP. The economic mineral deposits in this MSA are the Sub-Alluvial River Terrace Deposits and River Terrace Deposits. The DCO application will need to include a Minerals Assessment to address the safeguarding issue and demonstrate compliance with Policy DM 7 of the KMWLP. This policy sets out criteria that may be appropriate to justify an exemption from the KMWLP's presumption to safeguard important economic mineral resources.

The Minerals and Waste Planning Policy Team would be happy to discuss any mineral and waste issue further on 03000 413376 or mwlp@kent.gov.uk.

KCC would welcome further opportunities to engage throughout the progression of the DCO. If you require further information or clarification on any matter in this letter, then please do not hesitate to contact KCC.

Yours sincerely,

A black rectangular box redacting the signature of Katie Stewart.

Katie Stewart

Director for Environment, Planning and Enforcement

Development Management

Civic Offices

2 Watling Street, Bexleyheath, Kent, DA6 7AT

Tel: 020 8303 7777 Fax: 0203 045 5817

DX31807 Bexleyheath www.bexley.gov.uk

m/r 17/02902/ALA

y/r EN010093-000004

Tel 020 3045 5771

date 29th November 2017

The person dealing with this matter is

Mr M Watling

(e-mail- Mark.Watling@bexley.gov.uk)

Cory Riverside Energy

C/o The Planning Inspectorate

Contact: Hannah Pratt,

3D Eagle Wing

Temple Quay House

2 The Square

Bristol BS1 6PN

Dear Sir/Madam

TOWN AND COUNTRY PLANNING ACTS

Riverside Energy Park, Belvedere (The Planning Inspectorate, Bristol)

Application by Cory Environmental Holdings Limited for an Order granting development consent for the Riverside Energy Park for the Secretary of State's opinion as to the information to be provided in an Environmental Statement relating to the proposed development.

I acknowledge receipt of your details received on 28th November 2017 requesting observations on the above proposal.

I would advise you that I am undertaking a consultation exercise regarding this proposal and I will endeavour to reply within the specified period. For your information the application was recorded in our records under reference 17/02902/ALA.

Please contact my assistant on the above telephone number if you have any queries.


Head of Development Management

From: [Landsearches](#)
To: [Riverside Energy Park](#); [Landsearches](#)
Subject: RE: Riverside Energy Park - EIA Scoping notification and consultation
Date: 28 November 2017 13:56:52
Importance: High

Good Afternoon

We have forwarded your email as per below, we received this morning to our Planning Department.

Please send future emails and correspondents to planning@havering.gov.uk

Kind Regards

Janet Commons | Local Land Charges Assistant

London Borough of Havering | Local Land Charges
Town Hall, Main Road, Romford, RM1 3BD

t 01708 432474

e janet.common@havering.gov.uk

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[Please click here](#) to vote – and as a thank you from the Awards organisers you will be entered into a prize draw to win £50 worth of M&S vouchers

From: Riverside Energy Park [mailto:RiversideEP@pins.gsi.gov.uk]
Sent: 28 November 2017 10:25
To: Landsearches
Subject: Riverside Energy Park - EIA Scoping notification and consultation

FAO: Head of Highways

Dear Sir/Madam

Please see attached correspondence on the proposed Riverside Energy Park.

Please note the deadline for consultation responses is 26 December 2017. This deadline is a statutory requirement that has been triggered by submission of the Applicant's scoping report and cannot be extended.

Kind regards,
Hannah

Hannah Pratt

Senior EIA and Land Rights Advisor
Major Applications and Plans
The Planning Inspectorate, 3D, Temple Quay House, Temple Quay, Bristol,
BS1 6PN

Direct Line: 0303 444 5001
Helpline: 0303 444 5000
Email: Hannah.pratt@pins.gsi.gov.uk

Web: <https://infrastructure.planninginspectorate.gov.uk/> (National
Infrastructure Planning)
Web: www.gov.uk/government/organisations/planning-inspectorate (The
Planning Inspectorate)

Twitter: [@PINSgov](https://twitter.com/PINSgov)

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Ms. Hannah. Pratt
Senior EIA and Lands Right Advisor
Major Plans and Applications
The Planning Inspectorate
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Temple Quay, Bristol
BS1 6PN

London Fire and Emergency Planning
Authority runs the London Fire Brigade

Date 14 December 2017
Our Ref 93/177121
Your Ref EN010093-000004

Dear Hannah

FIRE AUTHORITY CONSULTATION

Premises: RIVERSIDE ENERGY FROM WASTE FACILITY, NORMAN ROAD, BELVEDERE, DA17 6JY

With reference to planning application **EN010093-000004**, requesting advice in respect of the above-mentioned premises, please refer to the comments below.

Pump appliance access and water supplies for the fire service were not specifically addressed in the supplied documentation, however they do appear adequate. In other respects this proposal should conform to the requirements of part B5 of Approved Document B.

Any queries regarding this letter should be addressed to the person named below. If you are dissatisfied in any way with the response given, please ask to speak to the Team Leader quoting our reference. If there are any specific fire safety matters about which you are concerned or you have any queries regarding this letter, please contact the person named below. If you are dissatisfied in any way with the response given, please ask to speak to the Team Leader quoting our reference.

Yours faithfully,

for Assistant Commissioner (Fire Safety)

Directorate of Operations
FSR-AdminSupport@london-fire.gov.uk

Reply to Matthew Arnold
Direct T 07342026168

The London Fire Brigade promotes the installation of sprinkler suppression systems, as there is clear evidence that they are effective in suppressing and extinguishing fires; they can help reduce the numbers of deaths and injuries from fire, and the risk to firefighters.



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Organisation

Marine Licensing
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Hannah Pratt
Senior EIA and Land Rights Advisor
The Planning Inspectorate
3D Eagle Wing, Temple Quay House
2 The Square,
Bristol, BS1 6PN.

Your reference: EN010093-000004
Our reference: DCO/2017/00008

[By email only]

21 December 2017

Dear Ms Pratt,

Formal Scoping Request under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 for the proposed Riverside Energy Park Development.

Thank you for your scoping request on 28 November 2017 and for providing the Marine Management Organisation (the "MMO") with the opportunity to comment on the Riverside Energy Park scoping request.

Please find attached the scoping opinion of the MMO. In providing these comments, the MMO has sought the views of our technical advisors at the Centre for Environment, Fisheries and Aquaculture Science (Cefas) and the MMO's Coastal Office (Eastern Area).

In providing our advice the MMO has reviewed the following chapters/sections:

- 2 – Proposed Development
- 3 – The Site and the Surrounding Area
- 7.8 – Marine Biodiversity
- 7.9 – Marine Geomorphology

If you require any further information, please do not hesitate to contact me using the details provided below.

Yours sincerely,

Jamie Short
Marine Licensing Case Officer

D +44 (0)20822 56469
E jamie.short@marinemanagement.org.uk

Enclosed: MMO Scoping Opinion: Riverside Energy Park Development
Copies to: Tim Fay (MMO), Jamie McPherson (MMO)



The MMO's role in Nationally Significant Infrastructure Projects

The MMO was established by the Marine and Coastal Access Act 2009 (the "2009 Act") to make a contribution to sustainable development in the marine area and to promote clean, healthy, safe, productive and biologically diverse oceans and seas.

The responsibilities of the MMO include the licensing of construction works, deposits and removals in English inshore and offshore waters and for Welsh and Northern Ireland offshore waters by way of a marine licence¹. Inshore waters include any area which is submerged at mean high water spring ("MHWS") tide. They also include the waters of every estuary, river or channel where the tide flows at MHWS tide. Waters in areas which are closed permanently or intermittently by a lock or other artificial means against the regular action of the tide are included, where seawater flows into or out from the area.

In the case of Nationally Significant Infrastructure Projects ("NSIPs"), the 2008 Act enables Development Consent Order's ("DCO") for projects which affect the marine environment to include provisions which deem marine licences².

As a prescribed consultee under the 2008 Act, the MMO advises developers during pre-application on those aspects of a project that may have an impact on the marine area or those who use it. In addition to considering the impacts of any construction, deposit or removal within the marine area, this also includes assessing any risks to human health, other legitimate uses of the sea and any potential impacts on the marine environment from terrestrial works.

Where a marine licence is deemed within a DCO, the MMO is the delivery body responsible for post-consent monitoring, variation, enforcement and revocation of provisions relating to the marine environment. As such, the MMO has a keen interest in ensuring that provisions drafted in a deemed marine licence ("dML") enable the MMO to fulfil these obligations.

Further information on licensable activities can be found on the MMO's website³. Further information on the interaction between the Planning Inspectorate and the MMO can be found in our joint advice note⁴.

¹ Under Part 4 of the 2009 Act

² Section 149A of the 2008 Act

³ <https://www.gov.uk/planning-development/marine-licences>

⁴ <http://infrastructure.planningportal.gov.uk/wp-content/uploads/2013/04/Advice-note-11-v2.pdf>

Scoping Opinion

Title: Riverside Energy Park

Applicant: Cory Riverside Energy

MMO Reference: DCO/2017/00008

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1. Proposal

- 1.1. Riverside Energy Park (REP) is proposing the development of a new integrated Energy Park, located in Belvedere in the London Borough of Bexley. This will be known as 'Riverside Energy Park', and would be sited adjacent to an existing Energy Recovery Facility.
- 1.2. The site will combine a waste Energy Recovery Facility, battery storage, a roof-mounted solar photovoltaic installation, an anaerobic digestion facility and provision for CHP readiness. A new connection to the existing electricity network will be required. The marine elements of the Riverside Energy Park proposal include:
 - Dredging to ensure sufficient vessel access
 - Installation of a temporary causeway across the intertidal zone, where self-propelled multi-axle trailers would roll the construction modules off a barge
 - Use of a lift crane, located on either a jetty constructed in the river or near the river bank.

2. Scoping Opinion

- 2.1. Pursuant of Regulations 10 and 11 of the Planning Act 2008 (as amended) and the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ("the Regulations"), the Planning Inspectorate have requested a Scoping Opinion from the MMO. Scoping Report entitled "*Lower Thames Crossing, Scheme Number HE540039, Environmental Impact Assessment Scoping Report*" has been submitted to the MMO for review.
- 2.2. The MMO broadly agrees with the topics outlined in the Scoping Report and, in addition, we outline that the following aspects be considered further during the Environmental Impact Assessment (EIA) and must be included in any resulting Environmental Statement (ES).

3. Habitats Directive / Wild Birds Directive / Nature Conservation

- 3.1. Thames Estuary and Marshes Special Protection Area (SPA) - Although the MMO agrees that the distance between the planned worksite and this designated site is great enough (approximately 20km) that it can be screened out (and no other identified pathways to the designated site), we defer comment on this matter to Natural England.
- 3.2. Thames Estuary and Marshes Ramsar - Although MMO agree that the distance between the planned worksite and this designated site is great enough that it can be screened out, we defer comment on this matter to Natural England.
- 3.3. Inner Thames Marshes Site of Special Scientific Interest (SSSI) - The MMO welcomes the inclusion of this designated site in the scoping report and recommend that it is screened in unless sufficient evidence determines it can be screened out.

- 3.4. Thames Estuary recommended Marine Conservation Zone (rMCZ) - The MMO welcome the inclusion of this designated site in the scoping report and welcome that it is screened in unless sufficient evidence determines it can be screened out.

4. Marine Processes

- 4.1. The MMO notes that the possible effects of vessel wash should be considered where relevant as part of any future EIA.
- 4.2. Table 7.9.2 indicates that 'Changes to the wave climate' have been scoped out of the assessment. The MMO considers this reasonable, since the incident waves themselves will not be altered by the works.
- 4.3. Since the works described include either a jetty or a causeway, which would generate a wave shadow, the MMO would expect to see some consideration of wave impacts on the intertidal sediments as part of the EIA. The works have potential to alter local patterns of erosion or accretion around the structure.
- 4.4. The MMO notes that the document does not discuss the methods for identifying, gathering and analysing the additional data which will be required for the intended EIA. This will be required as part of the ES.

5. Benthic Ecology

- 5.1. The MMO notes that not all relevant impacts on benthic ecology have been scoped. The remobilisation of contaminated sediment due to the marine works has not been considered as a potential impact. If the marine works undertaken within the intertidal/subtidal include any dredging during high tide, then this impact must be scoped in.
- 5.2. Although justification has been provided where impacts have been scoped out, no detail on the construction of the causeway or jetty has been supplied. The MMO expects this to be included in any future ES.
- 5.3. The MMO considers the approach of the scoping assessment and data gathering methods (a dedicated grab survey along with a Phase 1 Intertidal habitat survey) to be appropriate.
- 5.4. The MMO can only provide comments on the limited information provided, taking into account that details on the construction proposed within the intertidal and subtidal areas have not been finalised, therefore we may have further comments to add as the proposals and supporting assessments develop.

6. Fish and Shellfish Ecology and Fisheries

- 6.1. The MMO notes that the scoping report correctly recognises that the Thames Estuary supports a diverse range of fish fauna including known spawning and nursery

grounds for herring, lemon sole, and Dover sole. Commercially important fish species are also identified as utilising the Thames Estuary for nursery areas including plaice, sprat and seabass. Further, conservation and migratory species such as short-snouted seahorse, long-snouted seahorse, European eel, European smelt, sea lamprey, Atlantic salmon, river lamprey and the twaite shad are also mentioned as species which inhabit and use the Thames Estuary.

- 6.2. The MMO considers the potential impacts on fish receptors from construction identified within the scoping report to be appropriate.
- 6.3. The MMO expects any EIA to consider seabass in the context of the special measures in place i.e. are any construction activities (such as piling and dredging) likely to disturb nursery grounds or juvenile fish.
- 6.4. The MMO advises that the effects of underwater noise and vibration on herring to be assessed appropriately in the EIA, due to the current state of the Thames herring stock.
- 6.5. The MMO recommends that the potential effects of the proposed development on sole are assessed, given that the Thames Estuary is a high intensity spawning and nursery ground for the species.
- 6.6. Thornback ray are one of the four main species Thames fisherman target and are included on the on the OSPAR List of threatened and/or declining species and habitats (OSPAR Agreement 2008-6) for OSPAR region II (Greater North Sea). Given the importance of the species in the Thames estuary, the MMO recommends that they are assessed in the EIA.
- 6.7. The project details in respect to marine construction, noise generating activities and potential cumulative effects are limited (which is to be expected at this scoping stage). Therefore, MMO recommends that the impacts detailed in Table 7.8.1 of the scoping report relating to fish receptors are not scoped out at this stage, and are instead taken forward for consideration.
- 6.8. The MMO recommends that noise disturbance as a result of vessel movements during the marine works, temporary habitat loss and change as a result of marine infrastructure, and light disturbance as well as remobilising contaminated sediment are also scoped in and considered in the EIA.
- 6.9. The scoping report has identified cockles (*Cerastoderma edule*), oysters (*Ostrea edulis*) and mussels (*Mytilus edulis*) as being present throughout the outer estuary, though MMO advises noise during the construction phase is unlikely to have an adverse impact. Dredging activity is mentioned as a possible method to ensure vessels can access the site throughout the tidal cycles during construction – sedimentation may therefore occur, though due to the oceanographic nature of the estuary and proximity of the shellfish, the MMO suggests this is unlikely to result in a significant impact.
- 6.10. The MMO note that although Cefas spawning maps (Coull et al., 1998 and Ellis et al., 2012) do not extend as far upstream as Belvedere, they may provide useful

information for the EIA, especially as the lower Thames estuary is important as a spawning and nursery ground for sole, seabass and herring. The Cefas young fish survey (<http://data.cefas.co.uk/#/Search/1/YFS>) provided indices of abundance of small demersal fish for several areas around the UK coastline including the Thames Estuary. The survey particularly targeted juvenile 0-group and 1-group plaice and sole, prior to their recruitment to the fishery and the survey time series concluded in 2010. This may provide useful information for juvenile fish in the vicinity of the proposed development. The historic survey series data is reviewed in both Rogers et al., (1998) and within a research project that analysed the data and produced a report in 2011; 'Trends in the inshore marine community of the east and south UK coast: 1970s to present'. The final report can be downloaded from http://randd.defra.gov.uk/Document.aspx?Document=MF1107_sid5_210611_final.pdf and project information and relative abundance maps are available from <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=16741>

- 6.11. The MMO note that The Cefas young fish survey (<http://data.cefas.co.uk/#/Search/1/YFS>) provided indices of abundance of small demersal fish for several areas around the UK coastline including the Thames Estuary. The survey particularly targeted juvenile 0-group and 1-group plaice and sole, prior to their recruitment to the fishery and the survey time series concluded in 2010. This may provide useful information for juvenile fish in the vicinity of the proposed development. The historic survey series data is reviewed in both Rogers et al., (1998) and within a research project that analysed the data and produced a report in 2011; 'Trends in the inshore marine community of the east and south UK coast: 1970s to present'. The final report can be downloaded from http://randd.defra.gov.uk/Document.aspx?Document=MF1107_sid5_210611_final.pdf and project information and relative abundance maps are available from <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=16741>
- 6.12. The MMO note that The Fish Atlas of the Celtic Sea, North Sea and Baltic Sea (Heessen et al., 2015) provides an overview of 40 years of information collected from internationally coordinated and national surveys to present data and information on the recent distribution and biology of demersal and small pelagic fish in these ecoregions. It may provide the applicant with a useful resource of information on fish receptors in the wider Thames estuary.

7. Noise and Vibration

- 7.1. The scoping report states (section 7.8.27) that 'with specific respect to the noise assessment, a logarithmic spreading model will be used to predict the propagation of sound pressure with range from any marine piling. This model is represented by a logarithmic equation and will incorporate factors for noise attenuation and absorption losses based on empirical data from coastal environments. This model has been advocated by the UK regulators in a number of EIAs for recent coastal developments. The application of this model is therefore considered appropriate for this study'. Further, 'a range of available published criteria will be used to assess the potential physiological and behavioural effects of underwater noise on marine mammals, fish

and shellfish (namely Southall et al. 2007; Hawkins et al. 2014; Popper et al. 2014; National Oceanic and Atmospheric Administration (NOAA), 2016;). Unpublished criteria, namely dBht (species) proposed by Nedwell et al. (2007), will also be used to provide context as this metric has been used in numerous past EIAs'. MMO support the use of these studies, and would encourage early engagement in order to ensure that any modelling undertaken is both appropriate and fit for purpose.

- 7.2. The MMO recommends that while information regarding marine construction works is very limited at this early stage (and therefore potential impacts of underwater noise on marine receptors are not fully explored), the potential impacts on fish, marine mammals, benthic species and shellfish must be taken forward for consideration, and not scoped out.

8. Seascape/Landscape

- 8.1. The MMO welcomes the inclusion of any Area of Outstanding Natural Beauty (AONB) in the assessment but would defer comment on this matter to Natural England.

9. Archaeology/Cultural Heritage

- 9.1. The MMO welcomes the inclusion of any heritage features in the assessment but would defer comment on this matter to Historic England.

10. Navigation/Other Users of the Sea

- 10.1. The MMO advises that impacts to navigation and other users of the sea are considered in the ES and a navigational risk assessment produced to inform final assessments.

11. Cumulative Impacts & In-Combination Impacts

- 11.1. The MMO advises that a robust assessment of the cumulative and in-combination impacts in all chapters to be considered.

12. Mitigation

- 14.1 Although the scoping report does consider some mitigation, for example "soft start procedures for marine piling and for employing seasonal restrictions on the marine works", once the potential impacts are better understood then more appropriate mitigation can be considered and implemented. Should any mitigation be identified during the assessment and reporting, then this should be fully detailed and considered within the ES.

13. General Comments

- 15.1 The MMO support the approach to scope aspects in until such a time where they can be scoped out of further assessment.
- 15.2 The MMO welcomes further consultation prior to anything within its remit being scoped out of further assessment.
- 15.3 Sensitive marine receptors that are not taken forward for assessment should be fully justified and supported in the report.

14. Conclusion

- 14.1. The topics highlighted in this scoping opinion should be assessed during the EIA process and the outcome of these assessments must be documented in the ES in support of the application for a Development Consent Order. This statement, however, should not necessarily be seen as a definitive list of all EIA requirements. Given the scale and program of these planned works, other work may prove necessary, especially as detailed design is further defined.

From: [Helen Croxson](#)
To: [Riverside Energy Park](#)
Cc: [REDACTED]
Subject: RE: Riverside Energy Park - EIA Scoping notification and consultation
Date: 20 December 2017 13:58:20

Dear Hannah,

Thank you for your letter dated 28th November 2017 regarding the proposed Riverside Energy Park (REP).

We note that in order to facilitate construction of the REP, temporary works in the River Thames may be required, and that the developers are currently exploring the options for this element of the project. Full details of the works to be carried out in the River Thames will need to be provided and we would expect subject to a Marine Licence from the Marine Management Organisation (MMO). The MCA is a statutory consultee to the MMO and will consider the impact the proposed works may have on the marine environment at that stage.

In addition, we note that these proposed marine works are likely to fall within the jurisdiction of the Port of London Authority (PLA) so thorough consultation will need to take place with the PLA and applications made for any port licences they may require. We would also like to point developers in the direction of the Port Marine Safety Code (PMSC). They will need to liaise and consult with the PLA to develop a robust Safety Management System (SMS) for the project under this code. The sections that we feel cover Navigational safety under the PMSC and its Guide to Good Practice are as follows:

From the Guide to Good Practice, section 7 Conservancy, a Harbour Authority has a duty to conserve the harbour so that it is fit for use as a port, and a duty of reasonable care to see that the harbour is in a fit condition for a vessel to be able to use it safely. Section 7.7 Regulating harbour works covers this in more detail and have copied the extract below from the Guide to Good Practice.

7.7 Regulating harbour works

7.7.1 Some harbour authorities have the powers to license works where they extend below the high watermark, and are thus liable to have an effect on navigation. Such powers do not, however, usually extend to developments on the foreshore.

7.7.2 Some harbour authorities are statutory consultees for planning applications, as a function of owning the seabed, and thus being the adjacent landowner. Where this is not the case, harbour authorities should be alert to developments on shore that could adversely affect the safety of navigation. Where necessary, consideration should be given to requiring the planning applicants to conduct a risk assessment in order to establish that the safety of navigation is not about to be put at risk.

Examples of where navigation could be so affected include:

- high constructions, which inhibit line of sight of microwave transmissions, or the performance of port radar, or interfere with the line of sight of aids to navigation;
- high constructions, which potentially affect wind patterns; and
- lighting of a shore development in such a manner that the night vision of

mariners is impeded, or that navigation lights, either ashore and onboard vessels are masked, or made less conspicuous.

There is a British Standards Institution publication on Road Lighting, BS5489. Part 8 relates to a code of practice for lighting which may affect the safe use of aerodromes, railways, harbours and navigable Inland waterways.

Finally, we would expect a full Navigation Risk Assessment to be carried out as part of the Environmental Statement, covering the construction, operation and decommissioning of the associated works in the marine environment, detailing the expected impact on the safety of navigation and appropriate supporting risk mitigation measures.

Kind regards

Helen

Helen Croxson
Acting OREI Advisor
Maritime and Coastguard Agency
Bay 2/25 Spring Place
105 Commercial Road
Southampton
SO15 1EG

Tel: 0203 8172426
Mobile: 07468353062
Email: Helen.Croxson@mcga.gov.uk

Please note I currently work Tuesdays, Wednesdays and Thursdays.

From: Riverside Energy Park [mailto:RiversideEP@pins.gsi.gov.uk]

Sent: 28 November 2017 10:18

To: 'NSIP.applications@hse.gov.uk' <NSIP.applications@hse.gov.uk>; 'barkdag.bdccg2@nhs.net' <barkdag.bdccg2@nhs.net>; 'GRECCG.NHSGreenwichCCG@nhs.net' <GRECCG.NHSGreenwichCCG@nhs.net>; 'bexccg.contactus@nhs.net' <bexccg.contactus@nhs.net>; 'dgs.ccg@nhs.net' <dgs.ccg@nhs.net>; 'consultations@naturalengland.org.uk' <consultations@naturalengland.org.uk>; 'info@london-fire.gov.uk' <info@london-fire.gov.uk>; 'enquiries@kent.fire-uk.org' <enquiries@kent.fire-uk.org>; 'enquiries@mopac.london.gov.uk' <enquiries@mopac.london.gov.uk>; 'contactyourpcc@pcc.kent.pnn.police.uk' <contactyourpcc@pcc.kent.pnn.police.uk>; Helen Croxson <Helen.Croxson@mcga.gov.uk>; 'marine.consents@marinemanagement.org.uk' <marine.consents@marinemanagement.org.uk>; 'airspace@caa.co.uk' <airspace@caa.co.uk>; 'planningSE@highwaysengland.co.uk' <planningSE@highwaysengland.co.uk>; 'boroughplanning@tfl.gov.uk' <boroughplanning@tfl.gov.uk>; 'NSIPconsultations@PHE.gov.uk' <NSIPconsultations@PHE.gov.uk>; 'offshoreNSIP@thecrownestate.co.uk' <offshoreNSIP@thecrownestate.co.uk>; 'DIO-Safeguarding-Statutory@mod.uk' <DIO-Safeguarding-Statutory@mod.uk>; 'dgs.ccg@nhs.net' <dgs.ccg@nhs.net>; 'ped@londonambulance.nhs.uk' <ped@londonambulance.nhs.uk>; 'enquiries@secamb.nhs.uk' <enquiries@secamb.nhs.uk>; 'TownPlanningSE@networkrail.co.uk' <TownPlanningSE@networkrail.co.uk>;

Please ask for: Doug Coleman
Tel: 01634 331587
Our Ref: MC/17/4113
Date: 1 December, 2017



Serving You

Planning Service
Physical & Cultural Regeneration
Regeneration, Culture, Environment &
Transformation
Civic Headquarters
Gun Wharf
Dock Road
Chatham
Kent ME4 4TR
Telephone: 01634 331700
Facsimile: 01634 331195
Email:
planning.representations@medway.gov.uk

H Pratt
Planning Inspectorate
3D Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Dear H Pratt,

**TOWN AND COUNTRY PLANNING ACT 1990
The Town and Country Planning (General Management Procedure) (England) Order
2015**

APPLICATION NUMBER: MC/17/4113

LOCATION: RIVERSIDE ENERGY PARK BELVEDERE LONDON

**PROPOSAL: Consultation from the Planning Inspectorate in relation to an
environmental impact scoping report for Riverside Energy Park**

Thank you for your consultation letter which was received on 28 November, 2017. I will endeavour to ensure that you receive this Council's comments as soon as is practicable. If for any reason a formal response cannot be made within 21 days of receipt of details, the Case Officer, as advised above, will contact you within that period.

If you wish to enquire about the progress of your application please visit our website
<http://publicaccess.medway.gov.uk/online-applications/>

. All documents and plans relating to this application will be published on the above website. You can also phone the Planning Customer Contact Team on 01634 331700

Yours sincerely

Doug Coleman
Planning Officer

**This letter is available in larger print size if required. For details please contact
Lisa Maryott on 01634 331102**



Ministry
of Defence

Defence Infrastructure Organisation

Safeguarding Department
Statutory & Offshore

Defence Infrastructure Organisation
Kingston Road
Sutton Coldfield
West Midlands
B75 7RL

Tel: +44 (0)121 311 3818 Tel (MOD): 94421 3818

Fax: +44 (0)121 311 2218

E-mail: DIO-safeguarding-statutory@mod.uk

www.mod.uk/DIO

21 December 2017

Hannah Pratt
The Planning Inspectorate
3D Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Your reference: EN010093-000004

Our reference: 10042133

Dear Hannah

MOD Safeguarding – SITE OUTSIDE SAFEGUARDING AREA (SOSA)

Proposal: Application by Cory Environmental Holdings Limited for an Order granting Development Consent for the Riverside Energy Park (the Proposed Development)

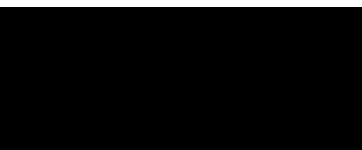
Location: Riverside Resource Recovery Ltd, Norman Road North, Belvedere DA17 6JY

Grid Ref: 549932, 180622

Thank you for consulting Defence Infrastructure Organisation (DIO) on the above proposed development. This application relates to a site outside of Ministry of Defence safeguarding areas. I can therefore confirm that the Ministry of Defence has no safeguarding objections to this proposal.

I trust this adequately explains our position on this matter.

Yours sincerely



Debbie Baker

Sent electronically to:

RiversideEP@pins.gsi.gov.uk

Nick Dexter
DCO Liaison Officer
Land & Business Support

Nicholas.dexter@nationalgrid.com

Tel: +44 (0)7917 791925

www.nationalgrid.com

18th December 2017

Dear Sir / Madam,

Ref: EN010093 - Riverside Energy Park - EIA Scoping notification and consultation

I refer to your letter dated 28th November 2017 in relation to the above proposed application for a Development Consent Order. Having reviewed the Scoping Report, I would like to make the following comments:

National Grid infrastructure within / in close proximity to the order boundary

Electricity Transmission

National Grid Electricity Transmission has high voltage electricity overhead transmission lines, substation and underground cables within or in close proximity to the proposed order limits. The overhead lines, substation and underground cables form an essential part of the electricity transmission network in England and Wales. The details of the electricity assets are shown below:

Overhead Lines

- ZR (400kV) overhead line route
- VN (275kV) overhead line route
- YL (400kV) overhead line route
- ZB (400kV) overhead line route

Substations

- Barking 1C 132kV Substation
- Barking 1G 132kV Substation
- Littlebrook 400kV Substation

Underground cables

There are numerous high voltage underground cables within or in close proximity to the proposed order limits

Please find enclosed a plan showing the location of National Grid's electricity assets.

Gas Transmission

National Grid Gas has no high pressure gas transmission pipelines located within or in close proximity to the proposed order limits.

Electricity Infrastructure:

- National Grid's Overhead Line/s is protected by a Deed of Easement/Wayleave Agreement which provides full right of access to retain, maintain, repair and inspect our asset
- Statutory electrical safety clearances must be maintained at all times. Any proposed buildings must not be closer than 5.3m to the lowest conductor. National Grid recommends that no permanent structures are built directly beneath overhead lines. These distances are set out in EN 43 – 8 Technical Specification for “overhead line clearances Issue 3 (2004).
- If any changes in ground levels are proposed either beneath or in close proximity to our existing overhead lines then this would serve to reduce the safety clearances for such overhead lines. Safe clearances for existing overhead lines must be maintained in all circumstances.
- The relevant guidance in relation to working safely near to existing overhead lines is contained within the Health and Safety Executive's (www.hse.gov.uk) Guidance Note GS 6 “Avoidance of Danger from Overhead Electric Lines” and all relevant site staff should make sure that they are both aware of and understand this guidance.
- Plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres of any of our high voltage conductors when those conductors are under their worse conditions of maximum “sag” and “swing” and overhead line profile (maximum “sag” and “swing”) drawings should be obtained using the contact details above.
- If a landscaping scheme is proposed as part of the proposal, we request that only slow and low growing species of trees and shrubs are planted beneath and adjacent to the existing overhead line to reduce the risk of growth to a height which compromises statutory safety clearances.
- Drilling or excavation works should not be undertaken if they have the potential to disturb or adversely affect the foundations or “pillars of support” of any existing tower. These foundations always extend beyond the base area of the existing tower and foundation (“pillar of support”) drawings can be obtained using the contact details above
- National Grid Electricity Transmission high voltage underground cables are protected by a Deed of Grant; Easement; Wayleave Agreement or the provisions of the New Roads and Street Works Act. These provisions provide National Grid full right of access to retain, maintain, repair and inspect our assets. Hence we require that no permanent / temporary structures are to be built over our cables or within the easement strip. Any such proposals should be discussed and agreed with National Grid prior to any works taking place.

- Ground levels above our cables must not be altered in any way. Any alterations to the depth of our cables will subsequently alter the rating of the circuit and can compromise the reliability, efficiency and safety of our electricity network and requires consultation with National Grid prior to any such changes in both level and construction being implemented.

To download a copy of the HSE Guidance HS(G)47, please use the following link:

<http://www.hse.gov.uk/pubns/books/hsg47.htm>

Further Advice

We would request that the potential impact of the proposed scheme on National Grid's existing assets as set out above and including any proposed diversions is considered in any subsequent reports, including in the Environmental Statement, and as part of any subsequent application.

Where any diversion of apparatus may be required to facilitate a scheme, National Grid is unable to give any certainty with the regard to diversions until such time as adequate conceptual design studies have been undertaken by National Grid. Further information relating to this can be obtained by contacting the email address below.

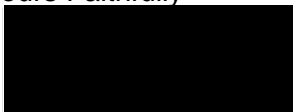
Where the promoter intends to acquire land, extinguish rights, or interfere with any of National Grid apparatus protective provisions will be required in a form acceptable to it to be included within the DCO.

National Grid requests to be consulted at the earliest stages to ensure that the most appropriate protective provisions are included within the DCO application to safeguard the integrity of our apparatus and to remove the requirement for objection. All consultations should be sent to the following email address: box.landandacquisitions@nationalgrid.com

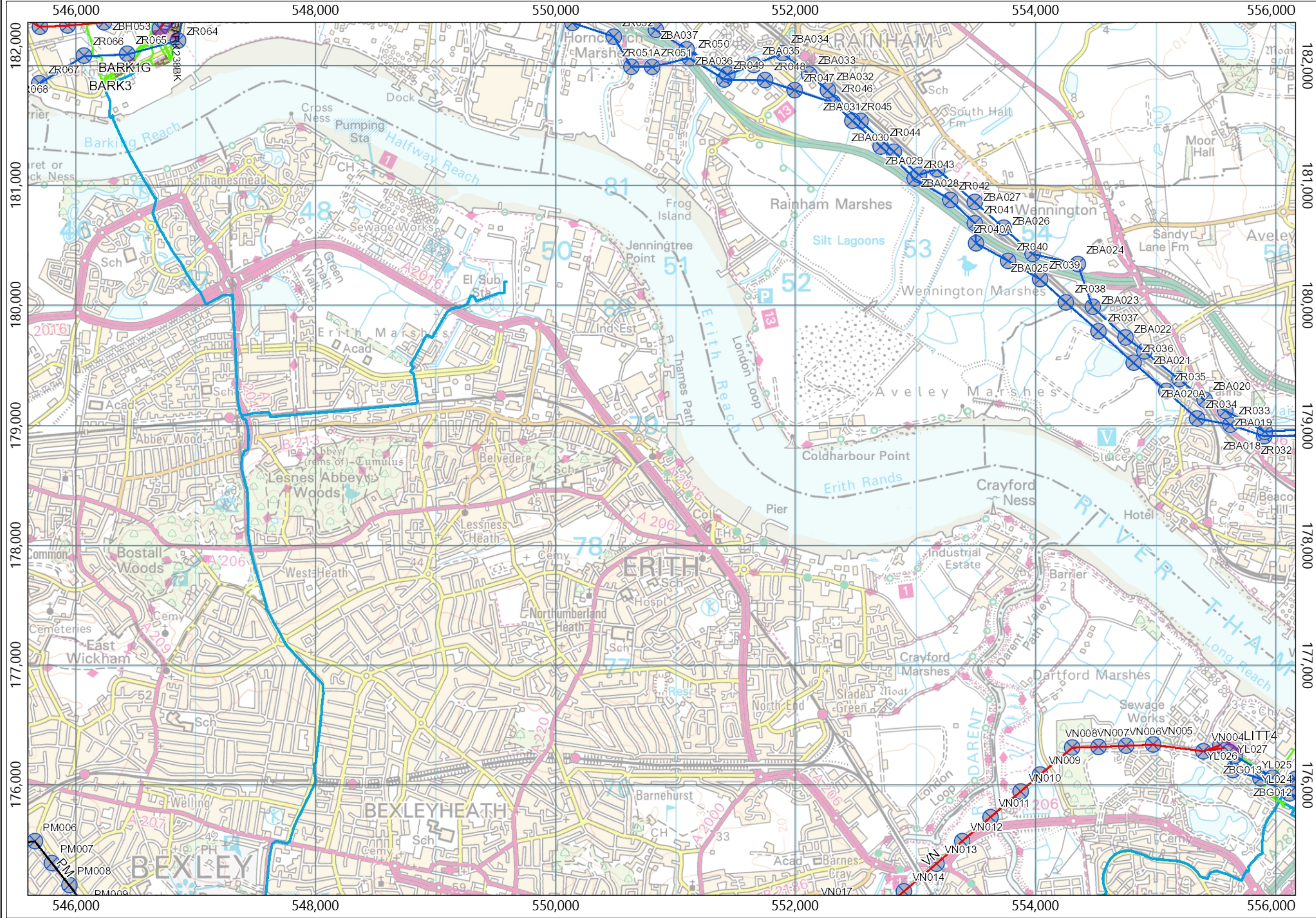
I hope the above information is useful. If you require any further information please do not hesitate to contact me.

The information in this letter is provided notwithstanding any discussions taking place in relation to connections with electricity or gas customer services.

Yours Faithfully



Nick Dexter.



Legend:

- Substations Commissioned
- OHL 400kV Commissioned
- OHL 275kV Commissioned
- OHL 132kV & Below Commissioned
- Towers Commissioned
- Buried Cable Commissioned
- Fibre Cable Commissioned
- Pilot Cable
- Gas Operational Boundary
- Gas Site Boundary
- Block Valve
- Compressor
- LNG Site
- Multijunction
- Minimum Offtake
- Future Minimum Offtake
- Offtake
- Pressure Reduction Installation
- Pig Trap
- Terminal
- Transferred Offtake
- Aerial Marker Post
- CP Test Post
- Transformer Rectifier
- Gas Pipe Feeder
- Commissioned
- Decommissioned Group
- Planned and Spares
- SRP Sightings - Open
- SRP Sightings - Closed
- Eagles Enquiries - Open
- Eagles Enquiries - Closed

Notes:

NG Disclaimer: National Grid UK Transmission. The asset position information represented on this map is the intellectual property of National Grid PLC (Warwick Technology Park, Warwick, CV346DA) and should not be used without prior authority of National Grid.

Note: Any sketches on the map are approximate and not captured to any particular level of precision.



From: [NATS Safeguarding](#)
To: [Riverside Energy Park](#)
Subject: RE: Riverside Energy Park - EIA Scoping notification and consultation (Our Ref: SG25495)
Date: 28 November 2017 15:24:09
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.gif](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)

The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

However, please be aware that this response applies specifically to the above consultation and only reflects the position of NATS (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.

If any changes are proposed to the information supplied to NATS in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

Yours Faithfully



NATS Safeguarding

D: 01489 444687

E: natssafeguarding@nats.co.uk

4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
www.nats.co.uk



From: Riverside Energy Park [mailto:RiversideEP@pins.gsi.gov.uk]
Sent: 28 November 2017 10:18
To: 'NSIP.applications@hse.gov.uk'; 'barkdag.bdccg2@nhs.net'; 'GRECCG.NHSGreenwichCCG@nhs.net'; 'bexccg.contactus@nhs.net'; 'dgs.ccg@nhs.net'; 'consultations@naturalengland.org.uk'; 'info@london-fire.gov.uk'; 'enquiries@kent.fire-uk.org'; 'enquiries@mopac.london.gov.uk'; 'contactyourpcc@pcc.kent.pnn.police.uk'; 'Helen.Croxson@mcga.gov.uk'; 'marine.consents@marinemangement.org.uk'; 'airspace@caa.co.uk'; 'planningSE@highwaysengland.co.uk'; 'boroughplanning@tfl.gov.uk'; 'NSIPconsultations@PHE.gov.uk'; 'offshoreNSIP@thecrownestate.co.uk'; 'DIO-Safeguarding-Statutory@mod.uk'; 'dgs.ccg@nhs.net'; 'ped@londonambulance.nhs.uk'; 'enquiries@secamb.nhs.uk'; 'TownPlanningSE@networkrail.co.uk'; 'hreenquiries@highwaysengland.co.uk'; 'pressoffice@pla.co.uk'; NATS Safeguarding; 'mail@homesandcommunities.co.uk'; 'developmentenquiries@nwl.co.uk'; 'southernwaterplanning@atkinsglobal.com'; 'vicky.stirling@cadentgas.com'; 'alans@espipelines.com'; 'FPLPlant@fulcrum.co.uk'; 'box.landandacquisitions@nationalgrid.com'; 'customer@sgn.co.uk'; 'enquiries@wwutilities.co.uk'; 'enquiries@g2energy.co.uk'; 'assetrecords@utilityassets.co.uk'; 'paul.watling@london.gov.uk'
Subject: Riverside Energy Park - EIA Scoping notification and consultation

Your attachments have been security checked by Mimecast Attachment Protection. Files where no threat or malware was detected are attached.

Dear Sir/Madam

Please see attached correspondence on the proposed Riverside Energy Park.

Please note the deadline for consultation responses is 26 December 2017. This deadline is a statutory requirement that has been triggered by submission of the Applicant's scoping report and cannot be extended.

Kind regards,
Hannah

Hannah Pratt
Senior EIA and Land Rights Advisor
Major Applications and Plans
The Planning Inspectorate, 3D, Temple Quay House, Temple Quay, Bristol, BS1 6PN
Direct Line: 0303 444 5001
Helpline: 0303 444 5000
Email: Hannah.pratt@pins.gsi.gov.uk

Web: <https://infrastructure.planninginspectorate.gov.uk/> (National Infrastructure Planning)
Web: www.gov.uk/government/organisations/planning-inspectorate (The Planning Inspectorate)

Twitter: [@PINSgov](https://twitter.com/PINSgov)

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Date: 21 December 2017
Our ref: 232914
Your ref: EN010093-000004



Hannah Pratt
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T 0300 060 3900

Dear Hannah Pratt

**Environmental Impact Assessment Scoping consultation (Regulation 15 (3) (i) of the EIA Regulations 2011): NSIP EIA scoping Application by Cory Environmental Holdings Limited for an Order granting Development Consent for the Riverside Energy Park.
Location: Norman Road, Belvedere, London DA17 6JY**

Thank you for seeking our advice on the scope of the Environmental Statement (ES) in your consultation dated 28 November 2017 which we received on 01 December 2017.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

Case law¹ and guidance² has stressed the need for a full set of environmental information to be available for consideration prior to a decision being taken on whether or not to grant planning permission. Annex A to this letter provides Natural England's specific advice on the scope of the Environmental Impact Assessment (EIA) for this development.

Should the proposal be amended in a way which significantly affects its impact on the natural environment then, in accordance with Section 4 of the Natural Environment and Rural Communities Act 2006, Natural England should be consulted again.

We would be happy to comment further should the need arise but if in the meantime you have any queries please do not hesitate to contact us. For any queries relating to the specific advice in this letter only please contact Zhinlap Tamang on 07825 902051. For any new consultations, or to provide further information on this consultation please send your correspondences to consultations@naturalengland.org.uk.

Yours sincerely

Zhinlap Tamang
Thames Team
Sustainable Development
Natural England

¹ Harrison, J in *R. v. Cornwall County Council ex parte Hardy* (2001)

² *Note on Environmental Impact Assessment Directive for Local Planning Authorities* Office of the Deputy Prime Minister (April 2004) available from <http://webarchive.nationalarchives.gov.uk/http://www.communities.gov.uk/planningandbuilding/planning/sustainableenvironmental/environmentalimpactassessment/noteenvironmental/>

Annex A – Advice related to EIA Scoping Requirements

1. General Principles

Schedule 4 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2011, sets out the necessary information to assess impacts on the natural environment to be included in an ES, specifically:

- A description of the development – including physical characteristics and the full land use requirements of the site during construction and operational phases.
- Expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed development.
- An assessment of alternatives and clear reasoning as to why the preferred option has been chosen.
- A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors.
- A description of the likely significant effects of the development on the environment – this should cover direct effects but also any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects. Effects should relate to the existence of the development, the use of natural resources and the emissions from pollutants. This should also include a description of the forecasting methods to predict the likely effects on the environment.
- A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.
- A non-technical summary of the information.
- An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

It will be important for any assessment to consider the potential cumulative effects of this proposal, including all supporting infrastructure, with other similar proposals and a thorough assessment of the 'in combination' effects of the proposed development with any existing developments and current applications. A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment.

2. Biodiversity and Geology

2.1 Ecological Aspects of an Environmental Statement

Natural England advises that the potential impact of the proposal upon features of nature conservation interest and opportunities for habitat creation/enhancement should be included within this assessment in accordance with appropriate guidance on such matters. Guidelines for Ecological Impact Assessment (EclA) have been developed by the Chartered Institute of Ecology and Environmental Management (CIEEM) and are available on their website.

EclA is the process of identifying, quantifying and evaluating the potential impacts of defined actions on ecosystems or their components. EclA may be carried out as part of the EIA process or to support other forms of environmental assessment or appraisal.

The National Planning Policy Framework sets out guidance in S.118 on how to take account of biodiversity interests in planning decisions and the framework that local authorities should provide to assist developers.

2.2 Internationally and Nationally Designated Sites

The ES should thoroughly assess the potential for the proposal to affect designated sites. European sites (e.g. designated Special Areas of Conservation and Special Protection Areas) fall within the scope of the Conservation of Habitats and Species Regulations 2010. In addition paragraph 118 of the National Planning Policy Framework requires that potential Special Protection Areas, possible Special Areas of Conservation, listed or proposed Ramsar sites, and any site identified as being necessary to compensate for adverse impacts on classified, potential or possible

SPAs, SACs and Ramsar sites be treated in the same way as classified sites.

Under Regulation 61 of the Conservation of Habitats and Species Regulations 2010 an appropriate assessment needs to be undertaken in respect of any plan or project which is (a) likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and (b) not directly connected with or necessary to the management of the site.

Should a Likely Significant Effect on a European/Internationally designated site be identified or be uncertain, the competent authority (in this case the Local Planning Authority) may need to prepare an Appropriate Assessment, in addition to consideration of impacts through the EIA process.

Sites of Special Scientific Interest (SSSIs) and sites of European or international importance (Special Areas of Conservation, Special Protection Areas and Ramsar sites)

The development site is within 2000m of the following designated nature conservation site:

- Inner Thames Marshes SSSI
- Further information on the SSSI and its special interest features can be found at www.magic.gov. The Environmental Statement should include a full assessment of the direct and indirect effects of the development on the features of special interest within this and should identify such mitigation measures as may be required in order to avoid, minimise or reduce any adverse significant effects.
- Natura 2000 network site conservation objectives are available on our internet site <http://publications.naturalengland.org.uk/category/6490068894089216>

2.3 Regionally and Locally Important Sites

The EIA will need to consider any impacts upon local wildlife and geological sites. Local Sites are identified by the local wildlife trust, geoconservation group or a local forum established for the purposes of identifying and selecting local sites. They are of county importance for wildlife or geodiversity. The Environmental Statement should therefore include an assessment of the likely impacts on the wildlife and geodiversity interests of such sites. The assessment should include proposals for mitigation of any impacts and if appropriate, compensation measures. Contact the local wildlife trust, geoconservation group or local sites body in this area for further information.

Contact Details: Crossness Nature Reserve Team

Email: karen.sutton@thameswater.co.uk

Nature Reserve Manager: 07747 643958

2.4 Protected Species - Species protected by the Wildlife and Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2010

The ES should assess the impact of all phases of the proposal on protected species (including, for example, great crested newts, reptiles, birds, water voles, badgers and bats). Natural England does not hold comprehensive information regarding the locations of species protected by law, but advises on the procedures and legislation relevant to such species. Records of protected species should be sought from appropriate local biological record centres, nature conservation organisations, groups and individuals; and consideration should be given to the wider context of the site for example in terms of habitat linkages and protected species populations in the wider area, to assist in the impact assessment.

The conservation of species protected by law is explained in Part IV and Annex A of Government Circular 06/2005 *Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System*. The area likely to be affected by the proposal should be thoroughly surveyed by competent ecologists at appropriate times of year for relevant species and the survey results, impact assessments and appropriate accompanying mitigation strategies included as part of the ES.

In order to provide this information there may be a requirement for a survey at a particular time of year. Surveys should always be carried out in optimal survey time periods and to current guidance

by suitably qualified and where necessary, licensed, consultants. Natural England has adopted [standing advice](#) for protected species which includes links to guidance on survey and mitigation.

Our records indicate that Lapwing, *Vanellus Vanellus*, is found in the area and should be included in any assessments.

2.5 Habitats and Species of Principal Importance

The ES should thoroughly assess the impact of the proposals on habitats and/or species listed as 'Habitats and Species of Principal Importance' within the England Biodiversity List, published under the requirements of S41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act 2006 places a general duty on all public authorities, including local planning authorities, to conserve and enhance biodiversity. Further information on this duty is available here <https://www.gov.uk/guidance/biodiversity-duty-public-authority-duty-to-have-regard-to-conserving-biodiversity>.

Government Circular 06/2005 states that Biodiversity Action Plan (BAP) species and habitats, 'are capable of being a material consideration...in the making of planning decisions'. Natural England therefore advises that survey, impact assessment and mitigation proposals for Habitats and Species of Principal Importance should be included in the ES. Consideration should also be given to those species and habitats included in the relevant Local BAP.

Natural England advises that a habitat survey (equivalent to Phase 2) is carried out on the site, in order to identify any important habitats present. In addition, ornithological, botanical and invertebrate surveys should be carried out at appropriate times in the year, to establish whether any scarce or priority species are present. The Environmental Statement should include details of:

- Any historical data for the site affected by the proposal (e.g. from previous surveys);
- Additional surveys carried out as part of this proposal;
- The habitats and species present;
- The status of these habitats and species (e.g. whether priority species or habitat);
- The direct and indirect effects of the development upon those habitats and species;
- Full details of any mitigation or compensation that might be required.

The development should seek if possible to avoid adverse impact on sensitive areas for wildlife within the site, and if possible provide opportunities for overall wildlife gain.

The record centre for the relevant Local Authorities should be able to provide the relevant information on the location and type of priority habitat for the area under consideration.

Our records indicate that there are is a Priority Habitat area on your development site. Priority Habitat – Deciduous woodland, Priority Habitat – Coastal Saltmarsh and Mudflats. These areas should be conserved and enhanced as part of the green infrastructure of the development in line with the [NPPF para 117](#). Building construction should be restricted away from woodland wherever possible and negative impacts to these sites should be avoided, mitigated or as a last resort compensated for.

Marine Conservation Zone (MCZ)

The former Thames Estuary rMCZ has now been split into two separate sites; the first (Upper Thames) stretches from Richmond Bridge to Battersea Bridge and the second (Swanscombe) stretches from The Queen Elizabeth II Bridge to Columbia Wharf/Grays respectively. The Upper Thames Estuary rMCZ is proposed as it is an important area for smelt (*Osmerus eperlanus*).

Although the proposed works are not situated within the boundary of either site, smelt are a migratory species found along the whole of the tidal Thames. The most sensitive time for this species is spring; sediment plumes and under water noise have potential to impact smelt.

This information is in draft status only and forms part of our scientific advice on the sites that are under consideration Tranche 3. Defra and the minister will make final decision regarding which sites

and which features will go forward to a public consultation. These sites are not currently a material consideration, but the sites and features that put forward to consultation will become a material consideration at that stage.

More information about Defra's commitment to Tranche 3 MCZ designations can be found here https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/492784/mcz-update-jan-2016.pdf.

2.6 Contacts for Local Records

Natural England does not hold local information on local sites, local landscape character and local or national biodiversity priority habitats and species. We recommend that you seek further information from the appropriate bodies (which may include the local records centre, the local wildlife trust, local geoconservation group or other recording society and a local landscape characterisation document).

2.7 Biodiversity Net Gain

Under [section 40](#) of the Natural Environment and Rural Communities Act 2006 and [section 109](#) of the National Planning Policy Framework there is a requirement to conserve biodiversity and provide a net gain wherever possible. Conserving biodiversity can include protection, restoration or enhancement to a population or habitat as well as the implementation of green infrastructure. The ES should thoroughly assess the impact of the development on biodiversity. Suitable methods for calculating biodiversity net gain can include the Defra biodiversity offsetting metric³ and the environment bank biodiversity impact calculator⁴.

3. Green Infrastructure

As part of the London Plan the Supplementary Planning Guidance - [All London Green Grid](#) has been produced. This gives guidance on the London Plan policy 2.18. The development resides within the Ridgeway Link which forms a green link between Crossness Sewage Treatment Works, Thamesmead and Plumstead; and is a key gateway from the West into the rich network of green open spaces and waterways in Thamesmead and Erith Marshes. As such there will be green infrastructure and green space requirements for the development.

Development provides opportunities to contribute to and enhance biodiversity and the local environment, as outlined in paragraph 109 and 118 of the NPPF. We advise you to consider what existing environmental features on and around the site can be retained or enhanced or what new features could be incorporated into the development proposal. Examples might include:

- Providing landscaped footpaths through the new development to link into existing rights of way or neighbouring greenspace.
- Creating ponds as part of the SUDS and as an attractive feature on the site.
- Planting trees characteristic to the local area to make a positive contribution to the local landscape.
- Using native plants in landscaping schemes for better nectar and seed sources for bees and birds.
- Avoid using non-native invasive plants in landscaping and greenspace plantings
- Incorporating swift boxes or bat boxes into the design of new buildings.
- Designing lighting to encourage wildlife.
- Adding vertical gardens/green walls to new buildings.

Please note that the implementation of Green Infrastructure vegetation will provide further mitigation against the effects of greenhouse gases from the development and may help to meet air quality targets. For example, the planting of street trees, along the Electrical Connection route on the northern side of Thames to the existing National Grid substation in option 1, can have multiple

³ <https://www.gov.uk/government/collections/biodiversity-offsetting#guidance-for-offset-providers-developers-and-local-authorities-in-the-pilot-areas> Note; the 'Guidance for developers' and 'Guidance for offset providers' documents provide a calculation method.

⁴ <http://www.environmentbank.com/impact-calculator.php> , and

http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0ahUKEwj7vcbl0aDQAhVMDcAKHb8IDEUQFggsMAI&url=http%3A%2F%2Fconsult.welhat.gov.uk%2Ffile%2F4184236&usq=AFQjCNFfkbJJQ_UN0044Qe6rmiLfxckg

benefits as the Green Infrastructure can act as a carbon sink, an air filter to help reduce pollution, soak up excess water and reduce the urban heat island effect.

You could also consider how the proposed development can contribute to the wider environment and help implement elements of any Landscape, Green Infrastructure or Biodiversity Strategy in place in your area. For example:

- Links to existing greenspace and/or opportunities to enhance and improve access.
- Identifying opportunities for new greenspace and managing existing and new public spaces to be more wildlife friendly (e.g. providing aid towards the maintenance of the adjacent local nature reserve, Crossness Nature Reserve, which is part of the Erith Marshes Site of Metropolitan Importance for Nature Conservation)
- Identifying any improvements to the existing public right of way network or using the opportunity of new development to extend the network to create missing links.
- Restoring neglected environmental features (e.g. coppicing a prominent hedge that is in poor condition or clearing away an eyesore).

4. Access and Recreation

Natural England encourages any proposal to incorporate measures to help encourage people to access the countryside for quiet enjoyment. Measures such as reinstating existing footpaths together with the creation of new footpaths and bridleways are to be encouraged. Links to other green networks and, where appropriate, urban fringe areas should also be explored to help promote the creation of wider green infrastructure. Relevant aspects of local authority green infrastructure strategies should be incorporated where appropriate.

4.1 Rights of Way, Access land, Coastal access and National Trails

The EIA should consider potential impacts on access land, public open land, rights of way and coastal access routes in the vicinity of the development.

4.3 Heritage Landscape Character

The nearby historical landmark, Crossness Pumping Station, could be considered to have a significant positive effect for the population of London and consideration should be given to the effects the development to it in the EIA.

5. Air Quality

Air quality in the UK has improved over recent decades but air pollution remains a significant issue; for example over 97% of sensitive habitat area in England is predicted to exceed the critical loads for ecosystem protection from atmospheric nitrogen deposition ([England Biodiversity Strategy](#), Defra 2011). A priority action in the England Biodiversity Strategy is to reduce air pollution impacts on biodiversity. The planning system plays a key role in determining the location of developments which may give rise to pollution, either directly or from traffic generation, and hence planning decisions can have a significant impact on the quality of air, water and land. The assessment should take account of the risks of air pollution and how these can be managed or reduced. Further information on air pollution impacts and the sensitivity of different habitats/designated sites can be found on the Air Pollution Information System (www.apis.ac.uk). Further information on air pollution modelling and assessment can be found on the Environment Agency website.

6. Climate Change Adaptation

The [England Biodiversity Strategy](#) published by Defra establishes principles for the consideration of biodiversity and the effects of climate change. The ES should reflect these principles and identify how the development's effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained. The NPPF requires that the planning system should contribute to the enhancement of the natural environment 'by establishing coherent ecological networks that are more resilient to current and future pressures' ([NPPF](#) Para 109), which should be demonstrated through the ES.

Consider the potential impacts of climate change on the development. How will the development protect against heat islands, more severe storms, drought, lack of frosts (that kill of pest and

disease), floods, etc. Consideration should be given to funding mechanisms for green infrastructure maintenance in a changing climate.

7. Cumulative and in-combination effects

A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment.

The ES should include an impact assessment to identify, describe and evaluate the effects that are likely to result from the project in combination with other projects and activities that are being, have been or will be carried out. The following types of projects should be included in such an assessment, (subject to available information):

- a. existing completed projects;
- b. approved but uncompleted projects;
- c. ongoing activities;
- d. plans or projects for which an application has been made and which are under consideration by the consenting authorities; and
- e. plans and projects which are reasonably foreseeable, i.e. projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects.

Natural England's pre-application Discretionary Advice Service (DAS)

Natural England has identified that this proposal may be suitable from benefitting from our pre-application advice service due to the proximity to designated sites of nature conservation, the potential for green infrastructure gains and potential for biodiversity enhancements. Through early engagement with Natural England customers will receive high-level customer service to support an efficient planning application process and achieve development which is more sustainable.

Through accessing our service customers will receive:

- Initial scoping advice on every case at no charge (unless already provided).
- The opportunity to access continued advice around our statutory conservation issues on a charged basis.
- Agreed timescales for responding to customer needs.
- An assigned local Natural England consultant for all pre-application advice.

We will contact the applicant in due course to provide more details of this service, however the first step is to fill out a simple [Request Form](#) and email it to consultations@naturalengland.org.uk so we can register interest and assign a local Natural England consultant.

If there are European Protected Species on site, Natural England offers a separate Pre-submission Screening Service (PPS) for planning proposals that will require a mitigation licence. More about this service can be found [here](#).

Please note that our pre-application advice is provided without prejudice to the consideration of any statutory consultation response or decision which may be made by Natural England in due course.

From: [Michael Atkins](#)
To: [Riverside Energy Park](#)
Cc: [James Trimmer](#); [Helena Payne](#)
Subject: Port of London Authority Response: Riverside Energy Park EIA Scoping Report Consultation. Ref: EN010093-000004
Date: 22 December 2017 11:05:30
Attachments: [image001.png](#)
[image002.png](#)

FAO: Hannah Pratt

Dear Hannah

Thank you for your letter dated 28th November 2017 inviting the Port of London Authority (PLA) to comment on the information that it considers should be provided in the Environmental Statement for the Riverside Energy Park proposal at Belvedere, Bexley.

For information, The PLA is the Statutory Harbour Authority for the Tidal Thames between Teddington and the Thames Estuary. Its statutory functions include responsibility for conservancy, dredging, maintaining the public navigation and controlling vessel movement's and its consent is required for the carrying out of all works and dredging in the river and the provision of moorings. The PLA's functions also include for promotion of the use of the river as an important strategic transport corridor to London.

Site location:

- The PLA note that the redline boundary for the proposed development is very broad at this stage, extending across the River Thames to the borough boundary line between the London Boroughs of Bexley and Barking & Dagenham. It will need to be made clear as the scheme develops the extent of the actual works affecting the Thames and how far into the Thames the proposed temporary works will encroach.

General Points:

- The PLA note that the electrical connection option proposed from Barking & Dagenham to the proposed energy park is via an existing cable tunnel and therefore has no comments regarding either electrical connection proposal.

- It is noted that the development site has a current river works license, for the works and use of the Safeguarded Middleton Wharf. It will be important for discussions to be held between the PLA and the applicant at an early stage regarding any amendments to the river works license (including dredging) and its incorporation as part of the DCO process.

- The PLA in general welcome the proposal which is looking to make greater use of the River Thames for the transportation of waste, as well as the use of the river during the construction phase of the proposed development. The Environmental Statement will need to demonstrate how the use of the river for the transportation of construction and waste materials is to be maximised in line with planning policy. It will also need to be made clear as the scheme develops any impacts as a result of the increased river traffic, particularly in central London once the facility is operational.

- It is noted in the scoping report that the Thames Path is mentioned in the description of the surrounding area, and that both construction options require provision to lift construction

modules over the flood defence wall and the Thames Path. As the scheme develops it will need to be made clear the interaction of the Thames Path with the development, and any periods in which the path may need to be closed during the construction phase.

Specific Comments

Section 2 Proposed Development:

- Paragraph 2.1.10:

The proposed solar panels must be orientated to ensure they do not create strong reflections/glare over the River Thames.

- Paragraph 2.2.3 & 2.2.4:

The interaction with the temporary and permanent works are critical to how the PLA would be content going forward. The options around the temporary construction works must be progressed further for the PLA to fully understand the impacts, scale and timings of each of the options if they were to continue as two options.

- Paragraph 2.2.4:

In relation to the temporary marine related works, it is essential that all marine infrastructure is removed at the end of the construction phase and appropriate riverbed restoration is undertaken. This includes any temporary works to the riverbed itself.

- Paragraph 2.3.1:

In regards to decommissioning, would the River Thames feature in the removal of large items that are likely to be brought in by river? If so does this mean that any temporary construction works would need to be re-installed at the end of the operational lifespan of the proposed energy park?

Section 7: Topics included in the EIA scope:

- Paragraph 7.2.2:

In regards to the multi-modal impact assessment which will consider the impact of the proposed development on all relevant transport infrastructure, can it be confirmed what levels of estimated throughput the assessment will be using? The PLA note that the existing facility currently has a nominal throughput of 785,000 tonnes per annum (tpa), and the proposed development will likely have a nominal throughput of 655,000 tpa with a maximum throughput of 805,000 tpa being assumed. In addition the proposed anaerobic digestion facility will process up to approximately 40,000 tpa of waste. In total the amount of throughput to the existing / proposed sites via river of road is approximately 1,630,000 tpa, over double what comes into the site currently. Will the impacts of this scale of change be considered in the multi-modal impact assessment? In addition has an assessment been carried out regarding supply / demand for this level of additional throughput across the wider London area?

- Paragraph 7.2.3:

The PLA consider that it is essential that a Navigational Risk Assessment (NRA) is completed as part of the Environmental Statement, and that this covers impacts during both the construction and operation stages of the proposed development, particularly to assess any potential risks / impacts for vessels that currently use the safeguarded Middleton Jetty (as mentioned in paragraph 7.2.6)

- Paragraph 7.2.9:

The applicant must confirm with Transport for London (TfL) regarding any updated tools for the appraisal of the environmental impacts of transport and travel.

- Paragraph 7.2.16:

Noted that a hypothetical assessment will be made in terms of the environmental impacts assuming 100% of water delivered by road, with an aim to achieve a modal split by at least 75% by river. The PLA will need to be involved in discussions on the modal split as the scheme develops.

- Section 7.3 Air Quality:

Detailed air quality emissions from the river are missing. The long term impacts of air quality from the road have been assessed but not that from the river, which by the increase in load will also change, through more frequent vessel movements, and prolonged periods of emissions rather than significant gaps to allow more dissipation. It is not clear if the marine operation will mean that the local vessel/shunt will be in operation more as a result of the increased demand.

- Section 7.8 Marine Biodiversity:

At this stage marine ecology is difficult to assess as the applicant has not identified in this section what the likely interactions are for the two temporary construction works options and how they differ in scale and duration.

- Paragraph 7.8.4:

The information presented here is not up to date advice regarding the Thames Estuary recommended Marine Conservation Zone (rMCZ); as it is the PLA's understanding that this area is no longer being assessed by Natural England as a rMCZ.

- Paragraph 7.8.29:

The PLA agree that underwater noise disturbance impacts to migratory fish during the construction phase could be significant and require mitigation, the PLA will need to be involved in any discussions regarding appropriate mitigation measures.

- Paragraph 7.8.30:

The PLA should also be consulted regarding the proposed benthic surveys for the site.

- Paragraph 7.8.21:

There is currently little on what questions the morphology assessment will answer at this stage. Regarding this there should be consideration to potential physical impacts on nearby terminals and the navigation channel, not just the ecological receptors. Also in this paragraph does the applicant mean Water Framework Assessment rather than Water Quality Assessment here? The PLA consider that the sediment is just as important in regards to the various required assessments.

- Paragraph 7.9.9:

TE2100 was assessed some time ago, the PLA consider that while the river likely hasn't changed drastically, it is likely there is more recent data that could better inform the assessment. Please contact the PLA hydrographic team on Tel: 01474 562206. The hydrographic team has extensive bathymetric data both current and historical which is available for use subject to appropriate charges.

- Paragraph 7.9.27 & 7.9.28:

Data availability is also linked to the type of development and link to receptors.

- Paragraph 7.10.2:

For clarity, to confirm the River Thames actually forms part of the development site, rather than being located to the north of the site as mentioned in this paragraph.

I hope the above is of assistance to you.

Regards

Michael

Michael Atkins
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Port of London Authority

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Your Ref: EN010093-000004

Our Ref : 41760

21st December 2017

Dear Hannah

**Re: Scoping Consultation
Application for an Order Granting Development Consent for the proposed
Riverside Energy Park**

Thank you for including Public Health England (PHE) in the scoping consultation phase of the above application. Our response focuses on health protection issues relating to chemicals and radiation. Advice offered by PHE is impartial and independent.

We welcome the promoter's proposal to include a Health Impact Assessment (HIA) section within the Environmental Statement (ES), which will review the potential health impacts of the project. We understand these will be presented in other chapters (i.e. air quality, contaminated land, etc) and summarised in the HIA. The section should summarise key information, risk assessments, proposed mitigation measures, conclusions and residual impacts, relating to human health. Compliance with the requirements of National Policy Statements and relevant guidance and standards should also be highlighted.

In terms of the level of detail to be included in an ES, we recognise that the differing nature of projects is such that their impacts will vary. Any assessments undertaken to inform the ES should be proportionate to the potential impacts of the proposal, therefore we accept that, in some circumstances particular assessments may not be relevant to an application, or that an assessment may be adequately completed using a qualitative rather than quantitative methodology. In cases where this decision is made the promoters should fully explain and justify their rationale in the submitted documentation.

It is noted that the current proposals do not appear to consider possible health impacts of Electric and Magnetic Fields (EMF). The proposer should confirm either that the proposed development does include or impact upon any potential sources of EMF; or ensure that an adequate assessment of the possible impacts is undertaken and included in the ES.

The attached appendix outlines generic areas that should be addressed by all promoters when preparing ES for inclusion with an NSIP submission. We are happy to assist and discuss proposals further in the light of this advice.

Yours sincerely,

Environmental Public Health Scientist

nsipconsultations@phe.gov.uk

Please mark any correspondence for the attention of National Infrastructure Planning Administration.

Appendix: PHE recommendations regarding the scoping document

General approach

The EIA should give consideration to best practice guidance such as the Government's Good Practice Guide for EIA¹. It is important that the EIA identifies and assesses the potential public health impacts of the activities at, and emissions from, the installation. Assessment should consider the development, operational, and decommissioning phases.

It is not PHE's role to undertake these assessments on behalf of promoters as this would conflict with PHE's role as an impartial and independent body.

Consideration of alternatives (including alternative sites, choice of process, and the phasing of construction) is widely regarded as good practice. Ideally, EIA should start at the stage of site and process selection, so that the environmental merits of practicable alternatives can be properly considered. Where this is undertaken, the main alternatives considered should be outlined in the ES².

The following text covers a range of issues that PHE would expect to be addressed by the promoter. However this list is not exhaustive and the onus is on the promoter to ensure that the relevant public health issues are identified and addressed. PHE's advice and recommendations carry no statutory weight and constitute non-binding guidance.

Receptors

The ES should clearly identify the development's location and the location and distance from the development of off-site human receptors that may be affected by emissions from, or activities at, the development. Off-site human receptors may include people living in residential premises; people working in commercial, and industrial premises and people using transport infrastructure (such as roads and railways), recreational areas, and publicly-accessible land. Consideration should also be given to environmental receptors such as the surrounding land, watercourses, surface and groundwater, and drinking water supplies such as wells, boreholes and water abstraction points.

Impacts arising from construction and decommissioning

Any assessment of impacts arising from emissions due to construction and decommissioning should consider potential impacts on all receptors and describe monitoring and mitigation during these phases. Construction and decommissioning will be associated with vehicle movements and cumulative impacts should be accounted for.

We would expect the promoter to follow best practice guidance during all phases from construction to decommissioning to ensure appropriate measures are in place

¹ Environmental Impact Assessment: A guide to good practice and procedures - A consultation paper; 2006; Department for Communities and Local Government. Available from: <http://webarchive.nationalarchives.gov.uk/20100410180038/http://communities.gov.uk/planningandbuilding/planning/sustainability/environmental/environmentalimpactassessment/>

² DCLG guidance, 1999 <http://www.communities.gov.uk/documents/planningandbuilding/pdf/155958.pdf>

to mitigate any potential impact on health from emissions (point source, fugitive and traffic-related). An effective Construction Environmental Management Plan (CEMP) (and Decommissioning Environmental Management Plan (DEMP)) will help provide reassurance that activities are well managed. The promoter should ensure that there are robust mechanisms in place to respond to any complaints of traffic-related pollution, during construction, operation, and decommissioning of the facility.

Emissions to air and water

Significant impacts are unlikely to arise from installations which employ Best Available Techniques (BAT) and which meet regulatory requirements concerning emission limits and design parameters. However, PHE has a number of comments regarding emissions in order that the EIA provides a comprehensive assessment of potential impacts.

When considering a baseline (of existing environmental quality) and in the assessment and future monitoring of impacts these:

- should include appropriate screening assessments and detailed dispersion modelling where this is screened as necessary
- should encompass all pollutants which may be emitted by the installation in combination with all pollutants arising from associated development and transport, ideally these should be considered in a single holistic assessment
- should consider the construction, operational, and decommissioning phases
- should consider the typical operational emissions and emissions from start-up, shut-down, abnormal operation and accidents when assessing potential impacts and include an assessment of worst-case impacts
- should fully account for fugitive emissions
- should include appropriate estimates of background levels
- should identify cumulative and incremental impacts (i.e. assess cumulative impacts from multiple sources), including those arising from associated development, other existing and proposed development in the local area, and new vehicle movements associated with the proposed development; associated transport emissions should include consideration of non-road impacts (i.e. rail, sea, and air)
- should include consideration of local authority, Environment Agency, Defra national network, and any other local site-specific sources of monitoring data
- should compare predicted environmental concentrations to the applicable standard or guideline value for the affected medium (such as UK Air Quality Standards and Objectives and Environmental Assessment Levels)
 - If no standard or guideline value exists, the predicted exposure to humans should be estimated and compared to an appropriate health-based value (a Tolerable Daily Intake or equivalent). Further guidance is provided in Annex 1
 - This should consider all applicable routes of exposure e.g. include consideration of aspects such as the deposition of chemicals emitted to air and their uptake via ingestion
- should identify and consider impacts on residential areas and sensitive receptors (such as schools, nursing homes and healthcare facilities) in the area(s) which may be affected by emissions, this should include consideration of any new receptors arising from future development

Whilst screening of impacts using qualitative methodologies is common practice (e.g. for impacts arising from fugitive emissions such as dust), where it is possible to undertake a quantitative assessment of impacts then this should be undertaken.

PHE's view is that the EIA should appraise and describe the measures that will be used to control both point source and fugitive emissions and demonstrate that standards, guideline values or health-based values will not be exceeded due to emissions from the installation, as described above. This should include consideration of any emitted pollutants for which there are no set emission limits. When assessing the potential impact of a proposed installation on environmental quality, predicted environmental concentrations should be compared to the permitted concentrations in the affected media; this should include both standards for short and long-term exposure.

Additional points specific to emissions to air

When considering a baseline (of existing air quality) and in the assessment and future monitoring of impacts these:

- should include consideration of impacts on existing areas of poor air quality e.g. existing or proposed local authority Air Quality Management Areas (AQMAs)
- should include modelling using appropriate meteorological data (i.e. come from the nearest suitable meteorological station and include a range of years and worst case conditions)
- should include modelling taking into account local topography

Additional points specific to emissions to water

When considering a baseline (of existing water quality) and in the assessment and future monitoring of impacts these:

- should include assessment of potential impacts on human health and not focus solely on ecological impacts
- should identify and consider all routes by which emissions may lead to population exposure (e.g. surface watercourses; recreational waters; sewers; geological routes etc.)
- should assess the potential off-site effects of emissions to groundwater (e.g. on aquifers used for drinking water) and surface water (used for drinking water abstraction) in terms of the potential for population exposure
- should include consideration of potential impacts on recreational users (e.g. from fishing, canoeing etc) alongside assessment of potential exposure via drinking water

Land quality

We would expect the promoter to provide details of any hazardous contamination present on site (including ground gas) as part of the site condition report.

Emissions to and from the ground should be considered in terms of the previous history of the site and the potential of the site, once operational, to give rise to issues. Public health impacts associated with ground contamination and/or the

migration of material off-site should be assessed³ and the potential impact on nearby receptors and control and mitigation measures should be outlined.

Relevant areas outlined in the Government's Good Practice Guide for EIA include:

- effects associated with ground contamination that may already exist
- effects associated with the potential for polluting substances that are used (during construction / operation) to cause new ground contamination issues on a site, for example introducing / changing the source of contamination
- impacts associated with re-use of soils and waste soils, for example, re-use of site-sourced materials on-site or offsite, disposal of site-sourced materials offsite, importation of materials to the site, etc.

Waste

The EIA should demonstrate compliance with the waste hierarchy (e.g. with respect to re-use, recycling or recovery and disposal).

For wastes arising from the installation the EIA should consider:

- the implications and wider environmental and public health impacts of different waste disposal options
- disposal route(s) and transport method(s) and how potential impacts on public health will be mitigated

For wastes delivered to the installation:

- the EIA should consider issues associated with waste delivery and acceptance procedures (including delivery of prohibited wastes) and should assess potential off-site impacts and describe their mitigation

Other aspects

Within the EIA PHE would expect to see information about how the promoter would respond to accidents with potential off-site emissions e.g. flooding or fires, spills, leaks or releases off-site. Assessment of accidents should: identify all potential hazards in relation to construction, operation and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident in order to mitigate off-site effects.

The EIA should include consideration of the COMAH Regulations (Control of Major Accident Hazards) and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations 2009: both in terms of their applicability to the installation itself, and the installation's potential to impact on, or be impacted by, any nearby installations themselves subject to the these Regulations.

There is evidence that, in some cases, perception of risk may have a greater impact on health than the hazard itself. A 2009 report⁴, jointly published by Liverpool John Moores University and the HPA, examined health risk perception and environmental problems using a number of case studies. As a point to consider, the report

³ Following the approach outlined in the section above dealing with emissions to air and water i.e. comparing predicted environmental concentrations to the applicable standard or guideline value for the affected medium (such as Soil Guideline Values)

⁴ Available from: <http://www.cph.org.uk/wp-content/uploads/2012/08/health-risk-perception-and-environmental-problems--summary-report.pdf>

suggested: “Estimation of community anxiety and stress should be included as part of every risk or impact assessment of proposed plans that involve a potential environmental hazard. This is true even when the physical health risks may be negligible.” PHE supports the inclusion of this information within EIAs as good practice.

Electromagnetic fields (EMF)

This statement is intended to support planning proposals involving electrical installations such as substations and connecting underground cables or overhead lines. PHE advice on the health effects of power frequency electric and magnetic fields is available in the following link:

<https://www.gov.uk/government/collections/electromagnetic-fields#low-frequency-electric-and-magnetic-fields>

There is a potential health impact associated with the electric and magnetic fields around substations, and power lines and cables. The field strength tends to reduce with distance from such equipment.

The following information provides a framework for considering the health impact associated with the electric and magnetic fields produced by the proposed development, including the direct and indirect effects of the electric and magnetic fields as indicated above.

Policy Measures for the Electricity Industry

The Department of Energy and Climate Change has published a voluntary code of practice which sets out key principles for complying with the ICNIRP guidelines:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/37447/1256-code-practice-emf-public-exp-guidelines.pdf

Companion codes of practice dealing with optimum phasing of high voltage power lines and aspects of the guidelines that relate to indirect effects are also available:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48309/1255-code-practice-optimum-phasing-power-lines.pdf

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224766/powerlines_vcop_microshocks.pdf

Exposure Guidelines

PHE recommends the adoption in the UK of the EMF exposure guidelines published by the International Commission on Non-ionizing Radiation Protection (ICNIRP). Formal advice to this effect was published by one of PHE’s predecessor

organisations (NRPB) in 2004 based on an accompanying comprehensive review of the scientific evidence:-

<http://webarchive.nationalarchives.gov.uk/20140629102627/http://www.hpa.org.uk/Publications/Radiation/NPRBArchive/DocumentsOfTheNRPB/Absd1502/>

Updates to the ICNIRP guidelines for static fields have been issued in 2009 and for low frequency fields in 2010. However, Government policy is that the ICNIRP guidelines are implemented in line with the terms of the 1999 EU Council Recommendation on limiting exposure of the general public (1999/519/EC):

http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/PublicHealth/HealthProtection/DH_4089500

Static magnetic fields

For static magnetic fields, the ICNIRP guidelines published in 2009 recommend that acute exposure of the general public should not exceed 400 mT (millitesla), for any part of the body, although the previously recommended value of 40 mT is the value used in the Council Recommendation. However, because of potential indirect adverse effects, ICNIRP recognises that practical policies need to be implemented to prevent inadvertent harmful exposure of people with implanted electronic medical devices and implants containing ferromagnetic materials, and injuries due to flying ferromagnetic objects, and these considerations can lead to much lower restrictions, such as 0.5 mT.

Power frequency electric and magnetic fields

At 50 Hz, the known direct effects include those of induced currents in the body on the central nervous system (CNS) and indirect effects include the risk of painful spark discharge on contact with metal objects exposed to the field. The ICNIRP guidelines published in 1998 give reference levels for public exposure to 50 Hz electric and magnetic fields, and these are respectively 5 kV m⁻¹ (kilovolts per metre) and 100 µT (microtesla). The reference level for magnetic fields changes to 200 µT in the revised (ICNIRP 2010) guidelines because of new basic restrictions based on induced electric fields inside the body, rather than induced current density. If people are not exposed to field strengths above these levels, direct effects on the CNS should be avoided and indirect effects such as the risk of painful spark discharge will be small. The reference levels are not in themselves limits but provide guidance for assessing compliance with the basic restrictions and reducing the risk of indirect effects.

Long term effects

There is concern about the possible effects of long-term exposure to electromagnetic fields, including possible carcinogenic effects at levels much lower than those given in the ICNIRP guidelines. In the NRPB advice issued in 2004, it was concluded that the studies that suggest health effects, including those concerning childhood leukaemia, could not be used to derive quantitative guidance on restricting exposure.

However, the results of these studies represented uncertainty in the underlying evidence base, and taken together with people's concerns, provided a basis for providing an additional recommendation for Government to consider the need for further precautionary measures, particularly with respect to the exposure of children to power frequency magnetic fields.

The Stakeholder Advisory Group on ELF EMFs (SAGE)

SAGE was set up to explore the implications for a precautionary approach to extremely low frequency electric and magnetic fields (ELF EMFs), and to make practical recommendations to Government:

<http://www.emfs.info/policy/sage/>

SAGE issued its First Interim Assessment in 2007, making several recommendations concerning high voltage power lines. Government supported the implantation of low cost options such as optimal phasing to reduce exposure; however it did not support the option of creating corridors around power lines on health grounds, which was considered to be a disproportionate measure given the evidence base on the potential long term health risks arising from exposure. The Government response to SAGE's First Interim Assessment is available here:

http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_107124

The Government also supported calls for providing more information on power frequency electric and magnetic fields, which is available on the PHE web pages (see first link above).

Ionising radiation

Particular considerations apply when an application involves the possibility of exposure to ionising radiation. In such cases it is important that the basic principles of radiation protection recommended by the International Commission on Radiological Protection⁵ (ICRP) are followed. PHE provides advice on the application of these recommendations in the UK. The ICRP recommendations are implemented in the Euratom Basic Safety Standards⁶ (BSS) and these form the basis for UK legislation, including the Ionising Radiation Regulations 1999, the Radioactive Substances Act 1993, and the Environmental Permitting Regulations 2016.

PHE expects promoters to carry out the necessary radiological impact assessments to demonstrate compliance with UK legislation and the principles of radiation protection. This should be set out clearly in a separate section or report and should not require any further analysis by PHE. In particular, the important principles of

⁵ These recommendations are given in publications of the ICRP notably publications 90 and 103 see the website at <http://www.icrp.org/>

⁶ Council Directive 96/29/EURATOM laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation.

justification, optimisation and radiation dose limitation should be addressed. In addition compliance with the Euratom BSS and UK legislation should be clear.

When considering the radiological impact of routine discharges of radionuclides to the environment PHE would expect to see a full radiation dose assessment considering both individual and collective (population) doses for the public and, where necessary, workers. For individual doses, consideration should be given to those members of the public who are likely to receive the highest exposures (referred to as the representative person, which is equivalent to the previous term, critical group). Different age groups should be considered as appropriate and should normally include adults, 1 year old and 10 year old children. In particular situations doses to the fetus should also be calculated⁷. The estimated doses to the representative person should be compared to the appropriate radiation dose criteria (dose constraints and dose limits), taking account of other releases of radionuclides from nearby locations as appropriate. Collective doses should also be considered for the UK, European and world populations where appropriate. The methods for assessing individual and collective radiation doses should follow the guidance given in 'Principles for the Assessment of Prospective Public Doses arising from Authorised Discharges of Radioactive Waste to the Environment August 2012'⁸. It is important that the methods used in any radiological dose assessment are clear and that key parameter values and assumptions are given (for example, the location of the representative persons, habit data and models used in the assessment).

Any radiological impact assessment should also consider the possibility of short-term planned releases and the potential for accidental releases of radionuclides to the environment. This can be done by referring to compliance with the Ionising Radiation Regulations and other relevant legislation and guidance.

The radiological impact of any solid waste storage and disposal should also be addressed in the assessment to ensure that this complies with UK practice and legislation; information should be provided on the category of waste involved (e.g. very low level waste, VLLW). It is also important that the radiological impact associated with the decommissioning of the site is addressed. Of relevance here is PHE advice on radiological criteria and assessments for land-based solid waste disposal facilities⁹. PHE advises that assessments of radiological impact during the operational phase should be performed in the same way as for any site authorised to discharge radioactive waste. PHE also advises that assessments of radiological impact during the post operational phase of the facility should consider long timescales (possibly in excess of 10,000 years) that are appropriate to the long-lived nature of the radionuclides in the waste, some of which may have half-lives of millions of years. The radiological assessment should consider exposure of

⁷ HPA (2008) Guidance on the application of dose coefficients for the embryo, fetus and breastfed infant in dose assessments for members of the public. Doc HPA, RCE-5, 1-78, available at <https://www.gov.uk/government/publications/embryo-fetus-and-breastfed-infant-application-of-dose-coefficients>

⁸ The Environment Agency (EA), Scottish Environment Protection Agency (SEPA), Northern Ireland Environment Agency, Health Protection Agency and the Food Standards Agency (FSA). Principles for the Assessment of Prospective Public Doses arising from Authorised Discharges of Radioactive Waste to the Environment August 2012. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/296390/geho1202bklh-e-e.pdf

⁹ HPA RCE-8, Radiological Protection Objectives for the Land-based Disposal of Solid Radioactive Wastes, February 2009

members of hypothetical representative groups for a number of scenarios including the expected migration of radionuclides from the facility, and inadvertent intrusion into the facility once institutional control has ceased. For scenarios where the probability of occurrence can be estimated, both doses and health risks should be presented, where the health risk is the product of the probability that the scenario occurs, the dose if the scenario occurs and the health risk corresponding to unit dose. For inadvertent intrusion, the dose if the intrusion occurs should be presented. It is recommended that the post-closure phase be considered as a series of timescales, with the approach changing from more quantitative to more qualitative as times further in the future are considered. The level of detail and sophistication in the modelling should also reflect the level of hazard presented by the waste. The uncertainty due to the long timescales means that the concept of collective dose has very limited use, although estimates of collective dose from the 'expected' migration scenario can be used to compare the relatively early impacts from some disposal options if required.

Annex 1

Human health risk assessment (chemical pollutants)

The points below are cross-cutting and should be considered when undertaking a human health risk assessment:

- The promoter should consider including Chemical Abstract Service (CAS) numbers alongside chemical names, where referenced in the ES
- Where available, the most recent United Kingdom standards for the appropriate media (e.g. air, water, and/or soil) and health-based guideline values should be used when quantifying the risk to human health from chemical pollutants. Where UK standards or guideline values are not available, those recommended by the European Union or World Health Organisation can be used
- When assessing the human health risk of a chemical emitted from a facility or operation, the background exposure to the chemical from other sources should be taken into account
- When quantitatively assessing the health risk of genotoxic and carcinogenic chemical pollutants PHE does not favour the use of mathematical models to extrapolate from high dose levels used in animal carcinogenicity studies to well below the observed region of a dose-response relationship. When only animal data are available, we recommend that the 'Margin of Exposure' (MOE) approach¹⁰ is used

¹⁰ Benford D et al. 2010. Application of the margin of exposure approach to substances in food that are genotoxic and carcinogenic. Food Chem Toxicol 48 Suppl 1: S2-24

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Ms Hannah Pratt
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19 December 2017

DECISION NOTICE - RAISE NO OBJECTION

Dear Ms Pratt,

Town & Country Planning Act 1990 (As Amended)
The Town and Country Planning (General Permitted Development) (England) Order 2015

Site: Riverside Energy Park, Belvedere
Applicant: Cory Environmental Holdings Limited
Proposal: Scoping Opinion for a combined waste Energy Recovery Facility (ERF), battery storage, a roof-mounted solar photovoltaic installation, an anaerobic digestion facility and provision for CHP readiness generating a nominal rated electrical output of up to 96 MWe.

Drawings

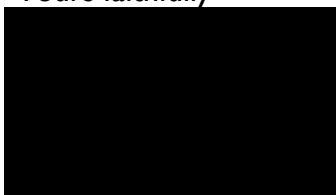
I refer to your letter dated 28 November 2017 enclosing details in respect of the above.

The Royal Borough has now formally considered the matter and raises no objections.

The Council has 2 further observations to make, please see attached.

Thank you for consulting me on this matter.

Yours faithfully



Assistant Director

SCHEDULE OF OBSERVATIONS and INFORMATIVES

Application Reference: I7/3823/K

At: Riverside Energy Park, Belvedere

Observation 1

The applicant will need to demonstrate that there is no air quality impact to RB Greenwich.

Observation 2

RBG would recommend that the following is considered:

- a. The Mayors Draft Environment Strategy is proposing that in areas which exceed legal air quality limits, the policy should prevent emissions from energy production plant, including from CHP that would exceed those of an ultralow NO_x gas boiler. Would the proposed CHP have to comply with this policy requirement if it is adopted? Will the CHP be able to demonstrate compliance with this possible requirement?
- b. The air quality assessment and dispersion modelling will need to take into account the topography of the proposed site and surrounding areas. RB Greenwich is situated at a higher ground level as compared to the proposed site.
- c. If the infrastructure for the delivery of waste by barge is not already in place, then RBG would like the assessment to take a precautionary worst case approach by including the additional vehicles movements that would be covered by the barge shipments. This is to cover the eventuality that the infrastructure is not constructed and all waste movements are conducted by land. Similarly, the same approach should be taken if the applicant proposes to use the river way to ship materials to and from site during the construction phase of the project.
- d. With regards to the barges, RBG would recommend LB Bexley liaise with the Port of London Authority to assess what boats/technology can be used to limit emissions from this source. For example, using hybrid boats over diesel and magnetic docking mechanisms to prevent idling engines.
- e. With regards to the abatement product, is the 3% air pollution residues a weekly, monthly or yearly output?
- f. The document states that there are multiple tall structures in the immediate area of the site; these needs to be taken into account in the dispersion modelling as they may impact on the dispersion from the proposed unit.
- g. LAEI data when available should always be used over Defra data as it is specific to London.
- h. Stack calculations should be included in the air quality assessment.
- i. The dispersion modelling should include different stack height scenarios.
- j. Modelling should account for dispersion near waterways as RBG believe they also impact on pollution dispersion.

Informative:

As part of the application, RBG would like the following to be taken into consideration:

1. An assessment of the potential to create a District Heat Network to Thamesmead;
2. Analysis of the site's potential energy supply and demand; and
3. Possibility of using waste heat from the nearby sewage works.



Riverside Energy Park

Royal Mail Group Limited comments on information to be provided in applicant's Environmental Statement

Introduction

Reference the letter from PINS to Royal Mail dated 28 November 2017 requesting Royal Mail's comments on the information that should be provided in Cory Riverside Energy's Environmental Statement for the proposed Riverside Energy Park. Royal Mail's consultants BNP Paribas Real Estate have reviewed the applicant's Scoping Report as submitted to the Secretary of State on 27 November 2017.

Royal Mail- relevant information

Royal Mail is responsible for providing efficient mail sorting and delivery nationally. As the Universal Service Provider under the Postal Services Act 2011, Royal Mail has a statutory duty to deliver mail to every residential and business address in the country as well as collecting mail from all Post Offices and post boxes six days a week.

Royal Mail's postal sorting and delivery operations rely heavily on road communications. Royal Mail's ability to provide efficient mail collection, sorting and delivery to the public is sensitive to changes in the capacity of the highway network.

Royal Mail is a major road user nationally. Disruption to the highway network and traffic delays can have direct consequences on Royal Mail's operations, its ability to meet the Universal Service Obligation and comply with the regulatory regime for postal services thereby presenting a significant risk to Royal Mail's business.

Royal Mail therefore wishes to ensure the protection of its future ability to provide an efficient mail sorting and delivery service to the public in accordance with its statutory obligations which may potentially be adversely affected by the construction of this proposed road scheme.

Royal Mail's has nine operational properties within eight miles of the proposed Riverside Energy Park as listed and shown on plan below:

Abbey Wood Delivery Office	Nathan Way, London SE28 0AW	3.1 miles
London South East Parcelforce Depot	Unit 3 Optima Park, Thames Road, Dartford DA1 4QX	3.5 miles
Bexleyheath Delivery Office	2 Glengall Road, Bexleyheath DA7 4BS	3.5 miles
Woolwich Delivery Office	Pettman Crescent, London SE28 0FE	4.7 miles
Sidcup Delivery Office	19 Halfway Street, Sidcup DA15 8LG	5.5 miles
Dartford Delivery Office	50 West Hill, Dartford DA1 1AA	5.6 miles
Eltham + Lee Delivery Office	31-33 Court Yard, London SE9 5DD	6.7 miles
Eltham + Lee Vehicle Park	31-33 Court Yard, London SE9 5DD	6.7 miles
Blackheath Delivery Office	41 Blackheath Grove, London SE3 0AT	8.0 miles



In exercising its statutory duties Royal Mail vehicles use on a daily basis all of the local roads that may potentially be affected by additional traffic arising from the construction of the proposed Riverside Energy Park. Consequently, Royal Mail is concerned about the potential for disruption to its operations during its construction phase. In particular, Royal Mail requires more information and certainty about traffic management measures that will be put in place to mitigate construction impacts on traffic flows within the surrounding highways network.

Royal Mail's comments on information that should be provided in Cory Riverside Energy's Environmental Statement

In view of the above, Royal Mail has the following comments / requests:

1. The ES should include information on the needs of major road users (such as Royal Mail) and acknowledge the requirement to ensure that major road users are not disrupted through full advance consultation by the applicant at the appropriate time in the DCO and development process.
2. The ES and DCO application should include detailed information on the construction traffic mitigation measures that are proposed to be implemented by Cory Riverside Energy / its contractor, including a draft Construction Traffic Management Plan (CTMP).
3. Royal Mail is fully pre-consulted by Cory Riverside Energy / its contractor on any proposed road closures / diversions/ alternative access arrangements, hours of working and the content of the CTMP. The ES should acknowledge the need for this consultation with Royal Mail and other relevant major road users.

Royal Mail is able to supply Cory Riverside Energy with information on its road usage / trips if required.



Should PINS or Cory Riverside Energy have any queries in relation to the above then in the first instance please contact Joe Walsh (joseph.walsh@royalmail.com) of Royal Mail's Legal Services Team or Daniel Parry-Jones (daniel.parry-jones@bnpparibas.com) of BNP Paribas Real Estate.

From: [Riverside Energy Park](#)
To: "Customer"
Subject: RE: Riverside Energy Park - EIA Scoping notification and consultation
Date: 28 November 2017 11:12:53
Attachments: [image001.jpg](#)

Hi Emma

Thank you for the email. We always consult with SGN on a precautionary basis because as we understand it, your PGT licence covers Great Britain. There is no obligation on you to respond if you do not have any further comments to make.

Kind regards
Hannah

From: Spence, Emma [mailto:Emma.Spence@sgn.co.uk] **On Behalf Of** Customer
Sent: 28 November 2017 10:57
To: Riverside Energy Park
Subject: RE: Riverside Energy Park - EIA Scoping notification and consultation

Hi Hannah,

I have checked the document and this is not covered by SGN's network? Is there something you would like help with?

Kind regards,

Emma Spence
Customer Service Advisor
T: 0800 912 1700
E: customer@sgn.co.uk
Find us on [Facebook](#) and follow us on Twitter: [@SGNgas](#)
cid:image001.jpg@01D0EC90.543660C0



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[Find out how](#) to protect your home from carbon monoxide

From: Riverside Energy Park [<mailto:RiversideEP@pins.gsi.gov.uk>]
Sent: 28 November 2017 10:18
To: 'NSIP.applications@hse.gov.uk' <NSIP.applications@hse.gov.uk>; 'barkdag.bdccg2@nhs.net' <barkdag.bdccg2@nhs.net>; 'GRECCG.NHSGreenwichCCG@nhs.net' <GRECCG.NHSGreenwichCCG@nhs.net>; 'bexccg.contactus@nhs.net' <bexccg.contactus@nhs.net>; 'dgs.ccg@nhs.net' <dgs.ccg@nhs.net>; 'consultations@naturalengland.org.uk' <consultations@naturalengland.org.uk>; 'info@london-fire.gov.uk' <info@london-fire.gov.uk>; 'enquiries@kent.fire-uk.org' <enquiries@kent.fire-uk.org>; 'enquiries@mopac.london.gov.uk' <enquiries@mopac.london.gov.uk>; 'contactyourpcc@pcc.kent.pnn.police.uk' <contactyourpcc@pcc.kent.pnn.police.uk>; 'Helen.Croxson@mcga.gov.uk' <Helen.Croxson@mcga.gov.uk>; 'marine.consent@marinemangement.org.uk'

<marine.consents@marinemanagement.org.uk>; 'airspace@caa.co.uk' <airspace@caa.co.uk>;
'planningSE@highwaysengland.co.uk' <planningSE@highwaysengland.co.uk>;
'boroughplanning@tfl.gov.uk' <boroughplanning@tfl.gov.uk>; 'NSIPconsultations@PHE.gov.uk'
<NSIPconsultations@PHE.gov.uk>; 'offshoreNSIP@thecrownestate.co.uk'
<offshoreNSIP@thecrownestate.co.uk>; 'DIO-Safeguarding-Statutory@mod.uk' <DIO-Safeguarding-Statutory@mod.uk>; 'dgs.ccg@nhs.net' <dgs.ccg@nhs.net>;
'ped@londonambulance.nhs.uk' <ped@londonambulance.nhs.uk>; 'enquiries@secamb.nhs.uk'
<enquiries@secamb.nhs.uk>; 'TownPlanningSE@networkrail.co.uk'
<TownPlanningSE@networkrail.co.uk>; 'hreenquiries@highwaysengland.co.uk'
<hreenquiries@highwaysengland.co.uk>; 'pressoffice@pla.co.uk' <pressoffice@pla.co.uk>;
'natssafeguarding@nats.co.uk' <natssafeguarding@nats.co.uk>;
'mail@homesandcommunities.co.uk' <mail@homesandcommunities.co.uk>;
'developmentenquiries@nwl.co.uk' <developmentenquiries@nwl.co.uk>;
'southernwaterplanning@atkinsglobal.com' <southernwaterplanning@atkinsglobal.com>;
'vicky.stirling@cadentgas.com' <vicky.stirling@cadentgas.com>; 'alans@espipelines.com'
<alans@espipelines.com>; 'FPLPlant@fulcrum.co.uk' <FPLPlant@fulcrum.co.uk>;
'box.landandacquisitions@nationalgrid.com' <box.landandacquisitions@nationalgrid.com>;
Customer <customer@sgn.co.uk>; 'enquiries@wwutilities.co.uk' <enquiries@wwutilities.co.uk>;
'enquiries@g2energy.co.uk' <enquiries@g2energy.co.uk>; 'assetrecords@utilityassets.co.uk'
<assetrecords@utilityassets.co.uk>; 'paul.watling@london.gov.uk'
<paul.watling@london.gov.uk>

Subject: Riverside Energy Park - EIA Scoping notification and consultation

Dear Sir/Madam

Please see attached correspondence on the proposed Riverside Energy Park.

Please note the deadline for consultation responses is 26 December 2017. This deadline is a statutory requirement that has been triggered by submission of the Applicant's scoping report and cannot be extended.

Kind regards,
Hannah

Hannah Pratt
Senior EIA and Land Rights Advisor
Major Applications and Plans
The Planning Inspectorate, 3D, Temple Quay House, Temple Quay, Bristol, BS1 6PN

Direct Line: 0303 444 5001
Helpline: 0303 444 5000
Email: Hannah.pratt@pins.gsi.gov.uk

Web: <https://infrastructure.planninginspectorate.gov.uk/> (National Infrastructure Planning)

Web: www.gov.uk/government/organisations/planning-inspectorate (The Planning Inspectorate)

Twitter: [@PINSgov](https://twitter.com/PINSgov)

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3D Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Developer Services
Southern Water
Sparrowgrove House
Sparrowgrove
Otterbourne
Hampshire
SO21 2SW

Tel: 0330 303 0119

Email: southernwaterplanning@atkinsglobal.com

Your Ref

EN010093

Our Ref

PLAN-020950

Date

20/12/2017

Dear Sirs,

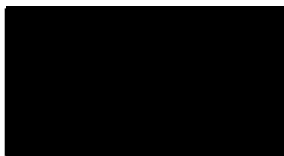
Proposal: Scoping consultation to build, commission and operate an integrated Energy Park consisting of complementary energy generating development, with an electrical output of up to 96 megawatts (MWe), together with a new connection to the existing electricity network and provision for Combined Heat and Power (CHP) readiness.

**Site: Riverside Energy Park, Belvedere, DA9 9AQ.
EN010093**

Thank you for your letter of 28/11/2017

The development site is not located within Southern Water's statutory area for water supply, drainage and wastewater services. Please contact, the relevant statutory undertaker to provide water supply, drainage and wastewater services to this development.

Yours sincerely



Developer Services

From: [Nicola Downes EI](#)
To: [Riverside Energy Park](#)
Cc: [REDACTED]
Subject: RE: Riverside Energy Park - EIA Scoping notification and consultation
Date: 30 November 2017 11:49:37

Dear Hannah,

I can confirm that Surrey County Council, in its role as Highway Authority, does not have any comments to make in respect of this matter.

Regards,

Nicola

Nicola Downes
Senior Transport Development Planning Officer

Surrey County Council
Room 365, County Hall
Penrhyn Road
Kingston Upon Thames KT1 2DW
Direct Tel: 020 8541 7426
www.surreycc.gov.uk/tdp

From: Riverside Energy Park [mailto:RiversideEP@pins.gsi.gov.uk]
Sent: 28 November 2017 10:30
To: Nicola Downes EI <nicola.downes@surreycc.gov.uk>; Toni Walmsley Macey EI <toni.walmsleymacey@surreycc.gov.uk>
Subject: Riverside Energy Park - EIA Scoping notification and consultation

Dear Sir/Madam

Please see attached correspondence on the proposed Riverside Energy Park.

Please note the deadline for consultation responses is 26 December 2017. This deadline is a statutory requirement that has been triggered by submission of the Applicant's scoping report and cannot be extended.

Kind regards,
Hannah

Hannah Pratt
Senior EIA and Land Rights Advisor
Major Applications and Plans
The Planning Inspectorate, 3D, Temple Quay House, Temple Quay, Bristol, BS1 6PN

Direct Line: 0303 444 5001

Helpline: 0303 444 5000

Email: Hannah.pratt@pins.gsi.gov.uk

Web: <https://infrastructure.planninginspectorate.gov.uk/> (National

Infrastructure Planning)

Web: www.gov.uk/government/organisations/planning-inspectorate (The Planning Inspectorate)

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From: [Jacobson, Neil](#)
To: [Riverside Energy Park](#)
Cc: [REDACTED]
Subject: Riverside Energy Park - EIA Scoping notification and consultation
Date: 12 December 2017 15:54:50
Attachments: [Letter to stat cons Scoping&Reg 11 Notification.pdf](#)
[Plan.msg](#)
Importance: High

Dear Sirs

**Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017(the EIA Regulations) – Regulations 10 and 11
Application by Cory Environmental Holdings Limited for an Order granting Development Consent for the Riverside Energy Park (the Proposed Development)**

Thank you for your letter of 28th November (attached) inviting us to provide information relating to this proposed development.

We have assessed that the proposed electrical connection (option 1) across the Thames would affect The Crown Estate's riverbed, as shown on the attached plan. This is also the site of part of UK Power Network's cable tunnel, which is subject of a licence from us. We assume that the proposal for option 1 would entail use of the existing tunnel. Either way, our land would be affected and the applicant would need to discuss the proposal with us and obtain our prior consent, on terms to be agreed.

I hope this is helpful at this stage.

Neil Jacobson

Neil Jacobson
Head of Coastal



1 St James's Market, London, SW1Y 4AH
Tel: +44 (0) 20 7851 5189
www.thecrownestate.co.uk

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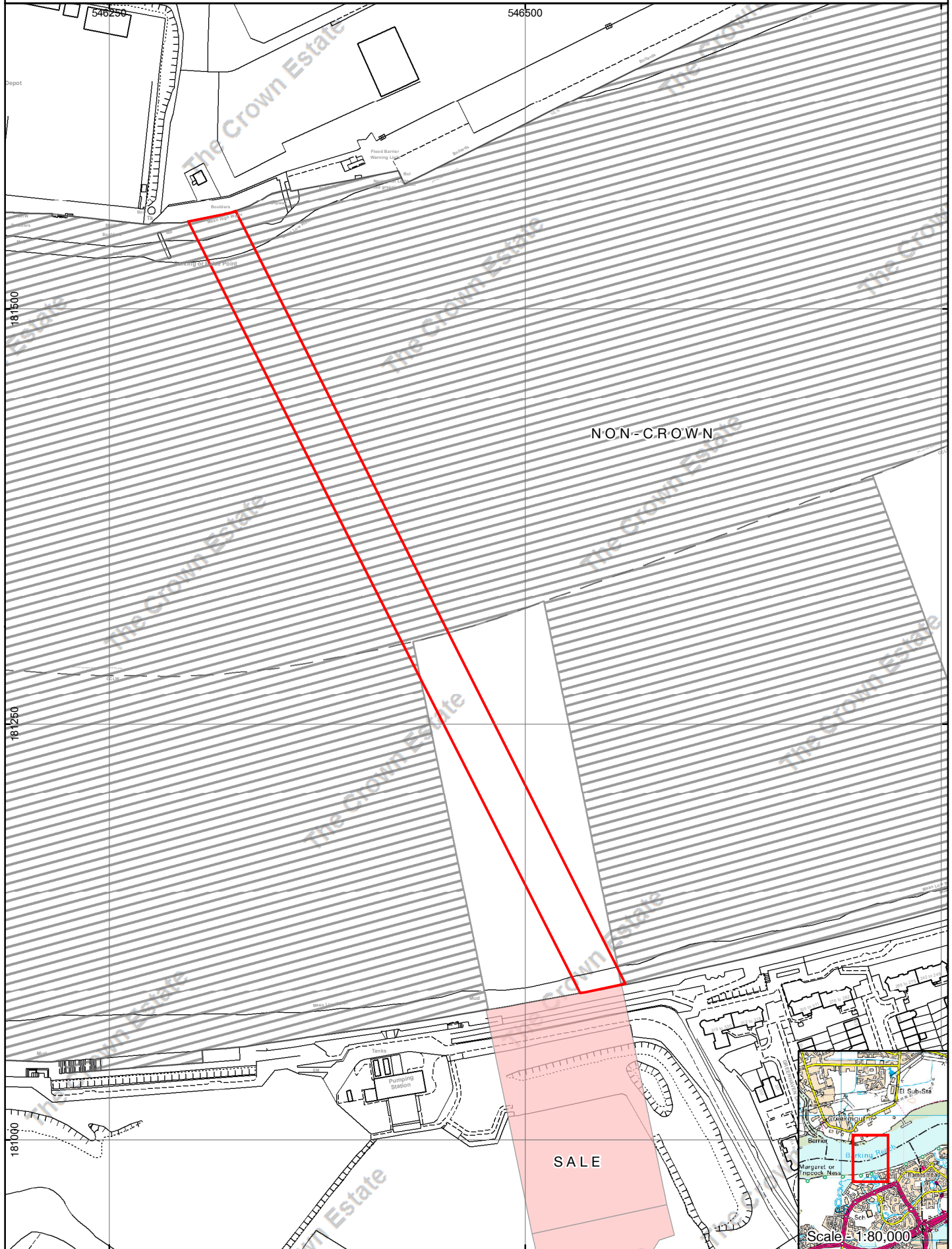
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The Crown Estate's head office is at 1 St James's Market London SW1Y 4AH

Cable Link Across River Thames At Creekmouth - Conflict Plan

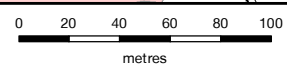
River Thames

TQ 4681



GIS_2017_2548_V1
Author:DJH QA: LP

1:3,000 @ A4



Date: 12/12/2017

Old File Ref: 11-16-20

OS Edn: 2015 MasterMap 50 000 Scale Raster.
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1 St James's Market
London
SW1Y 4AH



From: [Stephen Vanstone](#)
To: [Riverside Energy Park](#)
Cc: [REDACTED]
Subject: RE: Riverside Energy Park - EIA Scoping notification and consultation
Date: 15 December 2017 10:23:13
Attachments: [Letter to stat cons Scoping&Reg 11 Notification.pdf](#)

Good morning Hannah,

Trinity House advise that all marine works below the high water mark should be fully assessed within the Navigation Risk Assessment, provided as part of the Environmental Statement.

The Port of London Authority (PLA) should be consulted directly concerning the above, as well as any proposed risk mitigation measures relating to these marine works.

Kind regards,

Steve Vanstone
Navigation Services Officer

Navigation Directorate
Trinity House
Trinity Square
Tower Hill
London
EC3N 4DH

Tel: 0207 4816921

E-mail: stephen.vanstone@thls.org

From: Riverside Energy Park [mailto:RiversideEP@pins.gsi.gov.uk]
Sent: 28 November 2017 10:26
To: Navigation <Navigation.Director@thls.org>
Cc: [REDACTED]
Subject: Riverside Energy Park - EIA Scoping notification and consultation

Dear Sir/Madam

Please see attached correspondence on the proposed Riverside Energy Park.

Please note the deadline for consultation responses is 26 December 2017. This deadline is a statutory requirement that has been triggered by submission of the Applicant's scoping report and cannot be extended.

Kind regards,
Hannah

Hannah Pratt
Senior EIA and Land Rights Advisor
Major Applications and Plans
The Planning Inspectorate, 3D, Temple Quay House, Temple Quay, Bristol,
BS1 6PN

Direct Line: 0303 444 5001

Helpline: 0303 444 5000

Email: Hannah.pratt@pins.gsi.gov.uk

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From: [Danielle Thomas](#) on behalf of [Dig](#)
To: [Riverside Energy Park](#)
Subject: RE: Riverside Energy Park - EIA Scoping notification and consultation
Date: 30 November 2017 12:28:37
Attachments: [image001.png](#)

Good afternoon,

With regards to your below request, this is not Wales & West Utilities area. This falls within Southern Gas Network's area, contact details for them below:

Email: plantlocation@sgn.co.uk

Telephone: 0845 070 3497

If you have any further questions please don't hesitate to contact me. Many thanks

Kind Regards,

Danielle Thomas
Plant Protection Team
Administrator Assistant

Telephone: **02920 278 912**

Email: Danielle.Thomas@wwutilities.co.uk

Wales & West Utilities Ltd | Wales & West House | Spooner Close | Celtic Springs | Newport | NP10 8FZ



From: Enquiries
Sent: 28 November 2017 10:53
To: Plant Protection Enquiries
Subject: FW: Riverside Energy Park - EIA Scoping notification and consultation

Good morning,

Please see the email below for your attention.

Should this email not be for your attention please forward this on to the relevant department and let me know as soon as possible.

Many thanks,

Dave Carter
Customer Experience Administrator
Wales & West Utilities Ltd

T: 02920 278982

From: Riverside Energy Park [<mailto:RiversideEP@pins.gsi.gov.uk>]

From: [Martyn, Joe](#)
To: [Riverside Energy Park](#)
Subject: EA response EN010093-000004 Scoping Opinion - Riverside Energy Park, Belvedere.
Date: 27 December 2017 09:37:57
Attachments: [SL_117720-01 \(JM\) Scoping Opinion Riverside Energy Park, Belvedere, EN010093-000004 .pdf](#)

Dear Sir/madam

Please find attached our response. This was originally sent on the 22 of December. However I have just noticed it was in my draft box and so will not have reached you. I hope you can still considered our comments.

Kind regards

Joe Martyn

[Planning Specialist - South London](#)

Environment Agency | South East | Kent and South London | London

 **020 3025 5546**  kslplanning@environment-agency.gov.uk

Environment Agency | 3rd Floor, Seacole Building, 2 Marsham Street, London SW1P 4DF

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The Planning Inspectorate
Major Casework Directorate
Temple Quay House (2 The Square)
Temple Quay
Bristol
Avon
BS1 6PN

Our ref: SL/2017/117720/01-L01
Your ref: EN010093-000004
Date: 21 December 2017

Dear Sir/Madam

Scoping Opinion - An integrated energy park of up to 96 megawatts generating capacity (comprising waste energy recovery, waste anaerobic digestion, battery storage and solar generation) and associated electrical connection.

Riverside Energy Park, Belvedere.

We have review the Environmental Impact Scoping report by Peter Brett Associates
Project Name: Riverside Energy Park, Belvedere. Project Ref: 42166, Report Title:
EIA Scoping Report, Doc Ref: FINAL, Date: 24th November 2017 and wish to
provide comments on the following:

- Flood Risk
- Thames Tidal Flood Defences
- Groundwater Protection
- Ecology
- Environmental Permits
- Waste Planning
- Water quality and the Water Framework Directive (WFD)

Flood Risk

The proposed development is defined by [Table 2 of the Planning Practice Guidance \(PPG\)](#) as Less Vulnerable/Essential Infrastructure. The site is within Flood Zone 3, defined by [Table 1](#) of the PPG as land having a 1 in 200 or greater annual probability of sea flooding. The site is protected by the Thames Tidal defences, with a standard of protection of a 1 in 1000 annual probability of flooding. However, the site is situated within an area that would be flooded if there were to be a breach in the defences. We would expect any new development at this location to have finished floor levels set no lower than the breach flood event at this site.

Environment Agency
Ergon House, Horseferry Road, London, SW1P 2AL
Telephone: 03708 506 506
Email: enquiries@environment-agency.gov.uk
Website: www.gov.uk/environment-agency



Thames Tidal Flood Defences

The Riverside Energy Park Site and an area of the Potential Temporary Construction Work Areas appear to be adjacent to the flood defences. The condition grade of the flood defence is currently 'fair' with some sections 'poor', as such a flood defence condition survey will be necessary to identify remedial works required to improve the condition of the flood defence.

We would expect that any development at this site to be set back from the defences to allow for any required maintenance, emergency access and to allow for the defences to be raised in the future. A continuous fit for purpose flood defence line must be maintained at the minimum statutory level throughout the construction works and for the lifetime of the development.

It will need to be demonstrated that the flood defence can be raised in line with Thames Estuary 2100 Plan levels in the future without undue cost. Further on the Thames Estuary 2100 Plan can be found at <https://www.gov.uk/government/publications/thames-estuary-2100-te2100>.

Due to the level of flood risk that the site faces and the proximity to the Tidal Flood Defences, we would expect flood risk to be scoped in to the Environmental Impact Assessment to ensure that the risks are assessed adequately.

The applicant should be aware that any works in/over/underneath a main river may require a Flood Risk Activity Permit (FRAP). Additionally, any works within 16m of a Tidal Flood Defence may also require a FRAP. The applicant can find out more information regarding FRAPs, including Exclusions and Exemptions, on our [website](#).

Groundwater Protection

Section 7.11 (Ground Conditions) summarises the site's history and proposes a Phase 1 Ground Condition Assessment (GCA) to inform any possible site investigation / remedial actions that may be required. The GCA will be undertaken in accordance with CLR11. This approach is considered acceptable.

Ecology

Section 8.7 Lighting proposes to scope lighting out of the EIA. For lighting to be scoped out of the EIA the development will have to clearly demonstrate that there is no change from the existing lighting on site, particularly in relation to the adjacent nature reserve and the River Thames, which is subject to considerable amounts of change and possible in-combination affects from other developments.

Therefore lighting will have to be included for marine and terrestrial habitats in order to demonstrate that it is identical in terms of impact to the existing conditions. This approach applies to all development aspects that could impact on the adjacent nature reserve and River Thames.

The development may have to leave sufficient space for future raising of the Thames

Environment Agency
Ergon House, Horseferry Road, London, SW1P 2AL
Telephone: 03708 506 506
Email: enquiries@environment-agency.gov.uk
Website: www.gov.uk/environment-agency

defences, depending on their current condition. If additional wall raising will be required to meet the TE2100 standard the development must be set back to allow embankment raising to take place. This is so that no encroachment takes place and the tidal Thames habitats can be protected and enhanced where feasible to do so.

The development must consider how it can deliver a net gain for ecology both terrestrial, to achieve further mitigation for its proximity to the adjacent nature reserve, but also on the River Thames. The use of Estuary Edges guidance can help with this process.

Environmental Permit

An Environmental Permit will be required for the proposed activities at Riverside Energy Park (REP) under the Environmental Permitting (England and Wales) Regulations 2016. Since this proposal is likely to be of high public interest we strongly recommended that the applicant considers joint discussion and/or parallel tracking of the application alongside the planning permission.

Air Quality

The proposed activities fall within an area designated as an Air Quality Manager Area for NO₂ and PM₁₀. These pollutants, particularly NO₂, are produced by waste incineration processes and therefore this proposal will need to be considered in more detail. The proposed operations will need appropriate risk assessment and mitigation measures in place to control these emissions and reduce the risk of exceeding air quality standards. Dispersion modelling of the emissions and impacts will be needed, and further pollution prevention and control methods and appropriate height and location of major emission points will need to be considered. These may affect the layout and/or location of the development, so are likely to be key considerations for planning permission. Our assessment process and criteria can be found as follows:

<https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit>

Paragraph 7.3.18 states that the proposed stack height will be chosen in accordance with Best Available Techniques. Please note that we have recently produced guidance on options for assessing whether a proposed stack height represents best available techniques (BAT) and can be made available from the Environment Agency on request.

Combined heat and power (CHP)

Paragraph 2.1.14 states that the REP would be CHP enabled with necessary infrastructure within the REP site (heat exchangers, pumps and pressurisation system) included. This is in line with our requirements for new energy from waste plants which we need to be CHP-ready if they do not include CHP from the outset. The applicant will need to comply with the Environment Agency's [CHP-Ready guidance](#).

Environment Agency
Ergon House, Horseferry Road, London, SW1P 2AL
Telephone: 03708 506 506
Email: enquiries@environment-agency.gov.uk
Website: www.gov.uk/environment-agency

However, the applicant should also note that they will need to comply with additional requirements imposed by Article 14 of the Energy Efficiency Directive. This legislation requires all new combustion plant (including power stations and energy from waste plants) which has a total net thermal input of more than 20 megawatts to carry out a cost benefit analysis for operating as a high-efficiency co-generation plant or supplying a district heating or cooling network with waste heat. Guidance on how to comply with these requirements can be made available from the Environment Agency on request.

Proximity to nature conservation sites at risk from emissions to air

The proposed energy from waste plant is within 2km of Sites of Special Scientific Interest (SSSI) the closest one being the Inner Thames Marshes. We will need to give more detailed consideration to the proposal if the critical levels for pollutants such as ammonia, nitrogen oxides or sulphur dioxide, or critical loads for acidification or eutrophication are exceeded or close to the threshold. These operations may require consideration of additional pollution prevention and control methods as well as the height and location of major emission points. These may affect the layout of the development so are likely to be material considerations for planning permission. Our assessment process and criteria can be found as follows:

<https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit>

Please note that some larger emitters (greater than 50 megawatt), such as this proposal, may be required to screen to 15km for European sites and to 10km or 15km for SSSIs. Relevant screening distances should be discussed with the Environment Agency at pre-application.

Waste Planning and transport

The EIA should identify the need for the scheme in terms of the nature of the wastes that will be treated and the catchment area that the materials will be drawn from. It will need to consider the waste hierarchy under the waste framework directive. It should be considered if the materials being sourced are actually residual waste.

The EIA should consider if the existing network for waste transfer stations have capacity to take the extra materials that will be generated. If not the works needed to increase capacity should be included in the assessment.

Anaerobic digestion plant - In section 2.1.12 it mentions that the digestate could be incinerated or used in agriculture. The digestate should be used for the latter in order to move this particular waste stream up the waste hierarchy, and to capture this materials full resource potential. The transport assessment could include transport of the AD digestate to agriculture.

The EIA should consider the impact of the additional transport at the existing transfer station network be factored into the Air Quality assessment.

For the construction phase a comprehensive site waste management plan should be adopted.

Water quality and the Water Framework Directive (WFD)

The EIA has identified that a WFD assessment will be required .

Whilst we appreciate the temporary nature of the construction works, and that following cessation of construction there will be further decommissioning of the temporary structures and reinstatement of the intertidal and subtidal habitats, both the construction and the decommissioning & reinstatement works have potential (albeit temporary) to impact upon water quality, principally by raising sediment into suspension, whereupon it may interact with the water column, and cause chemical and/or physicochemical physical changes to the water column.

The degree, extent and duration of the effects are important in determining WFD compliance. The EIA should consider the Water Framework Directive and its daughter directives, including the Environmental Quality Standards Directive (EQSD) both have Environmental Quality Standards (EQS's) for Annual Average (AA) and Maximum Allowable Concentration (MAC).

Sediments in the vicinity of the proposed works will require chemical sampling, including for polycyclic aromatic hydrocarbons (PAH's) as directed by the MMO, in order to provide a basis for estimation of contaminant loadings for use in the impact assessment stage of the WFD assessment. It is very likely that sediment will be found to contain significant levels of contamination, based on our experience of sediment chemistry results from other dredges in the waterbody, such that water quality will not "scope out" when using the EA's "Clearing the Waters for All" guidance to WFD assessment. Thus a full "impact assessment" will be required, and the applicant will need to discuss with the marine team the level of evidence and arguments and assumptions that may be required by us to consider the applicants impact assessment for water quality to be acceptable.

Reasonable estimation of the volume of (contaminated) sediment likely to be disturbed will be required.

The rate of disturbance is also a relevant consideration—if the activity happens over a protracted period- the "peak loads" of contaminants transferred to the water column may be smaller than if one assumed an "instantaneous" load transfer of the whole dredged volume for example.

Considerations of the type of methodology used to dredge (dispersive vs removal)

and the timing of dredging will be pertinent to assessment of water quality risks. There are timing restrictions to dispersive dredging generally applied; dredging by dispersive methods, whilst often cheaper when viable, has greater potential to result in transfer of contaminants from sediment to water, and is generally resisted by us during the months of June-August inclusive in this reach of the Thames. Removal dredging, by comparison, results in much less sediment “lost” back into the water column, so has lower risks for water quality.

The requirements of the project timetable may influence the choice of an appropriate method to mitigate risks, and the rate of dredging can be varied to reduce risks also, should the initial assessment indicate water quality risks are too high.

The proximity of both Crossness and Beckton sewage treatment works (STW) outfalls would tend to suggest the sediments will have a relatively high organic content and may be anoxic fairly close to the surface. We hold historical benthic invertebrate subtidal grab and intertidal core data for the Crossness area (which was sampled regularly as a routine site of the Thames Estuary Biological Program [TEBP a.k.a. Thames Benthic Program] until spring 2008 when this local initiative was discontinued in favour of a more spatially randomised grab sampling methodology brought in to service the WFD program. These data are available on Open Data at [.gov.uk](https://data.gov.uk) (this can be found using the term BIOSYS, which is our biological database archive.)

With respect to

[7.3.3] A human health risk assessment, to assess the risk to human health from potential emissions of persistent organic pollutants, will also be undertaken.

[7.3.13] Υ Increased deposition of metals to soil; **and**

Υ Increased NO_x concentrations, nitrogen, sulphur, hydrogen fluoride, ammonia and acid deposition on sensitive ecological receptors.

We would wish to see some consideration of the effects of emissions on TRAC waterbodies. The drop out of persistent organic pollutants to the water and sediment environments of the waterbody, deposition of metals, sulphur, hydrogen fluoride, ammonia and acid deposition should all be placed in WFD context, since emissions will be long-term and may result in small far field effects at distances which could extend not only to the adjacent Thames Middle waterbody, but also other adjoining transitional waterbodies Thames Upper and Thames Lower for example. Shellfish fisheries in Thames Lower could conceivably receive additional chemical burdens, though the bacteriological drivers for designated shellfish waters monitoring under WFD are unlikely to be affected. Any EQSD/ WFD chemicals present in the emission that might enter the waterbodies need to be considered up to the point that their contribution can be demonstrated to be too low to affect WFD compliance over the life of the development. Persistent organic pollutants may well accumulate in the river sediments if they deposit in turbid, sediment-laden estuary water (due to their partitioning characteristics) and there are already concerns for high levels of PAH's in Thames sediments (Thames Middle failed for benzo g,h,i-perylene in 2009 RBMP

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classification). As EQS's for PAH's are already hard to meet, activities which significantly elevate their concentrations in water or sediments potentially could be a reason for a waterbody to fail to meet its objectives in the future. The lifetime of the development spans several RBMP cycles, when RBMP objectives might be revised to be more stringent, and this may include adoption of tighter EQS standards for some chemicals, and new standards for chemicals not yet regulated.

[7.6.2] Proposed river works for construction may also include some localised dredging of the river bed.

Dredging and marine construction both require a marine licences. We are a statutory consultee to both the Port of London Authority and the Marine Management Organisation (licenses will be required from both; dual licensing is currently the norm at present) and will consult on both. WFD assessments are required from the applicant for activities requiring a marine licence, and the marine team will determine whether the water quality elements of such assessments are of acceptably low risk to justify any claim to comply with WFD.

[7.9.22] The Environment Agency's "Clearing the Waters for All" process will be used for the WFD Assessment

We agree with this protocol; advice at the "impact assessment" stage should be sought from the marine team at the earliest possible opportunity, since no formal guidance can be written that is both waterbody and activity specific- location context **is** important. We are, however, able to offer insights into how impact assessment could be structured and what constitutes acceptable levels of evidence and argument, and we can agree what assumptions may be reasonably made in making arguments. Water quality predictions are extremely complex and gaps in data can cause problems for applicants.

[7.9.28] Data availability could provide a limitation to the assessment.....

The level of impact assessment should generally reflect the potential risks perceived. Small dredge and construction works in- river will seldom require full-scale modelling of sediment plumes and a fully numerical treatment to estimate final concentrations. Capital dredge works application will be required to provide sediment chemistry data to underpin sediment quality claims, and volume of material disturbed will be a key variable which will require quantification. For a dredge this is a relatively straightforward calculation (as dredge box dimensions and depth are known- volume is a calculated product), for construction impacts we are prepared to enter into a dialogue over quantities of sediment involved to determine what might be a reasonable figure we can agree upon, in order to supply this in any consideration of whether "sufficient dilution" will be achieved to remain WFD compliant. The MMO will require sediment analysis for dredge applications, but the need for sediment analysis for other construction activities in water rather depends on the amount of sediment that might be mobilised; projects which mobilise more than approximately 300 cu m of sediment *might* require sediment chemistry data to be provided to us, within a WFD assessment, to underpin dilution arguments, whereas smaller volumes will not

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require such a high burden of proof to demonstrate likely WFD compliance.

We agree that scoping out of shellfish and bathing waters from water quality assessment is appropriate. Shellfish waters in the Thames estuary are located seaward (east) of Thames Middle waterbody, in the Thames Lower and the Swale waterbodies. The triggers for shellfish water failures are microbiological, and there would be no pathway for transfer of faecal bacteria to water via the airborne emission route.

The sediments locally in the vicinity of the development might have higher levels of faecal bacteria taking into account the proximity to outfalls of sewage treatment works (STW's), though only if the STW was not performing to its usual effluent standards. Whilst the triggers for shellfish water non-compliance, following revision of the Shellfish Waters Regulations, are now purely bacteriological, the chemical element compliance limits which were formerly included within the shellfish regulations were harmonised with and incorporated into the main body of the WFD, and now apply to the water column of waterbodies generally. Any chemical transfers to shellfish waters should be considered under the water quality assessment section of a WFD assessment.

The high organic loadings on sediments in this area may increase the risk of high chemical or biological oxygen demand on the water column when disturbing sediments locally, which has relevance for achieving WFD chemical and physico-chemical standards (dissolved oxygen for example).

I hope our comments are helpful, if you have any questions please contact me.

Yours faithfully

Mr Joe Martyn
Planning Specialist

Direct dial 020 3025 5546

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From: [Simon Thelwell](#)
To: [Riverside Energy Park](#)
Subject: EN010093-000004 - Scoping Consultation
Date: 28 December 2017 13:32:16

Dear Sir/Madam

I refer to your letter of 28 November 2017 regarding the above. London Borough of Havering would wish to make the following comments:

1. We agree in principle with the proposed scope of works relating to the approach to assessing the impacts of the proposed development both during the construction and operational phases.
2. We would strongly recommend early involvement and consultation with London Borough of Havering prior to the commencement of the air quality and noise assessments to agree on the methodology which will be followed (e.g. location of receptors, baseline conditions, operating scenarios etc.)
3. Havering's HV1 Rainham Automating Monitoring Station (553127, 182506) is located less than 4 km from the site. We would therefore recommend that this monitoring station is included in Table 7.3.1.
4. The proposed residential developments along A1306 New Road (between Dover's Corner and Beam Park Development) should also be taken into account at the stage of identification of specific sensitive receptor locations.

Thank you.

Simon Thelwell | Planning Manager, Projects and Regulation

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y/r

The person dealing with this matter is



LONDON BOROUGH OF
BEXLEY

Direct Dial 020 3045 5771

Date **21 DEC 2017**

Mark Watling

Mark.watling@bexley.gov.uk

The Planning Inspectorate
3D Eagle Wing
Temple Quay House
2 The Square
Bristol BS1 6PN

For the attention of Ms Hannah Pratt

Dear Madam

RE Request to the Planning Inspectorate for a scoping opinion: Application by Cory Environmental Holdings Limited for an Order granting development consent for the Riverside Energy Park for the Secretary of States's opinion as to the information to be provided in an Environmental Statement relating to the proposed development. Riverside Energy Park Belvedere.

I refer to the above matter referred to the London Borough of Bexley for comment. Following a review of the information the London Borough of Bexley would wish the following points to be considered within the Environmental Impact Assessment:-

Section 7.2 deals with transport issues, and confirms that:

7.2.2 Chapter 7 of the ES will be based on a Transport Assessment (TA) and will follow a scope that they will seek to agree with Bexley and Transport for London in respect of impact on the surrounding transport infrastructure; and

7.2.3 An assessment of impacts during construction and operation on the river's capacity (in terms of levels of service and safety) through a Navigational Risk Assessment (NRA) appended to the ES.

Although the scope appears to generally cover the likely transport-related impacts, and some comfort is taken from the Applicant's confirmation (at 7.2.2) that they will seek to agree the scope of the TA with the Council, for the avoidance of doubt it should be clarified that the TA will need to cover likely impacts during construction and operation (and de-commissioning) the same as the NRA (confirmed at 7.2.3).

The scope and proposed methodologies for air quality and noise impacts in the ES are considered generally acceptable to the London Borough of Bexley and it is noted in paragraph 7.3.32 of the EIA Scoping Report that "...modelling will make use of mapped background concentration data from DEFRA...".

These background maps have been shown to be inaccurate for the Bexley area. There is a preference therefore that Bexley measured urban background measurements be used instead of the figures available on the modelled background maps provided by DEFRA.

In respect of issues relating to the London Borough of Bexley the applicant should contact Jon Fox (Team Leader: Environmental Protection; jon.fox@bexley.gov.uk), who leads on air quality matters, for any queries in this regard (and appropriate meteorological data sources).

As part of this process clarification may also need to be sought from the Greater London Authority on whether an additional "air quality neutral" assessment is required for a development of this type.

Bexley Council Officers have also spoken with officers from the Royal Borough of Greenwich who comment:-

- a. The Mayors Draft Environment Strategy is proposing that in areas which exceed legal air quality limits, the policy should prevent emissions from energy production plant, including from CHP that would exceed those of an ultralow NOx gas boiler. Would the proposed CHP have to comply with this policy requirement if it is adopted? Will the CHP be able to demonstrate compliance with this possible requirement?
- b. The air quality assessment and dispersion modelling will need to take into account the topography of the proposed site and surrounding areas. It is my understanding that RB Greenwich is situated at a higher ground level as compared to the proposed site.
- c. I am unsure if the infrastructure for the delivery of waste by barge is already in place, if it is not, then I would like the assessment to take a precautionary worst case approach by including the additional vehicles movements that would be covered by the barge shipments. This is to cover the eventuality that the infrastructure is not constructed and all waste movements are conducted by land. Similarly, the same approach should be taken if the applicant proposes to use the river way to ship materials to and from site during the construction phase of the project.
- d. With regards to the barges, it is suggested that the applicant liaise with the Port of London Authority to assess what boats/technology can be used to limit emissions from this source. For example, using hybrid boats over diesel and magnetic docking mechanisms to prevent idling engines.
- e. With regards to the abatement product, is the 3% air pollution residues a weekly, monthly or yearly output?
- f. The document states that there are multiple tall structures in the immediate area of the site; these needs to be taken into account in the dispersion modelling as they may impact on the dispersion from the proposed unit.
- g. LAEI data when available should always be used over Defra data as it is specific to London.
- h. Stack calculations should be included in the air quality assessment.
- i. The dispersion modelling should include different stack height scenarios.
- j. Modelling should account for dispersion near waterways as I believe they also impact on pollution dispersion.

In principle officers from the London Borough of Bexley are supportive of these comments and statements. I understand that these may well have been forwarded as part of any formal comments provided by the Royal Borough of Greenwich following any direct consultation from yourself.

It is also recommended that the appropriate chapter of the EIA deals with Flood risk assessment and that a SuDS hierarchy is brought forward for surface water run off.

In relation to fire safety 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 fire fighting purposes will be provided.

Following receipt of the Scoping opinion request for information to be included in the EIA the London Borough of Bexley consulted several external organisations (which the applicant may well have also consulted as on the Scoping opinion) for comments however given the tight deadline and the Christmas period very few were returned. If the London Borough of Bexley receives any relevant comments it will nevertheless forward these for your consideration.

Yours sincerely

A black rectangular redaction box covering the signature of Mr R Lancaster.

RL Mr R Lancaster
Head of Development Management

Removal of River Works Note

TECHNICAL NOTE

Job Name: Riverside Energy Project
Job No: 42166
Date: 01/02/2018
Prepared By: C. Leach / N. Frost
Subject: Removal of river works and amended scope of EIA

Introduction

Cory Environmental Holdings Limited (trading as Cory Riverside Energy) (Cory) intends to apply for development consent to build, commission and operate an integrated Energy Park consisting of complementary energy generating development, with an electrical output of up to 96 megawatts (MWe), together with a new connection to the existing electricity network and provision for Combined Heat and Power (CHP) readiness. The Proposed Development, located in Belvedere in the London Borough of Bexley, would be known as 'Riverside Energy Park' (REP) and would be sited adjacent to an existing Energy Recovery Facility (referred to as Riverside Resource Recovery Facility (RRRF)) also operated by Cory.

A Scoping Report for REP was submitted to the Planning Inspectorate (PINS) in November 2017 (ref: EN010093-00004). Paragraph 2.2.3 of the Scoping Report states: *"In order to facilitate construction of REP, temporary works in the River Thames may be required. Cory are currently exploring two potential options for this element of the proposed works. The first would be to install a temporary causeway across the intertidal zone, where self-propelled multi-axle trailers would roll the construction modules off a barge. The second option would include the use of a lift crane, which could be either located on a jetty head constructed in the river or constructed near the river bank, which would directly lift the modules from a barge into the site. Both options would require provision to lift the construction modules over the flood defence wall and the Thames River Path. Some localised dredging may also be required to ensure sufficient vessel access during the tidal cycle"*.

Furthermore, paragraph 2.2.4 states that the marine-related works would be temporary and limited only to the construction phase of the Proposed Development.

Given the nature of these works and the potential for impacts from REP on the Thames Estuary, Sections 7.8 and 7.9 of the Scoping Report describe the proposed scope of the EIA in relation to addressing potential impacts of REP on marine biodiversity and marine geomorphology.

The Scoping Opinion for REP was issued by PINS on behalf of the Secretary of State in January 2018. The Opinion includes a number of responses from stakeholders in relation to refining the scope of assessment of marine works (see Table 1).

Design Iteration

Since the Scoping Opinion was published, further refinement of the REP design and likely construction methodologies has removed the need to undertake any temporary works within the River Thames. Instead, the Applicant is proposing to utilise the existing jetty and fuel delivery infrastructure (currently used for RRRF).

It is anticipated that there would be a peak increase of four vessel movements per day through the existing jetty during the construction phase. At the latter end of this period, during commissioning, this peak daily figure would increase to eight which also represents the peak daily increase in operational vessel movements from that currently existing.

It is noted that the existing jetty has capacity to accommodate this increase in vessel movements without requiring works to the existing structure or cranes. A Navigational Risk Assessment (NRA) will be prepared for the REP DCO application, which will assess the operational increase in vessel movements over existing movements within this part of the River Thames.

On the basis of this design refinement, the temporary river works described in the Scoping Report will no longer form part of the project description for the purposes of the EIA.

TECHNICAL NOTE

Given these changes to the Proposed Development, the scope of the EIA will be amended to exclude an assessment of the likely impacts of the temporary works in the River Thames described in the Scoping Report. Table 1 below sets out the original consultee responses to the Scoping Report which specifically reference likely impacts of the temporary works in the River Thames, along with how the Applicant proposes to address these comments in the light of the proposed change in REP design and likely construction methodologies described.

Table 1 – Scoping responses and revised actions as a result of removing temporary river works

Organisation	Specific topic area	Comment – paragraph references relate to individual responses appended to the Scoping Opinion.	Applicant response in light of removing temporary works from River Thames
Marine Management Organisation (MMO)	Marine Biodiversity	3.4 - Recommend that Marine Conservation Zone is scoped in.	As no temporary works within the river are now planned, there will be no potential impacts on the MCZ.
Marine Management Organisation (MMO)	Marine Geomorphology	4.1 to 4.3 - MMO recommend effects of vessel wash and wave impacts on intertidal sediments should be considered.	<p>During construction of REP, it is anticipated that there would be an additional two vessel movements per day, within the worst-case month, above existing vessel movements. This worst-case scenario is anticipated to last for a single month with all other construction months requiring fewer additional vessel movements.</p> <p>It is considered that the anticipated additional vessel movements would not be likely to cause significant effects from vessel wash or wave impacts on intertidal sediments. Accordingly, it is considered that wave impacts on intertidal sediments from vessel wash can be scoped out of the EIA.</p>
Marine Management Organisation (MMO)	Marine Biodiversity	<p>6.4 - MMO advises effects of underwater noise and vibration on herring to be assessed, and also recommends impacts relating to fish receptors are not scoped out at this stage.</p> <p>6.8 - MMO recommends noise disturbance as a result of vessel movement during marine works, temporary habitat loss and change resulting from marine infrastructure, light disturbance</p>	<p>No potential impacts as no works to take place within river.</p> <p>As above, the anticipated additional vessel movements are not considered to cause likely significant effects on underwater noise and vibration, habitat loss or change. Accordingly, it is considered that these impacts can be scoped out of the EIA.</p>

TECHNICAL NOTE

Organisation	Specific topic area	Comment – paragraph references relate to individual responses appended to the Scoping Opinion.	Applicant response in light of removing temporary works from River Thames
		and remobilising contaminated sediment are considered.	
Marine Management Organisation (MMO)	Marine Biodiversity	7.2 - MMO recommend the potential impacts on fish, marine mammals, benthic species and shellfish must be considered.	No construction infrastructure in the river will be required, so any potential impacts can be scoped out.
Port of London Authority (PLA)	Marine Biodiversity	(No para reference) - PLA highlight the need to remove construction infrastructure with appropriate restoration.	No construction infrastructure in the river will be required, so no requirement to remove such infrastructure will be necessary.
Port of London Authority (PLA)	Marine Geomorphology	(No para reference) - PLA recommend consideration to physical impacts on nearby terminals and the navigation channel.	No construction works will take place within the river and therefore there is no potential for physical impacts on the navigation channel.
Environment Agency	Marine Licences	(No para reference) - EA note that dredging and marine construction works both require marine licences.	No dredging or construction works are required within the river.
Environment Agency	Marine Biodiversity	(No para reference) - EA recommend that lighting be included for marine and terrestrial habitats in order to demonstrate that it is identical in terms of impact to the existing conditions. This approach applies to all development aspects that that could impact in the adjacent nature reserve and River Thames.	No construction works will take place within the river. As existing infrastructure will be utilised, effects from lighting on marine habitat will remain the same.
PINS	General Assessment	2.3.11 - The Scoping Report identifies the potential for dredging during the construction phase. The ES should delineate the areas that would be dredged and identify the likely quantities of material that would be dredged, along	No construction infrastructure or dredging will be required, so any potential impacts can be scoped out.

TECHNICAL NOTE

Organisation	Specific topic area	Comment – paragraph references relate to individual responses appended to the Scoping Opinion.	Applicant response in light of removing temporary works from River Thames
		with the frequencies of these activities.	
PINS	General Assessment	2.3.12 - The Applicant is currently exploring two options for the temporary works within the River Thames; a temporary causeway or a lift crane. The Scoping Report does not state whether the DCO application will retain both options or opt for a single option. The ES should ensure that the significant effects associated with these options are assessed.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.
PINS	Marine archaeology	Section 4.5 (9) - This chapter of the Scoping Report has focused primarily on land-based archaeology. The ES should also assess the potential for effects to archaeology within the marine environment.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.
PINS	Marine conservation	Section 4.7 (1) - The Inspectorate considers that designation of the rMCZ is likely and therefore the ES should assess impacts on the rMCZ and its features.	As no temporary works within the river are now planned, there will be no potential impacts on the MCZ.
PINS	Marine Biodiversity	Section 4.7 (2) - The Scoping Report states that crustacean sensitivity to underwater sound and vibration is very much lower than fish and that noise levels are unlikely to adversely impact the benthic community of shellfish. The Scoping Report has not provided existing and predicted noise levels or details of marine construction and noise generating activities. In the absence of detail of the marine construction works, the Inspectorate does not agree that this matter can be scoped out and recommends that the Applicant agrees the approach	<p>No temporary works within the river are now planned, therefore construction noise impacts to the benthic community of shellfish would only occur from the small increase over current total levels of river traffic. This small effect would be temporary and is not anticipated to result in significant effects.</p> <p>As with noise impacts associated with the increase in operational vessel movements, construction noise impacts associated with vessel movements are scoped out.</p>

TECHNICAL NOTE

Organisation	Specific topic area	Comment – paragraph references relate to individual responses appended to the Scoping Opinion.	Applicant response in light of removing temporary works from River Thames
		with the Marine Management Organisation.	
PINS	Marine Biodiversity	Section 4.7 (3) - The Scoping Report states that the footprint of the proposed works and extent of indirect habitat change only covers a highly localised area that constitutes a very small fraction of the known ranges of local fish and marine mammal populations. However, the area of habitat loss and its importance to species has not been detailed within the Scoping Report. As such the Inspectorate does not agree to scope this out of the ES.	No temporary works within the river are now planned and therefore there will be no marine habitat loss. Therefore the need for assessment is scoped out.
PINS	Marine Biodiversity	Section 4.7 (5) - The Scoping Report states that the area of river that will be lit as a result of the new temporary infrastructure will only constitute a small fraction of the total width of the river and therefore no disruption or blocking of migratory routes are anticipated. No information on the importance of the affected area as a migratory route or the lux levels of lighting has been provided within the Scoping Report. In the absence of such information, the Inspectorate does not agree that this can be scoped out of the ES.	No temporary works within the river are now planned and therefore there will be no lighting required in the river. Therefore the need for assessment is scoped out.
PINS	Marine Biodiversity	Section 4.7 (10) - The Marine Management Organisation's response highlights the Cefas spawning maps, the Cefas young fish survey and The Fish Atlas of the Celtic Sea, North Sea and Baltic Sea. The	As no temporary works within the river are now planned, there will be no potential impacts on fish species.

TECHNICAL NOTE

Organisation	Specific topic area	Comment – paragraph references relate to individual responses appended to the Scoping Opinion.	Applicant response in light of removing temporary works from River Thames
		<p>Inspectorate advises that these resources are used to help establish the baseline environment.</p>	
PINS	Marine Biodiversity	<p>Section 4.7 (11) - No fish or marine mammal surveys are proposed. The Scoping Report proposes to utilise data from the London Zoological Society, Environment Agency, the National Biodiversity Network and previous impact assessments for nearby developments. The Inspectorate recommends that the Applicant agrees the level of necessary survey effort with relevant consultees including Natural England, the Environment Agency and the Marine Management Organisation.</p>	<p>No temporary works within the river are now planned and therefore the need for assessment of impacts on marine mammals is scoped out.</p>
PINS	Marine Geomorphology	<p>Section 4.7 (12) - The ES should detail how the seabed would be restored following the removal of marine infrastructure that is required for the construction phase. The aims of the restoration should be clear. The ES should provide details of any necessary pre- and post-construction coastal monitoring arrangements with any necessary defined triggers for intervention and restoration.</p>	<p>No temporary works within the river are now planned and therefore the need for assessment is scoped out.</p>
PINS	Marine Geomorphology	<p>Section 4.7 (13) - The ES should identify the logarithmic spreading model and the piling parameters that have been utilised. A worst case assessment should be allowed for.</p>	<p>No temporary works within the river are now planned and therefore the need for assessment is scoped out.</p>
PINS	Marine Geomorphology	<p>Section 4.7 (15) - The Inspectorate agrees with the Marine Management Organisation that the potential remobilisation of contaminated sediment should be assessed within the ES.</p>	<p>No temporary works within the river are now planned and therefore the need for assessment is scoped out.</p>

TECHNICAL NOTE

Organisation	Specific topic area	Comment – paragraph references relate to individual responses appended to the Scoping Opinion.	Applicant response in light of removing temporary works from River Thames
PINS	Marine Biodiversity	Section 4.7 (16) - The Inspectorate notes from the Marine Management Organisation's response that the Thornback ray is an important species in the Thames estuary. This species has not been identified within the Scoping Report; the Inspectorate considers the potential impacts on this species should be assessed.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.
PINS	Marine Biodiversity	Section 4.7 (17) - The assessment of impacts to marine mammals should consider inter-related impacts of a minor nature.	No temporary works within the river are now planned and therefore the need for assessment of impacts on marine mammals is scoped out.
PINS	General Assessment	Section 4.8 (1) - The Inspectorate understands that all temporary structures in the River Thames would be removed following completion of construction of the REP. On that basis, the Inspectorate agrees that significant effects during operation of the REP (i.e. following removal of the structures) are unlikely and can be scoped out of the ES. However, for the avoidance of doubt, the Inspectorate would expect the effects of decommissioning of the temporary structures and reinstatement of habitats to be assessed. The Inspectorate does not therefore agree that the decommissioning of temporary structures can be scoped out.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.

TECHNICAL NOTE

Organisation	Specific topic area	Comment – paragraph references relate to individual responses appended to the Scoping Opinion.	Applicant response in light of removing temporary works from River Thames
PINS	Marine Geomorphology	Section 2.8 (2) -The Scoping Report states that the complex morphological shape of the Thames Estuary is likely to lead to dissipation of swell waves prior to entering the middle estuary containing the Proposed Development. Consequently, any wave activity at the site would be a result of local wind generation and will be small in magnitude. The Inspectorate considers that a jetty or causeway has the potential to generate a wave shadow and that the impacts of this on intertidal sediments, for example erosion or accretion around the structure, should be considered within the ES. As the Scoping Report does not provide details of the proposed structures in the River Thames, the Inspectorate does not agree that sufficient information is available to agree to scope out impacts from changes to wave climate.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.
PINS	Contamination	Section 4.8 (3) - The nearest bathing water (The Serpentine in Hyde Park) is located at a distance greater than 20km from the Proposed Development. The nearest shellfish water protected area (Southend shellfish water) is located greater than 30km from the application site. The distances of these areas from the Proposed Development are noted, however the Scoping Report has not demonstrated there is no pathway for effect (e.g. via the deposition of emissions), or that the concentrations of pollutants would not be at level to impact on these areas. Therefore the Inspectorate does not agree to scope out these matters.	No temporary works within the river are now planned and therefore there will be no pathway to the Serpentine or Southend Shellfish Water. The need for assessment is scoped out.

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Organisation	Specific topic area	Comment – paragraph references relate to individual responses appended to the Scoping Opinion.	Applicant response in light of removing temporary works from River Thames
PINS	Assessment methodology	Section 4.8 (4) - The Inspectorate notes that the suspended sediment concentrations for the Thames Estuary are based on data collected in 2004. The Applicant should ensure that up-to-date information is utilised, or provide justification within the ES as to why data of this age is considered to be suitable and relevant.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.
PINS	General Assessment	Section 4.8 (8) - The design of the proposed temporary marine works should be provided within the ES and used to inform the scope of hydrodynamic assessments.	No temporary works within the river are now planned and therefore the need for assessment is scoped out.
PINS	Hydrology, Flood Risk and Water Resources	Section 4.9 (7) - The Scoping Report refers to a flood defence wall over which construction modules would be lifted. The ES should identify the locations of the flood defences and detail whether any works are required to them and, if so, the potential impacts from these works should be assessed. The ES should assess the potential impacts of the Proposed Development on the existing flood defences, in particular any effects resulting from changes to the hydrodynamic and sedimentary regime from the temporary marine infrastructure.	No construction infrastructure will be required, as such no lifting over the flood wall would take place. It is considered that use of the jetty would pose no greater risk to the integrity of the flood defence than through already consented operational activities, and any associated potential impacts can be scoped out. The outline Code of Construction Practise to be included within the DCO application would provide for a briefing of construction workers to maintain the integrity of the jetty.

Conclusion

Since publication of the REP Scoping Opinion, further refinement of the project design and construction methodologies has removed the need to undertake temporary works within the River Thames. Those temporary works will therefore no longer form part of the project description for the purposes of the EIA. The Applicant considers that many of the original comments raised by consultees within the Scoping Opinion in respect of those river works can now be scoped out of the assessment (see Table 1).

Consequently, for the reasons set out above, the Applicant considers that the Marine Biodiversity and Marine Geomorphology chapters of the PEIR and ES are no longer required. It is therefore not proposed to consider these further within the application for development consent and Cory is seeking to agree this approach with the statutory bodies whose comments are described in the table above. Notwithstanding this, consideration will still be given within the REP DCO application to the

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requirements of the Water Framework Directive, and to Navigational Risk as appropriate. The views of consultees to confirm this approach are sought.

DOCUMENT ISSUE RECORD

Technical Note No	Rev	Date	Prepared	Checked	Reviewed (Discipline Lead)	Approved (Project Director)
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