

Rampion 2 Wind Farm

Preliminary Environmental Information Report - Further Supplementary Information Report (LACR-01d)



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1. Introduction

1.1 Overview

The Proposed Development

- 1.1.1 Rampion Extension Development Limited (hereafter referred to as 'RED') ('the Applicant') is developing the Rampion 2 Offshore Wind Farm Project (Rampion 2) located adjacent to the existing Rampion Offshore Wind Farm Project ('Rampion 1') in the English Channel in the south of England.
- 1.1.2 This Preliminary Environmental Information Report – Further Supplementary Information Report (PEIR FSIR) should be read in conjunction with the original [Preliminary Environmental Information Report \(PEIR\)](#) published in July 2021 (RED, 2021), and the [Preliminary Environmental Information Report - Supplementary Information Report \(PEIR SIR\)](#) published in October 2022 (RED, 2022), as described in **Paragraphs 1.1.5 and 1.1.6**.
- 1.1.3 Rampion 2 comprises of both onshore and offshore infrastructure associated with the proposed offshore wind farm including:
- 90 offshore wind turbine generators (WTGs) and associated foundations;
 - inter-array cables connecting the WTGs to up to three offshore substations;
 - up to four offshore export cables will be buried under the seabed within the final cable corridor;
 - a single landfall site connecting offshore and onshore cables using Horizontal Directional Drilling (HDD) installation techniques;
 - buried onshore cables in a single corridor for the maximum route length of up to approximately 40.5 km using:
 - ▶ trenching and backfilling installation techniques; and
 - ▶ trenchless and open cut crossings.
 - a new onshore substation that will connect to the existing National Grid substation at Bolney, Mid Sussex.
- 1.1.4 A full description of the Proposed Development is provided in [Chapter 4: The Proposed Development, Volume 2](#) of the [PEIR](#) (RED, 2021). The original PEIR Assessment Boundary used to inform the [PEIR](#) is shown in [Figure 1.1, Volume 3](#) of the [PEIR](#).
- 1.1.5 Since the publication of the [PEIR](#), alternatives and modifications were identified for the onshore part of the original PEIR Assessment Boundary. These have been generated as a result of:
- further design evolution which has been informed by statutory consultation;
 - having regard to stakeholder and landowner feedback; and

- further engineering considerations and environmental assessment information that has arisen since the publication of the **PEIR** (RED, 2021).

1.1.6 These alternatives and modifications (as summarised in **paragraph 1.3.1**, were presented in the **PEIR SIR** (RED, 2022) to inform a second Statutory Consultation exercise in October 2022. Following the publication of the **PEIR SIR** and the conclusion of the second Statutory Consultation exercise (18 October to 29 November 2022), a further onshore cable route alternative has been identified in response to consultation feedback. This alternative is presented in this **PEIR FSIR** to inform a third Statutory Consultation exercise. Further information on the Statutory Consultation Exercises and supporting preliminary environmental information is provided in **Section 1.2**.

1.1.7 As described in the **PEIR** and **PEIR SIR** (RED, 2021; 2022), the current description of the Proposed Development is indicative, and a design envelope approach has been adopted to identify key design assumptions. This enables the environmental assessment to be carried out whilst retaining enough flexibility to accommodate refinement during detailed design.

1.2 Preliminary Environmental Information

First Statutory Consultation exercise (2021 and 2022): PEIR

1.2.1 In July 2021, RED published the **PEIR** in line with the requirements of Regulation 12 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as the 'EIA Regulations 2017'). The EIA Regulations 2017 requires the Applicant to consult on 'preliminary environmental information' (where the proposed development is 'EIA development'), which is information that is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development). The **PEIR** (RED, 2021) therefore set out the preliminary environmental information and assessment findings of the EIA based on the available information at the time of publication.

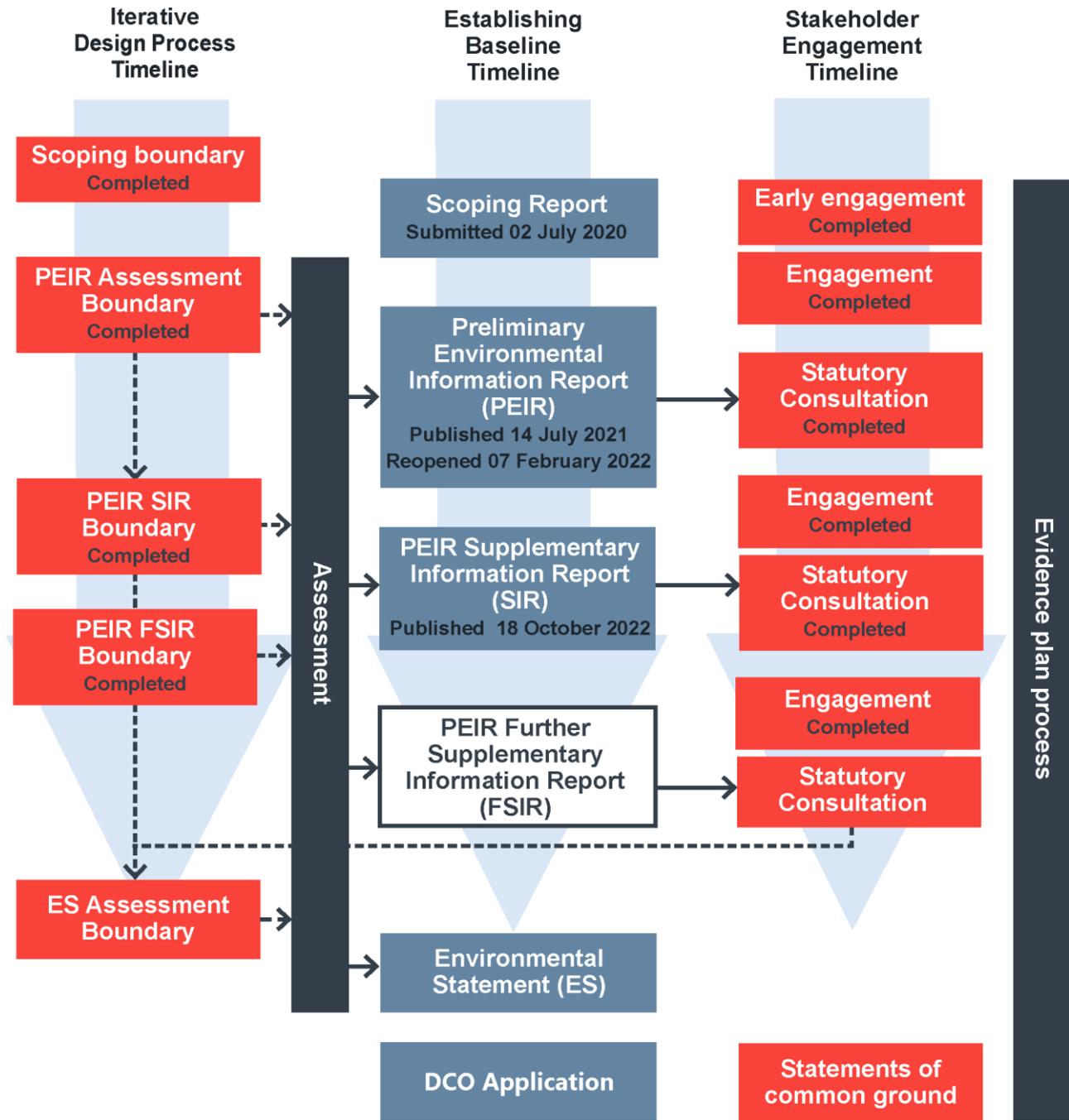
Second Statutory Consultation exercise (2022): PEIR SIR

1.2.2 The **PEIR SIR** was prepared to inform a second Statutory Consultation exercise, which was held from 18 October 2022 to 29 November 2022, for a period of six weeks (RED, 2022). This provided supplementary environmental information associated with new alternatives and modifications to the Rampion 2 onshore part of the original PEIR Assessment Boundary (**Graphic 1-1** illustrates where in the EIA process the **PEIR SIR** (RED, 2022) sits). These design iterations were generated as a result of stakeholder consultation, including Statutory Consultation, engagement with landowners, and further engineering and environmental studies which have taken place since the publication of the **PEIR** in July 2021 (RED, 2021).

Third Statutory Consultation exercise (2023): PEIR FSIR

- 1.2.3 This PEIR FSIR has been prepared to inform a third Statutory Consultation exercise. It provides further supplementary environmental information associated with a proposed new alternative to the original PEIR Assessment Boundary (**Graphic 1-1** illustrates where in the EIA process the **PEIR FSIR** sits). The proposed new alternative has been identified in response to consultation feedback since the publication of the **PEIR SIR** in October 2022 (RED, 2022).
- 1.2.4 The Rampion 2 iterative environmental design process is a fundamental element of the EIA, as promoted by Guidance (Department for Communities and Local Government (DCLG), 2015), and has allowed opportunities for stakeholders to provide feedback and to understand and influence the design as it progresses. As such, the design of the Proposed Development has had regard to the consultation responses from the first Statutory Consultation period in 2021, the second Statutory Consultation in 2022 and further information generated following the publication of the **PEIR** (RED, 2021) and **PEIR SIR** (RED, 2022). Each request for design change has been analysed from an inter-disciplinary perspective to evaluate the benefit of introducing an iteration to the original designs. This process has resulted in the onshore part of the PEIR Assessment Boundary being updated, with alternatives and modifications identified for assessment and presented within the **PEIR SIR** (RED, 2022) and subsequently this **PEIR FSIR**.
- 1.2.5 From the outset, the environment has been central to the design of Rampion 2, and this is demonstrated further through the development of the Commitments Register initially presented in the Scoping Report and updated in the **PEIR** and **PEIR SIR Appendix F** (RED, 2021; 2022). This register identifies environmental measures that have been made and embedded into the Rampion 2 design. One change to the embedded environmental measures (C-115) has been made as a result of this **PEIR FSIR**, as described in **Section 2.2, Table 2-2**. No further changes have been made to the Commitments Register as a result of this **PEIR FSIR** and the change to C-115 will be included in the forthcoming Environmental Statement (ES).
- 1.2.6 This **PEIR FSIR** is provided to inform feedback from stakeholders on the new proposed alternative to the onshore design of Rampion 2. This feedback will enable final refinements to be made to the onshore design of the Proposed Development to achieve a single onshore cable route and associated infrastructure. The alternative onshore cable route presented in this **PEIR FSIR**, together with the alternatives and modifications presented in the **PEIR SIR** (RED, 2022), will be further refined to produce the proposed Development Consent Order (DCO) Limits. This will include a final set of associated accesses and temporary construction compounds.

Graphic 1-1 EIA Process for Rampion 2



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1.3 Longer Alternative Cable Route: LACR-01d

1.3.1 The PEIR SIR (RED, 2022) presented a series of design iterations which comprised:

- Two Longer Alternative Cable Routes (LACRs), which are areas that deviate geographically from the onshore part of the original PEIR Assessment Boundary and are over 5km in length;

- Seven Alternative Cable Routes (ACRs), which are areas that deviate geographically from the onshore part of the original PEIR Assessment Boundary and are under 5km in length;
- 14 Modified Routes (MRs), which are new areas directly adjacent to the onshore part of the original PEIR Assessment Boundary;
- 33 additional or amended Trenchless Crossings (TCs); and
- 32 additional temporary construction and/or permanent Alternative Accesses (AAs).

1.3.2 These alternatives and modifications to the Proposed Development described in the **PEIR SIR** (RED, 2022; see **Chapter 4**) and summarised in **Paragraph 1.3.1** are included in assessment of overall effects described in **Section 3** of this **PEIR FSIR**.

1.3.3 A further proposed LACR and associated AAs are considered in this **PEIR FSIR**, as detailed in **Section 2.1**. This comprises the following:

- **LACR-01d:**
 - ▶ This is an area that deviates geographically from the onshore part of the PEIR SIR Assessment Boundary, to enable an alternative onshore cable corridor option to be considered by RED. LACR-01d is approximately 3km in length.
 - ▶ LACR-01d is subdivided into LACR-01d (west), LACR-01d (east) and LACR-01d (north). A high-level environmental review is provided per environmental aspect either for LACR-01d overall, or for each section, according to the level of detail required for the aspect.
 - ▶ LACR-01d is described in **Table 2-1** within **Section 2.1** of this **PEIR FSIR**. For each LACR-01d section, the consideration of each environmental aspect is presented in **Section 2.2**. The location of the LACR-01d is shown in **Figure 1, Appendix A**. The environmental constraints for LACR-01d are presented in **Appendix B**.
- Three additional temporary construction and/or permanent accesses (**AA-33** to **AA-35**):
 - ▶ Three additional temporary construction and/or permanent accesses are proposed associated with LACR-01d. Their location is shown on **Figure 1** in **Appendix A**. The environmental constraints for each AA are presented in **Appendix B**.
 - ▶ The three AAs included as part of LACR-01d are described in **paragraph 1.3.3**, in **Table 2-1** and **Section 2.1** of this **PEIR FSIR**.
 - ▶ These AAs (AA-33 to AA-35) are modifications and/or extensions to AAs considered in the **PEIR SIR** (RED, 2022) (AA-10, AA-24 and AA-26) which are required to facilitate LACR-01d. These AAs have therefore been assessed as new AAs (AA-33 to AA-35) within **Sections 2** and **3** in this **PEIR FSIR**.

1.4 PEIR FSIR Approach

Overview

- 1.4.1 The **PEIR FSIR** seeks to be a focused document cross-referencing the **PEIR** and **PEIR SIR** (RED, 2021; 2022) where relevant to provide additional context. For in-depth information on **PEIR** stage assessments and for understanding the full set of likely significant effects, the July 2021 (RED) **PEIR** documents are accessible on the Rampion 2 website¹. For further details on the alternatives and modifications presented in the second Statutory Consultation exercise in 2022, the **PEIR SIR** (RED, 2022) documents are also accessible on the Rampion 2 website².
- 1.4.2 As with the **PEIR** and **PEIR SIR** (RED, 2021; 2022), the **PEIR FSIR** assesses the maximum design scenario. It treats the proposed new alternative as a potential addition to the PEIR Assessment Boundary without taking account of any future refinement once options have been selected to inform the final design and DCO Order Limits.
- 1.4.3 The **PEIR FSIR** presents an environmental review of the proposed new alternative which has been informed by a desk-based review of publicly available information, mapping and documents, site visits (see **Paragraph 1.4.4**), and environmental information previously collated for the original **PEIR** (RED, 2021). Details regarding the existing evidence base are provided in **Chapters 6 to 28** of the **PEIR** (RED, 2021) for each of the relevant individual environmental aspects. Further information on the areas covered by the proposed alternatives and modifications is provided in **PEIR SIR Appendices H to M**. The evidence base has, and will continue to be, regularly discussed with relevant stakeholders to ensure that it is appropriate.
- 1.4.4 Further information on landscape and visual, terrestrial ecology and nature conservation, and historic environment has been required to help inform the **PEIR FSIR**. For terrestrial ecology and nature conservation, Phase 1 habitat survey data has been collected for LACR-01d. A historic environment site walkover survey was also conducted. This further information is discussed where relevant in **Section 2** and presented in the form of appendices (**Appendices D to G**). Future surveys will be undertaken and presented on the alternatives and modifications relevant to the proposed DCO Order Limits.
- 1.4.5 For other environmental aspects, existing survey results from the ongoing surveys within the original PEIR Assessment Boundary have been utilised to inform this **PEIR FSIR**. This is considered to be sufficient to inform robust and reliable environmental review of the outcomes and conclusions presented in this **PEIR FSIR** either because the survey has resulted in data capture from the wider area, or the survey area is highly representative of the wider area. Additional

¹ Available at: <https://rampion2.com/formal-consultation-detailed-documents/> [Accessed 23 February 2023].

² Available at: <https://rampion2.com/consultation-2022/documents/> [Accessed 23 February 2023].

environmental surveys are ongoing and results will be presented in the ES as appropriate and in line with the proposed DCO Order Limits.

- 1.4.6 This supplementary environmental review does not constitute a full assessment of effects. It determines whether the environmental receptors, the magnitude of change, and/or resulting assessment outcomes presented in the **PEIR** (RED, 2021) have changed as a result of the proposed new alternative presented to the onshore part of the original PEIR Assessment Boundary. It also considers whether these changes are likely to give rise to new or different residual significant effects. The outcomes of the Statutory Consultation exercises including this further consultation will help inform the proposed DCO Order Limits. A full assessment of the Proposed Development will be presented in the ES which will include a cumulative assessment. A summary of residual effects is provided in each of the onshore aspect chapters in the original **PEIR** (RED, 2021, **Chapters 18 to 28**) and presented in **Appendix G** of the **PEIR SIR** (RED, 2022). To avoid duplication these are not included again in this **PEIR FSIR**.
- 1.4.7 The environmental review presented in this **PEIR FSIR** has been undertaken in accordance with the assessment methodology set out in **Chapter 5: Approach to the EIA** of the **PEIR** (RED, 2021). Further detailed assessment criteria applicable to specific environmental aspects are detailed within aspect chapters (**Chapters 6 to 28**) of the **PEIR** (RED, 2021). The basis on which survey data has informed the **PEIR FSIR** has been set out and described in **paragraphs 1.4.4 and 1.4.5**.
- 1.4.8 LACR-01d and associated AAs presented in the **PEIR FSIR** are focused on the onshore cable corridor and therefore, the environmental review has been carried out for onshore and crosscutting environmental aspects only as follows:
- Socio-economics;
 - Landscape and visual impact;
 - Air quality;
 - Soils and agriculture;
 - Noise and vibration (onshore);
 - Terrestrial ecology and nature conservation;
 - Transport;
 - Ground conditions;
 - Historic environment;
 - Water environment;
 - Major accidents and disasters; and
 - Greenhouse gas assessment.
- 1.4.9 Descriptions of LACR-01d and associated AAs being considered as part of this environmental review are provided in **Table 2-1** of this **PEIR FSIR**. The description of the Proposed Development presented in **Chapter 4, Volume 2** of the **PEIR** (RED, 2021) will be updated in the ES to reflect where any alternatives or modifications considered in the **PEIR SIR** or **PEIR FSIR** are taken forward as part

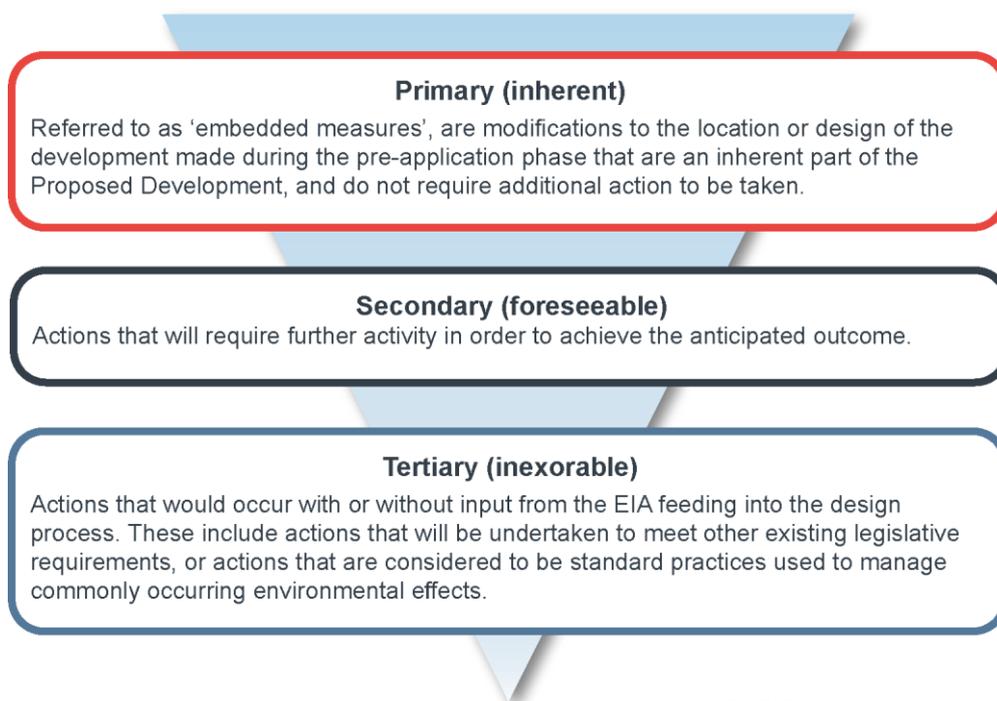
of the design at the DCO Application stage. The relevant sections of these chapters and associated figures (**Volume 3**) will be updated to reflect the design of the Proposed Development for the DCO Application and presented in the ES.

- 1.4.10 The assessment outcomes of the offshore environmental aspects presented in **Chapters 6 to 17, Volume 2** of the **PEIR** (RED, 2021) or associated design updates are not covered in this **PEIR FSIR**.

Embedded environmental measures

- 1.4.11 EIA is an iterative process and opportunities for mitigation, referred to as 'embedded environmental measures', have been considered throughout the design development of Rampion 2. They have also been considered in the assessment undertaken for the original **PEIR** (RED, 2021), and the supplementary environmental review undertaken for the **PEIR SIR** (RED, 2022) and this **PEIR FSIR**, where likely significant effects have been identified. Where possible, these embedded environmental measures have been developed with input from key stakeholders, together with appropriate technical standards, policies and guidance.
- 1.4.12 These embedded environmental measures include avoidance, best practice and design commitments, which are classified into primary, secondary or tertiary measures in accordance with the IEMA 'Delivering Quality Development' (2016) definitions and as set out in **Graphic 1-2**. Good practice consideration and application of environmental measures involves a hierarchical approach, considering avoidance of negative effects as the primary objective.
- 1.4.13 In the context of the original **PEIR**, the **PEIR SIR** (RED, 2021; 2022), this **PEIR FSIR**, and the ES that will follow, embedded environmental measures incorporate all of the types of measure as set out in **Graphic 1-2**. The iterative design evolution process followed has been driven by collaborative working between the design, environmental and land interests teams, and in consultation with key stakeholders. This may have been through the consideration of alternatives, or through measures incorporated within the design itself.
- 1.4.14 These embedded environmental measures have informed the review for each aspect and are included in the Commitments Register. This is used as the primary tool to capture and agree all embedded environmental measures and the mechanism for securing them. As the intention is to implement all embedded environmental measures as part of the Rampion 2 design, the preliminary assessment of likely significant effects is based on this assumption.
- 1.4.15 Due to the progress of the design since the original **PEIR** (RED, 2021), some embedded environmental measures have been updated or newly created in relation to the alternatives and modifications, presented in the **PEIR SIR** (RED, 2022). These are presented in full in **PEIR SIR Appendix F**. One further change to the embedded environmental measures (C-115) has been made as a result of this **PEIR FSIR** and is described in **Section 2.2, Table 2-2**.
- 1.4.16 Following this third Statutory Consultation exercise, a full and updated list of embedded environmental measures, including how they will be secured, will be included in the ES.

Graphic 1-2 Embedded environmental measures



Approach to the environmental review of alternative onshore cable route LACR-01d and associated AAs

- 1.4.17 The supplementary environmental review of onshore environmental receptors associated with LACR-01d and AA-33 to AA-35 are provided per environmental aspect in **Sections 2 and 3**. A summary is provided within **Appendix C**. As the AAs are all directly associated with LACR-01d, these are considered together with LACR-01d in the assessments in **Sections 2 and 3**.
- 1.4.18 **Section 3** provides an overall summary of the environmental review for each relevant onshore aspect when considering all of the alternatives and modifications presented previously in the **PEIR SIR** (RED, 2022), together with LACR-01d and associated AAs.
- 1.4.19 The environmental review has been carried out using the key shown in **Table 1-1**.

Table 1-1 Key to the supplementary environmental review presented in Appendix C

Green Cells	<p>As a result of the alternative or modification to the onshore part of the original PEIR Assessment Boundary, there is <u>no change</u> to overall assessment outcomes and/or conclusions presented in the PEIR (RED 2021).</p> <p>Text is provided to clarify where appropriate, including notable changes to environmental receptors since PEIR (RED 2021) where relevant.</p>
Orange Cells	<p>As a result of the alternative or modification to the onshore part of the original PEIR Assessment Boundary, there has been a <u>potential increase</u> in the overall assessment of significance presented at PEIR (RED, 2021).</p> <p>Text is provided where appropriate, indicating whether there is likely to be a change to the assessment of significance.</p>
White Cells	<p>As a result of the alternative or modification to the onshore part of the original PEIR Assessment Boundary, there has been a <u>potential reduction</u> in the overall assessment of effects presented at PEIR (RED, 2021).</p> <p>Text is provided where appropriate, indicating whether there is likely to be a change to the assessment of significance.</p>

1.5 Report structure

1.5.1 The full **PEIR FSIR** is structured as follows:

- **Section 1:** Introduction;
- **Section 2:** Longer Alternative Cable Route LACR-01d;
- **Section 3:** Environmental considerations – all alternatives and modifications;
- **Section 4:** Summary;
- **Section 5:** Glossary of terms and abbreviations;
- **Section 6:** References;
- **Appendix A:** Figures (PEIR FSIR Plans);
- **Appendix B:** Statutory and non-statutory environmental designations and other key environmental features;
- **Appendix C:** Review summary for LACR-01d;
- **Appendix D:** Technical appendices: Socio-economics Public Rights of Way;

- **Appendix E:** Technical appendices: Terrestrial ecology and nature conservation;
- **Appendix F:** Technical appendices: Landscape and visual impact; and
- **Appendix G:** Technical appendices: Historic environment.

2. Longer Alternative Cable Route LACR-01d

2.1 Description of LACR-01d

- 2.1.1 As outlined in **Section 1.3**, LACR-01d deviates geographically from the onshore part of the original PEIR Assessment Boundary and has been identified for consideration in response to consultation feedback since the publication of the **PEIR SIR** in October 2022 (RED, 2022).
- 2.1.2 LACR-01d is located within the South Downs National Park (SDNP), in the vicinity of Longfurlong, north of Patching. At the closest points, LACR-01d is approximately 2.5km northwest of Findon and approximately 2.3km southwest of Washington.
- 2.1.3 LACR-01d is an alternative route to part of LACR-01c, as assessed in the **PEIR SIR** (RED, 2022). It uses the original PEIR Assessment Boundary from landfall to the start of LACR-01, which is approximately 150m to the north of Littlehampton. LACR-01d requires the common section of LACR-01 (LACR-01a) to Michelgrove and a short section of LACR-01c of less than 1km. North of Myrtle Grove Farm, LACR-01d deviates north via either LACR-01d (west) or LACR-01d (east), then LACR-01d (north), to re-join the PEIR Assessment Boundary at Sullington Hill (see **Table 2-1**).
- 2.1.4 As such, LACR-01d (north) will either re-join the original PEIR Assessment Boundary or the northern section of LACR-01c depending on the final onshore cable corridor option selected through LACR-01d. In total, the proposed alternative cable route via LACR-01d deviates from the PEIR Assessment Boundary for approximately 13km.
- 2.1.5 As outlined in **Section 1.3**, LACR-01d is subdivided into LACR-01d (west), LACR-01d (east) and LACR-01d (north). The onshore cable corridor would be constructed within either LACR-01d (west) or LACR-01d (east), and then LACR-01d (north), which is a total length of approximately 3km (see **Table 2-1**). An environmental review is provided in **Section 2.2** per environmental aspect for LACR-01d as a whole, or for each section of LACR-01d (west, east and north), as appropriate. Where further information has been required to inform the environmental review, this is provided in relevant **Appendices D to G**.
- 2.1.6 Temporary construction accesses are required along the onshore cable corridor to allow for the transportation of materials, plant, equipment and personnel to and from the construction sites. Permanent operational accesses are required for future periodic inspection, test and fault investigation (if required) of the onshore cable system, likely to be required every two to five years, and maintenance and repair work. This will require access to the link box inspection chambers installed at ground level at defined inspection points along the onshore cable route. This will involve attendance by up to three light vehicles, such as vans, in a day at any one location where possible.

- 2.1.7 Modifications to three temporary construction and/or permanent accesses would be required to provide access to LACR-01d (AA-33 to AA-35). These are modifications and/or extensions to AAs considered in the **PEIR SIR** (AA-10, AA-24 and AA-26), and are described in **Table 2-1**. All three AAs (AA-33 to AA-35) would be required to facilitate LACR-01d, independent of whether LACR-01 (west) or LACR-01 (east) is selected. Other temporary construction and/or permanent accesses that would be required for LACR-01d have already been considered in the **PEIR** and **PEIR SIR** (RED, 2021; 2022).
- 2.1.8 The locations of the LACR-01d and AA-33 to AA-35 are shown in **Figures 1 and 2, Appendix A** and **Graphic 2-1**.
- 2.1.9 The statutory and non-statutory environmental features relevant to LACR-01d and AA-33 to AA-35 are presented in **Figures 1 to 3, Appendix B**.

Graphic 2-1 LACR-01d and AA-33 to AA-35 (see Figure 2, Appendix A)

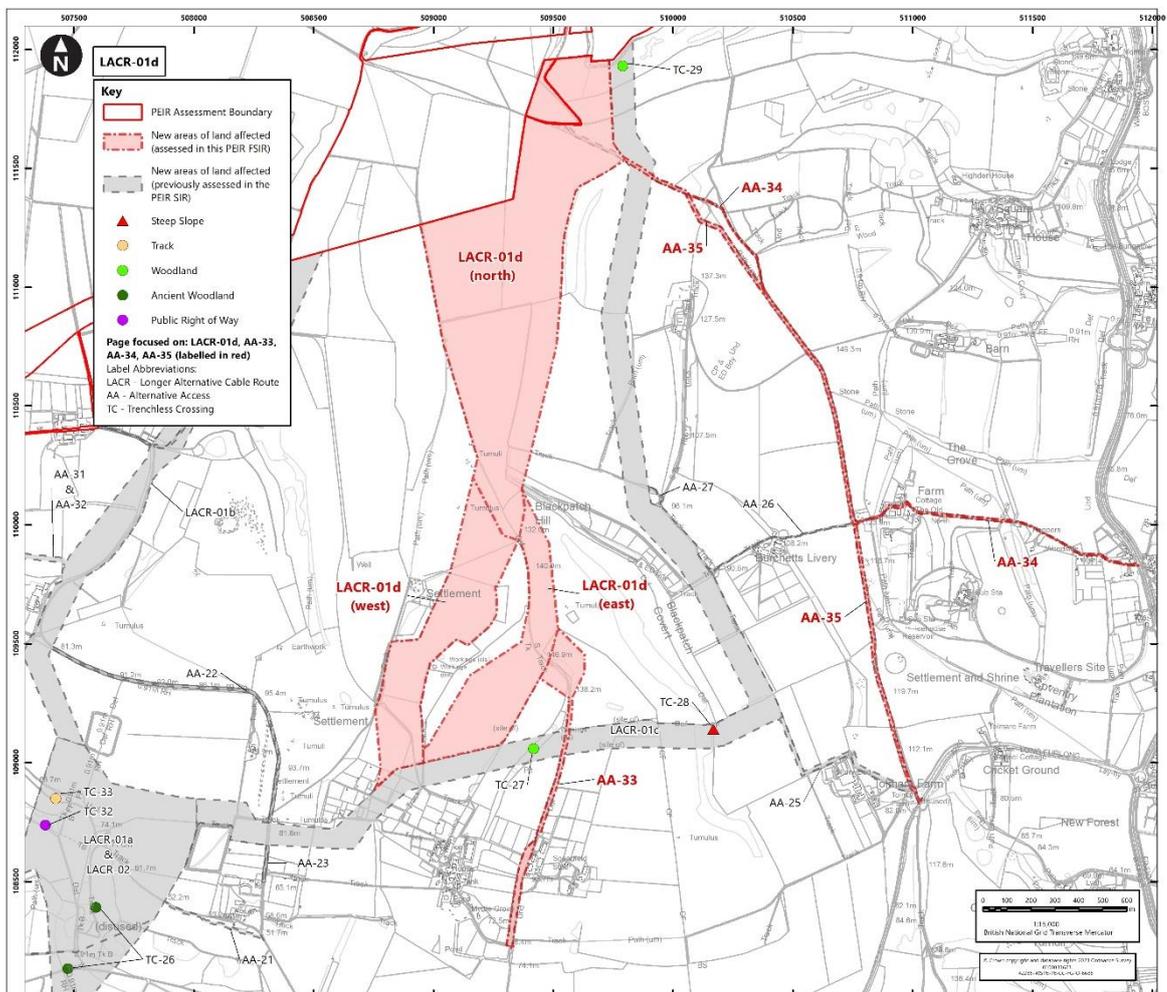


Table 2-1 Description of LACR-01d and associated AAs

ID	Description
LACR-01d (west)	<p>LACR-01d (west) is the alternative route option to LACR-01d (east), which are separated by a steep slope on Blackpatch Hill.</p> <p>LACR-01d (west) commences from the northern extent of LACR-01c running approximately 500m to the northwest of Myrtle Grove Farm crossing a Public Right of Way (PRoW) (Footpath 2262). The route runs between two areas of trees and is adjacent to Bridleway 2209. LACR-01d (west) then runs to the northeast uphill for approximately 700m until reaching the ridge of Blackpatch Hill where it joins LACR-01d (north).</p>
LACR-01d (east)	<p>LACR-01d (east) is the alternative route option to LACR-01d (west) which are separated by a steep slope on Blackpatch Hill.</p> <p>LACR-01d (east) commences from the northern extent of LACR-01c to the north west of Myrtle Grove Farm running in a north easterly direction for approximately 550m, crossing a PRoW (Bridleway 2173). LACR-01d (east) then runs north for approximately 700m up the slope of Blackpatch Hill where it joins LACR-01d (north).</p>
LACR-01d (north)	<p>From the northerly point of LACR-01d (west) and LACR-01d (east), LACR-01d (north) runs north for approximately 1.7km to Sullington Hill. To retain flexibility, this area is wider than the working width needed for the onshore cable construction corridor.</p> <p>Depending on the final onshore cable route configuration within the onshore cable corridor, LACR-01d (north) will cross up to six PRoWs (Bridleway 2173, Bridleway 2282_1, Restricted Byway 2092, Restricted Byway 2693, Bridleway 2108_1, Bridleway 2282). LACR-01d (north) will then either re-join the original PEIR Assessment Boundary (southwest of Sullington Hill) or the northern section of LACR-01c southeast of Sullington Hill) depending on the final onshore cable corridor option selected through LACR-01d.</p> <p>At the northern extent of LACR-01d (north), there is an overlap with Sullington Hill Local Wildlife Site (LWS). This area of the LWS supports a mixture of scrub and calcareous grassland. Sullington Hill LWS will be crossed using trenchless crossing techniques, as previously described in the PEIR and PEIR SIR for all previous onshore cable route options in this area.</p>
AA-33	<p>Alternative temporary construction and permanent access AA-33 runs north from the end of the adopted highway along Longfurlong Lane for approximately 1.3km. During the construction phase, a strip of land has been identified on the western side of the first 450m of AA-33 that may be suitable for a new temporary construction haul road should the</p>

ID	Description
	<p>existing track up to Longfurlong Farm be unsuitable. After passing Longfurlong Farm, an additional strip of land has also been included in AA-33 on the eastern side of the existing track for a new temporary stone road should the original be unsuitable. To retain flexibility in the routing of the access, AA-33 widens at its northern end, and is wider than the working width that would be required for the access.</p> <p>AA-33 joins LACR-01d (east) to the south of Blackpatch Hill. Should LACR-01d (west) be selected, AA-33 would still be required and would run north up the slope of Blackpatch Hill within the boundary of LACR-01(east) where it joins LACR-01d (north).</p> <p>Permanent access is proposed along the existing track within AA-33.</p>
AA-34	<p>Alternative permanent access which runs west from the A24 past Muntham Farm, using existing tracks and paths to reach the onshore cable corridor. After passing Muntham Farm, the track runs north towards Sullington Hill. AA-34 is approximately 3.2km in length and would use the existing tracks and paths where possible. AA-34 joins LACR-01d (north) to the south of Sullington Hill.</p>
AA-35	<p>Alternative temporary construction access which is approximately 3.1km in length. AA-35 runs from the existing bell mouth access from the A280 in the south (west of Findon), to the northern end of LACR-01d (north). From the A280, the first 1.2km of AA-35 will run alongside a restricted byway (2092) on a new temporary stone road, AA-35 then runs along 1.1km of existing farm track and continues along 1.3km on a new temporary stone road to join LACR-01d (north) to the south of Sullington Hill.</p> <p>AA-35 provides an alternative temporary construction access in response to further engineering considerations.</p>

2.2 Environmental review of LACR-01d

Summary

- 2.2.1 The environmental review of LACR-01d (LACR-01d (west), LACR-01d (east) and LACR-01d (north)) is provided for each environmental aspect below. This environmental review considers AA-33 to AA-35. If LACR-01d is selected, this will be assessed as part of the proposed DCO Order Limits. All assessments will be updated in line with the proposed DCO Order Limits and presented in the ES.
- 2.2.2 The environmental review has considered the implementation of existing **PEIR** (RED, 2021) and new/updated embedded environmental measures presented in the **PEIR SIR Appendix F** (RED, 2022). One change to an embedded environmental measure (C-115) has been made as a result of this **PEIR FSIR**, as

described in **Section 2.2, Table 2-2**. No further changes have been made to the Commitments Register as a result of this **PEIR FSIR** and the change to embedded environmental measure C-115 will be included in the forthcoming Environmental Statement (ES).

- 2.2.3 For the overall **PEIR** (RED, 2021) assessment outcomes and conclusions for each aspect, please see the **Summary of Residual Effects, PEIR SIR Appendix G** (RED, 2022). Additional information for aspect assessments has been provided within **Appendices D to G**.

Environmental Review Overview

Additional sensitive receptors introduced as a result of LACR-01d include socio-economics, LVIA, air quality, soils and agriculture, terrestrial ecology and nature conservation, transport, historic environment, and water environment receptors. Some changes in the magnitude of impact to sensitive receptors will be experienced by socio economics, LVIA, and historic environment receptors. Considering the implementation of embedded environmental measures, new or different significant residual effects have been identified which alter the assessment outcomes and conclusions presented in the PEIR for socio economics, LVIA, and historic environment.

Socio-economics

Consideration of onshore recreation receptors

LACR-01d

- 2.2.4 LACR-01d and associated AAs introduce additional socio-economic receptors including users of public rights of way (PRoW) including footpaths, bridleways and restricted byways, which are shown in **Figure 1, Appendix D**. LACR-01d could affect access to and enjoyment of onshore recreation activity for these receptors. A desk-based assessment has been carried out in **Appendix D** for each of these receptors. Compared to the PEIR, LACR-01d (north) results in a **Moderate/Major adverse effect (Significant)** on users of Restricted Byway 2092, which is part of the South Downs Way National Trail (SDW), and Restricted Byway 2693; and a **Minor/Moderate adverse effect (Significant)** on users of Restricted Byway 2092 (south of Restricted Byway 2693) during the open trench crossing of these strategic PRoWs. The assessment of Restricted Byway 2693 has been based on the maximum design scenario of an open cut trench crossing however it is expected Restricted Byway 2693 will either be avoided or crossed via trenchless crossing technique depending on the final onshore cable corridor option selected. LACR-01d (west) and LACR-01d (east) would not be expected to result in significant adverse effects.
- 2.2.5 AA-33 and AA-34 do not result in significant adverse effects. However, AA-35 results in **Moderate/Major adverse effects** to users of Restricted Byway 2092, Bridleway 2107 and Bridleway 2109, which are **Significant** in EIA terms. The impact on these PRoWs will arise predominantly from the proposed use of AA-35

as a temporary construction access route during the construction phase, resulting in regular, temporary interruptions to users due to temporary construction vehicular traffic and its management. The use of the assessed AA-10 (as presented in **PEIR SIR** (RED, 2022)) would result in the same effects as AA-35. However, the assessment outcomes and conclusions for AA-35 have been updated from the **PEIR SIR** (RED, 2022) as a result of the availability of further design information. The same would apply for AA-10.

- 2.2.6 For the users of all the other PRowWs impacted by LACR-01d and associated AAs, considering the implementation of embedded environmental measures, this will not lead to additional significant residual effects to those presented in **Sections 18.9 to 18.15** within **Chapter 18** of the **PEIR** (RED, 2021). A full list of PRowWs is provided in **Appendix D**.

Consideration of other socio-economic receptors

- 2.2.7 In addition to onshore recreation, other socio-economics receptors identified in the **Sections 18.9 to 18.15** within **Chapter 18: Socio-economics, Volume 2** of the **PEIR** (RED, 2021) have also been considered for the assessment of socio-economics in this **PEIR FSIR**. As noted in the **PEIR** these are economy (jobs and gross value added (GVA)), tourism economy (onshore and offshore) and recreation (inshore and offshore):

- the impact on the economy is assessed for the UK and Sussex Study Areas and the significance of this impact is not altered by the implementation of the additions set out in this **PEIR FSIR** (negligible for UK and Sussex Study Areas – **Not Significant**);
- the impact on tourism economy is considered at the Sussex Study Area and the changes set out in this the additions set out in this **PEIR FSIR** have no impact on the significance assessed at **PEIR** (RED, 2021) (**Not Significant**); and
- the impact on access and enjoyment of inshore and offshore recreation is considered for the inshore part of the PEIR Assessment Boundary (defined as a 250m- buffer from mean low water for inshore) and offshore part of the PEIR Assessment Boundary are not affected by any changes to the set out in this the additions set out in this **PEIR FSIR** and therefore the significance is consistent with what was assessed at **PEIR** (RED, 2021) (ranging from **Not Significant** to **Significant**).

Landscape and visual impact

- 2.2.8 LACR-01d (north), LACR-01d (west) and LACR-01d (east) fall outside the PEIR Assessment Boundary and partly outside of the Study Area provided in **Section 19.4** of **Chapter 19: Landscape and Visual Impact, Volume 2** of the **PEIR**) and illustrated in **Figure 19.1, Volume 3** of the **PEIR** (RED, 2021). Although they are within the **PEIR SIR** Study Area (RED, 2022), a revised Study Area and additional viewpoints are required to enable a focused assessment of the LACR-01d (north), LACR-01d (west) and LACR-01d (east) for this LVIA as part of the **PEIR FSIR**.

- 2.2.9 A revised extended Study Area illustrating a revised Zone of Theoretical Visibility (ZTV) for LACR-01d, including additional viewpoints and landscape and visual receptors are therefore shown in **Figures H-1 to H-5** of **Appendix H** and a preliminary assessment is provided in **Appendix H**.
- 2.2.10 LACR-01d has been considered in the two potential routes; LACR-01d (north) and LACR-01d (west) or LACR-01d (north) and LACR-01d (east). This approach has been taken to clearly set out the potential effects from the north section and west or east section of the route.

LACR-01d (north) and (west)

Landscape effects

- 2.2.11 In summary, LACR-01d (north) and (west) will also pass through two Landscape Character Areas (LCAs) and the SDNP. LACR-01d (north) and (west) will have a significant adverse residual effect on the following landscape receptors:
- A3: Arun to Adur Open Downs LCA; and
 - I3: Arun to Adur Downs Scarps LCA;
- 2.2.12 In total LACR-01d (north) and (west) crosses approximately five field boundaries (including treeline and hedgerows detailed in **Paragraph 2.2.47**) which will be subject to embedded environmental measure C-115 (**PEIR Appendix F** and updated in this **PEIR FSIR**, see **Paragraph 2.2.48** and **Table 2-2**) to reduce loss of vegetation/habitat.
- 2.2.13 The geographical extent of these significant adverse residual effects will extend to within approximately 1km LACR-01d (north) and (west) as a result of multiple elevated areas viewing along the linear onshore cable corridor within A3 and I3 LCAs.
- 2.2.14 The nature of these residual effects will be both direct and indirect, adverse and in some cases cumulative with the offshore elements of the Proposed Development. The duration of these residual effects will be short term (during the onshore cable corridor construction phase) and largely reversible with progressive backfill and reinstatement of the onshore cable corridor as the works progress.
- 2.2.15 LACR-01d (north) and (west) will also have a significant adverse residual effect on part of the SDNP and two of the seven special qualities of the SDNP will be significantly affected for a temporary period during the construction phase as follows:
- 1) Diverse, inspirational landscapes and breath-taking views; and
 - 3) Tranquil and unspoilt places.
- 2.2.16 The nature of these adverse residual effects will extend across part of the SDNP and its setting and expound from significant adverse effects on landscape character and visual receptors that will occur during the construction phase. The duration of the effects will be limited to the construction phase for the onshore cable corridor (onshore cable temporary construction compounds may be in use

for up to three years and six months) and some of these residual effects will be cumulative with the offshore elements of the Proposed Development.

- 2.2.17 In terms of the integrity of the SDNP, the short duration of these adverse residual effects and the largely reversible nature of the effects (in that the onshore cable corridor will be reinstated and hedgerows re-planted) indicates that the integrity of this part of the SDNP (within the Study Area) will not be adversely or significantly affected.

Visual effects

- 2.2.18 In terms of visual effects, LACR-01d (north) and (west) will have no significant (beneficial or adverse) visual effects on settlements or residential properties, transport routes or tourist attractions. LACR-01d (north) and (west) will however, result in significant visual effects on PRoW during the construction phase. There are no new PRoWs identified as a result of LACR-01d (north) and (west) that were not previously assessed in the **PEIR** and/or **PEIR SIR** (RED, 2021; 2022). The views from twelve bridleways, four footpaths and three restricted byways (mostly within the A3: Arun to Adur Open Downs LCA) will be significantly affected as follows:
- Bridleways: 2091, 2108/1, 2173, 2208/1, 2209, 2260, 2264, 2282, 2282/1, 2666, 2688 and 2689;
 - Footpaths: 2208/2, 2260/1, 2262 and 2263; and
 - Restricted byways; 2092, 2673 and 2693.
- 2.2.19 There are no new significant visual effects (beneficial or adverse) on Open Access Land as a result of LACR-01d (north) and (west) that were not previously identified in the **PEIR** and/or **PEIR SIR** (RED, 2021; 2022).
- 2.2.20 The nature of these residual effects will be both direct and indirect, adverse and in some cases cumulative with the offshore elements of the Proposed Development. The duration of these residual effects will be short term (during the onshore cable corridor construction phase) and largely reversible with progressive backfill and reinstatement of the onshore cable corridor as the works progress.

LACR-01d (north) and (east)

Landscape effects

- 2.2.21 In summary, LACR-01d (north) and (east) will pass through two LCAs and the SDNP. LACR-01d (north) and (east) will have a significant adverse residual effect on the following landscape receptors:
- A3: Arun to Adur Open Downs LCA; and
 - I3: Arun to Adur Downs Scarps LCA.
- 2.2.22 In total LACR-01d (north) and (east) crosses approximately five treebelts/hedgerows with trees/hedges or field boundaries which would be subject to embedded environmental measure C-115 (**PEIR Appendix F** and updated in this **PEIR FSIR**, see **Paragraph 2.2.48** and **Table 2-2**) to reduce loss of vegetation/habitat.

- 2.2.23 The geographical extent of these significant adverse residual effects will extend to within approximately 1km LACR-01d (north) and (east) as a result of multiple elevated areas viewing along the linear onshore cable corridor within A3 and I3 LCAs.
- 2.2.24 The nature of these residual effects will be both direct and indirect, adverse and in some cases cumulative with the offshore elements of the Proposed Development. The duration of these residual effects will be short term (during the onshore cable corridor construction phase) and largely reversible with progressive backfill and reinstatement of the onshore cable corridor as the works progress.
- 2.2.25 LACR-01d (north) and (east) will also have a significant adverse residual effect on part of the SDNP and two of the seven special qualities of the SDNP will be significantly affected for a temporary period during the construction phase as follows:
- 1) Diverse, inspirational landscapes and breath-taking views; and
 - 3) Tranquil and unspoilt places.
- 2.2.26 The nature of these adverse residual effects will extend across part of the SDNP and its setting and expound from significant adverse effects on landscape character and visual receptors that will occur during the construction phase. The duration of the effects will be limited to the construction phase for the onshore cable corridor (onshore cable temporary construction compounds may be in use for up to three years and six months) and some of these residual effects will be cumulative with the offshore elements of the Proposed Development.
- 2.2.27 In terms of the integrity of the SDNP, the short duration of these adverse residual effects and the largely reversible nature of the effects (in that the onshore cable corridor will be reinstated and hedgerows re-planted) indicates that the integrity of this part of the SDNP (within the Study Area) will not be adversely or significantly affected.

Visual effects

- 2.2.28 In terms of visual effects, LACR-01d (north) and (east) would have no significant (beneficial or adverse) visual effects on settlements or residential properties, transport routes or tourist attractions. LACR-01d (north) and (east) will however, result in significant visual effects on PRoW during the construction phase. There are no new PRoWs identified as a result of LACR-01d (north) and (east) that were not previously assessed in the **PEIR** and/or **PEIR SIR** (RED, 2021; 2022). The views from twelve bridleways, five footpaths and three restricted byways (mostly within the A3: Arun to Adur Open Downs LCA) will be significantly affected as follows:
- Bridleways: 2091, 2108/1, 2173, 2208/1, 2209, 2260, 2264, 2282, 2282/1, 2666, 2688 and 2689.
 - Footpaths: 2208/2, 2260/1, 2262, 2262/1 and 2263.
 - Restricted Byways; 2092, 2673 and 2693.

- 2.2.29 There are no new significant visual effects (beneficial or adverse) on Open Access Land as a result of LACR-01d (north) and (east) that were not previously identified in the **PEIR** and/or **PEIR SIR** (RED, 2021; 2022).
- 2.2.30 The nature of these residual effects will be both direct and indirect, adverse and in some cases cumulative with the offshore elements of the Proposed Development. The duration of these residual effects will be short term (during the onshore cable corridor construction phase) and largely reversible with progressive backfill and reinstatement of the onshore cable corridor as the works progress.

Air quality

- 2.2.31 Additional air quality residential receptors compared to those described in the **PEIR** (RED, 2021) have been identified within 350m of LACR-01d, including Myrtle Grove Farm and Longfurlong Farm. The introduction of new sensitive receptors does not change the outcome of the construction dust assessment (**Section 20.9** of the **PEIR** (RED, 2021)) or the overall conclusions (see **Table G-8** in **Appendix G** of the **PEIR SIR** (RED, 2022), noting commitments C-6 and C24 in **Appendix F** of the **PEIR SIR** and **Tables 20-22 and 20-26** from **Chapter 20: Air quality, Volume 2** of the **PEIR**) provided in **Sections 20.9 to 20.15** within **Chapter 20** of the **PEIR**. The construction dust assessment will be updated in line with the proposed DCO Order Limits and presented in the ES.
- 2.2.32 LACR-01d does not include any new trenchless crossings and therefore there are no changes in emissions calculated in the construction plant modelling in **Appendix 20.2: Full results of construction plant modelling, Volume 4** of the **PEIR** (RED, 2021). The overall assessment and conclusions provided in **Sections 20.9 to 20.15** (see **Table G-8** in **Appendix G** of the **PEIR SIR**) within **Chapter 20** of the **PEIR** remain unchanged. The construction plant modelling will be updated in line with the proposed DCO Order Limits and presented in the ES.
- 2.2.33 LACR-01d includes alternative temporary construction accesses on Longfurlong Lane and off the A280 along unnamed tracks to the north (AA-33 to AA-35). These alternative temporary construction and permanent accesses will not introduce additional sensitive receptors within 20m of LACR-01d. Consequently, these new alternative temporary construction and permanent accesses do not change the overall assessment outcomes and conclusions (see **Table G-8** in **Appendix G** of the **PEIR SIR** (RED, 2022), noting commitments C-6 and C-24 in **Appendix F** of the **PEIR SIR** and **Tables 20-22 and 20-26** from **Chapter 20** of the **PEIR**) provided in **Sections 20.9 to 20.15** within **Chapter 20: Air quality, Volume 2** of the **PEIR** (RED, 2021).
- 2.2.34 As outlined in **paragraph 2.2.52**, the construction traffic generation impacts for LACR-01d would be similar to the new revised maximum design scenario and therefore fall within the assessment of the maximum design scenario for LACR-01a and LACR-01c in the **PEIR SIR** (RED, 2022). LACR-01d therefore results in changes to construction traffic flows on the surrounding road network during the construction phase. However, the change in construction traffic flows will result in a negligible impact on the receptors associated with LACR-01d, including those previously noted in **Chapter 20** of the **PEIR** (RED, 2021). Consequently, there is no change to the overall assessment outcomes and conclusions in the air quality assessment of construction traffic, as provided in **Sections 20.9 to 20.15** (see

Table G-8 in **Appendix G** of the **PEIR SIR** (RED, 2022)) within **Chapter 20** of the **PEIR** (RED, 2021). The construction traffic assessment will be updated in line with the proposed DCO Order Limits and presented in the ES.

- 2.2.35 The air quality assessment including construction dust assessment, construction traffic, and construction plant item modelling will be updated in line with the proposed DCO Order Limits and presented in the updated air quality chapter in the ES.

Soils and agriculture

- 2.2.36 LACR-01d (west) and LACR-01d (east) traverse through agricultural land at Blackpatch Hill with provisional Agricultural Land Classification (ALC) grades (Ministry of Agriculture, Fisheries and Food (MAFF) (1988)) ranging from 3 to 4. LACR-01d (west) and LACR-01 (east) are shown as grade 3 and grade 4, with more grade 4 in LACR-01 (east), which is likely to be associated with the steeper slopes of Blackpatch Hill. LACR-01d (north) continues through agricultural land with provisional ALC grade 3, until it reaches the original PEIR Assessment Boundary south of Sullington Hill.
- 2.2.37 No post-1988 ALC mapping is available for LACR-01d (LACR-01d (east), LACR-01d (west) and LACR-01d (north)).
- 2.2.38 The Natural England Likelihood of Best and Most Versatile (BMV) Agricultural Land Strategic scale map (Natural England, 2017) shows a moderate likelihood of best and most versatile (BMV) land (20-60% area BMV) for LACR-01d (LACR-01d (east), LACR-01d (west) and LACR-01d (north)). This includes the areas shown on provisional ALC mapping as grade 4. It is therefore assumed that all of LACR-01d could be BMV land, and that there is no difference in the sensitivity of the soils and agricultural land between LACR-01d (west) and LACR-01d (east). This is consistent with **Sections 21.9 to 21.13** within **Chapter 21: Soils and agriculture, Volume 2** of the **PEIR** and assessment in the **PEIR SIR** (RED, 2021; 2022) which assumes that all MAFF Grade 3 agricultural land is sub-grade 3a (best and most versatile) providing a conservative assessment.
- 2.2.39 Soil and ALC Survey has been completed for 409.30 hectares of the original PEIR Assessment Boundary, in accordance with Revised Guidelines and Criteria for Grading the Quality of Agricultural Land, published by MAFF in 1988. This found that most of the surveyed agricultural land within the original PEIR Assessment Boundary is Grade 3a or lower, indicating that an average grade of 3a applied over the entire proposed DCO Order Limits for the temporary soil disturbance associated with onshore cable construction is suitably conservative.

Based on the temporary onshore construction corridor width being 50m and LACR-01d being a maximum of approximately 3km in length for either the route via LACR-01(east) or LACR-01(west), LACR-01d introduces an additional area of approximately 15 hectares (ha) potentially subject to temporary disturbance during the construction phase, over and above the original PEIR Assessment Boundary. If LACR-01d is selected, in conjunction with LACR-01a (considered separately in the **PEIR SIR** (RED, 2022)), this will avoid agricultural land in the original PEIR Assessment Boundary, and LACR-01b, and LACR-01c, of a similar extent and similar ALC grades, as these routes and LACR-01d are mutually exclusive.

However, for this assessment all land potentially affected is included. Although there is an increase in area of agricultural land potentially affected by the Proposed Development, there is no change to the environmental receptors or the embedded environmental measures ([Appendix F](#) of the [PEIR SIR](#) (RED, 2022)), LACR-01d does not change the overall assessment outcomes and conclusions (see [Table G-9](#) in [Appendix G](#) of the [PEIR SIR](#)) provided in [Sections 21.9 to 21.13](#) within [Chapter 21](#) of the [PEIR](#) (RED, 2021). The soils and agriculture assessment will be updated in line with the proposed DCO Order Limits.

Noise and vibration (onshore)

- 2.2.40 No new noise sensitive receptors have been identified within 50m of LACR-01d (east), LACR-01d (west) or LACR-01d (north). Consequently, LACR-01d does not change the overall assessment outcomes or conclusions of the onshore cable installation (trenched) assessment provided in [Section 22.9](#) (see [Table G-10](#) in [Appendix G](#) of the [PEIR SIR](#) (RED, 2022)) within [Chapter 22](#) of the [PEIR](#) (RED, 2021). The onshore cable installation (trenched) assessment will be updated in line with the proposed DCO Order Limits and presented in the ES.
- 2.2.41 LACR-01d does not include trenchless crossings. Consequently, there is no change to the overall assessment outcomes and conclusions of the trenchless crossing noise assessment provided in [Section 22.9](#) (see also [Table G-10](#) in [Appendix G](#) of the [PEIR SIR](#) (RED, 2022)) within [Chapter 22](#) of the [PEIR](#) (RED, 2021). The trenchless crossing assessment will be updated in line with the proposed DCO Order Limits in the ES.
- 2.2.42 LACR-01d introduces an alternative temporary construction and permanent access (AA-33, permanent access (AA-34), and construction access (AA-35). These alternative temporary construction and permanent accesses do not introduce additional noise sensitive receptors within 20m of LACR-01d. Consequently, AA-33 to AA-35 do not change the overall assessment outcomes and conclusions in the assessment of temporary construction and permanent accesses in [Section 22.9](#) (see also [Table G-10](#) in [Appendix G](#) of the [PEIR SIR](#) (RED, 2022)) within [Chapter 22](#) of the [PEIR](#) (RED, 2021). The assessment of temporary construction and permanent accesses will be updated in line with the proposed DCO Order Limits and presented in the ES.
- 2.2.43 LACR-01d will result in changes to construction traffic flows on the surrounding road network during the construction phase (as outlined in [paragraph 2.2.52](#)). However, the change in construction traffic flows will result in a negligible impact on receptors associated with LACR-01d. Therefore, there is no change to the overall assessment outcomes and conclusions in the assessment of construction traffic noise, as provided in [Section 22.9](#) (see also [Table G-10](#) in [Appendix G](#) of the [PEIR SIR](#) (RED, 2022)) within [Chapter 22](#) of the [PEIR](#) (RED, 2021). The construction traffic assessment will be updated in line with the proposed DCO Order Limits and presented in the ES.
- 2.2.44 Therefore, on the basis of the above, LACR-01d does not change the overall assessment outcomes and conclusions of no significant effect (see [Table G-10](#) in [Appendix G](#) of the [PEIR SIR](#) (RED, 2022)) provided in [Sections 22.9 to 22.15](#) within [Chapter 22](#) of the [PEIR](#) (RED, 2021). The construction noise predictions

and modelling will be updated in line with the proposed DCO Order Limits in the noise and vibration assessment and presented at ES.

Terrestrial ecology and nature conservation

- 2.2.45 Baseline information for LACR-01d is presented in **Appendix E**. Also within **Appendix E** are further details on proposed embedded environmental measures developed since the publication of the **PEIR SIR** (RED, 2022). Additional surveys are ongoing in 2023 to record further details on habitats and species in this area.
- 2.2.46 North of Michelgrove Park, LACR-01d progresses through a range of arable and pasture habitats that are separated by a mixture of fences, defunct hedgerows that are now classed as scattered scrub, a tree line or simply by change in usage. LACR-01d (east) and LACR-01d (north) overlap with an area of rough grassland on Blackpatch Hill. This area is noted within the Priority Habitat Inventory as supporting good quality semi-improved grassland (albeit with low confidence in the entry), whilst field survey in early 2023 identified the area as poor semi-improved grassland (noting that due to timing of survey this will need to be confirmed in late spring/early summer). At the northern extent of LACR-01d (north) there is an overlap with Sullington Hill Local Wildlife Site (LWS). This area of the LWS supports a mixture of scrub and calcareous grassland. As with all previous onshore cable route options described, Sullington Hill LWS will be crossed using trenchless crossing techniques.
- 2.2.47 LACR-01d includes one tree line crossing and up to two crossings of defunct hedgerow that are now classed as scattered scrub:
- LACR-01d (west) and LACR-01d (north) has one tree line crossing and two crossings of scattered scrub; and
 - LACR-01d (east) and LACR-01d (north) has two crossings of scattered scrub.
- 2.2.48 The former hedgerows crossed have very large gaps in places, most likely allowing for a haul road and cable trenches to be installed without the need to remove any scattered scrub. The embedded environmental measures described in the **PEIR SIR Appendix F** (RED, 2022) will be applicable including the minimisation of tree line/hedgerow loss (C-115). Following technical engagement with members of the Evidence Plan Process (EPP) Expert Topic Group (ETG) in November 2022, those associated with hedgerow crossings have been updated to allow flexibility to make decisions on approach based on local ground conditions, the update to C-115 is shown in **Table 2-2**.

Table 2-2 Updated PEIR FSIR Commitment

Commitment reference ID	Aspect	Commitment
C-115	Terrestrial ecology	Hedgerows/tree lines crossed by the cable route will be 'notched' to reduce habitat loss and landscape and heritage impacts. This is defined as temporarily displacing one or more short sections (i.e. notches) within the same hedgerow/tree line. Hedgerow/tree line losses will thereby

Commitment reference ID	Aspect	Commitment
		<p>be kept to a maximum of 14m total width at each hedgerow crossing point. In order to maintain composition and promote habitat connectivity hedgerow plants from within notches will be lifted, maintained, and then returned to their original positions where ground conditions and accessibility for irrigation suggest success rates will be high. This will provide a rapid hedgerow reinstatement that gives structure earlier than would be expected for a standard planting regime.</p> <p>With hedgerows deemed "important" under the Hedgerows Regulations 1997 (or where there are other considerations), losses will be reduced to a 6m notch for the temporary construction haul roads only, by trenchless installation of the cable ducts under them.</p> <p>Success rates for reinstatement of hedgerows and tree lines are expected to be high for both replanted and translocated hedgerows and tree lines. In all instances, the hedgerows and tree lines will be monitored over a period of 10 years, and remedial action taken rapidly where signs of failure are identified³.</p> <p>Further detail will be provided in the outline Code of Construction Practice and outline Landscape and Ecology Management Plan.</p>
2.2.49		<p>The proposed temporary construction and/or permanent access routes follow established tracks, with losses (e.g., where widening may be necessary) expected for temporary construction vehicles to be confined to arable and pasture habitats. In one location, AA-35 leaves the course of an existing farm track to ensure that a stand-off of more than 25m is maintained from a patch of Ancient Woodland (Highden Beeches) and any necessary ground works (see existing embedded environmental measure C-216 PEIR SIR Appendix F (RED, 2022)).</p>
2.2.50		<p>The land crossed by LACR-01d has the potential to support breeding birds (such as skylark) but has limited opportunities for other species. The field surveys did not highlight any badger activity and there are no ponds or watercourses to consider for species such as great crested newts and water voles. Harrow Hill lies to the</p>

³ In the PEIR SIR (RED, 2022), this third paragraph stated: Success rates for both techniques are expected to be high. In all instances, including in the event of unhealthy growth being detected by post construction monitoring; the hedgerow will be replaced in order to ensure that the gaps are filled by natural material that will promote connectivity. Additional planting will take place as necessary.”

west of LACR-01d. Harrow Hill is understood to be the location of an Eurasian curlew release project (first release in 2022). All parts of LACR-01d (LACR-01d (east), LACR-01d (west) and LACR-01d (north) lie more than 500m from Harrow Hill meaning disturbance effects on breeding curlew can be discounted (Goodship & Furness, 2022). Bats are likely to be present in the landscape although the open nature of the habitat will restrict the location and amount of activity. A total of 39 trees with bat potential (20 high, 10 moderate and 9 low potential) within or adjacent to LACR-01d were identified during field survey. However, the potential for losses to occur are minimal and restricted to one particular boundary where a single tree may require felling (noting that further design consideration may enable this tree to be retained).

- 2.2.51 The existing embedded environmental measures described in **PEIR SIR Appendix F** (RED, 2022) will be applicable (with tailoring required to fit the local situation); including the minimisation of hedgerow loss (updated as described in **Paragraph 2.2.48**) and restoration of habitats. Therefore, the effects on hedgerows, treelines, grassland and legally protected or notable species resulting from the inclusion of LACR-01d and the associates AAs will be less than those described within **Sections 23.10 to 23.14** in **Chapter 23** of the **PEIR** (RED, 2021) where these existing embedded environmental measures were not detailed. The conclusions drawn for these ecological features remains as reported in **Chapter 23** of the **PEIR** (RED, 2021).

Transport

- 2.2.52 The introduction of LACR-01d will result in similar construction traffic numbers to those assessed within **Chapter 24: Transport, Volume 2** of the **PEIR** (RED, 2021). **PEIR SIR Appendix J Transport paragraph 6.1.1.9** (RED, 2022) outlined that LACR-01a and LACR-01c to be the maximum design scenario (RED, 2022). It is considered that the construction traffic generation impacts for LACR-01d will be no greater than the maximum design scenario and therefore fall within the assessment of the maximum design scenario for LACR-01a and LACR-01c in the **PEIR SIR** (RED, 2022).
- 2.2.53 Construction traffic trip generation data will be further updated in detail in the ES, however at this stage the construction traffic trip generation is expected to be of a comparable level of magnitude to that presented at **PEIR** (RED, 2021) and **PEIR SIR Appendix J** (RED, 2022) stages.
- 2.2.54 LACR-01d will affect similar highway links as have been identified in the **PEIR** (RED, 2021) and **Appendix J** of the **PEIR SIR** (RED, 2022), most likely the A280, A27, A24 and A283. **PEIR Chapter 24: Transport, Volume 2 Table 24-4** (RED, 2021) identified the traffic count location closest to LACR-01d on the following highway links:
- Highway Link 11 – A27, South of Crossbush;
 - Highway Link 14 – A24 Findon;
 - Highway Link 15 – A280 Long Furlong; and
 - Highway Link 16 – A283 West of A24.

- 2.2.55 In the **PEIR** and **Appendix J** of the **PEIR SIR** (RED, 2021; 2022) the traffic count points were located principally on A and B roads. Given that LACR-01d represents only a short section of the total proposed onshore cable route length and is not located close to any major highway links, there are not additional highway links for which it is deemed necessary to include traffic data above and beyond those already covered in the **PEIR** (RED, 2021), and **Appendix J** of the **PEIR SIR** (RED, 2022).
- 2.2.56 **Table J-8** in **Appendix J** of the **PEIR SIR** (RED, 2022) identified highways links requiring consideration in the assessment of effects in line with Guidelines for the Environmental Assessment of Road Traffic (GEART) (Institute of Environmental Assessment (IEA), 1993). The highways links assessed do not include the highway links 11,14,15 and 16 but include four links further afield from LACR-01d:
- Highways Link 5 – A259 West of Wick;
 - Highways Link 6 – A284, North of Wick;
 - Highways Link 7 – A284, Lyminster; and
 - Highways Link 26 – Wineham Lane, South of the A272.
- 2.2.57 The assessment of effects provided in **Appendix J** of the **PEIR SIR** (RED, 2022) concludes for the highway links 5, 6, 7, and 26 that the significance of residual effects is negligible which is **Not Significant** in EIA terms. A summary of residual effects table for the four highway links is provided in **Section 8** of **Appendix J** of the **PEIR SIR** (RED, 2022). The inclusion of LACR-01d and the associated AAs falls within the maximum design scenario previously considered in the **PEIR SIR** and with consideration to the overall assessment outcomes and conclusions (see **Table G-12** in **Appendix G** of the **PEIR SIR**) provided in **Sections 24.10 to 24.15** within **Chapter 24** of the **PEIR** which are unchanged and remain valid (RED, 2021; 2022).
- 2.2.58 No new additional PRowWs have been identified for LACR-01d that have not already been considered at PEIR stage or PEIR SIR stage and this assessment should be read in conjunction with **Table 2-1, Appendix 24.2: Outline Public Rights of Way Management Plan (PRowWMP), Volume 4** of the **PEIR** and **Section 2, Appendix J: Transport** of the **PEIR SIR**. Consequently, with the implementation of embedded environmental measures (**Appendix F** of the **PEIR SIR** (RED, 2022)), LACR-01d does not change the overall assessment outcomes and conclusions as this is within the maximum design scenario (see **Table G-12** in **Appendix G** of the **PEIR SIR** (RED, 2022)) presented in **Table 2-1, Appendix 24.2: Outline Public Rights of Way Management Plan (PRowWMP), Volume 4** of the **PEIR** and **Section 2, Appendix J: Transport** of the **PEIR SIR**.
- 2.2.59 All PRowWs will be incorporated into the updated **Outline Public Rights of Way Management Plan (PRowWMP)** provided alongside the DCO Application.
- 2.2.60 LACR-01d includes additional alternative temporary construction and permanent accesses as follows:
- AA-33: construction and operational access to Longfurlong Lane;
 - AA-34: operational access to A24; and

- AA-35: construction access to A280.
- 2.2.61 These have all previously been assessed as part of, LACR-01a, LACR-01c or AA-10 in the **PEIR SIR** (RED, 2022), but will need be assessed as part of LACR-01d in the Environmental Statement. These temporary construction and permanent accesses will be reflected in the updated **Outline Construction Traffic Management Plan (CTMP)** provided alongside the DCO Application.
- 2.2.62 The assessment of transport effects will be updated in line with the proposed DCO Order Limits in the **Outline PRowMP**, **Outline CTMP**, and the ES submitted alongside the DCO Application.

Ground conditions

- 2.2.63 LACR-01d and the associated AAs traverse predominantly across agricultural fields and Ordnance Survey mapping indicates that there is limited potential for sources of contamination to be present within the onshore cable corridor. LACR-01d traverses an area which is outside of minerals safeguarding areas.
- 2.2.64 No potential sources of contamination or minerals safeguarding interactions have been identified adjacent to the onshore cable corridor or AAs for LACR-01d (east), LACR-01d (west) or LACR-01d (north).
- 2.2.65 Therefore, taking into account the implementation of the embedded environmental measures⁴ (**Appendix F** of the **PEIR SIR** (RED, 2022)), which include a protocol for encountering unexpected contamination (C-72), there is no change to the overall assessment outcomes and conclusions (see **Table G-13** in **Appendix G** of the **PEIR SIR** (RED, 2022)) provided in **Sections 25.9 to 25.15** within **Chapter 25** of the **PEIR** (RED, 2021).

Historic environment

- 2.2.66 The historic environment baseline for LACR-01d is presented in **Appendix G**, part **G1**, with a gazetteer of known heritage records provided in **Appendix G**, part **G2**.

Effects arising through change in historic landscape character

- 2.2.67 The historic landscape character is considered comparable to that described in **Appendix 26.2** of the **PEIR** (RED, 2021) (see **Section 3.2**, **Appendix G**, part **G1**). LACR-01d, is not expected to change the assessment outcomes or conclusions for the historic landscape character (see **Table G-14** in **Appendix G** of the **PEIR SIR** (RED, 2022)) in **Sections 26.9 to 26.15** within **Chapter 26: Historic environment, Volume 2** of the **PEIR** (RED, 2021).

Direct effects on heritage assets

- 2.2.68 Known archaeological assets, and the potential for as yet unknown archaeological assets, within LACR-01d, are identified in **Section 4** and **Table G1-17**, **Appendix**

⁴ See **Appendix F** of the **PEIR SIR** (RED, 2022): C-1, C-2, C-18, C-32, C-72, C-157, C-158, C-159, C-164, C-165, C-166 and C-169

G, part **G1**, together with an indication of their heritage significance (sensitivity). Further information is required to more accurately determine the nature, form and condition of archaeological remains that may be present within LACR-01d.

- 2.2.69 LACR-01d lies within two Archaeological Notification Areas (ANAs) (SDNPA 031 and SDNPA 078). These ANAs are categorised as “red”⁵ inferring the potential for “*nationally important and other significant archaeological sites*” (Salter, 2016).
- 2.2.70 There are no extant built heritage assets within LACR-01d.

LACR-01d (east)

- 2.2.71 Within LACR-01d (east), previous archaeological investigations have recorded remains of a late Bronze Age farm (MWS2968). The Historic Environment Record (HER) suggests that by 1971 the features were ploughed out. However, buried remains of these features could still survive, and indicates a high potential for other as yet unknown remains to be present within this vicinity in LACR-01d (east) where it crosses Blackpatch Hill. LiDAR analysis has recorded an irregular depression at this location (LDr_505) and a circular depression (LDr_503) close by. These LiDAR features may be associated with the late Bronze Age farm or extractive activity of unknown date. Prehistoric mining activity is known within the vicinity of Blackpatch Hill, with LACR-01d (AA-33) lying adjacent to a scheduled flint mine (NHLE 1015880).
- 2.2.72 Previous archaeological investigations have also recorded a hollow within LACR-01d (east), interpreted as a possible exploratory hollow of later Neolithic or Early Bronze Age date (MWS8026). LiDAR analysis recorded a circular depression (LDr_502) at this location which is likely to relate to the excavated hollow.
- 2.2.73 Potential Iron Age and Roman activity within LACR-01d (east) is evidenced through finds of pottery sherds recovered from the plough soil and as residual finds from a pit and ditch features. Excavations of the late Bronze Age settlement (MWS2968) also recovered an Iron Age coin and pottery finds (MWS2997) along with residual Roman pottery sherds (MWS2998).
- 2.2.74 Elsewhere within LACR-01d (east), LiDAR analysis has also recorded linear banks on the northern slopes of Blackpatch Hill, possible relating to former field boundaries of uncertain date (LDr_521).
- 2.2.75 Whilst not recorded within the boundary of LACR-01d (east), Bronze Age barrow sites are known within close proximity, evidencing prehistoric activity within the immediate location and the high potential for as yet unknown remains to be located within LACR-01d (east).
- 2.2.76 LACR-01d (east) falls entirely within ANA SDNPA 031, as does most of access AA-33, indicating a high archaeological potential across the route.

⁵ Red: “*very sensitive area for Archaeology, where new building(s), ground excavation or landscaping may have major adverse impact on nationally important and other significant archaeological sites.*” (Salter, 2016).

LACR-01d (west)

- 2.2.77 Within LACR-01d (west), occupation debris comprising pottery sherds and a hearth (MWS3009) and prehistoric marling pits (MWS3010) have been recorded which are thought could be associated with nearby Bronze Age settlement. On Cock Hill, 70m east of LACR-01d (west), there is a scheduled Itford Hill style settlement (NHLE 1015881) of Late Bronze Age, with an earlier, unenclosed settlement dating to the Middle Bronze Age below.
- 2.2.78 Within the northern part of LACR-01d (west) is the site of a Bronze Age barrow. Further barrow sites are known immediately north of LACR-01d (west). In the same location within LACR-01d (west), evidence for Iron Age and Roman activity has been previously recorded (MWS2849 and MWS2850), comprising a large amount Iron Age and Roman pottery which were ploughed up, and an oval and L-shaped pit, containing sherds of late Bronze or early Iron Age pottery, with further Iron Age and Roman pottery sherds recorded around the oval pit.
- 2.2.79 LACR-01d (west) falls almost entirely within ANA SDNPA 031, indicating a high archaeological potential across most of this route.

LACR-01d (north)

- 2.2.80 Within LACR-01d (north) there are three known Bronze Age barrow sites, one in the southwest and two in the north. One barrow (MWS6581) in the north was subsequently used as a Saxon cremation burial (MWS2804). No trace of the barrows observed during the historic environment site walkover over or as LiDAR features.
- 2.2.81 Muntham Court, a scheduled site comprising buried remains of an Iron Age defended settlement (1005850 and MWS5598), lies adjacent to LACR-01d (AA-35), as does a series of earthworks which were visible on aerial photographs which are thought to be remnants of an Iron Age or Roman field system (MWS246 and MWS415).
- 2.2.82 Relic field system identified at **PEIR** (RED, 2021) (LDr_009) extends partly into the southern part LACR-01d (north). In addition, LiDAR analysis has recorded a series of undated linear banks (LDr_519) within LACR-01d (north), east of Cobden Farm. Another series of linear banks of uncertain date are recorded in the north of LACR-01d (north) on Sullington Hill, which may be associated with the Terrace Way recorded in the HER and identified at **PEIR** (RED, 2021) (MWS3311).
- 2.2.83 LACR-01d (north) falls almost entirely within two ANAs (SDNPA 031 and SDNPA 078), with accesses AA-34 and AA-35 partly falling within SDNPA 041 indicating a high archaeological potential across most of this route.

Summary of direct effects on heritage assets for LACR-01d (LACR-01d (east), LACR-01d (west) and LACR-01d (north) and associated AAs:

- 2.2.84 Overall, LACR-01d has archaeological potential for all periods, ranging from very low to high (see **Section 4** and **Table G1-17, Appendix G**, part **G1**). There is existing evidence from within LACR-01d for Bronze Age settlement and mortuary activity, with some finds from the Iron Age and Roman periods which suggest activity within the vicinity of LACR-01d. The magnitude of change could be up to

high, though given the width of the onshore cable route construction corridor in relation to the extent of the known and potential archaeological assets, a low to medium magnitude of change is more likely (**Table 26-21, Chapter 26** of the **PEIR** (RED, 2021)). This could lead to potentially significant adverse effects, which will be permanent. However, further information obtained by field investigations along with implementation of embedded environmental measures (**Appendix F (PEIR SIR, RED, 2022)**), described in C-79, together with the avoidance of areas of sensitivity (or heritage significance) (C-6), will seek to limit the magnitude and overall effect on archaeological assets to an acceptable level being **low to medium adverse**, which will be **Not Significant** in EIA terms. The summary of effects is consistent with that identified at **PEIR (Table 26-36, Chapter 26** of the **PEIR** (RED, 2021)). As per **PEIR (Table 26-8, Chapter 26** of the **PEIR** (RED, 2021)), any disturbance of archaeological heritage assets within LACR-01d will occur during the construction phase of the Proposed Development. No further effects are anticipated during the operation and maintenance phase.

Effects arising through change to setting of heritage assets

- 2.2.85 LACR-01d (LACR-01d (east), LACR-01d (west) and LACR-01d (north)) introduces new designated heritage assets not previously identified within the baseline in **Appendix 26.2** of the **PEIR** (RED, 2021) (see **Table G3-1, Appendix G, part G3**). This has the potential to change the assessment outcomes and/or conclusions for some designated heritage assets (e.g., listed buildings and scheduled monuments) identified at **PEIR (Sections 26.9 to 26.15** within **Chapter 26** of the **PEIR** (RED, 2021)). However, there are no designated heritage assets identified within the boundary of LACR-01d.
- 2.2.86 **Table G3-1, Appendix G part G3** lists all of the potential effects arising through the change to setting of heritage assets associated with the construction phase of LACR-01d (LACR-01d (east), LACR-01d (west) and LACR-01d (north)). An indication is provided of the range of magnitude of change and heritage significance (sensitivity) definitions for each potential effect based on the definitions provided within **Section 26.8** in **Chapter 26** of the **PEIR** (RED, 2021). Overall, during the construction phase of LACR-01d (LACR-01d (east), LACR-01d (west) and LACR-01d (north)), there is potential for a very low to low magnitude of change to receptors of high heritage significance, resulting in minor to moderate adverse effects. Minor adverse effects will be **Not Significant** and moderate adverse effects could potentially be **Significant**. In addition, during the construction phase of LACR-01d (west), there is potential for a medium magnitude of change to a receptor of high heritage significance (scheduled monument, Itford Hill style settlement on Cock Hill 1015881), resulting in a major adverse effect, which could be **Significant**. The magnitude of change, and hence the significance of potential effects, have been assessed on the assumption that embedded environmental measures have been implemented as part of the Proposed Development. A precautionary approach has been taken in the identification of potential effects within the **PEIR FSIR** assessment, reflecting the level of detail available for the construction phase. It is anticipated that as detail of the construction sequence is further refined, the potential effects arising through change to setting identified at **PEIR FSIR** will be reduced. Where effects through changes to setting are identified during the construction phase, these are expected to be short-term and temporary.

- 2.2.87 Development within LACR-01d (LACR-01d (east), LACR-01d (west) and LACR-01d (north)) is unlikely to impact the setting of other designated heritage assets within the Study Area (see **Table G2-1, Appendix G, part G2**) due to the nature of the assets, topography, intervening planting and built infrastructure, and the relative distance from LACR-01d. No effects are anticipated and therefore they will not be considered for assessment in the ES.

Water environment

- 2.2.88 The area within LACR-01d and associated AAs overlay the Worthing Chalk (GB40701G505300) Water Framework Directive (WFD (2017)) groundwater body and the Source Protection Zones 2 and 3 associated with the Patching Southern Water Public Water Supply borehole, and two unlicensed Private Water Supply abstractions at Long Furlong Barn and Turners Dairies. Each of these receptors were identified in the **PEIR** (RED, 2021). The area also encompasses several other receptors which were identified within **Appendix L** of the **PEIR SIR** (RED, 2022), including several dew ponds between Blackpatch Hill and Harrow Hill, to the south of Long Furlong Farm, and in the vicinity of Cobden Farm near Findon. Therefore, LACR-01d does not introduce new water environment receptors beyond those already identified in the **PEIR** (RED, 2021) or the **PEIR SIR** (RED, 2022).
- 2.2.89 Since the **PEIR SIR** (RED, 2022) a detailed hydrogeological risk assessment has been undertaken to further understand the potential relationship between LACR-01 and the potential water environment receptors (stated in **Paragraph 2.2.88**). The hydrogeological risk assessment is supported by site visits carried out in November and December 2022, along with the production of conceptual cross sections to establish relative elevations and pathway linkages. The hydrogeological risk assessment within the ES considers the implementation of embedded environmental measures⁶ and that there would be a negligible magnitude of change for all receptors of very low (dew ponds), medium (Worthing Chalk and private water supplies) and high (public water supplies) respective sensitivity values, resulting in negligible – minor adverse (**Not Significant**) effects. This is in accordance with the overall assessment outcomes that were presented in **Sections 27.9 to 27.11** within **Chapter 27** of the original **PEIR** (RED, 2021).

Major accidents and disasters

- 2.2.90 In relation to major accidents and disasters, LACR-01d and associated AAs is largely comparable to the original **PEIR** Assessment Boundary and the other LACR options presented in the **PEIR SIR** (RED, 2021; 2022). It does not run through the consultation distances of any sites holding Hazardous Substances Consent or Control of Major Accident Hazard (COMAH) establishments, nor does it introduce any significant new hazards or receptor populations. LACR-01d does not significantly alter the baseline, environmental receptors or the overall

⁶ See **Appendix F** of the **PEIR SIR** (RED, 2022): C-76, C-77, C-78, C-137, C-141, C-142, C-144, C-147, C-150, C-167

outcomes and conclusions presented in **Sections 28.6 to 28.11** within **Chapter 28: Major accidents and disasters, Volume 2** of the **PEIR** (RED, 2021).

Greenhouse gas assessment

- 2.2.91 LACR-01d and associated AAs does not change the baseline, environmental receptors or the overall assessment outcomes and conclusions presented in **Appendix 5.2: Greenhouse gas assessment, Volume 4** of the **PEIR** (RED, 2021).

3. Environmental considerations – all alternatives and modifications

3.1 Introduction

- 3.1.1 This Section provides an overall summary of the environmental review for each relevant onshore aspect when considering all the alternatives and modifications presented in the **PEIR SIR** (RED, 2022) and this **PEIR FSIR** taken together. All alternatives and modifications relevant to the LACR-01d route are listed below, which excludes those associated with the part of the PEIR Assessment Boundary bypassed by LACR-01 (LACR-01a and LACR-01d). This Section provides the environmental considerations for the following onshore cable route scenario:
- original PEIR Assessment Boundary (presented in July 2021), with all relevant LACRs, ACRs, MRs, AAs and TCs presented in the **PEIR SIR** (RED, 2022). These comprise:
 - ▶ LACR-01a;
 - ▶ a section of LACR-01c;
 - ▶ ACR-01, ACR-06 and ACR-07;
 - ▶ MR-01, MR-02, and MR-06 to MR-14;
 - ▶ TC-01 to TC-04 and TC-12 to TC-33;
 - ▶ AA-01 to AA-03, AA-05, AA-11 to AA-29⁷; and
 - LACR-01d (east), LACR-01d (west) and LACR-01d (north), including AA-33 to AA-35 as considered in **Section 2**.
- 3.1.2 The environmental reviews are based on a maximum design scenario and consider all the alternative and modifications together per environmental aspect. The environmental assessment does not take account of the potential for removal of areas as the design evolves. The total length of the onshore cable route including LACR-01d is approximately 39.4km. The total length considered in this **PEIR FSIR** is shorter than the longest potential cable route, which is via LACR-01c as presented in the **PEIR SIR** (40.5km) (RED, 2022).
- 3.1.3 An indication is provided as to the anticipated change expected to the overall assessment outcomes and conclusions presented in the **PEIR** (RED, 2021). The summary is supported by and should be read in conjunction with **PEIR SIR Appendix G** (RED, 2022) which includes the relevant summary of residual effects tables included in the **PEIR**.

⁷ Three AAs presented in the PEIR SIR have been modified to provide temporary or permanent access for LACR-01d. AA-10 has been modified to become AA-35, AA-24 to become AA-33, and AA-26 to become AA-34.

3.2 Environmental considerations – all alternatives and modifications

Socio-economics

- 3.2.1 LACR-01d and associated AAs along with the relevant proposed alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs) results in a change to PROWs (as outlined in **paragraph 2.2.4 to 2.2.7**). With consideration of the embedded mitigation measures (**Appendix F**), this will change the overall assessment outcomes and conclusions presented in **Sections 18.9 to 18.15** within **Chapter 18: Socio-economics, Volume 2** of the **PEIR** (RED, 2021). Overall whole project/project-wide socio-economic effects, including cumulative effects will be further assessed in the ES.

Landscape and visual impact

- 3.2.2 LACR-01d and associated AAs, will not introduce new landscape and visual receptors (that were not previously identified in the **PEIR** or **PEIR SIR** assessments (RED, 2021; 2022)). LACR-01d (north), LACR-01d (west) and LACR 01d (east) will affect different geographical areas of landscape and visual receptors, at different levels when compared to those previously assessed in within the **PEIR** and **PEIR SIR** (RED, 2021; 2022) assessments.
- 3.2.3 LACR-01d and associated AAs with the relevant proposed alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs), considering the implementation of embedded environmental measures (**PEIR SIR Appendix F** (RED, 2022)), do not change the overall assessment outcomes and conclusions presented in **Sections 19.9 to 19.14** within **Chapter 19: Landscape and visual impact assessment, Volume 2** of the **PEIR**, and the **PEIR SIR** (RED, 2021; 2022). In some cases, there will be effects on different geographical areas of the landscape and visual receptors, previously assessed in the **PEIR** and **PEIR SIR** (RED, 2021; 2022). Implementation of embedded environmental measures will be required (see **PEIR SIR Appendix F** (RED, 2022)).
- 3.2.4 The key differences of LACR-01d (north and east or north and west) in comparison to the **PEIR** and **PEIR SIR** assessments (RED, 2021; 2022), in terms of landscape and visual effects are as follows:
- Landscape effects:
 - ▶ LACR-01d (north and east or north and west) would affect the same LCAs as previously assessed in the **PEIR** and **PEIR SIR** assessments (RED, 2021; 2022), namely the A3: Arun to Adur Open Downs LCA and the I3: Arun to Adur Downs Scarps LCA. The geographical extent of these effects would be focused on a different area as related to the LACR-01d.
 - ▶ LACR-01d, in common with the **PEIR SIR** assessment (RED, 2022), will significantly affect two of the special landscape qualities of the SDNP. This is because of a reduced impact on settlements such that the special landscape quality No7. Distinctive Towns and Villages will not be significantly affected, as previously reported in the **PEIR** assessment (RED, 2021).

- Visual effects:
 - ▶ LACR-01d, in common with the **PEIR SIR** assessment (RED, 2022) will not significantly affect the views from settlements or transport routes in comparison to the **PEIR** (RED, 2021).
 - ▶ LACR-01d will significantly affect views from the Monarch's Way and/or South Downs Way in addition to those significant effects assessed in the **PEIR** (RED, 2021).
 - ▶ LACR-01d will significantly affect views from different geographical parts of a small number of PRow's and Open Access Land receptors in addition to those assessed for the **PEIR** assessment (RED, 2021).

3.2.5 Overall whole project/project wide landscape and visual effects, including cumulative effects will be further assessed in the ES.

Air quality

- 3.2.6 LACR-01d and associated AAs along with the relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs) results in a change in construction traffic generation (as outlined in **paragraph 2.2.34**). However, no changes are anticipated to the overall assessment outcomes and conclusions (see **Tables G-8 and G-10 in Appendix G** of the **PEIR SIR** (RED, 2022)) of the construction traffic assessments presented in **Sections 20.9 to 20.15** within **Chapter 20: Air quality, Volume 2** of the **PEIR** (RED, 2021).
- 3.2.7 The LACR-01d and associated AAs with relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs outlined in the **PEIR SIR** (RED, 2022)), introduce a small number of additional residential receptors compared to the PEIR Assessment Boundary. However, this will not change the outcome of the construction dust assessment and overall conclusions (see **Table G-8 in Appendix G** of the **PEIR SIR**, noting embedded environmental measures C-6 and C-24 in **Appendix F** of the **PEIR SIR** (RED, 2022) and **Tables 20-22 and 20-26** from **Chapter 20** of the **PEIR** (RED, 2021)) provided in **Sections 20.9 to 20.15** within **Chapter 20** of the **PEIR** (RED, 2021).
- 3.2.8 The construction dust assessment, construction traffic and construction plant item modelling will be updated in line with the proposed DCO Order Limits and in the ES.

Soils and agriculture

- 3.2.9 LACR-01d and the associated AAs, along with the relevant proposed alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs outlined in the **PEIR SIR** (RED, 2022)) includes for:
- A 197ha onshore cable corridor based on a total onshore cable length of 39.4km in a 50m wide corridor;
 - 17.80ha of temporary construction compounds (four compounds);
 - Up to 0.75ha of trenchless crossing compounds;

- up to 5.90ha for the permanent onshore substation development area; and
 - 2.50ha for the onshore substation temporary works area.
- 3.2.10 Therefore, the total area of temporary ground disturbance as a result of LACR-01d is 223.2ha, which is an increase of 7.9% from the estimate of 206.95ha in **Chapter 21** of the **PEIR** (RED, 2021).
- 3.2.11 The assessment at **PEIR** (RED, 2021) stage also considers a maximum total area of 5.9ha where there could be permanent loss of soil resource and agricultural land due to construction of the onshore substation infrastructure. The area of permanent loss of soil resource and agricultural land due to the selection of LACR-01d will be 6.52ha. This is based on 5.9ha for the onshore substation, 0.22ha of land for permanent access to the onshore substation, and 0.40ha of fenced off land required for above ground access to joint bays/link boxes (based on 50 fenced areas along 39.4km of onshore cable corridor, typically 80m² each). This is an increase of 9.5% in relation to the permanent loss of agricultural land/soil's food/crop production function. The area of soil removed will be considerably less than 0.40ha, as the joint bays/link box structures will only extend to a few square metres. As the joint bays/link box structures will only extend to a few square metres, most of the soil within the compound will be restored and grassed, maintaining other soil functions.
- 3.2.12 Although the areas of temporary ground disturbance and permanent ground disturbance will increase, there is no change to the predicted effects. LACR-01d encounters Grade 3 and Grade 4 agricultural land (based on the MAFF provisional Agricultural Land Classification Map of England and Wales mapping (1998)). The assessment provided in **Sections 21.9 to 21.13** within **Chapter 21** of the **PEIR** (RED, 2021) assumes that all MAFF Grade 3 agricultural land within PEIR Assessment Boundary is sub-grade 3a (best and most versatile land). This assumption, that all agricultural land within PEIR Assessment Boundary is assumed to be Grade 3a (best and most versatile land), still provides a conservative assessment. This takes into consideration the implementation of the embedded environmental measures (**PEIR SIR Appendix F** (RED, 2022)) to reduce effects on soil and agricultural land caused by temporary construction activities. Therefore, LACR-01d with relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs), considering the implementation of embedded environmental measures (**PEIR SIR Appendix F** (RED, 2022)), does not change the overall assessment outcomes and conclusions (see **Table G-9** in **Appendix G** of the **PEIR SIR** (RED, 2022)) provided in **Sections 21.9 to 21.13** within **Chapter 21** of the **PEIR** (RED, 2021; 2022).

Noise and vibration (onshore)

- 3.2.13 LACR-01d and associated AAs taken together with relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs outlined in the **PEIR SIR** (RED, 2022)), result in a change in construction traffic generation (as outlined in **paragraph 2.2.43**). However, the predicted change in construction traffic flows are minimal and consequently, there is no change anticipated to the noise assessments of construction traffic across LACR-01d taken together with relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs outlined in the **PEIR SIR** (RED, 2022)). Therefore, there is no change to the overall conclusions of

the noise and vibration assessment in **Section 22.9** within **Chapter 22: Noise and vibration (onshore), Volume 2** of the **PEIR** (RED, 2021).

- 3.2.14 LACR-01d taken together with relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs outlined in the **PEIR SIR** (RED, 2022)), do not introduce new receptors for the noise and vibration assessment. Therefore, based on the assessment approach undertaken at PEIR stage and the embedded environmental measures outlined, LACR-01d taken together with relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs outlined in the **PEIR SIR** (RED, 2022)) do not change the overall conclusions of the noise and vibration assessment in **Section 22.9** within **Chapter 22: Noise and vibration (onshore), Volume 2** of the **PEIR** (RED, 2021).

Terrestrial ecology and nature conservation

- 3.2.15 The terrestrial ecology assessment within the **PEIR** (RED, 2021) considered each ecological feature across the entire onshore cable corridor and onshore substation search areas (including the options present) in **Chapter 23: Terrestrial ecology, Volume 2** of the **PEIR**. **Sections 2 to 6** (with **Appendix I**) of the **PEIR SIR** (RED, 2022) evaluated whether LACR-01 and LACR-02 and the proposed alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs) will result in changes to the assessment outcomes and conclusions of the **PEIR** (RED, 2021). **Section 2** of this **PEIR FSIR** evaluates whether LACR-01d will result in any changes to the assessment outcomes and conclusions of the **PEIR** (RED, 2021). LACR-01d and associated AAs, along with the relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs), have the potential to alter the outcome of the assessment, has also been considered at the same scale (i.e., in light of information on ecological features and the Proposed Development between landfall and connection point).
- 3.2.16 Given the route of LACR-01d and that the extent of each proposed modification is relatively small in the context of the entire onshore infrastructure, LACR-01d and the proposed modifications (LACRs, ACRs, MRs, AAs and TCs) together do not change the outcomes described at **PEIR** (see **Table G-11** in **Appendix G** of the **PEIR SIR** (RED, 2022)) as provided in **Sections 23.10 to 23.14** within **Chapter 23** of the **PEIR** (RED, 2021).
- 3.2.17 As the design becomes finalised prior to the DCO Application, the opportunity to understand more fully the realistic worst-case scenario (including new and updated embedded environmental measures) will likely enable some of the significant effects identified at **PEIR** (RED, 2021) to be revised to not significant. Additionally, the effects of fragmentation can be better understood and assessed across the Proposed Development.

Transport

- 3.2.18 LACR-01d and the associated AAs, along with the relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs) may alter the construction traffic generation and distribution presented in the **PEIR** and **PEIR SIR** (RED, 2021; 2022). However, the construction traffic generation impacts associated with LACR-01d and the associated AAs, along with the relevant alternatives and

modifications (LACRs, ACRs, MRs, AAs and TCs) are expected to be no greater than those provided in the revised maximum design scenario outlined for LACR-01a and LACR-01c in the **PEIR SIR** (RED, 2022). Therefore, the assessment of LACR-01 (and associated AAs) with relevant alternatives and modifications falls within the maximum assessment of LACR-01a and LACR-01c outlined in **Appendix J** of the **PEIR SIR** (RED, 2022). As such, the assessment of effects provided in **Appendix J** of the **PEIR SIR** (RED, 2022) concluded that for four identified highway links requiring consideration, following the implementation of embedded environmental measures, the significance of residual effects is negligible which is **Not Significant** in EIA terms. This is considered alongside the remaining overall assessment outcomes and conclusions (see **Table G-12** in **Appendix G** of the **PEIR SIR** (RED, 2022)) provided in the **Sections 24.10 to 24.15** within **Chapter 24** of the **PEIR** (RED, 2021) which are unchanged and remain valid. A fully detailed transport environmental assessment will be completed at the ES stage considering the final Proposed Development.

Ground conditions

- 3.2.19 LACR-01d and the associated AAs along with the relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs outlined in the **PEIR SIR** (RED, 2022)), following the implementation of embedded environmental measures (see **PEIR SIR, Appendix F** (RED, 2022)), do not change the assessment outcomes and conclusions (see **Table G-13** in **Appendix G** of the **PEIR SIR** (RED, 2022)) provided in **Sections 25.9 to 25.15** within **Chapter 25** of the **PEIR** (RED, 2021).

Historic environment

- 3.2.20 The historic environment assessment within the **PEIR** and **PEIR SIR** (RED, 2021; 2022) considered potential effects on onshore historic environment receptors. **Section 2** of this **PEIR FSIR** evaluates whether LACR-01d and associated AAs will result in any changes to the assessment outcomes and conclusions of the **PEIR** (RED, 2021).
- 3.2.21 Where new receptors or changes to magnitude of effects on known receptors have been identified, the residual effects are comparable to those identified in the **PEIR** (RED, 2021). Therefore, LACR-01d and associated AAs with relevant LACRs, ACRs, MRs, AAs and TCs, following the implementation of embedded environmental measures (**Appendix F** of the **PEIR SIR**, (RED, 2022)), are expected to be comparable to the overall assessment outcomes and conclusions presented in the **PEIR** (RED, 2021). Further historic environment surveys and analysis will be required (for example surveys to understand the presence and significance of as yet unknown archaeological remains) in relation to LACR-01d and the relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs). A detailed baseline and the overall assessment for historic environment receptors will be provided in the ES.

Water environment

- 3.2.22 The water environment assessment within the **PEIR** (RED, 2021) and **PEIR SIR** (RED, 2022) considered potential effects on a range of individual receptors that were identified across the onshore cable corridor and onshore substation area.

Section 2 of this **PEIR FSIR** evaluates whether there will be any changes to the assessment outcomes and conclusions of the **PEIR** (RED, 2021) at specific geographic locations. **Section 2** outlines that there were no new environmental receptors identified at LACR-01d and the associated AAs, and that based on further detailed investigations undertaken as part of the hydrogeological risk assessment, and following the implementation of embedded environmental measures (see **Appendix D** in the **PEIR SIR** (RED, 2022)), there is unlikely to be a change to the assessment outcomes presented at **PEIR** stage (RED, 2021).

- 3.2.23 It is therefore considered unlikely that, LACR-01d including the associated AAs and other relevant alternatives and modifications taken together, there will be a change in the overall preliminary assessment in **Section 27.9** to **27.14** within **Chapter 27** of the **PEIR** (RED, 2021).

Major accidents and disasters

- 3.2.24 In relation to major accidents and disasters, LACR-01d and associated AAs along with the relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs), are largely comparable to the original PEIR Assessment Boundary. It does not run through the consultation distances of any new Control of Major Accident Hazard (COMAH) facilities, nor does it introduce any significant new hazards or receptor populations. Therefore, LACR-01d and associated AAs do not significantly alter the baseline, environmental receptors, or the overall outcomes and conclusions presented in **Sections 28.6** to **28.11** within **Chapter 28: Major accidents and disasters, Volume 2** of the **PEIR** (RED, 2021).

Greenhouse gas assessment

- 3.2.25 LACR-01d and associated AAs along with the relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs), do not change the baseline, environmental receptors or the overall assessment outcomes and conclusions presented in **Appendix 5.2: Greenhouse gas assessment, Volume 4** of the **PEIR** (RED, 2021).

4. Summary

- 4.1.1 This section summarises the conclusions of the high-level environmental review of the proposed alternative LACR-01d and associated AAs.
- 4.1.2 LACR-01d will introduce additional sensitive receptors compared with those presented in in the **PEIR** (RED, 2021). The aspect assessments that include these additional sensitive receptors are socio-economics, landscape and visual impact, air quality, terrestrial ecology and nature conservation, transport, historic environment and water environment, as described in **Section 2**. Some changes in the magnitude of effect to sensitive receptors will be experienced for LACR-01d and are noted in the relevant aspect sections.
- 4.1.3 Considering the implementation of embedded environmental measures (**PEIR SIR Appendix F** (RED, 2022)), new significant residual effects have been identified which alter the assessment outcomes and conclusions presented in the **PEIR** (RED, 2021) for socio-economics, landscape, and historic environment.
- 4.1.4 The overall review for each environmental aspect of LACR-01d and associated AAs with relevant alternatives and modifications (LACRs, ACRs, MRs, AAs and TCs) outlined in the **PEIR SIR** (RED, 2022) is provided in **Section 3**. This review identifies a change to the overall assessment and conclusions in relation to onshore recreation as outlined in **Chapter 18, Volume 2** of the **PEIR** (RED, 2021). As such, when considering the implementation of embedded environmental measures (**PEIR SIR Appendix F** (RED, 2022)), new significant residual effects have been identified which alter the assessment outcomes and conclusions presented in the **PEIR** (RED, 2021) for onshore recreation (socio-economics). As the design becomes finalised prior to the DCO Application, further update and refinement of the maximum design scenario and embedded environmental measures will inform the environmental assessments presented in the ES.

5. Glossary of terms and abbreviations

Table 5-1 Glossary of terms and abbreviations

Term	Definition
Alternative Access (AA)	Alternative Accesses (AAs) are onshore part of the original PEIR Assessment Boundary amendments and represent the location of the additional temporary construction and permanent accesses.
Alternative Cable Route (ACR)	Alternative Cable Routes (ACRs) are areas that deviate geographically from the onshore part of the original PEIR Assessment Boundary to enable an additional onshore cable corridor option to be considered by RED. Due to the extent of the geographical deviation these additional areas are considered more likely to include new environmental receptors and/or the potential to change the resulting assessment outcomes and conclusions presented at PEIR stage.
Agricultural Land Classification (ALC)	ALC categorises land into five different grades based on the extent to which physical or chemical characteristics inflict long term limitations on an agricultural site.
ALC Grade 1	Land within this grade has little to no limitations to agricultural use. This land can support a very wide range of agricultural and horticultural crops including top fruit, soft fruit salad crops and winter harvested vegetables. Yields are consistently high
ALC Grade 2	Grade 2 indicates very good quality agricultural land with only minor limitations that affect crop yield, cultivations or harvesting and potential to grow a wide range of agricultural and horticultural crops. The level of yield is generally high but may be lower or more variable than Grade 1.
ALC Grade 3	The Grade 3 ALC classification indicates good to moderate agricultural land, meaning land with moderate limitations affecting choice of crops, timing, type of cultivation, harvesting and level of yield. Grade 3 land is divided into two subgrades designated as 3a and 3b. Grade 3a (good quality agricultural land) is defined as best and most

Term	Definition
ALC Grade 4	versatile (BMV) land, while Grade 3b (moderate quality agricultural land) is not BMV.
ALC Grade 5	Grade 4 indicates poor quality agricultural land, meaning land with severe limitations on the range of viable crops and level of yields, which is mainly suited to grass with occasional arable crops such as cereals and forage crops. Grade 4 can also include arable land that is very dry because of drought.
Archaeological Notification Area (ANA)	Grade 5 land has severe limitations which restricts use to permanent pasture or rough grazing, except for occasional pioneer forage crops.
Best and Most Versatile (BMV)	Archaeological Notification Areas (ANAs) are areas where there is evidence of archaeological remains.
Bridleway	The term BMV refers to the Best and Most Versatile agricultural land value from a soils and agriculture perspective.
County Character Area (CCA)	A Public Right of Way used for walking, horse riding, bicycles, mobility scooters or powered wheelchairs.
Development Consent Order (DCO)	Areas of distinct and recognisable landscapes as categorised by the relevant county council.
Development Consent Order (DCO) Application	This is the means of obtaining permission for developments categorised as Nationally Significant Infrastructure Projects, under the Planning Act 2008.
Environmental Impact Assessment (EIA)	An application for development consent to undertake a Nationally Significant Infrastructure Project, under the Planning Act 2008, made to the Planning Inspectorate. The Planning Inspectorate will consider the application and make a recommendation to the Secretary of State for Business, Energy, and Industrial Strategy, who will decide on whether development consent should be granted for the Proposed Development.
Environmental measures	The process of evaluating the likely significant environmental effects of a proposed project or development over and above the existing circumstances (or 'baseline').
	Measures which are proposed to prevent, reduce and where possible offset any significant adverse

Term	Definition
Environmental Statement (ES)	effects (or to avoid, reduce and if possible, remedy identified effects).
Footpath	A type of Public Right of Way used for walking, running, mobility scooters or powered wheelchairs.
Gross value added (GVA)	The measure of the value of goods and services produced in an area, industry or sector of an economy.
Guidelines for Landscape and Visual Impact Assessment (GLVIA)	The third edition of the Landscape Institute and Institute of Environmental Management and Assessment (IEMA) publication outlining guidelines for Landscape and Visual Impact Assessment.
Habitat of Principal Importance (HPI)	Habitats designated priority under Section 41 of the Natural Environment and Rural Communities Act (2006) of Principal Importance.
Hydrological Risk Assessment (HRA)	Hydrogeological Risk Assessment (HRA) to support the Water environment chapter in support of the ES.
Historic Environment Record (HER)	The HER is a collection of information on the nature and location of archaeological sites in Suffolk. This record can be used to identify and assess sites with regards to new development.
Horizontal Directional Drill (HDD)	Horizontal Directional Drill (HDD) is a trenchless crossing technique. HDD is a process whereby a tunnel is drilled under an obstacle and a cable duct is pulled through the drilled underground tunnel. It avoids the need for trenches, and enables minimal disruption to routing cables through rivers, roads, drains and other obstacles.
HDD Compound	Used to encompass all the HDD equipment/welfare facilities, entry pit excavation (& soil storage), removal of drilled soil and storage of drilling fluids. Construction materials and plant associated with the construction of the Horizontal Drilling (HDD) at landfall, such as cable and ducting.
Landscape Character Area (LCA)	These are single unique areas which are discrete geographical areas of a particular landscape type.

Term	Definition
Local Wildlife Site (LWS)	Local Wildlife Sites are non-statutory designations conferred by local planning authorities and given weight through local planning policy. These sites are selected through a selection of criteria (criteria are area dependent) aimed at identifying “substantive nature conservation value”.
Longer Alternative Cable Route (LACR)	These are areas that deviate geographically from the onshore part of the original PEIR Assessment Boundary, to enable an alternative onshore cable corridor option to be considered by RED and are over 5km in length.
Ministry of Agriculture Fisheries and Food (MAFF)	The former Ministry of Agriculture, Fisheries and Food (MAFF) was a United Kingdom government department created by the Board of Agriculture Act 1889, now Department for Environment, Food & Rural Affairs (Defra).
Modified Route (MR)	The Modified Routes (MRs) include new areas directly adjacent to the onshore part of the original PEIR Assessment Boundary. These are being proposed to facilitate flexibility in the design of the onshore cable corridor at specific locations in order to accommodate cable realignments, or widened working areas (i.e., for laying out equipment) or soil storage.
National Character Area (NCA)	An area of distinct and recognisable character at the national scale.
Nationally Significant Infrastructure Project (NSIP)	Nationally Significant Infrastructure Projects (NSIPs), under the Planning Act 2008, are major infrastructure developments in England and Wales which are consented by DCO. These include proposals for offshore wind farms with an installed capacity greater than 100MW.
Outline Construction Traffic Management Plan (CTMP)	The outline Construction Traffic Management Plan (CTMP) which will be provided alongside the DCO application.
PEIR Assessment Boundary	The PEIR Assessment Boundary combines the search areas for the offshore and onshore infrastructure associated with the Proposed Development at the PEIR stage. It is defined as the area within which the Proposed Development and associated infrastructure will be located, including

Term	Definition
Preliminary Environmental Information Report (PEIR)	the temporary and permanent construction and operational work areas.
Preliminary Environmental Information Report (PEIR) Supplementary Information Report (SIR)	<p>The Preliminary Environmental Information Report (PEIR) is the written output of the Environmental Impact Assessment undertaken to date for the Proposed Development. It is developed to support formal consultation. The PEIR presents the preliminary findings of the assessment to allow an informed view to be developed of the Proposed Development. The PEIR provides an overview of the assessment approach that has been undertaken, along with the preliminary conclusions on the likely significant effects of the Proposed Development and environmental measures proposed.</p> <p>The original Rampion 2 PEIR (RED, 2021) was published in July 2021 in support of Section 42 consultation under the Planning Act 2008.</p>
Preliminary Environmental Information Report (PEIR) Further Supplementary Information Report (FSIR)	<p>The PEIR Supplementary Information Report (SIR) identifies and provides additional supporting preliminary environmental information associated with proposed alternatives and modifications to the onshore part of the original PEIR Assessment Boundary which have been identified since the publication of the original PEIR (RED, 2021) in July 2021.</p>
Private Water Supply (PWS)	<p>The PEIR Further Supplementary Information Report (FSIR) identified and provides further preliminary environmental information associated with the proposed alternative route option identified since the publication of the original PEIR and PEIR SIR in July 2021 and October 2022 respectively (RED, 2021; 2022).</p>
Public Right of Way (PRoW)	<p>PWS refers to Private water supply” or “private supply of water” meaning a supply of water other than a supply provided directly by a water undertaker or licensed water supplier, and which is comprised of all physical assets from the point of abstraction to the point of use, including associated pipes, fittings and tanks.</p>
Outline Public Rights of Way Management Plan (PRoWMP)	<p>A path, road or track that is open for use by anyone.</p>
Outline Public Rights of Way Management Plan (PRoWMP)	<p>The outline Public Rights of Way Management Plan (PRoWMP) is a document which will be provided alongside the DCO Application.</p>

Term	Definition
Rampion 1	The existing Rampion Offshore Wind Farm located in the English Channel in off the south coast of England.
Restricted Byway	A Public Right of Way used for walking, cycling, horse riding and horse drawn carriages amongst other non-motorised vehicles.
RED	Rampion Extension Development Limited
SDNPA	South Downs National Park Authority
SDW	South Downs Way National Trail
SDTA	South Downs Training Area
Outline Soil Management Plan (SMP)	The outline Soil Management Plan is a document which will be provided alongside the DCO application
Special Landscape Qualities (SLQ)	Characteristics that give rise to an area's outstanding scenery.
Statutory Consultation	Statutory consultation is consultation required under Section 42 and Section 47 of the Planning Act 2008 with the relevant consultation bodies and the public on the preliminary environmental information.
The Proposed Development/ Rampion 2	Rampion Extension Development Limited (RED) is developing the Rampion 2 Offshore Wind Farm Project (Rampion 2) located adjacent to the existing Rampion Offshore Wind Farm Project ('Rampion 1') in the English Channel in the south of England. Rampion 2 comprises of both onshore and offshore infrastructure associated with the proposed offshore wind farm.
Trenchless Crossing (TC)	Trenchless crossing (TC) is when the cable duct is drilled or bored under a constraint(s). As part of the onshore cable route, trenchless crossing methods will be used under some constraints (e.g. main watercourses, railways, roads that form part of the Strategic Highways Network and other identified constraints).
Trenchless Crossing Compound	Trenchless crossing compounds encompass all the trenchless equipment/welfare facilities associated with the construction of trenchless crossings such as construction materials and plant associated with the construction i.e. cable and ducting (as required).

Term	Definition
	This area includes entry pit excavations and storage of drilling fluids (as required).
Unexploded Ordnance (UXO)	Unexploded ordnance are explosive weapons (bombs, shells, grenades, land mines, naval mines, etc.) that did not explode when they were employed and still pose a risk of detonation, potentially many decades after they were used or discarded.
Water Framework Directive (WFD)	The Water Framework Directive (WFD) is referred to in legislation as Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.
WTG	Wind Turbine Generators
Zone of Theoretical Visibility (ZTV)	A map, usually digitally produced, showing areas of land within which a development is theoretically visible.

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Appendix A

Figures (FSIR Plans)

Appendix B

Statutory and non-statutory environmental designations and other key environmental features

Appendix C

Review summary for Longer Alternative Cable Route (LACR) LACR-01d

Green Cells	<p>As a result of the alternative or modification to the onshore part of the original PEIR Assessment Boundary, there is <u>no change</u> to overall assessment outcomes and/or conclusions presented in the PEIR (RED 2021).</p> <p>Text is provided to clarify where appropriate, including notable changes to environmental receptors since PEIR where relevant.</p>
Orange Cells	<p>As a result of the alternative or modification to the onshore part of the original PEIR Assessment Boundary, there has been a potential change in magnitude of impact leading to a <u>potential increase</u> in the overall assessment of significance presented at PEIR.</p> <p>Text is provided where appropriate, indicating whether there is likely to be a change to the assessment of significance.</p>
White Cells	<p>As a result of the alternative or modification to the onshore part of the original PEIR Assessment Boundary, there has been a potential change in magnitude of impact leading to a <u>potential reduction</u> in the overall assessment of effects presented at PEIR.</p> <p>Text is provided where appropriate, indicating whether there is likely to be a change to the assessment of significance.</p>

Table C1 Review of LACR-01d

Aspect	LACR-01d
Socio-economics	<p>Additional receptors including users of PRowS are detailed in Table D-1 in Appendix D.</p> <p>Moderate/major adverse effect (Significant) on users of Restricted Byway 2092 and Restricted Byway 2693 as a result of LACR-01d (north).</p> <p>Moderate/major adverse effect (Significant) on users of Restricted Byway 2092, Bridleway 2107, and Bridleway 2109 as a result of AA-35.</p>
Landscape and visual	<p>Onshore cable corridor passes through two Landscape Character Area (LCAs) and the South Downs National Park (SDNP).</p> <p>A significant adverse effect on the following landscape receptors:</p> <ul style="list-style-type: none"> • A3: Arun to Adur Open Downs LCA;

Aspect	LACR-01d
	<ul style="list-style-type: none"> • I3: Arun to Adur Downs Scarps LCA; and • part of the SDNP. <p>Crosses approximately five field boundaries.</p> <p>Significant adverse visual effects during the construction phase:</p> <ul style="list-style-type: none"> • Bridleways: 2091, 2108_1, 2173, 2208_1, 2209, 2260, 2264, 2282, 2282_1, 2666, 2688 and 2689; • Footpaths: 2208_2, 2260_1, 2262, 2262_1 and 2263; and • Restricted Byways; 2092, 2673 and 2693.
Air quality	Residential receptors identified within 350m of LACR-01d, including Myrtle Grove Farm and Longfurlong Farm.
Soils and agriculture	Additional area of approximately 15ha potentially subject to temporary disturbance during the construction phase, over and above the original PEIR Assessment Boundary.
Noise and vibration (onshore)	No new noise sensitive receptors identified within 50m of LACR-01d or within 20m of AA-33 to AA-35.
Terrestrial ecology and nature conservation	<p>Passes through a range of arable and pasture farmland that are bounded, in places, by a number of hedgerows. LACR-01d includes one tree line crossing and up to two crossings of defunct hedgerow that are now classed as scattered scrub.</p> <p>LACR-01d (east) and LACR-01d (north) pass through good quality semi-improved grassland on Blackpatch Hill and at the northern extent of LACR-01d (north) there is an overlap with Sullington Hill Local Wildlife Site (LWS). Sullington Hill LWS will be crossed using trenchless crossing techniques.</p>
Transport	No change to the assessment conclusions in the PEIR (2021) or PEIR SIR (2022) .
Ground conditions	No change.
Historic environment	<p>During the construction phase of LACR-01d (west), there is potential for a medium magnitude of change to a receptor of high heritage significance (scheduled monument, Itford Hill style settlement on Cock Hill 1015881).</p> <p>Bronze Age settlement activity recorded within LACR-01d (east) (MWS2968) and LACR-01d (west) (MWS3009).</p> <p>Three known Bronze Age barrow sites within LACR-01d (north), one of which (MWS6581) was subsequently used as a Saxon cremation burial (MWS2804).</p>

Aspect	LACR-01d
	<p>Possible exploratory hollow of later Neolithic or Early Bronze Age date (MWS8026) within LACR-01d (east).</p> <p>Known scheduled site of an Iron Age defended settlement and Romano-British shrine (1005850 and MWS5598) lies adjacent to LACR-01d (AA-35). High potential for archaeological remains to be present.</p> <p>Known scheduled site of a Prehistoric flint mine and part of a barrow cemetery (1015880) lies adjacent to LACR-01d (AA-33). High potential for archaeological remains to be present.</p> <p>Evidence for numerous historic extraction pits.</p> <p>LiDAR features include linear banks suggestive of field boundaries or trackways within LACR-01d (north).</p>
Water environment	Several dew ponds between Blackpatch Hill and Harrow Hill.
Major accidents and disasters	No change.
Greenhouse gas assessment	No change.

