

# Riverside Energy Park

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## Outline Code of Construction Practice

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## Summary

This outline CoCP has been prepared to provide sufficient information, based on best practice guidance and references to mitigation measures set out in the ES (**Document Reference 6.1**), to act as a framework for the final CoCP to provide for each phase of works.

The outline CoCP includes a number of 'general' recommendations to include in the final CoCP which would drive best practice and create a safe construction environment. These include use of:

- Register of Environmental Aspects;
- Risk Assessments;
- Method Statements;
- Site Environmental Standards;
- Environmental Management System;
- Public Relations / Complaints Procedures;
- Monitoring and Measurement;
- Incident Response;
- Clearly identified Roles and Responsibilities; and
- Training and Awareness.

Furthermore, this outline CoCP sets out a number of specific design and mitigation measures which will be used in the final CoCP in order to limit impacts on transport, air quality, noise and vibration, townscape and visual, historic environment, terrestrial biodiversity, hydrology, flood risk and water resources, and ground conditions. It additionally outlines the measures to prevent impacts arising from/to lighting, waste management and aviation.

This outline CoCP is intended to provide assurance to the decision maker and stakeholders that appropriate measures will be taken forward into the construction phase to limit any potential impacts and encourage a safe working through the submission and approval of the final CoCP prior to the commencement of each, or part of, the numbered works which comprise REP.

# 1 Introduction

## 1.1 Introduction

1.1.1 Cory Environmental Holdings Limited (trading as Cory Riverside Energy (Cory or the Applicant)) is applying to the Secretary of State (SoS) under the Planning Act 2008 (PA 2008) for powers to construct, commission and operate an integrated Energy Park, to be known as Riverside Energy Park (REP or the Proposed Development). The Proposed Development comprises complementary energy generating development, together with an associated Electrical Connection. As REP will be in excess of 50 MWe capacity it is classified as a Nationally Significant Infrastructure Project (NSIP) under section 14 of the PA 2008 and therefore requires a Development Consent Order (DCO) to authorise its construction and operation. This document is provided as part of Cory's application for development consent for REP.

1.1.2 The two principal elements of the Proposed Development are: the Energy Park which would be located adjacent to an existing Energy Recovery Facility operated by Cory (referred to as Riverside Resource Recovery Facility (RRRF)) situated in Belvedere in the London Borough of Bexley (LBB); and the proposed underground Electrical Connection which would run from REP and terminate at the Littlebrook substation in Dartford. Plans showing the location, Application Boundary and indicative zoning for the Proposed Development are provided in **Figures 1.1** and **1.2** of the ES (**Document Reference 6.3**). A glossary of terms and definitions is provided in **Chapter 18** of the ES (**Document Reference 6.1**).

## 1.2 The Applicant

1.2.1 Cory is registered in England (Company Number 5360864) and is the Applicant for the Proposed Development. Cory's registered address is 2 Coldbath Square, London, United Kingdom, EC1R 5HL.

1.2.2 Cory is a leading recycling, energy recovery and resource management company. Cory consented, constructed and now operates the existing RRRF adjacent to the Proposed Development. RRRF is a key element of London's energy and resource management infrastructure.

1.2.3 Further information on Cory is provided at <http://www.coryenergy.com/>.

## 1.3 Project Description.

1.3.1 The Proposed Development comprises REP together with an associated Electrical Connection. These are described in turn, together with the anticipated REP operations, below. **Chapter 3** of the ES provides further details of the Proposed Development.

1.3.2 Cory, or its subsidiary, Riverside Energy Park Limited (Company Number 11536739) would be the undertaker under the DCO for the construction and operation of REP, and it is anticipated that UK Power Networks (UKPN) would be responsible for the construction of the Electrical Connection.

### REP

1.3.3 REP would be constructed on land immediately adjacent to Cory's existing RRRF, within the London Borough of Bexley and would complement the operation of the existing facility. It would comprise an integrated range of technologies including: waste energy recovery, anaerobic digestion, solar panels and battery storage. The main elements of REP would be as follows:

- Energy Recovery Facility (ERF): to provide thermal treatment of Commercial and Industrial (C&I) residual (non-recyclable) waste with the potential for treatment of (non-recyclable) Municipal Solid Waste (MSW);
- Anaerobic Digestion facility: to process food and green waste. Outputs from the Anaerobic Digestion facility would be transferred off-site for use in the agricultural sector as fertilizer or as an alternative, where appropriate, used as a fuel in the ERF to generate electricity;
- Solar Photovoltaic Installation: to generate electricity. Installed across a wide extent of the roof of the Main REP Building;
- Battery Storage: to store and supply additional power to the local distribution network at times of peak electrical demand. This facility would be integrated into the Main REP building;
- On Site Combined Heat and Power (CHP) Infrastructure: to provide an opportunity for local district heating for nearby residential developments and businesses. REP would be CHP Enabled with necessary on site infrastructure included within the REP site.

### Electrical Connection

- REP would be connected to the electricity distribution network via a new 132 kilovolt (kV) underground electricity cable connection. The route options for the Electrical Connection are shown in the Works Plans (**Document Reference 2.4**).
- In consultation with UK Power Networks ('UKPN'), Cory is considering Electrical Connection route options to connect to the existing National Grid Littlebrook substation located south east of the REP site, in Dartford. The route options are located within the LBB and Dartford Borough, and would run from a new substation proposed to be constructed within the REP site.

### Purpose of this Document

- 1.3.4 This is a single outline document which may be used in whole or in part as the basis, where appropriate, for any Code of Construction Practice (CoCP) produced for any part(s) of the works under Requirement 11 of the draft DCO (**Document Reference 3.1**). The final CoCP for each part of the works will be prepared by the relevant primary contractors (the Contractors) in consultation with the Applicant. The Applicant (or where appropriate, the primary contractor or undertaker) will submit the scheme to the relevant local planning authority for approval prior to initiating construction works for the relevant works or parts of the Proposed Development. The purpose of this outline CoCP is to provide the principles and requirements relating to the management and mitigation of construction impacts for REP and the Electrical Connection. This outline CoCP is to be read in conjunction with relevant safety and environmental legislation. It will form the management framework for the planning and implementation of construction activities in accordance with the environmental commitments identified as part of the application for a DCO or any subsequent Requirements in Schedule 2 to the DCO. The final CoCP (for each relevant part or parts of the works as necessary) will remain a live document and will be updated as required throughout construction by the Contractors.
- 1.3.5 This outline CoCP sets out the principles which the final CoCP (to be produced for each part or parts of the works as necessary) will be required to adhere to, and is informed by the Environmental Statement (ES) (**Document Reference 6.1**) and associated DCO application documents.
- 1.3.6 The draft DCO (**Document Reference 3.1**) includes a requirement that prior to the commencement of development of the various parts of REP, the Applicant/undertaker must submit the final CoCP for the relevant part of the development to the relevant planning authority (namely the LBB and DBC) for approval. The CoCP submitted must be substantially in accordance with this outline CoCP and must include certain items (see below). The final CoCP (for each relevant part or parts of the works as necessary) will be developed after the DCO is made, in conjunction with the relevant Contractor(s) once the timescales for the detailed implementation of the consent are defined.
- 1.3.7 No part of the authorised development may commence until the final CoCP for those activities have been submitted to and approved by the relevant planning authority. The draft DCO defines 'commencement' under the Order as excluding certain works that may occur before the final CoCP has been agreed. These are: land clearance, environmental surveys and monitoring, investigations for the purpose of assessing ground conditions (including the making of trial boreholes), receipt and erection of construction plant and equipment, erection of construction welfare facilities, erection of any temporary means of enclosure, the temporary display of site notices or advertisements and any other works that do not give rise to any likely significant adverse environmental effects as assessed in the Environmental Statement.



- 1.3.8 In addition to the final CoCP, (which includes a Materials Management Plan), further documents will be used to implement specific environmental mitigation during the construction phase including;
- Construction Traffic Management Plan; and,
  - Biodiversity & Landscape Mitigation Strategy.
- 1.3.9 The final CoCP will provide a signpost to these additional documents, which will be discussed and detailed accordingly.
- 1.3.10 The final CoCP will provide information on:
1. The construction and phasing programme;
  2. Construction liaison procedures;
  3. Construction Complaints procedures;
  4. Nuisance management including measures to avoid or minimise the impacts of construction works (covering dust, wheel washing, damping of stockpiles, sheeting materials, lighting, noise and vibration);
  5. Reference to undertaking construction activities in accordance with the recommendations of BS 5228 'Noise and Vibration Control on Construction Open Sites' Part 1 Noise and Part 2 Vibration;
  6. Construction waste management;
  7. Measures for the maintenance of construction equipment;
  8. Temporary storage of soils and other material of value to be in accordance with best practice;
  9. Installation of hoarding and/ or fencing;
  10. Safe storage of polluting materials;
  11. Protocol for flood warning and a flood incident management plan;
  12. Protocol flood warning and a flood incident management plan;
  13. Methods to prevent water pollution and adverse impacts upon surface water drainage;
  14. Restoration of the site following completion of construction;
  15. Methods to prevent water pollution and adverse impacts upon surface water drainage; and,

16. Measures to deal with contamination which is likely to cause significant harm to persons or significant pollution of controlled waters or the environment.

- 1.3.11 This outline CoCP is considered to provide sufficient information, based on best practice guidance and references to mitigation measures set out in the ES (**Document Reference 6.1**), to act as a framework for the final CoCP to provide for each parts of works. This document is intended to provide assurance to the decision maker and stakeholders that appropriate measures will be taken forward into the construction phase through the submission and approval of the final CoCP prior to the commencement of each, or part of, the numbered works which comprise REP.
- 1.3.12 An overview of the REP site and the activities relating to construction for REP is provided in **Chapter 3** of the ES (**Document Reference 6.1**).

## **2 Outline CoCP – General Information**

### **2.1 Introduction**

2.1.1 This section of the document sets out the general information which should be included within the final CoCP and is not necessarily linked to a specific environmental topic area. Section 3 of this document covers specific considerations for environmental topics.

### **2.2 Overarching Principles**

2.2.1 Preparation of the final CoCP (for each relevant part or parts of work) will be consistent with the best practice advice on CoCP contained within Chapter 10 of BS 42020 (Code of Practice for Planning and Development) (or its updates).

### **2.3 Register of Environmental Aspects**

2.3.1 A register of Environmental Aspects will be produced as part of the final CoCP. This register will be used to inform the environmental procedures to be undertaken on the construction site (e.g. any specifically identified environmental risks) and to provide a tool for construction teams when preparing construction method statements or field briefings.

2.3.2 This register would cover several environmental topic areas and would be regularly updated to reflect any additional risks resulting from the Contractor's selected methods of working, changing site conditions and parts of work etc. Environmental risks and key environmental issues to consider during construction would be identified under the following general headings:

- Transport (including where appropriate any marine access);
- Air Quality;
- Noise and Vibration;
- Townscape and Visual Impacts;
- Historic Environment;
- Terrestrial Biodiversity;
- Hydrology, Flood Risk and Water Resources;
- Ground Conditions;
- Socio-economic;
- Lighting;

- Waste Management; and
- Aviation.

## **2.4 Risk Assessment**

2.4.1 It is envisaged that, even on a reasonable worst case basis, the risk of significant effects occurring during construction of the Proposed Development is low. However, the final CoCP will require the majority of construction activities undertaken on-site to undertake environmental risk assessments which will:

- Identify if or where potential significant environmental impacts or effects might still be anticipated given the final form of the works;
- Assess the impact or effects and probability of risks from these;
- Identify potential control measures to be taken and re-calculate the risk; and
- Report where a potentially unacceptable level of residual risk is identified so that action can be considered, where practicable.

2.4.2 The results of risk assessments, and their residual risks are only considered acceptable if:

- The severity of outcome is reduced to the lowest practicable level;
- The number of risk exposures are reduced to an acceptable level;
- All reasonably practicable mitigating measures have been taken; and
- The residual risk rating is reduced to an acceptable level.

2.4.3 The findings of the risk assessment and in particular the necessary controls would be explained to the Contractor before the commencement of the relevant works using an instruction format (e.g. Toolbox Talks). The controls will be agreed by the undertakers environmental staff (or appropriately experienced personnel).

2.4.4 The risk assessments would be kept and filed to be checked/reported against.

## **2.5 Method Statements**

2.5.1 Method statements would be completed by the contractors undertaking work on the Application Site, in consultation with the undertaker's engineers (or appropriately experienced personnel), on-site environmental staff and, where necessary, environmental specialists. Their production would include a review of the environmental risks and commitments referred to in Section

2.4, so that appropriate control measures are developed and included within construction processes.

2.5.2 Method statements would be reviewed by the Site Manager or appointed delegate and, where necessary, by an appropriate environmental specialist.

2.5.3 The Contractor and / or in conjunction with the Contractor's environmental staff would decide which of the works have environmental implications using the following criteria:

- The work may result in an adverse effect on the environment (including receptors such as cycleways/footpaths) or human health; and /or
- The work is adjacent to a surface water drain or water body.

2.5.4 Where the works have environmental implications, the method statements will be passed to the Contractor and the undertaker's environmental staff for approval prior to work commencing. Work would then need to be carried out in accordance with the approved method statements.

2.5.5 Method statements should contain at least the following information:

- Location of the activity and access/egress arrangements;
- Work to be undertaken and methods of construction;
- Plant and materials to be used;
- Labour and supervision requirements;
- Health, safety and environmental considerations; and
- Any permit or consent requirements beyond those already obtained (including the DCO).

## **2.6 Site Environmental Standards**

2.6.1 Site Environmental Standards will be agreed between the Contractor and the undertaker, and will detail the measures for construction work that do not align with the risk assessment/ method statement procedure. These will be determined on a case by case basis and through consideration of, for example, site conditions or weather conditions. The Site Environmental Standards would be designed to cover the majority of construction activities in accordance with the ES and requirements associated with the DCO.

2.6.2 Site Environmental Standards will address issues such as working hours for different activities, storage of materials, management of waste, dust, noise and vibration, and pollution control. The standards will be printed on A3 posters, placed on site notice boards and used as a briefing tool on the Application Site. These standards will also form the basis of Toolbox Talks

which will inform all the Contractors working on the Application Site of the potential environmental risks arising from construction activities.

- 2.6.3 Best practice construction site management techniques will be implemented to avoid/minimise the generation of excessive waste, dust, lighting, noise and vibration, in accordance with the ES and relevant requirements associated with the DCO. These are discussed in more detail in Section 3 of this document.

## **2.7 Environmental Management System**

- 2.7.1 Following construction, an Environmental Management System (EMS) for commercial operation will be developed and designed to comply with ISO 14001 or an equivalent recognised standard. ISO 14001 is a set of standards related to environmental management that assists organisations to minimise environmental effects during operation and comply with applicable laws and regulations.

- 2.7.2 Implementation of ISO 14001 is key to work undertaken by the undertaker and the use of an Environmental Management Plan for commissioning based on ISO 14001 (or similar) will be used to support implementation and compliance with the REP DCO and the Environmental Permit that will be required for operation of REP under the Environmental Permitting (England and Wales) Regulations 2016.

## **2.8 Construction Stage Public Relations / Complaints Procedures**

- 2.8.1 The following steps will be taken to make the public aware of the activities on site and the available lines of communication with the undertaker:

1. Regular communication will continue with the Belvedere Community Forum as the main local residents' group with which the Applicant is already closely engaged;
2. A Community Stakeholder Group will be set up for the vicinity of the REP Site, to include an invite for a representative from local stakeholders including Crossness Nature Reserve and as appropriate representatives from LBB and Belvedere Community Forum;
3. Appropriate signage providing advanced notice of street works would be made available to road users;
4. The neighbouring occupiers (listed above) will be notified of the start of site works and the likely duration of the overall construction phase;
5. A telephone number for environmental complaints will be published locally to the Application site;
6. The Contractor will maintain close liaison with the relevant planning authority's Environmental Health Officer (EHO) at all times; and

7. Should any unforeseen event occur within the construction site that has the potential to cause off-site pollution then the Contractor will notify the EHO and/or other appropriate regulatory authority as soon as possible.

## **2.9 Monitoring and Measurement**

- 2.9.1 Regular site inspections will be carried out by the Site Manager or delegate which will assess the potential for environmental impacts to arise from construction works.
- 2.9.2 Particular notice will be taken during and following extreme weather events, when working in areas of known or potential contamination, and when particularly hazardous activities are being carried out. Method Statements will be required where the risk assessment has identified a potential significant risk to the environment (see Section 2.5 above).
- 2.9.3 In the event of any environmental incident the most senior representative of the Contractor will take the role of the responsible person and will take charge of the situation. The responsible person will take immediate steps to eliminate the impact on the environment and mitigate/minimise any environmental damage through immediate preventative action (e.g. use of spill response kits) or by contacting the relevant regulatory body.

## **2.10 Incident Response**

- 2.10.1 The following procedures would be followed if an environmental incident occurs:
  - Stop work immediately;
  - Report the discovery to the Site Manager;
  - Seal off the area to contain the spread of contaminants (if required);
  - Clear the area to ensure there is nothing that could cause fire or explosion;
  - Contact the regulator or local authority to describe the incident;
  - Arrange for testing to be carried out (as required); and
  - Record details of the incident, including photos and relevant information on the Environmental Incident Report Form.

## **2.11 Roles and Responsibilities**

- 2.11.1 The anticipated specific roles and indicative responsibilities for the implementation of the final CoCP are described below. These will be confirmed in the final CoCP:

Indicative Role	Responsibility
Project Director (or appropriate nominated senior delegate from the undertaker or undertaker for the construction of the Electrical Connection for the given stage of Works)	<ul style="list-style-type: none"> <li>■ Overall responsibility for performance throughout the construction period in their respective areas of responsibility and will ensure that appropriate resources are made available and that environmental controls and any agreed or appropriate protection measures are implemented.</li> </ul>
Site Manager	<ul style="list-style-type: none"> <li>■ Monitor construction activities and performance to ensure compliance with the final CoCP for that part(s) of work and that identified and appropriate control measures are effective.</li> <li>■ With the team, ensures that the works are correctly implemented with regard to HSE, quality, time and budget.</li> <li>■ Develop and review the final CoCP for that part(s) of work and specialist procedures in accordance with this outline CoCP.</li> </ul>
Project Engineering Manager	<ul style="list-style-type: none"> <li>■ Deputy of Project Director.</li> <li>■ Coordination of Engineering of the entire plant including the technical, time scheduling and quality aspects.</li> </ul>
Project Construction Manager	<ul style="list-style-type: none"> <li>■ Establish the erection plan for the project including resourcing so that it can be executed to the satisfaction of the customer, taking into account HSE, quality, time, environment and cost.</li> </ul>
Contract Manager	<ul style="list-style-type: none"> <li>■ Assessment of commercial risk and claim potential, and participates in the development of risk mitigation measures.</li> <li>■ Contractual Administration of Change management under client and consortium partner contracts and preparation of commercial notifications.</li> </ul>
Health, Safety & Environment Manager	<ul style="list-style-type: none"> <li>■ Responsible for co-ordinating and managing all the environmental activities.</li> </ul>



Indicative Role	Responsibility
	<ul style="list-style-type: none"> <li>■ Establishes, directs and maintains the HSE integrated management system, directs the safety organization in accordance with applicable laws, policies and standards and establishes and administers the national and international legal register.</li> <li>■ Ensure delivery of environmental training to personnel within the project team.</li> <li>■ Act as a main point of contact between the regulatory and local planning authorities and the undertaker on environmental issues</li> </ul>
Project Procurement Manager	<ul style="list-style-type: none"> <li>■ Operational Leadership of all procurement activities required across the Contract.</li> </ul>
Project Manager Civil	<ul style="list-style-type: none"> <li>■ Leading all Project Management issues on the Civil Work Scope and Manage Civil Project team with Task allocation and delegation of Authority to ensure Project Objectives in terms of Work Scope, Budget, Time Schedule, Quality and EHS- are met.</li> </ul>
Ecological/ Arboricultural Clerk of Works	<ul style="list-style-type: none"> <li>■ To undertake pre-construction ecological surveys, supervise vegetation clearance and be available to advise the contractor and liaise with the Local Planning Authority Ecologist, Tree Officer and Natural England, in the event that protected species are found or disturbed during the construction process.</li> </ul>

## 2.12 Training and Awareness

2.12.1 All site personnel will receive site induction training. Induction checklists will be used, and inductees should sign the induction checklist after having understood the relevant induction material. This includes reading and understanding relevant environmental operating procedures.

2.12.2 Induction training will include:

- Introduction to the site;
- Site tour (if deemed appropriate, relative to the spatial and technical extent of works that the staff member will undertake);
- Awareness of the Environmental Management System;
- Key roles and responsibilities;

- Environmental objectives, targets, applicable improvement plans and environmental key performance indicators; and
- Relevant risk assessments and operating procedures.

## **3 General Site Requirements**

### **3.1 Good Housekeeping and Site Layout**

3.1.1 To reduce potential environmental incidents or nuisances occurring, the Contractor will ensure compliance with the following measures, where relevant:

- Prohibition of open fires as well as measures in place to reduce the likelihood of fires;
- A wheel washing services for all vehicles leaving the site;
- Removal or stopping and sealing of drains and sewers taken out of use as well as prevent discharge of site runoff to ditches, watercourses, drains, sewers or soakaways without agreement of the appropriate authority;
- Storage, machinery, equipment and temporary buildings will be carefully positioned to reduce environmental effects;
- A site layout map showing key areas such as material storage, spill kits, material and waste storage and drains will be printed off and placed on site notice boards;
- Appropriate lighting and security such as control of lighting/illumination to reduce visual intrusion or any adverse effects on sensitive receptors;
- Security measures, including, closed circuit television (CCTV); and
- Adequate welfare facilities for staff, and designated smoking areas and containers for their waste.

### **3.2 Construction Working Hours**

3.2.1 Core working hours for potentially noisy or disturbing construction are planned to be from 0700 to 1900 on weekdays (Monday - Friday excluding Bank Holidays) and 0700 to 1300 on Saturdays.

3.2.2 The Contractor would likely require a period of up to one hour before and one hour after core working hours for start-up and close down activities such as:

- Arrival and departure of workforce and staff on site;
- Deliveries and unloading;
- Checks and examinations of plant and machinery (including test running) and the carrying out of essential repairs/maintenance to plant and machinery;

- Re-fuelling of plant and machinery engines;
- Site inspections and safety checks prior to commencing work;
- Site meetings; and
- Site clean-up.

3.2.3 Certain specific construction activities will require extended working hours for reasons of engineering practicability and safety such as slip form working, surveys and lifting/fitting of infrastructure and abnormal deliveries.

### **3.3 Hoarding and Fencing**

3.3.1 Design of hoardings around construction activities shall include consideration of the character of the surrounding landscape (e.g. solid hoarding, use of artwork where appropriate, viewing windows, or use of vegetation on hoardings). Fencing and hoarding shall be kept well maintained throughout construction.

3.3.2 The following measures will be applied, as appropriate:

- Maintenance of adequate fencing and hoardings to an acceptable condition to prevent unwanted access to the construction site, to provide noise attenuation, screening and site security where required;
- Use of different types of fencing and hoarding (e.g. mesh fence or solid hoarding including hoardings used for noise control);
- Consideration of artwork or other decoration and to keep them free of graffiti or posters;
- Providing site information boards with 'out of hours' contact details, telephone helpline number (for comments/complaints) and information on the works;
- Installing adequate lighting near hoardings; and
- Positioning and constructing gates in the fencing or hoarding to minimise the noise transmitted to nearby noise sensitive receptors.

### **3.4 Health and Safety (and COSHH assessment)**

3.4.1 All site work must be carried out in accordance with the provisions of the Health and Safety at Work Act 1974 to the satisfaction of the Health and Safety Executive (HSE) or its local officer. The Health and Safety at Work Act 1974 (HSWA) places a number of general and specific duties on employers, employees and the self-employed.

3.4.2 Section 2 of the HSWA places a duty on every employer to ensure, as far as is reasonably practicable, the health, safety and welfare at work of all

employees. Employers are also under a duty (section 3) to ensure, so far as is reasonably practicable, that persons not in their own employment (e.g. contractors or subcontractors) are not exposed to risks to their health and safety. Section 7 of the HSWA places a duty on every employee while at work to take reasonable care of the health and safety of themselves and of other persons, and to cooperate with their employer or any other person with regard to any duty or other statutory requirement. A large number of statutory regulations made under the HSWA set out detailed requirements for specific aspects of health and safety (e.g. provision of personal protective equipment, ladders, lighting, signs, electrical equipment, manual handling). These must be complied with during all construction works. The developer's nominated representative will ensure that appropriate industry standards for health and safety are applied, and that continuous improvement in safety performance is sought, in accordance with the principles of HSG65 'Successful health and safety management', published by the HSE.

3.4.3 Risk assessments will be carried out by the Contractor to document all identified risks. The risk assessments will be shared with all workers during the site induction and made available at the site office for the duration of the works. Further assessments will be carried out as the works progress and any necessary mitigation implemented.

3.4.4 The Contractor will prepare Control of Substances Hazardous to Health (COSHH) assessments to cover substances brought to or arising from the construction works.

### **3.5 Pollution Incident Control**

3.5.1 The Contractor will prepare and implement appropriate measures to control the risk of pollution due to construction activities, materials and extreme weather events and document in an incident control plan as part of the final CoCP.

3.5.2 The Contractor will be required to investigate and provide a report to the undertaker in the event a pollution incident event occurs, including the following:

- A description of the pollution incident, including its location, the type and quantity of contaminant and the likely receptor(s);
- A description of the contributing factors;
- Adverse effects and the measures implemented to mitigate adverse effects; and
- Recommendations to reduce the risk of the incident reoccurring.

3.5.3 The Contractor will consult with the relevant organisations statutory bodies and other relevant parties such as the HSE (Construction), the Fire Authority, the Ambulance Service, Environment Agency (EA), Natural

England (NE), utilities companies and the LBB when preparing response measures.

### **Emergency Preparedness**

3.5.4 The Contractor will develop, prior to the commencement of construction, an emergency procedure in consultation with the emergency services for potential risks during construction and will be required to follow the procedure in any site emergency.

3.5.5 The procedures will contain emergency phone numbers and the method of notifying Local Authorities and all other relevant statutory authorities including emergency services for action by the Contractor and/or the undertaker. Contact numbers of the Contractors' and the undertaker 's key personnel will also be included.

### **Emergency Access**

3.5.6 The Contractor will ensure that the requirements of the relevant fire authority will be followed for the provision of construction site access points (and suitable for emergency services). Emergency access points will be included in the emergency procedures and updated as required.

### **Fire Protection**

3.5.7 All construction sites and welfare facilities will have in place appropriate plans and management controls to prevent fires in liaison with the Fire Authority.

### **Unexploded Ordnance**

3.5.8 The Contractor will prepare procedures to deal with any unexploded ordnance encountered on site and ensure that all operatives are aware of them. Should unexploded ordnance be discovered on-site the site emergency procedures will be implemented to evacuate the work area and the emergency services contacted.

### **Extreme Weather Events**

3.5.9 The Contractor will consider the impacts of extreme weather events and related conditions during construction. The Contractor's CoCP should consider all measures deemed necessary and appropriate to manage extreme weather events and should specifically address training of personnel and prevention and monitoring arrangements. As appropriate, method statements should also consider extreme weather events where risks have been identified.

## 4 Outline CoCP – Specific Measures

### 4.1 Introduction

4.1.1 This section outlines the specific design and mitigation measures which will be used in the final CoCP for REP in order to limit impacts on transport, air quality, noise and vibration, townscape and visual, historic environment, terrestrial biodiversity, hydrology, flood risk and water resources, and ground conditions. It additionally outlines the measures to prevent impacts arising from/to lighting, waste management and aviation.

### 4.2 Transport

4.2.1 An assessment of the potential likely significant Transport effects resulting from the development has been undertaken which is set out in **Chapter 6** of the ES.

4.2.2 As part of any temporary closures of Public Rights of Way (PRoWs) associated with the construction of the Electrical Connection, there would be appropriate diversions put in place, where possible, to be agreed with the relevant highway authorities prior to the commencement of construction. These diversions would follow UKPN's appropriate guidance and take in to account the needs of all pedestrians; small children, pushchairs, reduced mobility, visually impaired and people using wheelchairs/mobility scooters etc.

4.2.3 Separate to this outline CoCP, the measures designed to limit potential impacts from construction phase traffic movements will be outlined in a draft Construction Traffic Management Plan (CTMP) (**Appendix B.1**) which would include:

- Construction vehicle routing plans;
- The use, where practicable, of the existing jetty;
- Where practicable, temporary diversions of any public rights of way that are temporarily closed;
- A construction logistics plan setting out the management of non-construction related traffic to and from Work Nos. 1, 2, 3, 4, 5, 6, 7 and 8;
- A construction staff travel plan together with a scheme for monitoring how construction staff travel to and from the construction of Work Nos. 1, 2, 3, 4, 5, 6, 7 and 8;
- Proposals for the scheduling and timing of movements of delivery vehicles including details of abnormal indivisible loads;
- Details of escorts for abnormal indivisible loads;

- Proposals for temporary warning signs and banksman and escort details;
- Site access plans;
- Measures to ensure the protection of users of any footpath within the Order limits which may be affected by the construction of the authorised development; and
- Proposals for the management of junctions to and crossings of highways and other public rights of way.

4.2.4 A vehicle booking system will manage deliveries and extractions, ensuring no congestion on site or in the vicinity of the works. The approved CTMPs for each part would add detail to the proposals in the draft CTMP, to reflect the construction programme and tasks scheduling. Opportunities would be explored to minimise and consolidate loads if feasible, guided by the geographic locations of suppliers, operators and hauliers.

4.2.5 Where footways and cycleways have to be temporarily closed, suitable alternative temporary pedestrian and cycle facilities will be provided, where possible, at the works to maintain a safe environment for pedestrians and cyclists.

### **4.3 Air Quality**

4.3.1 An assessment of the potential likely significant Air Quality effects resulting from the Proposed Development has been undertaken and this is set out in **Chapter 7** of the ES.

4.3.2 Best practice measures to limit dust will be incorporated into the construction of the Proposed Development. This includes mitigation relating to: site planning, construction activities and site activities. Key measures include wheel washing, damping down of stockpiles during dry and windy conditions, and sheeting materials to prevent dust migration. Good site management practices (e.g. adherence to guidance such as the London Mayor's SPG on The Control of Dust and Emissions During Construction and Demolition, 2014) during the construction works will help to prevent the generation of airborne dust. It will be the responsibility of the Contractor and site manager to ensure, through the CoCP, that sufficient precautionary measures to limit dust generation are undertaken.

4.3.3 Additionally, standard mitigation measures for low risk sites, taken from the Institute of Air Quality Management (IAQM) document 'Dust and Air Emissions Mitigation Measures' tables would also be applied. These are:

- Record all dust and air quality complaints, seek to identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken;
- Make the complaints log available to the local authority when asked;



- Record any exceptional incidents that cause dust and/or air emissions, either on or off site, and the action taken to resolve the situation in a log book;
- Avoid bonfires and external burning of waste materials on site; and
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.

4.3.4 The use of tugs on the River Thames will be explored and used where practical to transport construction materials and waste, which, if feasible, would help to reduce construction road traffic movements and emissions.

#### **4.4 Noise and Vibration**

4.4.1 An assessment of the potential likely significant noise and vibration effects resulting from construction of the Proposed Development has been undertaken and is set out in **Chapter 8** of the ES.

4.4.2 This Section outlines the potential sources of noise and vibration created by construction works and the methods of mitigation proposed to reduce these impacts which should be adopted in the final CoCP.

4.4.3 The CoCP would incorporate best practice working methods such as:

- All construction activities would be undertaken in accordance with the recommendations of BS 5228 'Noise and Vibration Control on Construction and Open Sites' Part 1 Noise and Part 2 Vibration;
- Core hours for construction works of 7am to 7pm Mondays to Fridays, 7am to 1pm on Saturdays with no works on Sundays/Public Holidays. This would not preclude work: carried out within existing buildings or buildings constructed as part of the authorised development; carried out with the prior approval of the relevant planning authority; are associated with an emergency; or, are associated with slip form working.
- Ensure the use of quiet working methods and the most suitable plant where reasonably practicable;
- Screening fixed and mobile plant to reduce noise which cannot be reduced by increasing the distance between the source and the receiver (i.e. by installing acoustic screens/enclosures);
- Where practicable, orienting fixed and mobile plant that is known to emit noise strongly in one direction so that the noise is directed away from dwellings or sensitive receptors;
- Closing acoustic covers to engines when they are in use or idling; and
- Engage with local neighbours and residents through the agreed Community Liaison channels to keep them informed of the proposed

working schedule, where appropriate, including the times and duration of any abnormally noisy activity that may cause concern.

#### **4.5 Townscape and Visual Impacts**

4.5.1 An assessment of the potential likely significant Townscape and Visual effects resulting from construction of the Proposed Development has been undertaken and is set out in **Chapter 9** of the ES.

4.5.2 This Section outlines the specific design and mitigation measures which will be used in the CoCP for the Proposed Development in order to limit landscape and visual impacts:

- Land / vegetation clearance and occupation would be limited to the minimum area necessary for the safe and efficient execution of the works;
- Temporary protection of vegetation and other vulnerable features to be retained would be undertaken in accordance with prevailing best practice;
- Temporary storage of soils and other material considered of value for retention would be undertaken in accordance with prevailing best practice;
- Construction areas would be laid out to reduce adverse impacts arising from temporary structures, construction activities and lighting;
- Use of construction site lighting outside normal working hours would be restricted to the minimum necessary for workforce and public safety, efficiency of working and for security. Directional luminaires would be used to limit unwanted light spills;
- Maintenance of tidy and contained site compounds;
- Fencing / Hoardings erected around the area of construction works, for reasons of creating a visual barrier to construction activities and also as a safety measure, to prevent access to the general public;
- Tree protection fencing;
- Temporal measures including the removal of all temporary structures and stockpiles when no longer required, and prompt reinstatement of construction areas; and
- Replacement of trees, shrubs and hedgerows (where removed) to accommodate the Electrical Connection, subject to planting constraints. Any planting would be maintained for a minimum of 12 months to ensure full and successful establishment.

## **4.6 Historic Environment**

- 4.6.1 An Assessment of the potential likely significant Historic Environment effects resulting from construction of the Proposed Development has been undertaken and is set out in **Chapter 10** of the ES.
- 4.6.2 This Section outlines the specific design and mitigation measures which will be used in the CoCP for the Proposed Development in order to limit impacts to the Historic Environment.
- 4.6.3 A Written Scheme of Investigation (WSI) identifying any areas where further archaeological investigations are required; the nature and extent of the investigation required; and providing details of the measures to be taken to protect, record or preserve any significant archaeological features that may be found, must be submitted to and approved by the relevant planning authority prior to commencement of the authorised development.
- 4.6.4 Following the production of the WSI, excavation of two geoarchaeological specific boreholes will be retained for palaeoenvironmental assessment / analysis from the locations of BH04 and between BH12 and BH09/BH10.

## **4.7 Terrestrial Biodiversity**

- 4.7.1 An assessment of the potential likely significant terrestrial biodiversity effects resulting from construction of the Proposed Development has been undertaken and is set out in **Chapter 11** of the ES.
- 4.7.2 This section outlines some of the specific design and mitigation measures which will be used in the CoCP for the Proposed Development in order to limit the impact on terrestrial biodiversity.
- 4.7.3 Appropriate regard for the protection of habitats and protected species during the construction works will be included within the final CoCP and will incorporate the following measures:
- Noise effects during construction will be mitigated through several measures (see Section 4.4.3 above) in line with BS 5228;
  - Wherever practicable, work compounds, access tracks and associated temporary works areas will not be located in, or adjacent to, areas that maintain habitat value;
  - Where works are located within designated areas or contain features of ecological value such as notable habitats or protected species, appropriate working measures will be adopted to protect habitats and species including consideration of noise, lighting and pollution impacts as a result of spillages or leaks from equipment during construction;
  - Site fencing will be used to prevent access to areas outside working areas, particularly in areas adjacent to features of ecological value;

- Procedures will be implemented to address potential site safety issues, including storage of potentially polluting materials;
- Briefings and instruction would be given to the Contractor through tool box talks regarding the biodiversity issues associated with the Application Site;
- An outline Biodiversity Mitigation Strategy will include measures to avoid and mitigate impacts to protected or notable species during the construction phase including sensitive methods of working in areas known to contain breeding birds, commuting and foraging bats, invertebrates, reptiles, and overwintering birds, or in areas where great crested newts may be present;
- Impacts to designated areas and habitats of ecological value within or adjacent to REP, such as the pond to the east of RRRF, will be avoided and protected where possible to protect them from adverse effects. This includes consideration of noise, lighting, and pollutant impacts, as a result of spillages or leaks from equipment during construction and decommissioning;
- If it is necessary to clear vegetation which is suitable for reptiles, this would take place during suitable climatic conditions and at the appropriate time of year. It would also be overseen by a suitably qualified ecologist and measures would be implemented to prevent re-colonisation if required;
- Impacts to watercourses along the Electrical Connection route will be minimised through the use of trenchless installation techniques; and
- Impacts to water voles in the ditch adjacent to Norman Road from Electrical Connection route option 1 will be avoided by ensuring an offset of at least 5 m from the top of the ditch bank.

## **4.8 Hydrology, Flood Risk and Water Resources**

- 4.8.1 An assessment of the potential likely significant hydrology, flood risk and water resources effects from the construction of the Proposed Development has been undertaken and is set out in **Chapter 12** of the ES.
- 4.8.2 The CoCP will include best practice working methods to prevent both water pollution and adverse impacts upon the surface water drainage regime during the construction of the Proposed Development. These will include:
- Management systems (as required in support of the Flood Risk Activity Permit process) to adequately manage works within the flood plain, including (inter alia), the method of working, provisions for flood warning and a flood incident management plan;

- Best practice working methods to prevent both water pollution and adverse impacts upon the surface water drainage regime;
- Siting stockpiles away from watercourses;
- Refuelling on areas of hardstanding only away from watercourses and surface water drains;
- Where necessary, installing construction site drainage to intercept and control run-off from worked areas;
- All oil and chemical storage tanks and areas where drums are stored will be surrounded by an impermeable bund and located away from watercourses in accordance with COSHH Regulations 2002 and the Control of Pollution (Oil Storage) Regulations 2015. Single tanks will be within bunds sized to contain 110 per cent of capacity and multiple tanks or drums will be within bunds sized to contain the greater of 110 per cent of the capacity of the largest tank or 25 per cent of the total tanks contents. Empty drums and any drums that are identified as leaking will be removed from the Application Site as soon as possible and disposed of appropriately in accordance with the relevant legislation;
- Any surface water potentially contaminated by hydrocarbons will be passed through oil/grit interceptors prior to discharge;
- Precautions would be undertaken to ensure that silt laden runoff, arisings or chemicals are not allowed to enter watercourses including the use of impermeable liners and fixing agents and surface water sumps/silt traps; and
- New cables will pass under watercourses deep enough to avoid risk of damage, and the integrity of the River Darent embankments will not be compromised by the cable installation.

#### **4.9 Ground Conditions**

- 4.9.1 An assessment of the potential likely significant Ground Conditions effects from the construction of the Proposed Development has been undertaken and this is set out in **Chapter 13** of the ES.
- 4.9.2 Off-site disposal of waste arisings would be undertaken in accordance with the Waste Duty of Care Code of Practice (March 2016), and the excavation and re-use of materials would be undertaken in accordance with a Materials Management Plan (MMP) to be submitted as a DCO requirement.
- 4.9.3 The provision of a Foundation Works Risk Assessment (FWRA) would be undertaken by the Contractor once the proposed foundation solutions are known. This would be prepared in accordance with EA guidance 'Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination' (EA, 2001).

- 4.9.4 The use of PPE and best practice measure will aim to reduce exposure to site workers from construction dust.
- 4.9.5 The final CoCP will, where appropriate, include protocols for working in confined spaces, in accordance with HSE Approved Code of Practice 'Safe work in confined spaces'.
- 4.9.6 The final CoCP will include details of the protocol to be followed in the event of previously undiscovered contamination being encountered during enabling works and/or construction.
- 4.9.7 The movement of material around the REP site, or imported onto the REP site or Main Temporary Construction Compounds, would be undertaken under an MMP.
- 4.9.8 Where the Electrical Connection route crosses the River Darent, to the south of Bob Dunn Way, the proposed option for trenchless installation techniques avoids any excavation or ground disturbance within the area of the former historical landfill and this commitment will be included within the final CoCP.
- 4.9.9 The final CoCP should include measures to reduce exposure to construction dust and vapour (PPE and work practises).
- 4.9.10 Methods to protect and reinstate soils (where appropriate) within the final CoCP will include:
- stockpiling of any excavated materials in discreet horizons, in reverse order of excavation to test whether any can be re-used on site and also to ensure that proper reinstatement (where appropriate) can take place;
  - DEFRA's general guidance on the 'Construction Code of Practice for the Sustainable Use of Soils on Construction' would be adhered to;
  - methods to prevent compaction of soils such as constructing access roads first and ensuring traffic only uses designated access routes; and
  - ensuring any exposed soils are re-vegetated as soon as practical to prevent excess runoff or wind erosion. Land required temporarily during construction would be reinstated to an agreed condition.
- 4.9.11 An Outline Remedial Strategy (ORS) has been prepared that identifies the requirement for additional intrusive ground investigation, data collection and analysis to refine the preliminary ground gas risk assessment and enable specific personal protection measures for construction workers to be defined (if required). The ORS also provides preliminary mitigation options for the protection of human health (end users) and buildings, including measures to be incorporated into the design of the structures for the Proposed Development. Following completion of the additional ground investigation, monitoring and assessment, the ground gas risk assessment will be refined and the potential mitigation measures to be adopted, including any specific

personal protection measures will be included in the final Remediation Strategy that forms part of the final CoCP as required by the DCO (**Document Reference 3.1**).

- 4.9.12 The ORS provides preliminary mitigation measures for the protection of human health (end users) in relation to asbestos in the Made Ground, in the form of a clean cover system to be provided in areas of soft landscaping in the Proposed Development. Following further assessment and review of the areas where Made Ground will remain in place below soft landscaped areas, the details of the clean cover system will be included in the Remediation Strategy that forms part, where relevant, of the final CoCP.
- 4.9.13 The ORS provides preliminary recommendations for specific personal protection measures for construction workers during excavations and ground disturbance works in the Made Ground at the REP site, and recommends further investigation and sampling to confirm the preliminary assessment. Once the additional investigation, sampling and assessment has been undertaken, the final specific personal protection measures required will be included in the Remediation Strategy that forms part of the final CoCP.
- 4.9.14 The requirements for additional investigation (to be undertaken prior to construction), data collection, analysis and assessment to inform the final CoCP, and MMP are secured in Requirement 11 of the dDCO (**Document Reference 3.1**).

#### **4.10 Lighting**

- 4.11 The Contractor should follow relevant guidance and legislation relevant to lighting, including:
- Institution of Lighting Professionals (ILP) Guidance Notes for the Reduction of Obtrusive Light, (2011);
  - The Department for Communities and Local Government (DCLG) Guidance on Lighting in the Countryside: Towards Good Practice (1997);
  - Assessment of the Problem of Light Pollution from Security and Decorative Light produced by Temple and NEP Lighting Consultancy on behalf of Defra;
  - The Bat Conservation Trust – Bats and Lighting in the UK (2018);
  - The Bat Conservation Trust (BCT) – Statement on the Impact and Design of Artificial Light on Bats;
  - Environmental Protection Act 1990 (as amended);
  - Where practicable, the general design objectives that will be used to ensure that potential adverse effects of lighting associated with



construction of the Proposed Development are minimised are listed below:

- Use appropriately designed luminaires for the task at hand;
- Use louvres and shields to prevent undesirable light break-out;
- Demolition and construction lighting should be directed away from all sensitive receptors;
- Preference should be given to several, lower lighting units rather than tall, wide beam lighting units to illuminate large areas as it will limit light trespass, glare and sky glow from the Application Site;
- Vehicle lights should be properly directed (conforming to MOT requirements) and lenses must be intact to prevent un-necessary glare and light intrusion;
- Lighting should be reduced or switched off when not required for safety purposes. Security lighting should be kept at the minimum level needed for visual and security protection; and
- Motion sensitive lighting will be used in order to avoid unnecessary lighting.

4.11.1 Light fittings will comply with the specifications and the requirements of CIE 150 (2003) and Institute of Lighting Engineer's Guidance Notes for the Reduction of Obtrusive Light.

#### **4.12 Waste Management**

4.12.1 Mitigation measures that can be applied to reduce the impacts of waste associated with the construction phase of the Proposed Development are described below.

4.12.2 A pre-construction site waste management plan (SWMP) will be prepared for the Proposed Development. This will contain the requirement for a SWMP to be implemented by the Project Director during the construction phase and will assist in mitigating the environmental impact of construction waste.

4.12.3 Duty of Care requirements will be fulfilled by the Project Director (in accordance with the SWMP). This includes using licensed waste carriers, recovery / recycling / disposal at licensed waste facilities and the recording of waste movements through use of waste transfer notes.

4.12.4 Specific impacts associated with the storage of construction waste on the REP site can be managed through creating designated areas for segregation and storage of waste including providing skips for the separate collection of waste.



**4.13 Aviation**

- 4.13.1 London City Airport, the Defence Geographic Centre (DGC), and Civil Aviation Authority (CAA) (Airspace Regulations section) will be notified of any crane above 75 ft or more above ground level (AGL).
- 4.13.2 Temporary structures such as cranes would be notified through means of a Notice to Airman (NOTAM). If a crane is to be above a height of 91.4m (300ft) Above Ground Level, the undertaker would ensure that the CAA Airspace Regulations section are contacted on [AROP@caa.co.uk](mailto:AROP@caa.co.uk).
- 4.13.3 Cranes above 60 m AGL in height would be fitted with aviation lighting.
- 4.13.4 Once the grid coordinates of the Proposed Development are finalised, they will be reported as appropriate to the relevant aviation authorities (e.g. CAA, MOD) for aviation mapping purposes.

## **5 Conclusion**

- 5.1.1 This outline CoCP provides a framework on which the Contractors would base the final CoCP (for each relevant part or parts of the works as necessary) which will be implemented during construction of REP and the Electrical Connection.
- 5.1.2 Mitigation measures have been outlined to limit potential impacts of transport, air quality, noise and vibration, townscape and visual, the historic environment, terrestrial biodiversity, hydrology, flood risk and water resources, ground conditions, lighting, waste management and aviation. These mitigation measures will be taken forward for further consideration when preparing the final CoCP.