Riverside Energy Park

ES Appendix Construction Traffic Management Plan (CTMP)

(with track changes)

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CORY
RIVERSIDE ENERGY

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1 Introduction

1.1 Overview

1.1.1 Peter Brett Associates LLP (PBA) has been commissioned by Cory Environmental Holdings Limited (Cory or the Applicant) to prepare an outline for a Construction Traffic Management Plan (CTMP) which supplements the construction of an integrated Energy Park, to be known as Riverside Energy Park (REP). The principal elements of REP comprise complementary energy generating development and an associated Electrical Connection (together referred to as the 'Proposed Development'). The two principal elements of the Proposed Development are: the Energy Park which would be located adjacent to an existing Energy Recovery Facility (ERF) operated by Cory (referred to as Riverside Resource Recovery Facility (RRRF)) situated at Norman Road in Belvedere within the London Borough of Bexley (LBB). The underground Electrical Connection would run from the REP site and terminate at the Littlebrook substation in Dartford.

1.1.2 This Outline Construction Traffic Management Plan (CTMP) has been produced in accordance with Transport for London's (TfL's) Construction Logistics Plan (CLP) guidance (July 2017) and is appended to the Transport Assessment (TA) submitted with the application for REP's Development Consent Order (DCO).

1.1.3 This document provides a framework for information and strategies that would be adopted within the final CTMPs which would be developed for the construction stages for REP, including any pre-commencement works where applicable. **Requirement 13** of the **draft DCO** (dDCO) (**3.1, Rev~~1~~ 3**) requires a CTMP to be submitted for approval by the relevant Local Planning Authority (LPA) in consultation with the Local Highway Authority (LHA) and, where appropriate, TfL prior to the commencement of the Proposed Development or part thereof. Any CTMP submitted for approval must be substantially in accordance with this Outline CTMP which provides a framework for:

- the traffic management processes and proposals that should be anticipated to be put in place during the pre-commencement works where relevant and construction processes associated with the delivery of the works consented within the DCO;
- the basis for the logistics strategy to be adopted during the construction stages, including any pre-commencement works where relevant; and
- the travel planning framework that would be implemented to assist and guide the construction workforce travel patterns.

1.1.4 Separate CTMPs would be prepared for different stages of the pre-commencement and construction works, with the matters set out in those

CTMPs varying to reflect the different requirements of each stage. It is envisaged the staged plans could include:

- Pre-commencement works such as environmental surveys and monitoring;
- Site Establishment and Preliminary Works;
- REP construction; and
- The Electrical Connection construction.

1.2 CTMP Objectives

1.2.1 The coverage and objectives of the approved CTMPs would be to:

- set out the details of the construction processes for the stage of works covered by that CTMP;
- minimise impacts of the demolition and construction stages on the local community and highway network;
- lower emissions from those construction processes;
- enhance safety and awareness;
- identify the site location specific to that CTMP;
- provide information on traffic routeing and site access;
- provide an indication of programme and key dates; and
- identify temporary traffic management, waiting and loading controls and parking suspensions and Highway Licences required to undertake the works safely and efficiently.

1.3 Site Context

1.3.1 The REP site is located in Belvedere, in the LBB, in an area bounded to the north by the River Thames and the adjacent Thames Path long distance trail. It is bounded to the east by a boundary fence onto a public footpath linking Norman Road with the Thames Path, and to the west by a boundary fence onto the adjacent undeveloped Crossness Nature Reserve, between the REP site and Thames Water's Crossness Sewage Treatment Works (STW) site, approximately 200 m away. Within this area a public footpath links the Crossness Local Nature Reserve (LNR) with the Thames Path. A number of ditches and small watercourses surround the REP Site.

1.3.2 The Riverside Resource Recovery Facility (RRRF) lies immediately to the north-east of REP. RRRF will continue to operate on continuous basis during construction of REP.

1.3.3 **Figures 2.1 and 2.2** of this document show the Application Site and the local road network. The Application Boundary is provided at **Appendix A.**

1.4 Development Proposal

1.4.1 REP would comprise:

- an Energy Recovery Facility (ERF);
- an Anaerobic Digestion facility;
- a Solar Photovoltaic installation;
- Battery storage; and
- Enabling infrastructure for Combined Heat and Power to provide for a potential future local district heating (DH) pipe connection at the site boundary.

1.4.2 The proposed Main Temporary Construction Compound would be located in an area of previously developed land (a former National Grid substation site) adjacent to the west side of Norman Road, immediately north of its junction with A2016 Picardy Manor Way. The northern extent of this area most recently received planning permission for the erection of three industrial units for mixed-use within Class B1 (business), Class B2 (general industrial) and B8 (storage/distribution), with associated ancillary works (Local Planning Authority reference: 13/00918/FULM). At Deadline 2, the Applicant removed Plots 02/53, 02/55 and 03/07 from the Main Temporary Construction Compound, Plots 02/53 and 02/55 will no longer be subject to compulsory acquisition and temporary use powers and the existing joinery business on Plot 02/53 would remain.

1.4.3 An Electrical Connection would be constructed, running predominantly underground between the REP site and the Electrical Connection Point at Littlebrook substation, connecting into an existing National Grid building in Dartford. The likely statutory undertaker for the Electrical Connection would be UK Power Networks (UKPN). Cable Route Temporary Construction Compounds would be required to support the construction of the selected Electrical Connection route.

2 Context, Considerations and Challenges

2.1 Introduction

2.1.1 This Section sets the general context for the Proposed Development at REP, including the Electrical Connection route. This would be refreshed at the time of preparing the detailed CTMPs for each stage of construction, considering the different characteristics of each work stage.

2.2 Policy Context

2.2.1 As is set out within TfL's Construction Logistics Plan (CLP) guidance document (July 2017) the key national and regional planning policies explain why CLPs and CTMPs are used in planning. This policy base would be reviewed and refreshed as necessary at the time of preparing the CTMP for each stage of construction.

Overarching National Policy Statement for Energy – EN1 July 2011

2.2.2 Section 5.13 of the NPS EN1 includes the following points which have helped to inform this Outline CTMP:

2.2.3 "*The consideration and mitigation of transport impacts is an essential part of Government's wider policy objectives for sustainable development as set out in Section 2.2 of this NPS.*" (Paragraph 5.13.2).

2.2.4 "*Where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts*." (Paragraph 5.13.4).

2.2.5 "*A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the IPC should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development*." (Paragraph 5.13.6).

2.2.6 "*Water-borne or rail transport is preferred over road transport at all stages of the project, where cost-effective."* (Paragraph 5.13.10).

2.2.7 "*All large infrastructure projects are likely to generate hazardous and non-hazardous waste. The [Environment Agency's] EA's Environmental Permitting (EP) regime incorporates operational waste management requests for certain activities. When an applicant applies to the EA for an Environmental permit, the EA will require the application to demonstrate that processes are in place to meet all relevant EP Requirements".* (Paragraph 5.14.4).

National Policy Statement for Renewable Energy Infrastructure – EN3 July 2011

2.2.8 Section 2.5.25 of NPS EN3 seeks that "*Government policy encourages multi-modal transport and the IPC should expect materials (fuel and residues) to be transported by water or rail routes where possible…….Applicants should locate new biomass or waste combustion generating stations in the vicinity of existing transport routes wherever possible.*"

National Planning Policy Framework (NPPF), 2018

2.2.9 The National Planning Policy Framework (NPPF) was published in July 2018 and sets out the Government's environmental, economic and social policies for England. Section 9: Promoting Sustainable Transport, of the NPPF, paragraph 102 is applicable to the preparation of this Outline CTMP and states that:

"transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

a) the potential impacts of development on transport networks can be addressed;
b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;
c) opportunities to promote walking, cycling and public transport use are identified and pursued;…"

Traffic Management Act, 2004

2.2.10 Part 2 of the Traffic Management Act sets out the responsibility of Local Traffic Authorities to manage traffic networks within their geographical area of responsibility. This includes efficient use of the highway network and the requirement to take measures to minimise contributions to traffic congestion. Part 5 outlines the responsibility of local authorities in Greater London to manage the strategic route network. This includes TfL's role to manage certain areas of the Greater London route network.

The London Plan, 2016

2.2.11 Chapter 6 (Policies 6.3 and 6.14) of the London Plan makes specific reference to CLPs as a way of making more efficient use of the road network. It encourages developers to submit CLPs and consider freight. CLPs are secured for planning applications which are referable to the Mayor, where there are construction impacts. In addition, they are encouraged on all other applications where there are construction issues.

Draft New London Plan showing Minor Suggested Changes, 2018

2.2.12 A replacement London Plan has been drafted and is the subject of an ongoing Examination in Public which started in January 2019. The relevant policies proposed for construction freight in the document are: Policy SI15 Water transport; Policy T4 Assessing and mitigating transport impacts; and Policy T7 Freight and servicing.

2.2.13 The policies state that construction works should comply with TfL's CLP Guidance, take account of modal options, adopt the latest standards around safety and environmental performance of vehicles, enable the use of vehicles which meet TfL's Direct Vision standard[1] attending the site; and embrace best practices as set out in Fleet Operator Recognition Scheme (FORS) and CLOCS (Construction Logistics and Community Safety).

Mayor's Transport Strategy, March 2018

2.2.14 This document uses construction logistics in relation to the transport of demolition and construction materials by road, rail and water. It highlights the importance of CLPs in supporting and improving the efficiency and sustainability of construction supply chains.

2.2.15 In relation to FORS, and in addition to references in the draft New London Plan 2018, the document states that it can promote best practice in order to tackle congestion and improve the efficiency of the freight industry.

2.2.16 Proposal 16 states that "*The Mayor, through TfL, and working with the boroughs and members of the Freight Forum, will improve the efficiency of freight and servicing trips on London's strategic transport network by:*

a. Identifying opportunities for moving freight on to the rail network where this will not impact on passenger services and where the benefits will be seen within London.

b. Increasing the proportion of freight moved on London's waterways.

c. *Reviewing the potential benefits of a regional freight consolidation and distribution network and completing the network of construction consolidation centres in London*."

Local Policy

2.2.17 LBB's 'Bexley Sustainable Design and Construction Guide - Supplementary Planning Document' (adopted October 2007) sets out guidance that would be followed as part of the construction logistics of the Proposed Development.

[1] [1] Direct Vision – a term used by Transport for London in reference to the initiative to improve vision standards for lorries. Refer: http://content.tfl.gov.uk/working-towards-direct-vision-hgvs.pdf

2.2.18 Under the Section 5 ‘Conserving resources and reducing carbon emissions’ and the sub-section on ‘Materials’ Guidance 22 states that developers should:

- consider the use of prefabricated elements in order to reduce total energy used in the construction phase, speed up assembly, improve quality and minimise defects and wastage; and
- consider the source location of prefabricated elements to minimise transportation.

2.2.19 Guidance 33 in Section 6 ‘Ensuring comfort and security in and around the development’ and the sub-section on ‘Waste and recycling’ states that at the design stage the waste hierarchy should be applied:

- reduce the amount of waste generated;
- reuse;
- recycle;
- recover energy and materials; and
- minimise disposal.

2.2.20 Re-use and recycling of construction and demolition waste on site should be considered.

2.2.21 Section 7 ‘Minimising the adverse effects of the construction on site and surroundings’ sub-section ‘Considerate construction’ Guidance 35 expects developers to achieve certification under the Considerate Constructors Scheme.

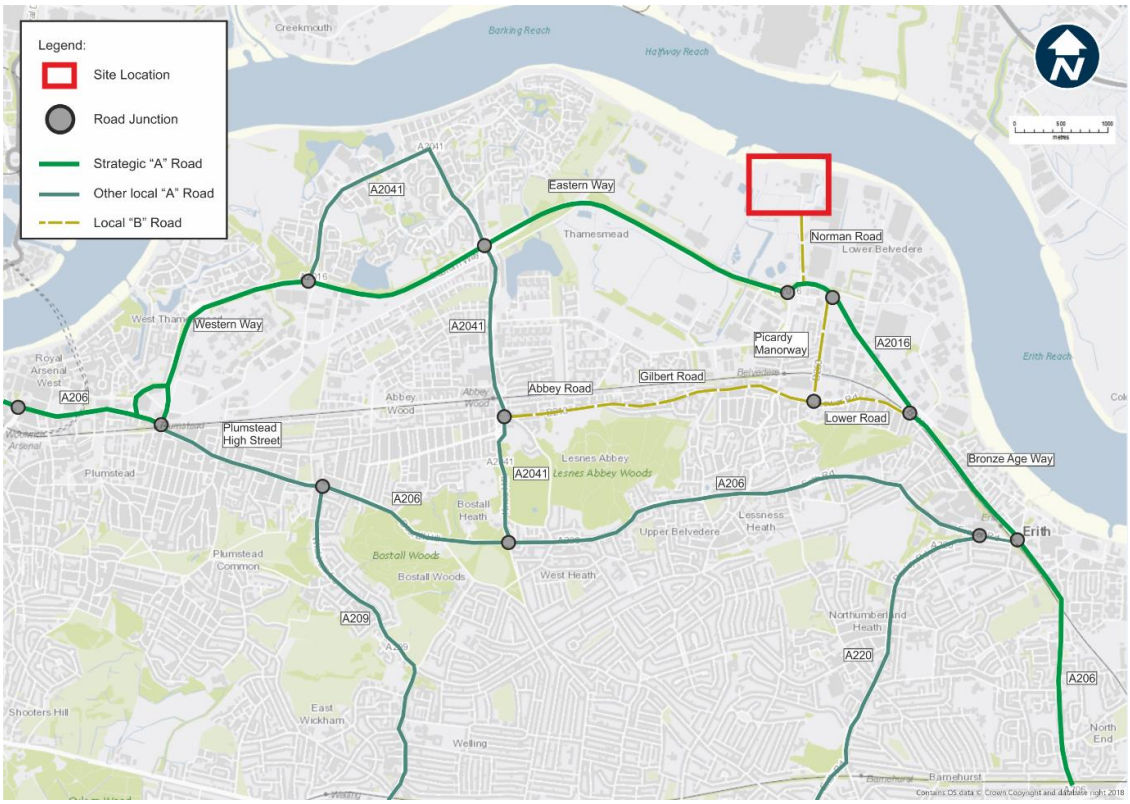
2.2.22 Guidance 38 within Section 8 ‘Encouraging sustainable living through building design and information provision’ sub-section ‘Sustainable forms of transport, information provision and locally sourced labour’ suggests that the river should be used where possible for the transport of materials to development sites and identifies that water is more efficient than rail, though both are preferred to road freight. This particularly relates to bulk materials. That sub-section further promotes the use of travel planning initiatives and the provision of suitable cycle parking and welfare facilities.

2.3 Location Context

2.3.1 The following plans provide information about the Application Site’s location in the context of Greater London and the local road network. A plan indicating the Application Boundary is provided at **Appendix A** of this document together with an illustrative site layout.

Figure 2-1: London Context

Figure 2-2: Local Context Plan



2.4 Local Access Context

Highways, Carriageways and Footways

2.4.1 The REP site would be served by Norman Road, an adopted 2 lane single carriageway road with an approximate width of 6 m and a footway on its eastern side with an approximate width of 1.8 m. The footway for its northern section is a shared unsegregated footway / cycleway with no provision of a safety margin adjacent to the carriageway.

2.4.2 The Main Temporary Construction Compound would be accessed directly from Norman Road via a priority junction. Separate vehicle and pedestrian access points would be provided. Details of the layout and design of the access points would be set out in the CTMP.

2.4.3 The design and provision of a controlled pedestrian crossing of Norman Road, to the north of the access to the Asda depot, should be reviewed with LBB. This would provide a safe direct route for pedestrians and cyclists accessing and leaving the welfare facilities at the Main Temporary Construction Compound.

2.4.4 The primary materials, plant and equipment for the site establishment; pre-commencement works and construction of REP would move directly to and from the construction site. Access to the construction areas adjacent to RRRF would be set out in the detailed design information for the construction period – indicating how RRRF and neighbouring development would continue to function efficiently and safely, whilst REP is constructed. The access strategy for the construction site would include safe corridors for REP construction workforce and RRRF employees.

2.4.5 Access to the mobile works for the Electrical Connection would be planned in line with the staged construction of the cable route; typically access to the cable construction area would be by way of site transport or to a Cable Route Temporary Construction Compound. Direct access to the cable construction areas would be for works transport only.

Railway/Underground

2.4.6 The Electrical Connection route would cross the alignment of the railway lines along the route. Exact locations would be determined through detailed design but are anticipated to include:

- Queens Road (A2016);
- Northend Road (A206); and
- Thames Road (A206).

2.4.7 The CTMP for each stage would identify the implications on rail infrastructure and set out how the works should be co-ordinated with Network Rail and the

train operating company. Where works would affect rail infrastructure, this could include night-time or weekend working if required in co-ordination with Network Rail, the train operating company and the LHA.

Bus Routes

2.4.8 In the vicinity of the REP site, there are three bus routes serving Picardy Manorway (180, 401 and 601), with bus stops located on each side of the dual carriageway. Given that site construction traffic would have to pass these stops on its in/outbound journeys this might pose, some minor effects on buses arriving / departing the stops. Service 601 provides school transport with one journey in the morning and one in the afternoon.

2.4.9 The route for the Electrical Connection would not interact with local bus services for much of its length by follow strategic roads. The exception to this would be the section along the Fastrack corridor within Dartford Borough, along the dedicated busway.

2.4.10 Sections of the Electrical Connection route interface with bus routes B12, N89, 89, 99, 180, 229, 401, 428 and 469, and school services 602 and 669. Services 602 and 669 provide school transport with one journey each in the morning and one in the afternoon.

2.4.11 An appraisal would be included within each CTMP of the anticipated disruption to bus services during that stage of the works. This would be developed in consultation with ~~the~~ TfL, LBB and the bus service operator and should include such matters as:

- proposals for the method of traffic management;
- a judgement of the disruption to those services;
- details of any proposed diversions or suspensions to the routes;
- bus stop suspensions or temporary relocations;
- the programme for those impacts; and
- the monitoring and review processes to be used.

2.4.12 The structure of a method for exploring opportunities to manage the processes and minimise effects on local bus services during the construction of the Electrical Connection is outlined at section 6.2~~.~~ below.

Cycling

2.4.13 Advisory cycle lanes are provided on each side of Norman Road for c. 390 m between the REP site and Picardy Manorway. These do not completely link REP and Picardy Manorway but begin/end approximately c. 100 m north of the Norman Road / Picardy Manorway junction and begin/end c. 225 m south of the shared access to REP and RRRF.

2.4.14 Cyclists travelling north from Picardy Manorway join the carriageway by crossing from the eastern footway to the advisory on-carriageway cycle lane. Where the cycle lane ceases at the north section of Norman Road, it combines with the footpath on the east side. To join the shared cycle track, cyclists travelling north leave the carriageway on the nearside to cross to the eastern side by effectively a "jug handle" arrangement where they are advised by a sign to dismount to cross the carriageway. Cyclists travelling south at this point are directed to give-way by road markings to join the carriageway and the advisory on-carriageway cycle lanes. At the southern end of Norman Road, southbound cyclists are directed off the carriageway to join a shared segregated path to connect to Picardy Manorway.

2.4.15 The cycle route serves as a link to REP and RRRF and the Thames Path National Trail. The on-carriageway cycle lanes are advisory and vehicles would be driving in these lanes due to the narrow carriageway width. There would be a potential for conflict between construction traffic and cyclists for both the movement along Norman Road and when crossing the road to connect with the shared footway/ cycle track.

2.4.16 At the Main Temporary Construction Compound, cycle access should include a link from the current cycle provision on Norman Road into a safe access point for cycle storage and other associated welfare.

2.4.17 For the Electrical Connection undertaker's workers, where it is judged to be appropriate, access for cyclists would be incorporated into Cable Route Temporary Construction Compound layouts, to facilitate safe access for workforce commuting. Cycle access is less likely to the construction areas given the worksite safety requirements and the linear and temporary nature of the works.

2.5 Considerations and Challenges

Neighbouring Construction Sites

2.5.1 There is an extant outline planning permission granted July 2016 for a Data Centre (ref: 15/02926/OUTM) to the south of REP and west of Norman Road. The CTMPs would reflect the status of this proposal, seeking to co-ordinate construction activities where necessary and feasible if both construction periods are concurrent.

2.5.2 When preparing the CTMP for the Electrical Connection, the statutory undertaker would engage with the LHAs and LPAs to confirm the programme and sequence of works. This process would take account of other construction activity along the corridor. The statutory undertaker would work with those undertaking other consented works to seek to co-ordinate construction and maximise the efficiency of the construction programmes for each party, limiting impacts on the public and others. The LHAs would advise on other works by statutory undertakers and would co-ordinate planned and unplanned works in accordance with their Network Management duties.

Pre-submission consultation with relevant parties

2.5.3 Consultation has been undertaken with near neighbours, LPAs, LHAs and the Port of London Authority.

2.5.4 In response to the pre-submission consultation, the Royal Mail has requested notification of road closures and diversions to address concerns of traffic congestion and to ensure they are able to retain access to their collection and delivery points. The CTMPs would identify that this process is observed and how the contractor could engage with the Royal Mail.

2.6 Communication

2.6.1 The Principal Contractor would be responsible for ensuring coordination with adjacent development sites to minimise traffic disruption. They would also be responsible for promoting a good working relationship with the immediate neighbours to the REP site and dealing with any complaints arising from the construction of REP and the associated Electrical Connection. Contact details would be provided on information boards adjacent to the work site and the Main Temporary Construction Compound on Norman Road. The information on the notice board would provide information on the works and contact details for general enquiries and emergencies.

2.6.2 It is anticipated that UK Power Networks (UKPN) would be responsible for the construction of the Electrical Connection. The works are, in the main, remote from the REP site. The statutory undertaker's site agent would be responsible for coordinating the cabling works with any other undertaker or LHA undertaking adjacent works. Complaints specific to works on the Public Highway would be the responsibility of the statutory undertaker's site agent to manage. Site boards would be provided at work sites and compounds on the Public Highway giving contact details for both day to day enquiries and emergencies. The signs would be the responsibility of the statutory undertaker to provide and maintain during the period of highway works.

3 Construction Programme and Methodology

3.1 Works Description

3.1.1 The works comprise of the following:

- Pre-commencement works may involve works such as, land and vegetation clearance, environmental surveys and monitoring, investigations for the purpose of assessing ground conditions, erection of construction welfare facilities and temporary mean of enclosure and the temporary display of site notices or advertisements.
- the construction of Riverside Energy Park (REP) located to the north of Belvedere off Norman Road comprising:
  - an Energy Recovery Facility (ERF);
  - an Anaerobic Digestion facility;
  - a Solar Photovoltaic installation;
  - Battery Storage; and
  - On site enabling infrastructure for Combined Heat and Power to provide for a potential future local district heating (DH) network.
- the Main Temporary Construction Compounds located to the south of the REP site and west of Norman Road;
- the Electrical Connection, running underground between the REP site and the Electrical Connection Point at Littlebrook substation connecting into an existing National Grid building in Dartford; and
- Cable Route Temporary Construction Compounds required to support the construction of the selected Electrical Connection route.

3.1.2 Each CTMP would provide details of the specific works to be undertaken during that stage. This would include information on individual tasks and operations, such as:

- Pre-commencement works such as environmental surveys and monitoring;
- demolition works;
- hoarding and boundary treatment construction and decommissioning;
- site set up and establishment works;
- significant concrete pours and construction tasks;

- periods and durations of piling;
- Mechanical Electrical Instrumentation Control and Automation and fit out periods;
- demobilisation operations; and
- other major construction processes.

3.2 Works Programme

3.2.1 The Proposed Development would be constructed over a period of c. 45 months. It is anticipated that construction would start in 2021 and operations start in 2024.

3.2.2 The final CTMPs to be submitted to the LPA for approval, in consultation with TfL and KCC as required, would provide a detailed and current programme for the works covered by that document.

3.3 Construction Hours

3.3.1 Subject to confirmation through the DCO and in the final CTMPs, the core construction hours and construction vehicle access at the Main Temporary Construction Compound and the REP site would be: -

- 07.00hrs – 19.00hrs Monday to Friday (excluding Bank Holidays); and
- 07.00hrs – 13.00hrs Saturdays

3.3.2 In order to appraise a robust case, the assessment within **Chapter 6 Transport** of the **ES (6.1, Rev1)** and the associated **TA, Appendix B.1 to the ES (6.3, APP-066)** has been conducted on the basis of the following working hours:

- 08.00hrs - 18.00hrs Monday to Friday (excluding Bank Holidays); and
- 08.00hrs – 13.00 hrs Saturdays

3.3.3 The assessed hours provide for a reasonable worst case assessment having assumed that all construction workforce trip impacts would occur during the morning and evening highway network peak periods.

3.3.4 In practice the construction of REP requires a wide range of construction trades and labour; and design and management personnel. The Principal Contractor's workforce is expected to work a typical single shift. There will, however, also be a range of specialist contractors' teams employed during the construction programme which will have differing work requirements across different hours. This will spread the arrival and departure profile of commuting across a number of hours, with many commuting journeys made prior to the morning peak period and after the typical evening peak. The dilution of

commuting journeys will reduce the impact on the operation of the transport network.

3.3.5 The detail of this spread of workforce would not be known until: the main contractor has been appointed; their programme confirmed; and the labour force and specialist sub-contractors appointed. The appropriate CTMP would provide further detail on the spread of workforce across the trades and their anticipated working hours.

3.3.6 Contractor teams 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;
- briefings;
- 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.

3.3.7 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.

3.3.8 The works on the highway would generally follow the above working hours. As a result of the location of some of the areas of highway works it could be necessary for working hours to be extended, this could include night time and weekend working to minimise disruption on the road network. Advice given in Traffic Advisory Leaflet 8/14 Extended Working Hours at Road Works would be followed. These adjusted hours, if needed, would be agreed with the relevant LHAs and LPAs. Works at rail interfaces could also require night time or extended working hours where confirmed with Network Rail and the local authorities.

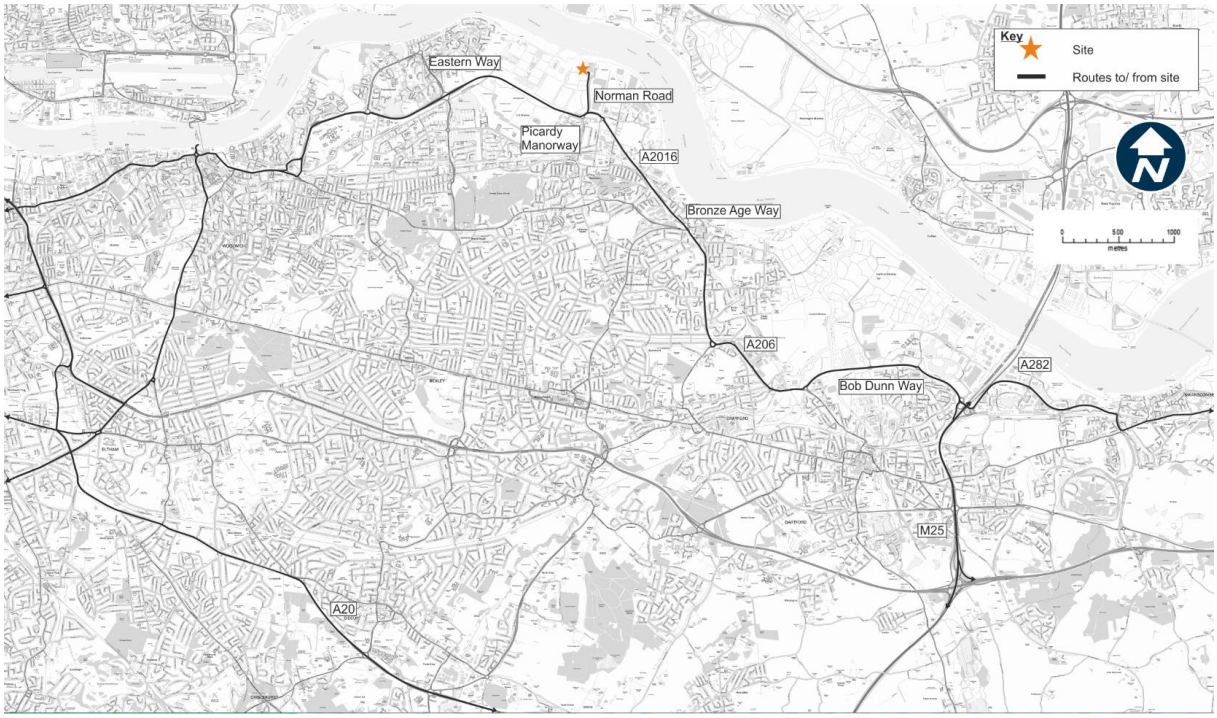
3.3.9 Applications under S61 of the Control of Pollution Act 1974 would be made to the relevant LPA to cover working outside standard hours.

4 Vehicle Routeing and Access

4.1 Routeing of Worksite Construction Traffic

4.1.1 The preferred routeing for construction traffic to the REP work site would be from Norman Road which has direct access to the A2016 via a left in and left out junction, which forms part of the Strategic Road Network (SRN) for London. An overview of the local access plan is shown in **Figure 4-1.**

Figure 4-1: Local Construction Traffic Access Plan



4.2 Construction Traffic Approaching from the East and M25

4.2.1 Traffic accessing the construction site from the east would access the site from the A206/A282(M25) Littlebrook Interchange or A2/A282(M25) Darenth Interchange.

4.2.2 Traffic accessing from the A206/A282 Littlebrook Interchange would approach the site from the A206 Bob Dunn Way, A206 Thames Road, A206 Northend Road, A206 Queens Road, A2016 Bronze Age Way and the A2016 Picardy Manorway. When reaching the A2016 Picardy Manorway vehicles would proceed to A2016 Eastern Way/Picardy Manorway roundabout to undertake a U-turn manoeuvre to access Norman Road.

4.2.3 The access route from the A206/A282 Littlebrook interchange is mainly dual carriageway. There is a short section reduced to single carriageway due to a railway bridge over the carriageway on the A206 Thames Road. The carriageway is reduced to single carriageway on the approach to the bridge

and the bridge then dissects the single carriageway with opposing traffic lanes passing through separate bridge arches. The maximum height for vehicles passing through the bridge arches is 16 ft 3 in (4.9 m).

4.3 Construction Traffic Approaching from the West

4.3.1 Construction traffic travelling from the west would approach the site from the A2016 Eastern Way. The network feeding traffic to the construction site from the north of the River Thames and the A12 is likely to be from the A102 Blackwall Tunnel approach where it joins the A206 Woolwich Road, A206 Woolwich Church Street, A206 Woolwich High Street, A206 Plumstead Road, A206 Pettman Crescent, A2016 Western Way and the A2016 Eastern Way before joining A2016 Picardy Manorway to access the site from Norman Road. The route is predominantly dual carriageway with a section of Woolwich Road being single carriageway.

4.3.2 Traffic travelling from the southwest within the M25 would approach the site from the South Circular Road, joining the A206 on Woolwich High Street where traffic joins the route from the A102 Blackwall Tunnel approach to access the site from the A2016 Picardy Manorway.

4.3.3 Access to the mobile works for the Electrical Connection would follow the same strategic routes but could require local variations to access the temporary works areas. The local variations would be confirmed as part of the detailed CTMP for that stage.

4.3.4 Where access is required during the operating hours of the London Lorry Control Scheme (LLCS), it will be the responsibility of the haulier to agree exemptions as necessary. Eastern Way (A2016) is a route included within the LLCS.

5 Site Access

5.1 Site Access – REP Site and Main Temporary Construction Compound

5.1.1 The Main Temporary Construction Compound would be located off Norman Road, as illustrated in **Figure 5-1**, with the provision of boundary line gates suitably sized to facilitate access for large construction vehicles. The boundary line gates would be provided for site security when the site is not operational. The site and compound gate lines or barrier systems would be provided to enable maximum legal length delivery vehicles to pull off the Public Highway to be checked.

5.1.2 The Main Temporary Construction Compound would have sufficient room for vehicles to turn to enable them to exit on to Norman Road in a forward gear. The compound would be used to consolidate smaller deliveries to the REP site.

Figure 5-1: Main Temporary Construction Compound Location

5.1.3 A pedestrian and cycle access would be provided, separate to the vehicle accesses, for site workers and visitors to access the site offices, welfare and laydown areas. The strategy for accessing on-site parking would be identified within the compound layout and details provided in the detailed CTMP for that stage.

5.1.4 Bulk materials movements, such as concrete and excavated material, and large loads would be instructed, at the time of booking, to proceed direct to the REP construction site.

5.1.5 A method of washing down vehicles would be provided to prevent material and debris from being deposited onto Norman Road and the adjacent Public

Highway. This would apply for both the site compound and the REP site. The wheel washing facility would be supplemented by a road sweeper call-off contract operating on Norman Road and Picardy Manorway when necessary.

5.1.6 The detailed layout of the Main Temporary Construction Compound has yet to be determined, although it is anticipated that it should accommodate a laydown area, including a delivery reception area and consolidation point, office and welfare facilities, and on-site parking.

5.1.7 Vehicles and loads not accepted would be rejected from the compound or works area. They would be directed to turn within the site and leave in a forward gear. They would not be inspected within the Public Highway.

5.2 The REP Site Access

5.2.1 Construction traffic would enter the REP site through the existing RRRF delivery and servicing access to the north of Norman Road. The RRRF would be receiving vehicles during construction. Access to the existing weighbridges and access/egress points would be maintained for RRRF operational vehicles while REP is under construction.

5.2.2 The combination of construction vehicles and RRRF operational vehicle movements would be coordinated to ensure minimal impact with clear directional signing provided as part of the temporary traffic management. The preferred traffic management would be determined during detailed design and presented through the CTMP for that stage.

5.2.3 The construction site at REP would have similar access arrangement to the Main Temporary Construction Compound - comprising of a gate line with Traffic Marshals controlling access. Rejected vehicles or loads would be required to turn within the construction areas or compound and leave in a forward gear to Norman Road. Exiting vehicles would not be permitted to wait on Norman Road, where they could cause delays and disruption and would conflict with on-carriageway cycle facilities.

5.3 Construction Site Parking

5.3.1 Vehicle parking would be provided during construction for up to 275 cars and vans. These spaces would be provided for workforce or visitor parking. Further parking and holding areas would be provided by the Principal Contractor in their detailed site layout arrangements within the Main Temporary Construction Compound and the REP works area for essential vehicles associated with specific operations such as: concrete pours; cranage operations; materials, plant and equipment deliveries and removals; and vehicles undertaking maintenance operations.

5.3.2 The strategy for maintaining and managing the parking stock would be developed for the CTMP for that stage. This could include a system of permits to guide who can park within the area and to limit off-site parking. Permits

could be issued on a 'needs' basis, which would be defined in consultation with LBB as the LHA. The indicative criteria could include:

- functional need - based on personal mobility or carer requirements;
- a proven need due to poor access to suitable environmentally sensitive forms of transport – such as home location or required working hours;
- trade requirements – such as the need to carry tools or specialist equipment;
- electric vehicle or suitable environmentally friendly transport use;
- group transport – such as crew buses or high occupancy car sharing; or
- temporary specialist personnel – who may not have access to local accommodation.

5.3.3 Personnel would be required to apply for a permit, and that application would be assessed on an individual basis and could be granted on a temporary basis or subject to review.

5.3.4 The Applicant has no wish to provide workforce parking unless a requirement can be shown. The Applicant will confirm with the appointed Principal Contractor the quantum of parking to be provided (to a maximum of 275 spaces) which would be phased during the construction programme to reflect an appropriately high level of restraint to car-based travel.

5.3.5 The parking allocation on site would have an allocation of approximately 5-10 parking spaces for visitors to the worksite. The number of parking spaces for mobility impaired car occupants would be determined at the time of preparing the detailed CTMP but could be in the order of 3-5%, depending on the expected demand.

5.3.6 The Principal Contractor would work with LBB Highways to monitor and manage off-site parking to protect the effective operation of the local road network.

5.4 Cable Route Temporary Construction Compounds and Works Areas

5.4.1 Access to the Cable Route Temporary Construction Compounds would be configured, to allow access in a forward gear, manoeuvring within the compound to deliver to the site and exit in a forward gear. The location and layout of these compounds would be identified within the detailed CTMP for that stage.

5.4.2 At the Electrical Connection construction areas, vehicles would be required to access the safe working zone directly from the running carriageway and travel through the construction area to leave forwards. The construction areas would be configured to comply with Traffic Signs Manual Chapter 8 – Road Works

and Temporary Situations. The layouts and associated temporary traffic management would be agreed with the LHAs through the associated CTMP.

5.4.3 In addition to the Cable Route Temporary Construction Compounds and the Electrical Connection construction areas there are areas which would require special engineering operations to enable the cable ducting to traverse structures and water courses. These construction areas would need a separate compound to house specialist equipment and associated materials. These compounds would accept deliveries specific to the operation being undertaken from the compound area. The currently identified areas are: Thames Road between its roundabout with Bob Dunn Way and its roundabout with Crayford Way adjacent to the rail over bridge; and on Bob Dunn Way between its roundabout with Thames Road and its roundabout with Central Road adjacent to the River Darent. Other locations would be set out in the CTMP for that stage.

5.5 Pedestrians, Cyclists and Parking

5.5.1 Pedestrian and cycle access for those working at and visiting the Main Temporary Construction Compounds would be from Norman Road, as indicated at **Section 2.4.** Workers would then transfer to the construction area from the compound facilities. Access by vehicle to the construction area at the REP site would be limited to construction traffic only.

5.5.2 Parking access at the Main Temporary Construction Compound would be determined through the detailed layout design for the compound, reflecting the safe co-ordinated operation of workforce access with plant, materials and equipment deliveries and extractions.

5.5.3 Detailed arrangements for pedestrian and cycling access would be set out in the detailed CTMP. This would include a strategy for parking provision and management within the Main Temporary Construction Compound.

5.5.4 In the CTMP for the construction of the Electrical Connection, the statutory undertaker would define where their workforce would be directed to and how they would commute. Private vehicle parking would not be provided for at the construction areas.

6 Impact on Other Highway Users

6.1 Construction Delivery Impact on Other Highway Users

6.1.1 In their operation, the Main Temporary Construction Compound and the REP site layout would not directly impact the highway network.

6.1.2 The potential effect of construction related traffic is considered in the Transport Assessment and shows that there will be some residual effects primarily due to workforce movements. This peak effect would be temporary during the busiest construction period. The Applicant continues to engage with TfL and other stakeholders on the refinement of analysing construction workforce travel. The outline for a Workforce Travel Plan, at **Section 10.7** of this document, provides a framework for the mitigation which would be used to minimise the potential effects of commuting and other worker related travel. The Workforce Travel Plan would be included with the final CTMP and be agreed with the LHA and LPA, in consultation with TfL where appropriate.

6.1.3 The potential effect of construction traffic for the main site works would be minimised with deliveries being programmed to quieter periods on the road network, where possible, taking account of local peak traffic periods; construction tasks and programme; and local events.

6.1.4 Prior to deliveries being undertaken to site, information would be provided to each supplier outlining the requirements needing to be followed when delivering to site. The information should include such points as.

a. the presence of cycle and pedestrian infrastructure within the vicinity of the worksite or compound e.g. the on-carriageway advisory cycle route on Norman Road;

b. likely conflicts with other vulnerable user groups in the immediate area of the construction areas;

c. known local congestion points and periods; and

d. the location of the access points and crossings for pedestrians and cyclists – at compounds and construction areas.

6.1.5 The information for drivers would be contained in a Driver Information Pack. The Driver Information Pack would be updated, during the construction process, to reflect the requirement and conflict points on the delivery route to reflect the changing operations that are in progress at the time delivery is being made. A copy of the information pack would be made available through the suppliers to the driver before commencing their journey to the site.

6.1.6 Traffic Marshals would, where appropriate, be employed to operate and manage the site gates and check and record vehicle arrivals against those

booked arrivals. The Principal Contractor would determine the number of gate staff required and their locations.

6.1.7 Site and compound access points should be managed to ensure vehicles do not wait on the Public Highway. Where there is a possibility of this occurring, potentially during large concrete pours, the activity would be supported by an approved system of temporary traffic management.

6.2 Works Impact on Other Highway Users

6.2.1 The offsite works associated with the construction of the Electrical Connection between REP and the Littlebrook Substation would have an impact on the road network at the locations where the cable installation works are undertaken. The length of works area would be determined in co-ordination with the LHAs, in consultation with TfL for hHighways within LBB, to minimise traffic effects whilst maintaining a work site to maximise duct and cable installation efficiency. Unless agreed otherwise with the LHA, it is anticipated that each construction area would be up to approximately 200 m in length (extending to approximately 300 m when the associated temporary traffic management measures are included). Suitable temporary traffic management would be put in place and maintained in accordance with the Traffic Signs Manual Chapter 8 – Road Works and Temporary Situations and reflecting TfL's guidance "*Temporary Traffic Management Handbook - Keeping people safe at roadworks*".

6.2.2 The Electrical Connection construction site would be a rolling lane closure or temporary side road closures to accommodate: open trenching and duct installation; backfilling; and surface reinstatement. The cable laying work site would be enclosed by temporary traffic management comprising of worksite barriers, cones and warning signs. The temporary traffic management would be provided following best practice principles with any full road closures timed to cause least impact on traffic, including local bus services.

6.2.3 It is envisaged that there would be minimal road closures and diversions during the cable installation works. These would be associated with works to cross side roads and junction arms. The main impact of the highway related work would be the loss of highway capacity due to lane closures on sections of dual-carriageway and possibly the need for single lane alternate working on sections of the cable route provided on single carriageway roads.

6.2.4 Interfaces between local bus services and the construction of the Electrical Connection would be managed in agreement with the LHAs, and where appropriate the bus operating companies and TfL or DBC. Where bus stops and other infrastructure are affected by the cable laying works area, suitable alternative temporary facilities will be provided. Without unduly affecting other road users, temporary traffic management controls would be configured as far as possible to minimise delays to bus services and disruption to passengers and avoiding the need to amend bus timetables or scheduling. This could include actively managing temporary traffic signals during peak periods to balance traffic flows.

6.2.5 The decision making process set out below provides a method to understand the interface between the Electrical Connection construction works and local bus services, within LBB. This acknowledges that lane closures within the highway will be unavoidable and that the focus should be on providing a proportionate approach, to mitigate the temporary and transient effects of the construction works on the operation of the road network in the context of normal street works procedures. UKPN would consult bus operators under the standard notification procedures – including London Work's and Kent County Council's road space bookings and programme notification for statutory utilities' works – and with direct contact where there will be an interface with infrastructure and services. The process would provide details of:

- the proposed alignment of the cable trench;
- constraints and opportunities in respect of phasing;
- temporary traffic management measures;
- the extent of the works; and
- interfaces with bus stops and shelters and how they are managed.

6.2.6 The Electrical Connection follows the alignment of the A2016 / A206 corridor within LBB. The interfaces have been broken down into six zones:

- Zone 1: Norman Road / Picardy Manorway
- Zone 2: Lower Road crossing
- Zone 3: Erith roundabout / James Watt Way
- Zone 4: Northend Road (inc. Colyers Lane / Bridge Road)
- Zone 5: Perry Street to Howbury Lane
- Zone 6: Thames Road (to Crayford Way)

6.2.7 Those zones are illustrated in the diagram at Appendix B and have been discussed with TfL and Arriva London, which operates most of the local bus services. Arriva has expressed their opinion that Zones 3 to 6 are of most interest to them.

6.2.8 The Applicant and UKPN will continue to review opportunities to manage the construction works in those areas to limit and minimise disruption, whilst also implementing measures to manage the works at all other points. The Applicant has committed to use of the carriageway with least traffic disruption for the construction of the cable route, where practicable and on balance with other construction matters (such as underground structures or ground conditions), and to seek opportunities to use areas outside or adjacent to the

running carriageway if appropriate and feasible (such as options around the Erith Station approach). The Applicant and UKPN will remain focussed on minimising disruption to services through the careful planning of works around bus stops and minimising the extent of traffic management within the highway.

6.2.9 Detailed traffic management phasing and designs would be provided through the associated CTMP and would be developed in liaison with the LHA, and, where appropriate, TfL or Dartford Borough Council. The method and programming of when and how the Electrical Connection should be constructed across side roads and road crossings would be co-ordinated and agreed with the affected LHAs as part of the preparation of the final CTMP for that work. This could include temporary traffic management measures such as short-term closures of side roads and slip roads, with associated temporary diversions. Where feasible road crossings would be carried out using single lane closures, however, alternative detailed temporary traffic management arrangements could be agreed with the affected LHAs.

6.2.10 For bus routes within LBB, the specific method for progressing discussions with TfL and the bus operator to prepare the finalised CTMP to inform the management of the construction works and the interface with bus services would be structured as follows:

1) -Determine whether the Electrical Connection construction works directly interface with a bus route or bus infrastructure within LBB, i.e. adjacent to a bus stop, along or across a bus route.

2a) If not, inform the bus operators, LBB and TfL of the works within the vicinity of routes used by buses through the London Works standard street works notifications and road space bookings, including: working dates; work periods/phasing; and the final cable alignments.

2b) If there is a direct interface, do the works cross or run along a given bus route?

3a) If crossed, for each route crossed, identify: the period of works; extent and timing of lane closures; and whether the alignment and phasing of the works could be practicably adjusted to minimise effects on buses passing through or passengers using the services. Consult on ~~Conclude~~ this review with the bus operator and TfL and, following consultation, include in the final CTMP for LBB's approval – as secured through **Requirement 13** of the **dDCO** (**3.1, Rev 3** or amendments thereof). The standard London Works notifications would also be adhered to.

3b) If works run along a route, review as for (2a) and also meet with the bus operator and discuss:

- phasing of the works;

- lengths for working areas and details of the interface between the works and the bus services;
- working areas and management around bus stops (including minimising use of temporary bus stops);
- securing adequate manoeuvring into/out of bus stops/laybys (sufficient for the services using that stop); and
- identify with LBB whether there are any benefits to undertaking works outside of peak periods that are appropriate in respect of a balance of all effects to all potential receptors, noting that removal and reinstatement of traffic management is unlikely to be practicable. Peak removal of traffic management may only benefit specific locations and would also extend the working period.

~~6.2.4~~6.2.11 The interaction of the works with the PRoW network would include a number of instances where the works abut the terminal points of PRoW and several locations where the routes are directly affected. These are considered in summary in **Section 2.8** of the **Transport Assessment, Appendix B.1** of the **ES (6.3, APP-066)** and in detail in **Section 7** of this Outline CTMP. The details and timing of the interaction and impacts would be set out in the respective CTMP for those stages.

~~6.2.5~~6.2.12 The detailed CTMPs would explain the method of management of the construction areas and compounds and how affected PRoWs would be protected and / or diverted during the adjoining construction processes, in line with matters set out in **Section 7** of this Outline CTMP. The time over which the PROWs would be affected would be indicated within the CTMP and plans showing diversions where they are required. The 'Transport' section of the **Oo~~o~~utline Code of Construction Practice (CoCP**) (**7.5, Rev 3~~2~~**) identifies the requirement to protect users of PRoWs. A full and final CoCP will be secured through **Requirement 11** at **Schedule 2** of the **dDCO (3.1, Rev 3~~2~~)** and the final CoCP provisions will be reflected in the final CTMPs.

7 Public Rights of Way Considerations.

7.1 Introduction

7.1.1 The final alignment of the Electrical Connection for REP may affect Public Rights of Way (PRoW) on a temporary basis. The general reasonable worst case disruption would be for sections where the typical 200m working length (of open excavation for ducting installation) disrupts a given PRoW for the approximate 7 working days that it is present at that location and for the construction of jointing pits. Extended disruption may occur at locations where trenchless installation (e.g. drilling or boring activities) are required and the drilling compound coincides with the PRoW. This is most likely to occur at the drilling sites either side of the River Darent in the County of Kent.

7.2 General Considerations

7.2.1 It has been confirmed that:

1. no permanent diversion or closure of a PRoW is proposed as part of REP and its associated Electrical Connection;

2. no temporary closure of any PRoW in its entirety is proposed; where localised temporary closures are required, it is expected that a temporary diversion will be sought and will be achievable;

3. where PRoWs are affected or diverted in Kent County Council, the width any temporary alternatives or diversions will be no less than the existing access provision available where practicable. Where this is not possible, the following minimum widths should apply: Public Footpaths: 2m, Public Bridleways 3m, Restricted Byways 3m;

4. an appropriate path surface should be provided along the alternative or diversion route. The specification of the path surface would be detailed in the final CTMP and agreed with the Local Highway Authority (KCC PRoW and Access Service); and

5. the contractor installing the Electrical Connection will proceed on the basis of seeking to provide 'no less preferable access', e.g. that they do not introduce steps where drop kerbs or ramps were present previously and that widths do not reduce where the PRoW is currently wider than the target minima set out above.

7.3 Specific Footpath Considerations

England Coast Path

7.3.1 It is noted that the England Coast Path (National Trail) is intended to connect through the area south of the Thames and in the vicinity of the Electrical Connection works, specifically in the 'Bexley, River Cray and Southern

Marshes' and 'Kent Thameside Green Grid' sections of the Path. For the Electrical Connection, or each part thereof, the beneficiary of the REP DCO will liaise with Natural England and the relevant Access Authority to understand the latest proposals for the Path and the extent to which the Electrical Connection works could interact with the proposals. Where interaction occurs, the minimum standards set out above will be sought, regardless of the Path's status as a PRoW or otherwise at the time of REP construction.

DB1 and DB5

7.3.2 These footpaths cross Bob Dunn Way at the location of the Electrical Connection crossing of the River Darent. This is a location where directional drilling or boring is proposed and therefore 'launch' and 'reception' compounds would be required at each end of the drill extent. If these are not required then it will still be necessary for the Electrical Connection to cross these paths. Whilst both footpaths connect up to the public highway and allow a crossing there, they also pass underneath the highway, and therefore unhindered by traffic movements. The upper footpath connections are provided with drop kerbs, tactile pavers and breaks in the central reservation barrier and therefore provide a suitable, albeit less desirable, crossing of the highway. It is not anticipated that the connections up to the highway would be affected on both carriageways at the same time, meaning that access to the upper highway level would be available from one side or the other at all times. Furthermore, it is not expected that the riverside routes would be affected at the same time as the upper highway crossing routes, meaning that connectivity to either side of the highway would be maintained by one route or another.

7.3.3 In all cases it is expected that the contractor would maintain access to the highway and across (or under it) and in all scenarios would seek to secure no less preferable access. In the event that overall connectivity is affected more than is set out above, the contractor would consult with KCC to seek to agree a mutually agreeable solution for the period of temporary effect. However, KCC's preference to maintain the more desirable route for DB1 under the highway (given that it comprises the part of the Darent Valley Walk and proposed England Coast Path National Trail) is acknowledged. In the event that this cannot be maintained, alternative route options/access management approaches would be explored, other than crossing the upper highway, to ensure that an equivalent level of access is sought along the temporary diversion route, unless it is clearly impracticable to do so.

DB3

7.3.4 This Restricted Byway crosses the Electrical Connection route that follows the Fastrack bus route. It is noted that immediately to the east of DB3 (on Marsh Street North) there is a comprehensive arrangement and routeing for the existing cycleway with a substantial and dedicated width and southern signal controlled crossing at the junction between Marsh Street North and the bus

route. The cycleway and footway on both sides of the bus route connect westwards to DB3. In this respect the existing footway, cycleway and dedicated crossing arrangements in the area already provide a suitable alternative route for pedestrians who do not choose to take the slightly shorter route option presented by DB3. No specific commitments are required if the contractor is able to maintain suitable access for Restricted Byway users either via DB3 or the existing footway/cycleway route during construction.

DB50

7.3.5 This Public Bridleway passes on a bridge over a route option included within the submitted DCO boundary and would be unaffected by the works.

DB56

7.3.6 This route has been removed from the DCO boundary and on this basis would not be affected.

FP2

7.3.7 FP2 would not be affected by the preferred option of an above-ground cable trough structure on the east side of Norman Road, at its junction with Picardy Manorway. This solution has been approved in principle by LBB Highway, such that the likelihood of requiring a solution on the west side is very limited. In the event of works on the west side, the Applicant will liaise with LBB to seek to mitigate effects to the PRoW, including seeking to secure the shortest practical temporary diversion route.

FP3

7.3.8 Following the EIA Scoping stage, the Applicant removed all proposed works within the river which might be required to facilitate construction-related deliveries other than in ISO containers via the existing jetty. This was to, in part, minimise potential closures arising to the Thames Path/FP3, from crane oversailing or transiting materials via a temporary platform. The Applicant therefore does not anticipate any closure or temporary diversion of this PRoW. In the event of works affecting FP3, the Applicant will liaise with LBB to seek to mitigate effects to the PRoW, including seeking to secure the shortest practicable temporary diversion route.

FP4

7.3.9 FP4 connects to the north end of Norman Road from the east and provides a through route to FP3 (the Thames Path). The exit of FP4 onto Norman Road may be affected during reconfiguration of the gated arrangement which currently serves visitors to RRRF. It is anticipated that only a short localised temporary diversion would be required whilst the kerbline is adjusted. In the unlikely event that a temporary closure is required for safety reasons, an alternative connection route is available via FP3 and FP2. In the event that a temporary diversion via FP3 and FP2 is proposed, before implementation of

this diversion the Applicant will liaise with LBB to explore whether any alternative practicable solution can be agreed to maintain connectivity of FP4.

8 Temporary Traffic Management and Traffic Regulation Orders.

8.1 Parking Suspensions, Waiting and Loading Restrictions and Highway Licences

8.1.1 There are no proposals for waiting restrictions to ensure access for construction traffic at the REP worksite or the associated Main Temporary Compound. Consideration would be given during the construction stage to introduce waiting and loading restrictions on Norman Road if required to deter waiting by construction vehicles and parking by workers on Norman Road which could impede access and egress to the site or neighbouring premises.

8.1.2 The temporary closures of footways, footpaths, cycle paths and traffic lanes along with road closures, suspensions of access restrictions and on street parking would be determined once detailed proposals for the Electrical Connection route are known and prior to the final CTMP being prepared. Any permits and licences, deemed necessary, would be identified in the final CTMPs and progressed in accordance with the processes set out in the granted DCO and the finalised CoCP.

8.1.3 The need for licences for the use of two way and multiphase temporary signals would be determined through the detailed programming of the cabling works. Temporary traffic controls would be managed so as to minimise delays to local bus services. This could include manual intervention during busy traffic periods to balance waiting times.

8.1.4 When undertaking certain operations during cabling works the use of Stop Works traffic management may be required, this traffic management would only be used during off peak times and with prior approval from the LHA. The associated temporary traffic management would be deployed.

8.1.5 Statutory undertaker connections to the Main Temporary Construction Compounds would be undertaken by approved statutory undertakers contractors. This would include electrical, communications, water and sewer connections to the construction sites and compounds. Those contractors' works would be co-ordinated in accordance with standard New Roads and Street Works Act 1991 systems.

8.2 Electrical Connection Construction Area Traffic Management

8.2.1 The construction of the Electrical Connection would involve a combination of Temporary Construction Compounds and laydown areas and mobile construction areas. The former would be established to provide materials storage and lay down facilities and some fixed site welfare. —These compounds would have semi-permanent access provision and, in the instance of the anticipated compound location on Bob Dunn Way, would incorporate provision for the local diversion and protection of the DB5 PRoW route.

8.2.2 The Electrical Connection construction areas would be established as safe working areas within the Public Highway with associated temporary traffic management. The layout of the construction areas would follow the statutory undertakers' established practices and accord with the guidance in Traffic Signs Manual Chapter 8 – Road Works and Temporary Situations and in TfL's guidance "Temporary Traffic Management Handbook - Keeping people safe at roadworks". Streetworks notification processes would be implemented in accordance with the LHA for that road.

8.2.3 It is recognised that Fastrack is an award-winning bus rapid transit system operating in Dartford Borough and Kent County. The route of works to construct the Electrical Connection follows, in part, Route A of Fastrack and will therefore interact with services during construction.

8.2.4 Whilst the general measures in this Outline CTMP would be employed to mitigate effects along all routes, particular consideration would be given to the specific opportunities presented along the lightly trafficked dedicated busway and at the interface with the general traffic routes of Marsh Street North and Rennie Drive. This includes, but is not limited to:

- exploring the optimum working arrangement in respect of temporary traffic management such as traffic signal controlled versus priority traffic management for lane management and closures; and

- exploring the practicable optimum phasing, extent and timing of works, in discussion with DBC and KCC, to seek a 'minimised' overall effect on Fastrack services, particularly at the timetabled location of service crossover in the vicinity of Marsh Street North.

8.2.5 Furthermore, following further discussion with KCC, the Applicant has agreed the following in respect of the manner and alignment of installations of the Electrical Connection cables through the dedicated busway of Fastrack:

- As long as it is practicable, economic and efficient to do so, the Electrical Connection will remain within the verge/footway/cycleway next to the Fastrack busway and not in the bus running surface;

- That any closure of a lane on the busway and effects to bus stops will be minimised in length and duration, through measures which could include:

  - If sufficient width is available, maintaining any footway/cycleway continuity off-highway such that a lane closure is not required for this purpose;

  - If a busway lane closure is only required for deliveries, spoil removal and other similar construction-related activities (subject to securing a safe width for working), a solution will be explored that only closes the lane when deliveries etc. occur (likely with a temporary "stop-go" or priority working arrangement) and that the length of lane closure is

minimised to the immediate working/delivery/departure area necessary for safe working;

- Where a bus stop exists, the cable alignment will seek to pass behind the bus stop (where practicable) and maintain pedestrian access to the bus stop, such that the operation of the permanent bus stop is unhindered; and

- On the approach to bus stops, where practicable and appropriate, the works will be curtailed in length so that they do not impinge on the immediate vicinity of the bus stop until necessary.

9 Construction Traffic Site Deliveries

9.1 Construction Traffic REP Site Deliveries

9.1.1 Day to day site deliveries and removals would be undertaken during site working hours where possible.

9.1.2 The times for acceptance of key deliveries are set out at **Section 3.3** and would be confirmed through the approved CTMP for that stage.

9.1.3 Where practical the Principal Contractor would consider programming site deliveries to arrive after 09.00hrs Monday to Friday to seek to minimise impacts on the local highway network peak periods. This should take account of the origin of the load and vehicle, which could restrict retiming opportunities – such as due to operating licence restrictions or LLCS controls.

9.1.4 Information on the plant, equipment and materials required for each stage of the works would be provided within the detailed CTMP for that stage.

9.1.5 Site deliveries and removals involving Abnormal Indivisible Loads (AILs) would typically be undertaken at times of reduced traffic flow normally outside of the normal working hours and following notification through the ESDAL system (Electronic Service Delivery of Abnormal Loads) or similar recognised process. Movement times would adhere to advice given by the affected Police Authorities and LHAs.

9.1.6 Key deliveries or removals would, where appropriate, be booked in with the Principal Contractor in good time prior to the planned movement. In the case of AILs, 7-day prior notice would be required. Planned arrival or removal times would be coordinated on site to ensure there is sufficient space on site to accept the haulier's vehicle within the compound or works area, ensuring the vehicle could be loaded/unloaded promptly and safely and avoiding any vehicle queuing and waiting on roads adjacent to the site.

9.1.7 Deliveries would be controlled at the site access by trained Traffic Marshals who would record vehicle arrivals and subsequent departures against those booked in with the Principal Contractor. Drivers of booked vehicles would be directed to the appropriate area within the site compound.

9.1.8 The contractor would seek to ensure that lorries, with a Gross Vehicle Weight in excess of 8 tonnes, delivering to site comply with requirements of TfL's Work-Related Road Risk (WRRR) and the Construction Logistics and Community Safety (CLOCS) standards.

9.1.9 In meeting the WRRR requirements, the contractor would ensure that operators providing vehicles delivering construction materials, plant and sundries on the project, using vehicles with Gross Vehicle Weights greater than 8 t would be a member of the Fleet Operators Recognition Scheme

(FORS), unless specific circumstances are confirmed with LBB Highways officers.

9.1.10 Where there is a requirement for specialist operators to access site, who are not FORS registered and CLOCS compliant, and it is not reasonable to expect that company to become so, this would be confirmed with the LHA, with justification given. This could include specialist haulage or lifting contractors who could be visiting site on fewer than three occasions.

9.1.11 During periods of prolonged disruption and incidents on the routes approaching the Main Temporary Construction Compound and the REP site, the Principal Contractor would seek to manage construction vehicle movements such that they are either held at their origin or a suitable alternative location off-site. Alternatively, their visit would be retimed to avoid the period of disruption. Lorries will not change their route whilst en route, unless directed by the Police; a Traffic Officer (as defined in the Traffic Management Act 2004 Articles 1 to 5); or an approved traffic management scheme. Re-routeing, en route, would require contact with the driver, potentially taking that person's attention from the road, which is not safe. Drivers might also seek to use routes which would not be deemed suitable.

9.1.12 Where possible, the Principal Contractor would work with the LHAs to manage the impact of the construction phase on the network, during incidents. Due to the nature of the works, the safety and efficiency of the construction could limit opportunities to amend the programme at that time.

9.2 Construction Traffic – Electrical Connection Site Deliveries

9.2.1 The installation of the power cable between REP and Littlebrook Substation located off Rennie Drive would be remote from the REP site. The main materials for the cable route comprise: ducting; pipe bedding back fill; cable warning tape; junction pit components comprising of joint boxes, covers and cable; excavated material; and surfacing materials. Plant and equipment would be delivered and removed directly to or from the construction areas. Refuelling would be carried out either on-site by way of mobile tanker or off-site.

9.2.2 The materials would typically be delivered in bulk to the works compounds and then transported to the work site by site vehicles. The onsite operation would require direct removals of surplus excavated material from the work site along with any removed vegetation from the cable route. It would also be necessary for reinstatement materials to be delivered direct to the work site. The onsite welfare for cable laying work sites would require a weekly maintenance visit by a pump vehicle with reception tank.

9.2.3 As with the management of construction vehicles associated with the construction of REP, the Electrical Connection contractor would seek to minimise the potential impact of their works on the adjoining Public Highway network during periods of disruption and incidents. Due to the nature of the road works, it would not be feasible to amend working areas at short notice.

10 Strategies to Reduce Impacts

10.1 Planned Measures

10.1.1 The following Planned Measures have been identified to help the Principal Contractor achieve the goals of the CTMP and better manage the challenges identified in **Section 2.** Measures identified as "committed" are those that would be anticipated to be included as Requirements within the DCO or through the Code of Construction Practice. The items listed as "proposed" are measures that could be advanced but would not be a binding commitment. The "considered" measures would continue to be explored and would be employed should an acceptable opportunity be available.

Table 10-1: Planned Measures

Planned Measures Checklist	Committed	Proposed	Considered
Measures influencing construction vehicles and deliveries			
Vehicle safety and environmental standards and programmes	x		
Adherence to designated routes	x		
Delivery scheduling		x	
Retiming for out of peak time deliveries		x	
Retiming for out of hours' deliveries		x	
Use of holding areas and vehicle call off areas			x
Follow local bus service interface appraisal process	x		
Measures to encourage sustainable freight			
Freight by Water			x
Freight by Rail			x
Material procurement measures			
DfMA and off-site manufacture			x
Reuse of material on site		x	
Smart procurement		x	
Collaboration amongst other sites in the area			x
Implement a staff travel plan		x	

10.1.2 The Applicant (Cory) ~~Riverside Energy~~ is a water freight operator and would explore the movement of materials by river where opportunities are viable, efficient and safe. It would continue to review options for moving bulk material by river which would be off-loaded using the current gantry crane system. The

use of the existing jetty facilities for the construction of REP should only be considered where there would be no undue disruption to the operation of RRRF and convenient pre-existing water interface is available at the starting point of that material's journey. The operation of marine activities would be managed by Cory ~~Riverside Energy~~'s existing marine logistics teams~~department~~, who are highly trained in the operations on the River Thames and would co-ordinate vessel movements with those for the continuing operation of RRRF.

10.1.3 Opportunities to move material by rail would be monitored, as the project progresses, and consideration would be given to moving material by rail where rail interchange is available and could be appropriate to the construction programme.

10.1.4 Each CTMP would set out the measures that have been adopted to reduce the impacts of the construction processes associated with the movement of plant, materials and equipment.

10.2 Measures Influencing Construction Vehicles and Deliveries

Safety and environmental standards and programmes

10.2.1 The Applicant and Principal Contractor would seek to ensure all contractor and subcontractor lorries over 8 t Gross Vehicle Weight, arriving at site, comply with sufficient safety measures and requirements relating to Work Related Road Risk (WRRR), as detailed by TfL, and outlined at paragraphs 8.1.8 to 8.1.10 above.

10.2.2 The requirements for compliance with WRRR are set out at: https://tfl.gov.uk/info-for/deliveries-in-london/delivering-safely/work-related-road-risk.

10.2.3 The CTMPs would reiterate this commitment and detail how compliance should be enforced, monitored and managed.

10.2.4 Industry best practice would be adopted, wherever possible, to support the construction stage of REP. This would be likely to be achieved by ensuring that, through the procurement process, the Principal Contractor and its subcontractors are members of, or signatories to, relevant best practice schemes and initiatives including, for example:

- Considerate Contractors Scheme (CCS) – promotes best practice that relates to on-site activities and those in the vicinity of the site. It is noted that the site would be registered under this scheme.

- Fleet Operator Recognition Scheme (FORS) – for suppliers that would deliver to, and hauliers that visit the site, the Principal Contractor would mandate these businesses to be members of FORS before they could deliver to site – unless a specific exception is agreed with the LHA prior to that haulier or supplier visiting site (**Section 9.1.10** refers).

- Construction Logistics and Community Safety (CLOCS) – CLOCS brings the construction logistics industry together to revolutionise the management of work-related road risk and ensure a road safety culture is embedded across the industry. The Principal Contractor would require all hauliers and suppliers to be CLOCS compliant – unless a specific exception is agreed with the LHA prior to that haulier or supplier visiting site (**Section 9.1.10** refers).

- Construction Logistics Improvement Group (CLIG) – CLIG comprises around 50 construction industry stakeholders which are involved in TfL's behaviour change project aimed at minimising the impact of the increasing amount of construction and to ultimately reducing the congestion and improve safety and air quality for the capital.

10.2.5 Current levels of good practice implemented by major projects such as Crossrail and the Thames Tideway Tunnel have led the way in setting the standards which construction projects should attain. The Applicant for the Riverside Energy Park is supportive of these standards and would adopt good practices consistent or exceeding these high levels. The extent to which the developer could apply and possibly enhance the standards would be appraised and set out in the detailed CTMPs for each stage.

Adherence to designated routes

10.2.6 Road traffic routes to be used for journeys to/from the Transport for London Road Network and SRN in London and the strategic road network in Kent are specified in **Section 4**. These access routes have been reviewed with respect to physical obstructions and hazards which could restrict access for larger construction vehicles. Qualitative assessments of junctions on the approach to REP have been undertaken and reported in the Transport Assessment.

10.2.7 A copy of the route plan would be given to all suppliers when orders are placed to ensure drivers are fully briefed on the required route to take. The supplier would be made aware that these routes are required to be followed at all times, unless agreed or alternate diversions are in place by the LHA or other parties.

10.2.8 Routes for AILs would be determined by the haulier in collaboration with the affected Police and LHAs. These would be determined by the configuration of the load, depending on its height, width, weight and length. The need for escort vehicles would be determined through that process.

10.2.9 The Principal Contractor would agree with LBB Highways, a strategy for local signing to assist with guiding drivers to the appropriate access points on Norman Road. The format of that strategy would be set out in the final CTMP for those works.

Delivery scheduling and monitoring

10.2.10 Delivery scheduling for road movements would be confirmed with the Principal Contractor's logistics team. An electronic delivery management system could be implemented to book and manage vehicles visiting the site. This could be a proprietary system or bespoke to the project. Such systems can record all details relevant to the vehicle visit, which are then available for the inclusion into monitoring reports. More information regarding the system would be presented in the approved CTMP for that stage.

10.2.11 Water freight movements that are viable would be managed by Cory Riverside Energy's Lighterage Team, to ensure they are co-ordinated with the marine operations of RRRF.

Retiming of deliveries outside peak traffic times

10.2.12 Retiming of deliveries outside peak traffic times may improve the operational efficiency of the construction site, as well as lessening the impact of vehicle activity on the neighbouring area. The Principal Contractor and the Electrical Connection statutory undertaker would explore in the CTMPs where they are minded to support retiming of site deliveries to times outside the morning peak (i.e. outside 07:00-09:00hrs).

10.2.13 In the case of deliveries and collections by water, these are anticipated to occur at varying times over a 24-hour period, as they would be governed by the tidal state of the River Thames.

Use of holding and vehicle call off areas

10.2.14 The use of a holding area for construction vehicles approaching site has been considered but the location of the development and amount of available space at the REP site does not lead to this type of facility being required for the construction works. Subject to the detailed layout design of the compound, the Main Temporary Construction Compound on Norman Road could be used to muster some vehicles prior to sending them to the REP site.

10.2.15 The statutory undertaker would determine where to locate laydown areas for the construction of the Electrical Connection. The operation would not require remote holding areas for vehicles.

Use of logistics and consolidation centres

10.2.16 The decision to use a consolidation centre would be made once the Principal Contractor has been appointed and its need and viability investigated in greater detail. The conclusions and result of the appraisal, and the approach to be adopted would be set out in the detailed CTMP for that stage.

10.3 Measures to Encourage Sustainable Freight

Freight by Water

10.3.1 The REP site lies within 100 m of the River Thames and has an existing jetty for the movement of standard containers as part of RRRF's present operations. Where practicable, water transport would be considered as a mode for inbound materials and outbound construction waste streams. The precise details on the use of waterborne transport are to be made once the Principal Contractor has investigated its need and viability in greater detail and would be in co-ordination with Cory Riverside Energy's existing marine operations.

10.3.2 It is proposed that the contract for ready mixed concrete would require that supplier to explore the use waterborne or rail deliveries as part of their transport chain for some, or all of the raw materials to their batch plant. The supply of batched concrete from the plant would be by road.

10.3.3 The feasibility of transporting materials or equipment by water would be addressed by the Principal Contractor and presented in the detailed CTMP.

10.3.4 Water freight is not proposed to be used by the statutory undertaker for the construction of the Electrical Connection.

Freight by Rail

10.3.5 The REP site would not directly link to the railway network and there are currently no rail freight terminals within a reasonable distance of the site. Therefore, it is not envisaged rail freight would feature as a primary transport mode for the delivery and removal of construction materials and waste. Proposals for the Howbury Strategic Rail Freight Interchange have been refused. Therefore, its use in the supply chain for the construction of REP can no longer be considered.

10.3.6 As stated above, it is the Applicant's preference that the contract for ready mixed concrete would require the supplier to use waterborne or rail deliveries as part of their transport chain for some, or all of the raw materials to their batch plant.

10.4 Material Procurement Measures

Design for Manufacture and Assembly and off-site manufacture

10.4.1 The potential to use prefabricated assemblies and techniques would be considered as an approach to reduce the number of construction vehicle movements, once a Principal Contractor has been appointed. A decision as to how prefabrication might be integrated into the construction process would be included in the detailed CTMP.

Reuse of material on site

10.4.2 Demolition materials arising from site clearance and ground preparations could be reused as part of the site levelling and the provision of a building platform and piling mat for the construction works. The material would be stored within the site area until required. This would be determined during the detailed design development and reflected in the CTMP for that stage.

10.4.3 Consideration would also be given to the reuse of excavated material for filling, depending on its suitability - e.g. potential contamination. Where possible, the project could seek to maximise the reuse of suitable soils for landscaping, to minimise waste disposal.

Smart procurement

10.4.4 Where appropriate suppliers are available and suitable contracts can be negotiated, materials, equipment and plant could be sourced from local suppliers. Furthermore, during the procurement stage the Principal Contractor would explore with suppliers if the use of waterborne or rail transport would be possible for part of the transport chain.

10.4.5 Opportunities to source materials from the suppliers supplying other development sites already underway in the immediate area would also be investigated.

10.5 Other Measures

Collaboration amongst other sites in the area

10.5.1 The Applicant would consider working with other construction site contractors in the vicinity and would ascertain the feasibility of a shared consolidation or holding area for construction vehicles and/or materials. If a suitable forum were to be established, the Principal Contractor could attend working group meetings to discuss opportunities to collaborate with other sites and suppliers, to minimise any disruption during the construction stages.

10.6 Vehicle Holding Areas and Call Up Procedure

10.6.1 There is no intention currently to provide a remote lorry holding area, therefore a vehicle call up procedure would not be required. There would be communication between the Main Temporary Construction Compound and the REP site to co-ordinate when vehicles need to move between the two areas.

10.6.2 In the case of larger concrete pours the site would coordinate deliveries with the batching plant to ensure a constant turnaround of vehicles. Where pours are of sufficient scale, multiple batching plants could be used. The co-ordination between batching plants would be the responsibility of the concrete supplier.

10.6.3 The use of interactive communication devices which may distract driver's attention whilst driving would be discouraged during vehicle movements on the Public Highway associated with the development's construction.

10.7 Implement a Workforce Travel Plan

10.7.1 An outline Operational Worker Travel Plan has been developed to promote sustainable transport for workers during the operational phase of REP. This would be extended to a full final Operational Worker Travel Plan as a Requirement of the DCO. Through the inclusion in the final CTMP of details of travel planning initiatives and measures, construction staff engaged on the project would similarly be encouraged to use alternatives to the car to travel to site which should include promotion of walking, cycling, car sharing, bus and rail. The need for workers to drive to site is recognised and onsite parking for up to 275 cars or vans would be provided.

10.7.2 Management of those parking spaces would be detailed within the final CTMP and should reflect the initiatives set out at Paragraph 5.3.2.

10.7.3 Parking on Norman Road would be strongly discouraged. If necessary, however, working with LBB Highways, waiting restrictions may be proposed to maintain site access for deliveries and extractions and to deter worker and visitor parking other than in the designated areas.

10.7.4 The Principal Contractor will maintain the role of a Travel Plan Coordinator (TPC) who will champion initiatives to reduce the environmental impacts of work force travel and to minimise the impacts of commuting on the local road network.

10.7.5 The TPC would:

a. Implement and actively promote Travel Plan measures to maximise the use of non-car modes of travel to and from work, such as:
    i. providing information on public transport services in the area;
    ii. promoting the use of cycle facilities at the Main Temporary Construction Compound; and
    iii. extolling the virtues of active travel and encouraging walking for those living within 1 km of REP or cycling for those living within 5 km.
b. Ensure the requirements for workforce inductions, briefings and communications include information and guidance on the importance of environmentally friendly commuting;
c. Act as a focal point for workforce commuting issues;
d. Determine applications for construction worker parking permits for on-site parking and maintain a database of those allocated permits and

the justification – assessed on criteria based around those outlined at paragraph 5.3.2;

e. Manage the monitoring, assessment and review of workforce travel patterns; and

f. Engage with subcontractors to encourage their workers to commute sustainably.

10.7.6 Those workers using cycles to commute would be encouraged to undertake cycle training, to wear appropriate safer cycling equipment, and be offered guidance on safe cycle maintenance. The cycle training would be arranged through TfL's existing Cycle Skills training initiatives. At the time of preparing the final CTMP, the Principal Contractor would reflect on the suitability and appropriateness of promoting the use of cycle hire schemes.

10.7.7 The Principal Contractor and sub-contractors would consider the use of crew buses to limit the number of individual car journeys.These could be established to provide a link between the REP site and Abbey Wood station, encouraging the use of the Elizabeth Line services.

11 Estimated Vehicle Movements

11.1 Construction Vehicles Accessing Site

11.1.1 It is expected that a wide range of vehicle types would access the site to enable construction, which would comprise of the following (but not limited to):

- Service Vans – Plant maintenance, PPE, fixings, sundry items for site office services and deliveries, canteen supplies, courier/post and small parcel deliveries;
- 2 axle rigid lorries – site services deliveries building materials, waste skips, waste paper recycling, sundry items, PPE fixings, courier and parcel deliveries;
- 3 axle rigid lorries – plant deliveries, access platforms heavy side building materials, refuse collection, ready mixed cement;
- 4 axle rigid lorries – muck away, aggregate supplies, ready mixed cement, heavy side building materials;
- Multi axle articulated lorries – materials deliveries, cement powder, rebar, plant deliveries, piling rig, access platforms; and
- Abnormal Indivisible Loads (AIL) – mobile cranes and large adapted articulated lorry combinations (for items such as non-road mobile machinery, transformers, turbines, generators and boiler drums).

11.2 Estimated Vehicle Numbers

11.2.1 The estimated cumulative peak of construction related goods vehicles and workforce commuting has been identified during month 13 of the period of construction. The estimated demand for the peak month would be in the order of 500 goods vehicles which equates to an average over a 5.5 day working week of 22 vehicles per day. In addition to goods vehicle movements for plant, equipment and materials, there would be in the order of 275 worker vehicle visits each day during the peak month.

11.2.2 The CTMPs would include a fuller prediction on the programme for vehicle movements and the types of plant material and equipment to be transported. The predictions would provide an estimated average daily number of movements.

11.2.3 Marine movements would be predicted in collaboration with Cory Riverside Energy's marine department and summarised in the appropriate CTMP.

12 Implementing, Monitoring and Updating

12.1.1 This Outline CTMP does not include a detailed and defined description of how the CTMP would be implemented, monitored and updated. However, the following approach can be confirmed at this stage.

12.1.2 It is anticipated that an appointed Logistics Manager would be responsible for implementing the CTMPs on behalf of the Principal Contractor. Once implemented, it is expected that the data and information collected as part of the CTMP would include:

Vehicle bookings

- number of vehicle movements to site; collected through a delivery booking-in system that provides data on:
  - total vehicles accessing the site;
  - type/size/age of vehicles;
  - time spent on site;
  - any consolidation centre utilisation; and
  - supplier FORS accreditation.

Breaches, complaints and non-compliance:

- vehicle routeing;
- unacceptable queuing;
- unacceptable parking; and
- Ultra Low Emissions Zone compliance.

Safety:

- logistics-related accidents;
- record of associated injuries;
- vehicles and operations not meeting safety requirements.

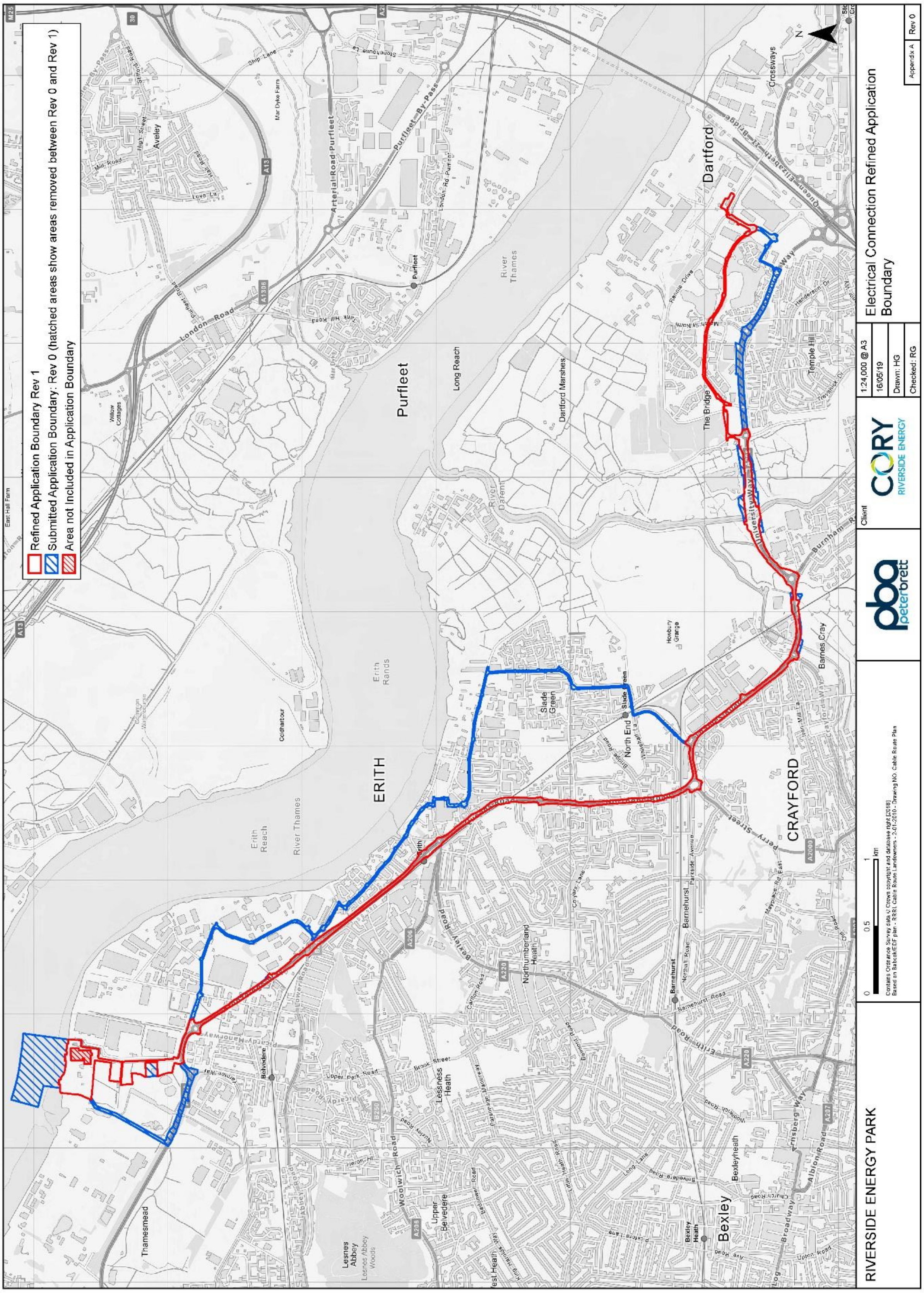
Workforce Travel Patterns

- details of staff travel modes when commuting to site;
- summary of travel times; and

- challenges and obstacles that are limiting the maximisation of non-car travel.

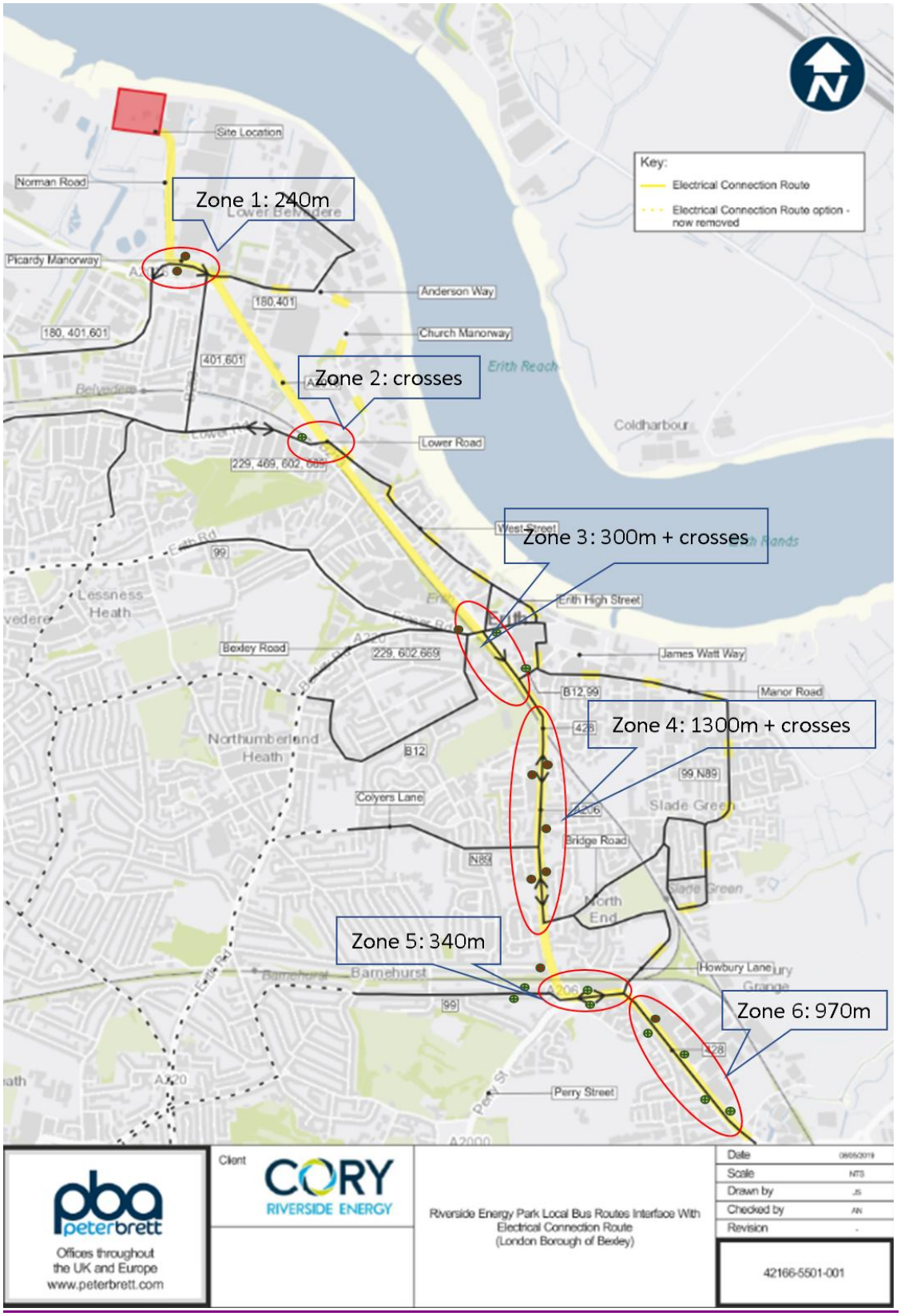
12.1.3 The data collected will be reported with full transparency to LBB, Kent County Council and TfL. Dartford Borough Council would be provided with data as required. The final CTMP would set out how a group, with an invitation to all the aforementioned parties, would be convened in the unlikely event that Workforce Travel Patterns are materially worse than those assumed in the assessment.

Appendix A Application Boundary and Illustrative REP layout


Refined Application Boundary Rev 1
Submitted Application Boundary: Rev 0 (hatched areas show areas removed between Rev 0 and Rev 1)
Area not Included in Application Boundary
RIVERSIDE ENERGY PARK
Electrical Connection Refined Application Boundary
1:24,000 @ A3
16/05/19
Drawn: HG
Checked: RG
Appendix A
Rev 0


KEY:
APPLICATION BOUNDARY
AREA NOT INCLUDED IN APPLICATION BOUNDARY
PARAMETERS KEY:
MAIN REP BUILDING
ANAEROBIC DIGESTION
ASSOCIATED PROCESS BUILDINGS AND INFRASTRUCTURE
STACKS
RIVERSIDE ENERGY PARK
NORMAN ROAD BELVEDERE LONDON
ILLUSTRATIVE SITE LAYOUT AND PARAMETERS PLAN
THE RIVERSIDE ENERGY PARK SITE LONDON
Date 17.05.19
A3 Scale 1:2000
Drawn by AG
Checked by PC
Drawing Number Figure 1.3a Rev 1
WEEDON architects
CORY
RIVERSIDE ENERGY

Appendix B Diagram indicating local bus service interface in LBB


Site Location
Norman Road
Zone 1: 240m
Picardy Manorway
Anderson Way
180,401
180, 401,601
Church Manorway
401,601
Zone 2: crosses
Lower Road
229, 469, 602, 669
Coldharbour
West Street
Zone 3: 300m + crosses
Erith High Street
Bexley Road
229, 602,669
James Watt Way
B12,99
Manor Road
Zone 4: 1300m + crosses
Northumberland Heath
B12
99,N89
Colyers Lane
Slade Green
Bridge Road
N89
Zone 5: 340m
Howbury Lane
Barnehurst
99
Zone 6: 970m
228
Perry Street
Key:
Electrical Connection Route
Electrical Connection Route option - now removed
pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com
Client
CORY RIVERSIDE ENERGY
Riverside Energy Park Local Bus Routes Interface With Electrical Connection Route (London Borough of Bexley)
Date
Scale NTS
Drawn by JS
Checked by AN
Revision
42166-5501-001