



Riverside Energy Park Belvedere

Supplementary Information to the PEIR



On behalf of **Cory Environmental Holdings Limited**

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1 Introduction

1.1 Introduction

- 1.1.1 Cory Environmental Holdings Limited (trading as Cory Riverside Energy ('the Applicant')) is applying to the Secretary of State under the Planning Act 2008 (PA 2008) for powers to construct and operate an integrated Energy Park, to be known as Riverside Energy Park (REP). The principal elements of REP comprise complementary energy generating development, with an electrical output of up to 96 megawatts (MWe), and an associated Electrical Connection (together referred to as the 'Proposed Development'). As the generating capacity of REP will be in excess of 50 MWe it is classified as a Nationally Significant Infrastructure Project (NSIP) under Sections 14 and 15 of the PA 2008 and therefore requires a Development Consent Order (DCO) to authorise its construction and operation.
- 1.1.2 REP would be located adjacent to an existing Energy Recovery Facility (ERF) operated by the Applicant (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. Plans showing the location, Indicative Application Boundary (IAB) and indicative location of project elements are provided in **Figures 1.1-1.3, Appendix A.1** of the Preliminary Environmental Information Report (PEIR), published in June 2018.
- 1.1.3 This Supplementary Information to the PEIR (SIP) report identifies and provides additional information relating to minor, non-material changes to the IAB for REP which have been identified since the publication of the PEIR. This report complements, and should be read in conjunction with, the PEIR. It does not replace, supersede or act as an addendum to the PEIR.

1.2 Preliminary Environmental Information Report and subsequent design changes

- 1.2.1 In June 2018, the Applicant published the PEIR under Regulation 12 of the Infrastructure EIA Regulations 2017, which contained information reasonably required for the local community and the consultation bodies to develop an informed view of the Proposed Development and its likely significant environmental effects. The PEIR sets out preliminary environmental information and the preliminary findings of the Environmental Impact Assessment (EIA) based on available information at that time.
- 1.2.2 Since the PEIR was published, changes have been identified to the REP IAB which require further consideration to supplement the preliminary findings of the assessments reported within the PEIR.
- 1.2.3 In June 2018, through ongoing engineering investigation and information received from local highway authorities relating to the Electrical Connection, specific locations were identified where the IAB may require extending to facilitate the installation of the Electrical Connection. These areas are highlighted on **Figures 1-7, Appendix A** of this report. This has resulted in additional areas of land potentially being affected beyond those considered within the PEIR.

1.2.4 The location and details of these changes are listed in **Table 1.1** below.

Table 1.1: Changes to the IAB

Change reference (refer to Appendix A)	Description of works	Area of change (m ²)
A1	An area of verge extending towards the natural fenced boundary adjacent to Norman Road (north) to allow an option for trenched cable installation, whilst avoiding the surfaced highway.	1,102
A2	Areas either side of the existing Norman Road bridge to facilitate either the installation of a cable bridge/trough spanning the existing watercourse between banks, or to allow an alternative trenchless civil engineering technique/solution (for example localised Horizontal Directional Drilling (HDD)) which could commence either within the additional areas, or within the existing boundary.	455
A3	Area included to the front of Erith Railway Station and along an existing pedestrian route to allow an option to install cables avoiding a potential engineering constraint in the adjacent dual carriageway.	868
A4	Existing footway and bridge crossing included to allow alternative means of crossing the existing railway, should this be preferable to using one of the existing road bridges. Cables would be trenched either side of the bridge and attached to the existing footbridge structure for support.	1,057
A5	Area included to the south of the existing highway to allow for an alternative trenchless civil engineering technique/solution (for example localised HDD under the River Cray, other watercourses and the existing railway line. The area also provides for trenched installation in those areas outside the current metalled highway.	2,676
A6	The areas north and south of the existing bridge crossing of the River Darent allow optional implementation of alternative trenchless civil engineering techniques/solutions (for example localised HDD) under the river in the event that a highway based crossing is not practicable. The area also allows for access and installation in the event that cables are attached to the existing bridge. Further east the additional areas allow for trenching outside the highway, crossing of other watercourses and the exploration of using the existing opening that protects	41,437

Change reference (refer to Appendix A)	Description of works	Area of change (m ²)
	<p>the existing strategic sewer under the A206 as a crossing point.</p> <p>Note that the area included to the southwest of the existing highway crossing of the River Darent would <u>not</u> be used as a location for trenchless installation techniques due to the presence of an existing inert landfill. This area would be used for access/laydown only if required to facilitate the installation of cables being installed across the existing highway structure.</p>	

1.2.5 In addition to the above areas, we have taken the opportunity to make minor refinements to the IAB at a number of locations (labelled as ‘B’ areas), see **Figure 8, Appendix A**. These do not give rise to any potential changes in environmental effects and are limited to:

- Removal of some areas of established woodland/planting, which we are now satisfied will not be required;
- Inclusion of some additional strips of verge or footway adjacent to highways where they lie within the adopted highway land; and
- Inclusion of some additional bellmouths on roundabout arms to provide an additional alignment through those junctions.

The areas identified in bullets 2 and 3 all lie within the existing adopted highway.

1.3 Approach to consultation

1.3.1 The changes set out in **Table 1.1** are subject to a consultation exercise which is separate from the statutory consultation already undertaken on the PEIR and which closed on 30th July 2018. The consultation on the changes to the IAB will run from 31st July to 7th September 2018. Given the scale and nature of the changes, the Applicant is carrying out a limited statutory consultation on these changes with those persons with an interest in the land in which the changes are located and is inviting views from certain prescribed bodies and addresses within a 200 m radius of each change. The consultation documents are also published at the following website: <https://riversideenergypark.com/>.

1.4 Methodology

1.4.1 A desk-based review of the changes to the IAB was undertaken for all EIA topics, alongside a review of publicly available information, mapping and documents (e.g. local authority records). In addition, a site walkover was undertaken on the 11th July 2018 in relation to Terrestrial Biodiversity. The aim of the further assessment is to determine whether the changes give rise to new or different likely significant effects when compared to the assessments undertaken and presented in the PEIR.

1.5 Format of this report

- 1.5.1 For simplicity, this report is structured to reflect the PEIR. PEIR **Chapters 1-5** are considered together in **Section 2** of this report, with environmental considerations on a topic by topic basis in **Sections 3.1 – 3.11** as follows:
- **Section 3.1** – Transport
 - **Section 3.2** – Air Quality
 - **Section 3.3** – Noise and Vibration
 - **Section 3.4** – Townscape and Visual
 - **Section 3.5** – Historic Environment
 - **Section 3.6** – Terrestrial Biodiversity
 - **Section 3.7** – Hydrology, Flood Risk and Water Resources
 - **Section 3.8** – Ground Conditions
 - **Section 3.9** – Socio-economics
 - **Section 3.10** – Other considerations
 - **Section 3.11** – Glossary
- 1.5.2 Each topic specific section provides a commentary as to whether or not the changes to the IAB require a change or addition to existing information contained in the PEIR, followed by a conclusion on the overall significance of the changes in relation to that specific topic.
- 1.5.3 It is acknowledged that all PEIR figures containing the IAB would require updating to show the revised IAB, which is identified in **Appendix A**. For clarity, this report only identifies figures within the PEIR that contain environmental information which has been superseded or supplemented by the changes and will be updated for the Environmental Statement (ES).
- 1.5.4 **Section 4** provides an overall conclusion as to the likely significant environmental effects arising from the changes to the IAB.

2 PEIR Chapters 1 - 5

2.1 Updates required to PEIR Chapters 1 - 5

- 2.1.1 **Chapters 1, 2 and 4** do not require supplementary information as a result of the changes to the IAB and therefore remain valid.

Chapter 3

- 2.1.2 **Chapter 3** (paragraph 3.2.11) is superseded by the following text:

“The Electrical Connection route would cross the River Darent, a tributary which feeds into the River Thames. The Dartford Marshes Local Wildlife Site (LWS) is a large area of marshland and wetland habitat along the River Darent and on the Darent floodplain. The Electrical Connection route would cross the River Darent in the existing highway (either in the highway surface or attached to the structure) or in land to the immediate north or south of the highway verge using a trenchless installation technique such as Horizontal Directional Drilling.”

- 2.1.3 Note that as per **Table 1.1**, a trenchless installation technique would not be used where it might affect the integrity of the existing inert landfill to the southwest of the existing highway crossing of the river.

- 2.1.4 **Chapter 3** (paragraph 3.3.11) is superseded by the following text:

“REP would be connected to the existing electricity distribution network via a new 132 kilovolt (kV) distribution connection (‘the Electrical Connection’) by UK Power Networks (UKPN). It is proposed that the Electrical Connection would be routed predominantly via the existing road network and would be predominantly underground. The exceptions would be at the connection point with REP itself, at the connection point to the distribution network operator (DNO) and at discreet locations along the Electrical Connection route where it might be attached to existing bridges or supported in new cable troughs over smaller watercourses. This connection would necessarily require a new substation within the REP site. However, the connection to the distribution system would be installed in an existing substation building with no external alteration required. Littlebrook is the most suitable connection point for REP, as outlined in **Chapter 5 Alternatives Considered**. The Electrical Connection would comprise a new part of that network, to be owned and operated by UKPN.”

- 2.1.5 Other than the above, **Chapter 3** does not require supplementary information as a result of the changes to the IAB.

Chapter 5

- 2.1.6 **Chapter 5, Section 5.5** is supplemented by the text in **Table 1.1** of this document, which identifies the progression of the IAB since the publication of the PEIR.

3 Environmental Considerations

3.1 Transport

- 3.1.1 This section provides a tabulated overview of how the changes to the IAB interact with the information provided within **Chapter 6** (Transport) of the PEIR, specifically highlighting any areas where the information needs to be updated in light of the changes. Subsequent sections (3.2 – 3.9) continue this format.

Table 3.1: Implications for PEIR text

PEIR text reference	Comment on changes
6.1, 6.2, 6.3, 6.4, 6.5	Section 6.1 (Introduction), Section 6.2 (Policy Context, Legislation, Guidance and Standards), Section 6.3 (Consultation), Section 6.4 (Parameters Used for Assessment) and Section 6.5 (Assessment Methodology and Significance Criteria) do not require to be supplemented as a result of the changes to the IAB and therefore remain valid.
6.6	Section 6.6 (Baseline Conditions and Receptors). Whilst paragraph 6.2.2 described the electrical connection as being underground, following the changes, the position is that it will be predominantly underground (and over ground in change locations A2, A4, A5 and A6). However, it remains the case that potential impacts on PRow would only be associated with the temporary construction phase.
6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13	Section 6.7 (Embedded Mitigation), Section 6.8 (Assessment of Likely Effects), Section 6.9 (Cumulative Assessment), Section 6.10 (Further Mitigation and Enhancement), Section 6.11 (Residual Effects and Monitoring), Section 6.12 (Summary of Residual Effects) and Section 6.13 (Preliminary Conclusion and Further Assessment) do not require supplementary information as a result of the changes to the IAB and therefore remain valid.
Figures	No figures were provided as part of Chapter 6 , and no supplemental figures are required.
Appendices	No Appendices were provided as part of Chapter 6 , and no supplemental figures are required.

Conclusion relating to Transport

- 3.1.2 It is considered that Change Item A5 would be beneficial in that it would potentially reduce impacts on the single lane section of the A206. However, given that the benefitting section of the A206 is relatively short (approximately 500 m), that an adjoining section of the A206 would still be impacted upon, and as the PEIR did not specify or assess individual links of the A206, the overall conclusions of temporary moderate adverse effects to driver delay during the construction phase remain valid on a precautionary assessment until more engineering detail for potential works is available.
- 3.1.3 The conclusions of **Chapter 6** of the PEIR are considered to remain valid when considered against the changes.

3.2 Air Quality

- 3.2.1 Whilst the changes would introduce the potential for temporary construction dust impacts in areas not previously identified within the PEIR, the mitigation measures already identified would be sufficient to prevent the likelihood for significant effects to occur.
- 3.2.2 The conclusions of **Chapter 7** are therefore considered to remain valid when considered against the changes, and there is no requirement to supplement the PEIR text.

3.3 Noise and Vibration

Table 3.3: Implications for PEIR text

PEIR text reference	Comment on changes
8.1, 8.2, 8.3, 8.4, 8.5	Section 8.1 (Introduction), Section 8.2 (Policy Context, Legislation, Guidance and Standards), Section 8.3 (Consultation), Section 8.4 (Parameters Used for Assessment) and Section 8.5 (Assessment Methodology and Significance Criteria) do not require supplementary information as a result of the changes to the IAB and therefore remain valid.
8.6	Section 8.6 (Baseline Conditions and Receptors) does not require supplementary information as a result of the changes to the IAB. The PEIR provided an assessed construction noise levels at different distances from construction activities, specific receptors will be identified within the ES. The PEIR assessment therefore remains valid.
8.7	Section 8.7 (Embedded Mitigation) does not require supplementary information as a result of the changes to the IAB and therefore remains valid.
8.8	Section 8.8 (Assessment of Likely Effects) does not require supplementary information as a result of the changes to the IAB. The PEIR assessment provided for the construction activities associated with the changes and therefore remains valid.
8.9	Section 8.9 (Cumulative Assessment) does not require supplementary information as a result of the changes to the IAB and therefore remains valid.
8.10	Section 8.10 (Further Mitigation and Enhancement) does not require supplementary information as a result of the changes to the IAB. Best practice measures outlined within the PEIR remain the same, the PEIR therefore remains valid.
8.11, 8.12, 8.13	Section 8.11 (Residual Effects and Monitoring), Section 8.12 (Summary of Residual Effects) and Section 8.13 (Preliminary Conclusion and Further Assessment) do not require supplementary information as a result of the changes to the IAB and therefore remain valid.
Figures	The changes do not require that the PEIR figures are supplemented.

PEIR text reference	Comment on changes
Appendices	The changes do not require that the PEIR appendices are supplemented.

Conclusion relating to Noise and Vibration

- 3.3.1 Whilst the changes would introduce the potential for temporary construction noise impacts in areas not identified within the PEIR, the predicted construction noise levels would remain as presented within the PEIR. Therefore, the mitigation measures already identified are likely to be sufficient to reduce the likelihood of significant effects occurring.
- 3.3.1 The conclusions of **Chapter 8** are therefore considered to remain valid when considered against the changes.

3.4 Townscape and Visual

Table 3.4: Implications for PEIR text

PEIR text reference	Comment on changes
9.1, 9.2, 9.3, 9.4	Section 9.1 (Introduction), Section 9.2 (Policy Context, Legislation, Guidance and Standards), Section 9.3 (Consultation) and Section 9.4 (Parameters Used for Assessment) do not require supplementary information as a result of the changes to the IAB and therefore remain valid.
9.5	Section 9.5 (Assessment Methodology and Significance Criteria). Whilst paragraph 9.5.7 described the electrical connection as being underground, following the changes, the position is that it will be 'predominantly' underground. In the specific locations where the Electrical Connection would be located above ground, it would be attached under or alongside existing infrastructure (bridges) or in an adjacent cable trough (A2, A4, A5 and A6). It is not anticipated that these changes would introduce the potential for significant operational effects to either townscape or visual receptors. For this reason, it is considered that the approach agreed through the Scoping Opinion - to assess only the construction of the Electrical Connection - remains valid. Other than the above, Section 9.5 does not require supplementary information as a result of the changes to the IAB.
9.6	Section 9.6 (Baseline Conditions and Receptors). Whilst paragraph 6.9.2 described the electrical connection as being underground, following the changes, the position is that it will be predominantly underground, and that it leaves the public highway at locations A1 - A6. Paragraph 9.6.23 is supplemented as per paragraph 9.6.2, to reflect the revised Electrical Connection.
9.7	Section 9.7 (Embedded Mitigation). In addition to those areas already referred to in the PEIR, there may be a requirement for replacement tree planting in the locations impacted by the changes. The details of proximity of replacement

PEIR text reference	Comment on changes
	planting in relation to the finalised cable ducting would be considered as part of the ES.
9.8, 9.9, 9.10, 9.11, 9.12, 9.13	Section 9.8 (Assessment of Likely Effects), Section 9.9 (Cumulative Assessment), Section 9.10 (Further Mitigation and Enhancement), Section 9.11 (Residual Effects and Monitoring), Section 9.12 (Summary of Residual Effects) and Section 9.13 (Preliminary Conclusion and Further Assessment) do not require supplementary information as a result of the changes to the IAB and therefore remain valid.
Figures	The changes do not require that the PEIR figures are supplemented.
Appendices	PEIR Appendix E.3 is superseded to account for the additional mitigation item identified in Section 9.7 . Revised Appendix E.3 is located in Appendix B to this SIP report.

Conclusion relating to Townscape and Visual Impact Assessment

- 3.4.1 Whilst the changes would introduce the potential for temporary construction impacts in areas not identified within the PEIR, subject to the mitigation identified it is anticipated that impacts to Townscape receptors would remain as presented within the PEIR.
- 3.4.2 The conclusions of **Chapter 9** are therefore considered to remain valid when considered against the changes.

3.5 Historic Environment

Table 3.5: Implications for PEIR text

PEIR text reference	Comment on changes
10.1, 10.2, 10.3, 10.4, 10.5	Section 10.1 (Introduction), Section 10.2 (Policy Context, Legislation, Guidance and Standards), Section 10.3 (Consultation), Section 10.4 (Parameters Used for Assessment) and Section 10.5 (Assessment Methodology and Significance Criteria) do not require supplementary information as a result of the changes to the IAB and therefore remain valid.
10.6	Section 10.6 (Baseline Conditions and Receptors) is supplemented by the following text: A1: This area contains no known designated / non-designated assets. It is located within an Area of High Archaeological Potential (AHAP) with high potential for underlying geoarchaeological deposits of interest and prehistoric occupation evidence. The deposit model indicates that the geoarchaeological deposits and prehistoric occupation evidence lies at depth (1m +) and are unlikely to be impacted by the development works (excavation of a cable trench). The ES Chapter will detail the physical impact of the works in this area

PEIR text reference	Comment on changes
	<p>once further assessment has been undertaken. There are no new or different likely significant effects relating to built heritage.</p> <p>A2: This area contains no known designated / non-designated assets. It is located within an Archaeological Priority Area and there is generalised potential for underlying geoarchaeological deposits and prehistoric occupation evidence. The deposit model indicates that the geoarchaeological deposits and prehistoric occupation evidence lies at depth (1m +). Horizontal Directional Drilling (HDD) in this area has the potential to impact buried geoarchaeological deposits, the physical impact of which will be assessed within the ES Chapter once further assessment has been undertaken. The alterations to the IAB may, subject to the final design, result in visible ducting and cable at this location. No designated or non-designated built heritage assets are identified at or near this location.</p> <p>A3: This area contains no known designated / non-designated assets. A review of historic OS mapping indicates the area lies in an area landscaped as part of the railway construction and early 20th century tramway depot. Low potential for earlier archaeological remains to survive in this area.</p> <p>A4: This area contains no known designated / non-designated assets. It lies within an Area of High Archaeological Priority (AHAP 7), Crayford Brickearths. The High Archaeological Potential is focussed around the concentrations of highly significant Palaeolithic material recovered from brickearth and clay pits in the Crayford area, roughly between Barneshurst and Slade Green, in the 19th century. A review of historic OS mapping indicates the area lies in an area landscaped as part of the railway construction. There is low potential for earlier archaeological remains to survive in this area.</p> <p>A5: This area contains no known designated / non-designated heritage assets, nor does it lie within an AHAP. A review of historic OS mapping indicates that a 19th century flour mill lay to the north of the A206 and the water power was harnessed in this area with a series of leats and dams. There is no evidence on later maps or readily available satellite imagery that such features survive within the areas of works. The heritage or archaeological constraints identified in the eastern part of A5: prehistoric and Roman finds or features, cannot be entirely discounted but the potential for nationally significant remains in this area is low. The ES Chapter will detail the physical impact of the works in this area once further assessment has been undertaken.</p> <p>A6: No known designated assets. A number of non-designated assets are recorded along the edge of the river, relating to wharfs / revetments etc. A walkover survey of the area as part of the ES will be undertaken to ensure there are no post-medieval river management structures impacted by the works. The KHER records a possible prehistoric enclosure in the grasslands further east of the Darent and a number of WWII structures. The ES Chapter will detail the physical impact of the works in this area once detailed drawings are available.</p>
10.7	Section 10.7 (Embedded Mitigation) is supplemented by the following:

PEIR text reference	Comment on changes
	A walkover survey of the area as part of the ES will be undertaken to ensure there are no extant remains of interest in relation to the industrial history of the Cray, or post-medieval river management structures impacted by the works.
10.8	<p>Section 10.8 (Assessment of Likely Effects) is supplemented by the following text:</p> <p>Subject to the results of the site walkover survey, potential residual effects are restricted to the construction phase at A2, A5 and A6. These comprise direct physical impacts on potential non-designated heritage assets of local significance. The effect of the changes to the IAB are considered low adverse and not significant. The ES Chapter will detail the physical impact of the works in this area once further assessment has been undertaken.</p>
10.9	<p>Section 10.9 (Cumulative Assessment) does not require supplementary information as a result of the changes to the IAB and therefore remains valid.</p>
10.10	<p>Section 10.10 (Further Mitigation and Enhancement) is supplemented by the following text:</p> <p>Subject to the results of the site walkover (River Darent and River Cray), and following consultation with Historic England, the following indicates reasonable worst case mitigation should it be required: archaeological monitoring of intrusive groundworks, secured through the production of a written scheme of investigation (WSI) once the DCO has been made.</p>
10.11	<p>Section 10.11 (Residual Effects and Monitoring) is supplemented by the following text:</p> <p>Subject to the results of the site walkover survey, residual effects are restricted to the construction phase at A2, A5 and A6. The implementation of a mitigation strategy in the form of archaeological monitoring during groundworks would result in the residual effect of the changes to the IAB being Negligible and Not Significant.</p>
10.12, 10.13	<p>Section 10.12 (Summary of Residual Effects) and Section 10.13 (Preliminary Conclusion and Further Assessment) does not require supplementary information as a result of the changes to the IAB and therefore remains valid.</p>
Figures	The changes do not require that the PEIR figures are supplemented.
Appendices	The changes do not require that the PEIR appendices are supplemented.

Conclusion relating to Historic Environment

- 3.5.1 The construction of the Electrical Connection has, subject to the final design, and following a site walkover of the River Cray and River Darent, the likelihood of impacting potential non-designated heritage assets of local significance in areas A2, A5 and A6. The removal of potential non-designated archaeological remains of local significance in these areas has the potential to

result in a Low (rather than Negligible) Adverse Magnitude of Impact based on the criteria set out in **Table 10.3** of the PEIR. The significance of this effect is considered permanent negligible in line with the criteria set out in **Table 10.4** of the PEIR and not significant in EIA terms.

3.6 Terrestrial Biodiversity

Table 3.6: Implications for PEIR text

PEIR text reference	Comment on changes
11.1, 11.2	Section 11.1 (Introduction) and Section 11.2 (Policy Context, Legislation, Guidance and Standards) do not require supplementary information as a result of the changes to the IAB and therefore remain valid.
11.3	Section 11.3 (Consultation) does not require supplementary information as a result of the changes to the IAB and therefore remains valid. Further consultation will be required to agree the baseline survey and assessment approach for the changes to the IAB; outcomes from this consultation will be presented in the ES Terrestrial Biodiversity Chapter.
11.4, 11.5	Section 11.4 (Parameters Used for Assessment) and Section 11.5 (Assessment Methodology and Significance Criteria) do not require supplementary information as a result of the changes to the IAB and therefore remain valid.
11.6	<p>Section 11.6 (Baseline Conditions and Receptors) is supplemented by the following text:</p> <p>As stated in the PEIR, the presentation of baseline conditions and receptors was limited by virtue of the fact that the ecological baseline data collection for the Application Site had not yet been completed. Whilst the survey work is almost now complete for the IAB considered in the PEIR, the approach to baseline data collection for the changes to the IAB have not yet been agreed with consultees.</p> <p>The agreed baseline data will be presented in the ES Terrestrial Biodiversity Chapter and used as the basis for assessment.</p> <p>The most likely changes to Baseline Conditions and Receptors due to changes to the IAB are due to extension of the IAB into small parts of locally designated areas, and potentially sensitive habitats and species associated with them. The designated areas affected by the changes to the IAB include:</p> <ul style="list-style-type: none"> • Crossness Local Nature Reserve (LNR) and Erith Marshes Site of Importance for Nature Conservation (SINC) (A1 and western section of A2); • River Cray SINC (A5); and • Dartford Marshes Local Wildlife Site (LWS) (A6). <p>These areas are designated for the habitats they support including, but not limited to: rivers, wetlands, coastal grazing marsh and meadows. The habitats in turn support protected and notable species including, but not limited to: breeding and</p>

PEIR text reference	Comment on changes
	<p>wintering birds, water voles, and herpetofauna, as well as botanical species with limited distribution.</p> <p>In addition, whilst not affecting designated areas, the extension of the IAB elsewhere also has the potential to affect sections of wet ditch, scrub or trees associated with the verges beyond the amenity grassland that is dominant immediately next to the kerb. This increases the potential for non-native invasive species to be encompassed by the IAB: cotoneaster and Japanese knotweed have been noted. It also increases the potential for the need to consider possible impacts on protected species (e.g. water vole in ditches).</p>
11.7	<p>Section 11.7 (Embedded Mitigation) is supplemented by the following text:</p> <p>Protective measures will be required to protect designated areas from indirect effects of the changes to the IAB, especially where associated with trenchless installation techniques such as HDD. Protection and appropriate working measures will be required during construction to protect the habitats and species within these designated areas from significant adverse effects. This includes consideration of noise, lighting and pollutant impacts as a result of spillages or leaks from equipment during construction; all such issues are anticipated to be addressed within the outline Code of Construction Practice (CoCP).</p>
11.8	<p>Section 11.8 (Assessment of Likely Effects) is supplemented by the following text:</p> <p>Designated Areas</p> <p>As described above, additional areas of locally designated sites are affected by the changes. The effects will arise from short-term temporary impacts affecting small areas of the designated areas adjacent to the highway corridor only. However, this will affect the value of the designated areas on a temporary basis; habitats affected by the connection route will be reinstated afterwards. The Applicant is working with UKPN to determine ways of minimising the working corridor and associated impacts of the Electrical Connection works (e.g. through considering the use of trenchless installation techniques from preferable launch and reception locations near sensitive riverine habitats). Impacts are unlikely to be residually significant in the Local context that the LNR, LWS and SINCS are valued, after consideration of mitigation items and once habitat reinstatement has established.</p> <p>Habitats</p> <p>Impacts on habitats described in the PEIR as a result of the connection route do not require any updates as a result of the changes to the IAB and therefore remain valid.</p> <p>Protected or Notable Species</p> <p>An assessment of the effects of the proposed Electrical Connection route on protected or notable species will be reported within the ES chapter once baseline work to inform the assessment has been completed.</p>

PEIR text reference	Comment on changes
	<p>However, impacts on protected or notable species are considered unlikely to be significant in the long-term, providing appropriate mitigation and compensation measures can be identified. Such measures may include appropriate timing or precautionary methods of work, measures to limit lighting and noise inputs, are anticipated to be provided within the outline CoCP, as well as the provision of replacement or compensatory habitats, where required.</p> <p>At the end of the Electrical Connection’s operational life, it is currently anticipated that the ducting will be left in situ, such that there will be no decommissioning works and therefore no effect.</p> <p>Operational effects of the cable remain the same as described in the PEIR.</p>
11.9, 11.10, 11.11, 11.12, 11.13	<p>Section 11.9 (Cumulative Assessment), Section 11.10 (Further Mitigation and Enhancement), Section 11.11 (Preliminary Residual Effects and Monitoring), Section 11.12 (Summary of Residual Effects) and Section 11.13 (Preliminary Conclusion and Further Assessment) do not require supplementary information as a result of the changes to the IAB and therefore remain valid.</p>
Figures	<p>The changes result in the requirement to supplement the buffer zone around the new IAB – with reference to designated area buffers. This is unlikely to raise any new significant issues but will be completed for the ES for accuracy.</p>
Appendices	<p>The changes do not require that the PEIR appendices are supplemented.</p>

Conclusion relating to Terrestrial Biodiversity

- 3.6.1 Based on the preliminary findings of this assessment of a limited number of ecological features, significant ecological effects are considered unlikely to result from the changes in the IAB in the long-term, as described in the PEIR for the Electrical Connection route, taking into account the following:
- The relatively small areas of additional land affected by the IAB changes;
 - The short-term temporary impacts associated with the connection route;
 - The commitment to minimise impacts (especially on locally designated areas) resulting from these changes through appropriate working measures;
 - That affected habitats will be reinstated and working measures will be employed to avoid or mitigate for impacts on protected species; and
 - Overall the project is committed to the policy objective to achieve biodiversity net gain.
- 3.6.2 A full ecological assessment will be undertaken for the ES which will provide a full ecological baseline for assessment, along with further information on the potential ecological impacts of the Proposed Development, and associated mitigation and compensation, with reference to achieving policy and legal compliance.

3.7 Hydrology, Flood Risk and Water Resources

Table 3.7: Implications for PEIR text

PEIR text reference	Comment on changes
12.1, 12.2, 12.3, 12.4, 12.5	<p>Section 12.1 (Introduction), Section 12.2 (Policy Context, Legislation, Guidance and Standards), Section 12.3 (Consultation), Section 12.4 (Parameters Used for Assessment) and Section 12.5 (Assessment Methodology and Significance Criteria) do not require supplementary information as a result of the changes to the IAB and therefore remain valid.</p>
12.6	<p>Section 12.6 (Baseline Conditions and Receptors) is supplemented by the following text (at 12.6.34):</p> <ul style="list-style-type: none"> • The River Cray; • The River Darent.
12.7	<p>Section 12.7 (Embedded Mitigation) is supplemented by the following text:</p> <p>The IAB has been extended in specific locations to facilitate installation of the Electrical Connection and allow alternative civil engineering techniques/solutions, such as Horizontal Directional Drilling (HDD), to be employed where the Electrical Connection crosses beneath a watercourse. HDD construction techniques are likely to necessitate works within the floodplain. Such works would be the subject of a Flood Risk Activity Permit and flood risk impacts would therefore be controlled by measures set out in the associated management system. In accordance with EA requirements, the management system would include details regarding, inter alia, the method of working, provisions for flood warning and a flood incident management plan – anticipated to be addressed within an outline CoCP to be submitted as part of the REP DCO application.</p>
12.8	<p>Section 12.8 (Assessment of Likely Effects) is supplemented by the following text:</p> <p>Where trenchless construction techniques such as HDD are employed to facilitate crossing of watercourses, including the River Cray and the River Darent, there is the potential for works within the floodplain and therefore impacts upon floodplain storage and flood flow routing. This is also the case for potential structures (e.g. scaffolding) that might be required to attach cables to existing structures. The infrastructure carrying the cable over watercourses are not anticipated to encroach into the channel cross-section over and above that associated with existing bridges in the immediate location. Additionally, as noted in Section 12.7 above, mitigation measures in respect of flood risk impacts associated with works within the floodplain will be secured through a Flood Risk Activity Permit. On this basis, the effects upon floodplain storage and flood flow routing during construction of the Electrical Connection would be Negligible and therefore Not Significant.</p>
12.9, 12.10, 12.11,	<p>Section 12.9 (Cumulative Assessment), Section 12.10 (Further Mitigation and Enhancement), Section 12.11 (Residual Effects and Monitoring), Section 12.12 (Summary of Residual Effects) and Section 12.13 (Preliminary Conclusion and</p>

PEIR text reference	Comment on changes
12.12, 12.13	Further Assessment) do not require supplementary information as a result of the changes to the IAB and therefore remain valid.
Figures	The changes do not require that the PEIR figures are supplemented.
Appendices	The changes do not require that the PEIR appendices are supplemented.

Conclusion relating to Hydrology, Flood Risk and Water Resources

- 3.7.1 Although the changes to the IAB include provision for HDD construction techniques to facilitate the crossing of watercourses, potential impacts would be controlled through the Flood Risk Activity Permit process.
- 3.7.2 In consideration of the inclusions identified in **Table 3.7**, the conclusions of **Chapter 12** are considered to remain valid when considered against the changes.

3.8 Ground Conditions

Table 3.8: Implications for PEIR text

PEIR text reference	Comment on changes
13.1, 13.2	Section 13.1 (Introduction), Section 13.2 (Policy Context, Legislation, Guidance and Standards) do not require supplementary information as a result of the changes to the IAB and therefore remain valid.
13.3	Section 13.3 (Consultation) is supplemented by the following text: The scoping opinion received from the Secretary of State (SoS) scoped the Electrical Connection route out of the ES on the basis that the proposed underground route for the Electrical Connection would seek to follow existing highways or corridors utilised by the existing RRRF connection where possible. However, the changes to the IAB now include areas along the Electrical Connection route outside of the existing highways and utility corridors where excavations are required. Therefore, these specified areas along the Electrical Connection route will be included in the assessment reported in the ES. Where the changes to the IAB along the Electrical Connection route do not involve any ground disturbance (such as where it is proposed to strap the cable to existing structures), or where there are no changes to the route, these areas remain scoped out of the assessment.
13.4	Section 13.4 (Parameters Used for Assessment) is supplemented by the following text: In undertaking the impact assessment as part of the ground conditions assessment (GCA), a number of reasonable worst case scenarios have previously been considered for REP and the Main Temporary Construction Compounds in the PEIR, and the ES will also include those specified areas along

PEIR text reference	Comment on changes
	the Electrical Connection route that are outside of existing highways and utility corridors and where ground disturbance may be required.
13.5	<p>Section 13.5 (Assessment Methodology and Significance Criteria) is supplemented by the following text:</p> <p>The study area for the ES will now be defined as the REP site, and the main temporary construction compounds adjacent to Norman Road, and up to a 1 kilometre radius, and will also include the areas of the Electrical Connection Route that are located outside of existing highways and utility corridors and where ground disturbance may be required.</p> <p>The assessment of ground conditions for the baseline data collection in the ES will include the areas of the Electrical Connection Route that are located outside of existing highways and utility corridors and where ground disturbance may be required.</p>
13.6	<p>Section 13.6 (Baseline Conditions and Receptors) is supplemented by the following text:</p> <p>Baseline conditions and receptors for the areas of the Electrical Connection route that are outside of existing highways and utility corridors and where ground disturbance may be required, will be identified through the update of the Phase 1 GCA and will subsequently be incorporated in to the ES.</p>
13.7	<p>Section 13.7 (Embedded Mitigation) does not require supplementary information as a result of the changes to the IAB and therefore remains valid.</p>
13.8	<p>Section 13.8 (Assessment of Likely Effects) is supplemented by the following text:</p> <p>The assessment of likely effects due to the changes will be undertaken once the Phase 1 GCA has been updated and the Tier 1 qualitative risk assessment for the revised IAB has been completed. The assessment of likely effects will be presented in the ES.</p>
13.9	<p>Section 13.9 (Cumulative Assessment) does not require supplementary information as a result of the changes to the IAB and therefore remains valid.</p>
13.10, 13.11	<p>Section 13.10 (Further Mitigation and Enhancement) and Section 13.11 (Preliminary Residual Effects and Monitoring) do not require any updates as a result of the changes to the IAB and therefore remain valid.</p>
13.12	<p>Section 13.12 (Summary of Residual Effects) is supplemented by the following text:</p> <p>The assessment of residual effects relating to the changes to the IAB will be undertaken once the Phase 1 GCA has been updated and assessment of likely</p>

PEIR text reference	Comment on changes
	effects has been completed. The summary of residual effects in relation to the changes to the IAB will be presented in the ES.
13.13	Section 13.13 (Preliminary Conclusion and Further Assessment) is supplemented by the following text: The assessment of residual effects relating to the changes to the IAB will be undertaken once the Phase 1 GCA has been updated and assessment of residual effects has been completed. The preliminary conclusion and further assessment in relation to the changes to the IAB will be presented in the ES.
Figures	The changes result in the requirement to supplement the areas identified in Figures 1 and 2 of the Phase 1 GCA. These will be updated as part of the GCA to be submitted with the ES.
Appendices	The changes result in the requirement to supplement Appendix H of the Phase 1 GCA. This will be undertaken as part of the ES.

Conclusion relating to Ground Conditions

- 3.8.1 The changes would introduce the potential for construction impacts in areas not identified within the PEIR. The baseline conditions and identified receptors for the changes to the IAB will be established through the update of the Phase 1 GCA which presents information on the geotechnical and geoenvironmental setting of the Proposed Development. This information will then be used to determine the assessment of likely effects, the likely residual effects following further mitigation and enhancement (to be identified as required through this update) and any changes to the conclusions and further assessment required. Subject to the results of the updated Phase 1 GCA (including the identification of any required mitigation items), it is not anticipated that the changes would result in any new likely significant effects.
- 3.8.2 The conclusions of **Chapter 13** are therefore considered to remain valid when considered against the changes, however this will be confirmed through the assessment presented in the ES.

3.9 Socio-economic

- 3.9.1 The changes would not result in new or different impacts to those identified within the PEIR. Therefore, the conclusions of **Chapter 14** are therefore considered to remain valid when considered against the changes.

3.10 Other Considerations

Introduction

- 3.10.1 **Chapter 15** of the PEIR identified topics which were confirmed as not requiring specific Chapters within the ES, as no likely significant effects were anticipated. However, the PEIR considered effects in relation to Climate, Lighting, Human Health and Waste.

- 3.10.2 This section provides an overview of how the changes to the IAB interact with the information provided within **Chapter 15** of the PEIR, specifically highlighting any areas where the information needs to be updated in light of the changes.

Climate

- 3.10.3 The changes are not considered to result in an increase in the contribution of greenhouse gasses from the Proposed Development, nor do the changes introduce any areas which are more vulnerable to the impact of climate change than identified within the PEIR. Therefore, **Section 15.2** of the PEIR does not require supplementary information as a result of the changes to the IAB and therefore remains valid.

Lighting

- 3.10.4 The changes introduce new areas which will be impacted by temporary construction lighting. However, it is anticipated that the working practices and principles for appropriate use of lighting as identified in the PEIR would prevent significant effects occurring from the changes.
- 3.10.5 **Section 15.3** of the PEIR does not require supplementary information as a result of the changes to the IAB and therefore remains valid.

Health Impact Assessment (HIA)

- 3.10.6 **Appendix K.1** (HIA) was prepared using assessments within the air quality, ground conditions, transport, noise and socio-economic PEIR chapters. As these environmental disciplines have not identified changes to the assessments, the HIA as presented within the PEIR remains valid.
- 3.10.7 **Section 15.3** of the PEIR does not require to be updated as a result of the changes to the IAB and therefore remains valid.

Waste

- 3.10.8 The changes may increase waste arisings from the construction process for the Electrical Connection, where engineering solutions required become more extensive than an open trenching solution. However, it is not considered that the works would generate significant levels of waste arisings. Coupled with the measures for dealing with waste as identified in the PEIR, **Section 15.3** of the PEIR does not require supplementary information as a result of the changes to the IAB and therefore remains valid.

3.11 Glossary

- 3.11.1 **Chapter 17** of the PEIR does not require supplementary information as a result of the changes to the IAB and therefore remains valid.

4 Overall Conclusions

- 4.1.1 This SIP report has identified where the IAB in the PEIR has been altered due to the changes as outlined in **Table 1.1** above. It then clearly identifies whether the additional areas result in any changes to the text or assessments provided within the PEIR.
- 4.1.2 Desk based reviews, reviews of publically available information, mapping and documents have been undertaken to inform this SIP report. Additionally, a site walkover was undertaken in relation to Terrestrial Biodiversity to inform **Section 3.6**.
- 4.1.3 It has been identified that the changes do not result in changes to the PEIR conclusions for Transport, Air Quality, Noise and Vibration, Townscape and Visual Impact, Hydrology, and Socio-economics. Accordingly, these chapters of the PEIR remain valid subject to the supplements as identified in this report.
- 4.1.4 The potential for new, not significant adverse effects has been identified in relation to the Historic Environment where the changes impact areas in addition to those considered within the PEIR.
- 4.1.5 The changes are not at this stage anticipated to result in new significant effects for Terrestrial Biodiversity or Ground Conditions. However, the preliminary findings of the assessments for these topics are subject to further investigation and assessment work which will be presented within the ES.
- 4.1.6 Whilst not required as standalone chapters, the topics of Climate, Lighting, HIA and Waste are not altered by the changes and thus also remain valid.
- 4.1.7 It has been identified that, at this stage, the changes are not considered to be material. This is because the conclusions of the PEIR remain, or are anticipated to remain valid when considered against mitigation measures. Such new mitigation measures as identified within this report will be incorporated into the outline Code of Construction Practice which will support the REP DCO.

Appendix A Figures

Figure 1: Supplementary Areas

Figure 2: Supplementary Area 1

Figure 3: Supplementary Area 2

Figure 4: Supplementary Area 3

Figure 5: Supplementary Area 4

Figure 6: Supplementary Area 5

Figure 7: Supplementary Area 6

Figure 8: Additional 'B' Boundary Refinements

Appendix B PEIR Appendix E.3