

Appendix E

Terrestrial ecology and nature conservation

1. Terrestrial ecology and nature conservation

1.1 Introduction

- 1.1.1 This Appendix provides a baseline for the Longer Alternative Cable Route (LACR) -01d including LACR-01d (west), LACR-01d (east) and LACR-01d (north) and the associated alternative accesses (AAs) AA-33 to AA-35. This is comparable to that used within the [Preliminary Environmental Information Report \(PEIR\)](#) (RED, 2021), the [PEIR Supplementary Information Report \(SIR\)](#) (RED, 2022) and [Appendix I](#) of the [PEIR SIR](#) (RED, 2022). The baseline information provided is equivalent to that presented in [Appendix I](#) of the [PEIR SIR](#) (RED, 2022) to allow for commentary to be comparable. This baseline has been used to inform the assessment provided in the [PEIR Further Supplementary Information Report \(FSIR\)](#).
- 1.1.2 Further detail is provided in [Section 2.2](#) on the embedded environmental measure C-115 regrading hedgerow restoration described in the [Appendix I](#) of the [PEIR SIR](#) (RED, 2022) following technical engagement with members of the Evidence Plan Process (EPP) Expert Topic Group (ETG) in November 2022. This is described in [Section 2](#) of the [PEIR FSIR](#).

1.2 Baseline – Desk study methodology

- 1.2.1 A desk-based data-gathering exercise was undertaken to obtain existing information for the area crossed by LACR-01d including LACR-01d (west), LACR-01d (east), LACR-01d (north) and associated AAs (see [Figure E1](#)). Data relating to relevant statutory and non-statutory sites designated for their nature conservation importance, Habitats and Species of Principal Importance in England, legally protected and controlled species and other conservation notable species¹ that have been recorded over the previous 10 years (2012 to 2022) was gathered. [Table E-1](#) lists the data compiled within the Study Area and associated areas of search. The 'Study Area' for this desk study comprises:
- land within LACR-01d including LACR-01d (west), LACR-01 (east), LACR-01 (north) and associated AAs (AA33 to AA35);
 - areas of search (measured from the boundaries of LACR-01d for sites designated for their nature conservation interest at the international/national site network, national and local levels);
 - an area of search for legally protected and notable ecological features; and
 - an area of search for any legally controlled species.

¹ A conservation notable species is one that has some form of conservation designation (for example it is present on a red list) but has no specific legal protection.

- 1.2.2 This desk study was informed by data obtained from Sussex Biodiversity Records Centre (SxBRC) and Multi Agency Geographic Information for the Countryside (MAGIC) database (2022). The information gathered compliments the desk study report published at PEIR (see [Appendix 23.2: Terrestrial ecology desk study, Volume 4](#) of the PEIR (RED, 2021) and is comparable to that in [Appendix I](#) of the PEIR SIR (RED, 2022)).

Table E-1 Data gathered during the desk study for LACR-01d

Ecological feature	Example/definition	Coverage of Study Area
Statutory sites designated under international conventions or the Habitats Regulations 2019	Special Areas of Conservation (SAC), possible SAC (pSAC), Special Protection Areas (SPA), potential SPA (pSPA), Ramsar sites, proposed Ramsar sites and sites identified, or required, as compensatory measures for adverse effects on other Habitats Regulations Assessment (HRA) sites ² .	<p>SACs and possible SACs were searched for inside and within 12km of LACR-01d to reflect recommendations in the Draft Sussex Bat Special Area of Conservation: Planning and Landscape Enhancement Protocol (also known as the “<i>Draft Sussex Bat SAC Protocol</i>”) (South Downs National Park Authority (SDNPA) and Natural England, 2018).</p> <p>SPAs, pSPAs, Ramsar sites and proposed Ramsar sites were searched for inside and within 10km of LACR-01d reflecting the upper foraging distances of dark-bellied brent geese <i>Branta bernicla</i> (Summers & Critchley, 1990) and Bewick’s swan <i>Cygnus columbianus bewickii</i> (Robinson et al. 2004) from roost locations. These species were identified as the species with the largest foraging distances for terrestrial habitats for any SPA features within the wider area.</p>
Statutory sites designated under national legislation	Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs).	SSSIs with bats listed on the citation were searched for inside and within 12km of LACR-01d. NNRs and all other

² Definition is reproduced from the draft ‘Overarching National Policy Statement for Energy (EN-1) – September 2021’

Ecological feature	Example/definition	Coverage of Study Area
Locally designated sites	In Sussex, these are termed as Local Wildlife Sites (LWS) or notable road verges.	SSSIs were searched for inside and within 5km of LACR-01d following precedent for other large infrastructure projects. LNRs were searched for within 1km of LACR-01d reflecting the purpose of their designation.
Habitats of Principal Importance (HPI) and Species of Principal Importance (SPI)³, Red listed species and legally protected species	HPIs and SPIs, species recorded on The International Union for Conservation of Nature (IUCN) Red List of Threatened Species (2021) and/or local Red Lists ⁴ for the UK or relevant sub-units (e.g. regions or counties) and legally protected habitats and species include those listed on Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended), those included on Schedules 2 and 5 of the Habitats Regulations. Badger and Hedgerows are provided protection under the Protection of Badgers Act 1992 and the Hedgerows Regulations 1997 respectively.	HPI and SPI, Red listed species and legally protected species were searched for inside and within 2km of LACR-01d.
Legally controlled species	Legally controlled species include those listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).	Legally controlled species searched for within 2km of LACR-01d.

³ Habitats and Species of Principle Importance covered under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006

⁴ The IUCN red list provides taxonomic, conservation status and distribution information on taxa that have been globally evaluated using the IUCN Red List Categories and Criteria. This system is designed to determine the relative risk of extinction, and the main purpose of the IUCN Red List is to catalogue and highlight those taxa that are facing a higher risk of global extinction - those listed as Critically Endangered, Endangered and Vulnerable (IUCN, 2021)

Ecological feature	Example/definition	Coverage of Study Area
Bat roosting locations	Bat roost locations are considered separately from other species records in accordance with guidance.	Bat roosting locations were searched for within 2km of LACR-01d.
Water body locations	Water bodies may support species within the groups listed above (for example legally protected great crested newts <i>Triturus cristatus</i>).	Water body locations were searched for inside and within 250m of LACR-01d.

1.3 Field Survey Methodology

- 1.3.1 Field surveys were undertaken in February 2023 to establish a high-level baseline. A Phase 1 habitat survey was undertaken to classify and map the habitats within and adjacent (within 50m) to LACR-01d and AAs (the 'Survey Area'). The survey was 'extended' to identify the presence or potential presence of species of importance for nature conservation and/or species afforded legal protection. The survey followed the methods described in the Joint Nature Conservation Committee (JNCC) Handbook for Phase 1 habitat survey (2016). The majority (in excess of 90%) of LACR-01d was subject to survey, with one area described from neighbouring fields only.
- 1.3.2 A ground level visual assessment of trees within and adjacent to the boundary of LACR-01d was also undertaken to determine the potential for bat roosts to be present. This followed survey guidance from the Bat Conservation Trust (Collins, 2016).
- 1.3.3 The surveys were undertaken across the Survey Area, although where access to private land was not available, recording took place from Public Rights of Way (PRoW).

2. Results

2.1 Baseline – Desk Study Results

2.1.1 One Ramsar site, one SPA and three SACs were identified through the desk study, none of which fall within LACR-01d. **Table E-2** provides information on the designations. All of the designations listed in **Table E-2** were identified within the **Appendix 23.2** of the **PEIR** (RED, 2021). All of the European sites identified are located at greater distances to LACR-01d than to the closest point of the PEIR Assessment Boundary.

Table E-2 International/European sites designated for nature conservation

Site name	Designation	Designated features	Approximate distance and direction from closest points of LACR-01d
Arun Valley (overlaps with Arun Valley SPA and SAC)	Ramsar	Wetland invertebrate and plant species, assemblage of wintering waterfowl.	6km north-west of LACR-01d (west).
Arun Valley (overlaps with Arun Valley SPA and Ramsar site)	SAC	Ramshorn snail <i>Anisus vorticulus</i> .	6km north-west of LACR-01d (west).
Arun Valley (overlaps with Arun Valley Ramsar site and SAC)	SPA	Bewick's swan (non-breeding) Waterfowl assemblage (non-breeding): including shoveler <i>Anas clypeata</i> , teal <i>Anas crecca</i> , wigeon <i>Anas Penelope</i> and Bewick's swan.	6km north-west of LACR-01d (west).
Duncton to Bignor Escarpment	SAC	Asperulo-Fagetum beech forests.	10.4km north-west of LACR-01d (west).
The Mens	SAC	Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrub layer (<i>Quercion robori-petraeae</i> or <i>Ilici-Fagenion</i>) and Barbastelle <i>Barbastella barbastellus</i> .	12km north-west of LACR-01d (north).

Statutory nature conservation sites (national)

- 2.1.2 A total of five SSSIs designated for biodiversity were identified through the desk study (one SSSI covering geological features was also identified). Of the five SSSIs designated for biodiversity all are within 5km of LACR-01d. Following a further search up to 12km from LACR-01d, no SSSIs cited for one or more bat species were found. LACR-01d does not overlap with any SSSI.
- 2.1.3 **Table E-3** provides information on the designated sites.

Table E-3 Nationally designated sites for nature conservation

Site name	Designation	Designated features	Approximate distance and direction from closest points of LACR-01d
Amberley Mount to Sullington Hill⁵	SSSI	Calcareous grassland Juniper <i>Juniperus communis</i> Fly honeysuckle <i>Lonicera xylosteum</i> Adonis blue butterfly <i>Polyommatus bellargus</i>	330m north of LACR-01d (north).
Chanctonbury Hill	SSSI	Breeding bird assemblage Calcareous grassland Woodland Great crested newt	3.6km east of LACR-01d (east).
Chantry Mill	SSSI	EA – Aptian – Albian	1.7km north of LACR-01d (north).
Cissbury Ring	SSSI	Breeding bird assemblage Calcareous grassland Adonis blue butterfly	4.5km south-east of LACR-01d (north).
Parham Park	SSSI	Lichens Invertebrate assemblage	3.5km north-west of LACR-01d (north).

⁵ Amberley Mount to Sullington Hill SSSI is also identified as groundwater dependent terrestrial ecosystems in **Chapter 27: Water environment, Volume 2** of the **PEIR (RED, 2021)**. This aspect of the SSSI will be considered alongside the designated features in all future assessment.

Site name	Designation	Designated features	Approximate distance and direction from closest points of LACR-01d
		Woodland	
Sullington Warren	SSSI	Breeding bird assemblage Dry heath habitat	2.0km north of LACR-01d (north).

Non-statutory designated sites of nature conservation

2.1.4 The desk study identified two non-statutory designated sites of nature conservation within 2km of LACR-01d. **Table E-4** provides information on these non-statutory designated sites of nature conservation.

Table E-4 Non-statutory sites designated for nature conservation

Site name	Designation	Designated features	Approximate distance and direction from closest point of LACR-01d
Long Furlong and Church Hill	LWS	<p>Long Furlong is a steep north and west-facing slope between the A280 and Clapham Woods, supporting rich chalk grassland and scrub.</p> <p>Church Hill is a complex mosaic of chalk grassland, species-rich scrub and woodland.</p> <p>Long Furlong and Church Hill form a large piece of contiguous habitat, so have been included as one site.</p>	1.6km south-east of LACR-01d (east).
Sullington Hill	LWS	<p>This stretch of the South Downs escarpment supports moderately species-rich chalk grassland on north and east-facing slopes. Some areas are maintained by grazing while others are no longer grazed and have become heavily scrub-invaded. The site includes small areas of semi-natural woodland.</p>	Overlaps with LACR-01d (north).

Habitats listed on the Priority Habitat Inventory

- 2.1.5 LACR-01d crosses areas of habitat listed on the Priority Habitat Inventory. LACR-01d (east) and LACR-01 (north) cross an area of good quality semi-improved grassland (noted as non-priority on the data entry) on Blackpatch Hill (data source is SXBRC Environmental Survey Directory of 1994⁶). More of this habitat type is crossed close to Sullington Hill (data source high-level stewardship information). At Sullington Hill the habitat was identified as improved pasture during field survey (in keeping with surveys from adjacent fields surveyed in previous years), whilst on Blackpatch Hill poor semi-improved grassland was identified from adjacent fields. However, the status of this grassland will need to be confirmed in late spring / summer based on survey limitations.
- 2.1.6 Up to seven hedgerows are crossed by LACR-01d (dependent on the selection of LACR-01d (east) or LACR-01d (west)). Although these features are not listed on the Priority Habitats Inventory, they do qualify as HPI as they are dominated by native species.

Legally protected and notable species

- 2.1.7 SXBRC provided a large number of records for the Study Area, with these reflecting the make-up of species identified in the desk-study centred on the original PEIR Assessment Boundary ([Appendix 23.2](#) of the [PEIR](#) (RED, 2021)).
- 2.1.8 There are records of eight species of bat within the Study Area including barbastelle, serotine, whiskered bat, Natterer's bat, noctule, common pipistrelle, soprano pipistrelle and brown-long eared bat. Records of roosts are associated with buildings including churches, residential dwellings and farm buildings.
- 2.1.9 Dormouse has been recorded close to Clapham, although there are no records within the woodlands close to LACR-01d. Hedgehog and brown hare are also recorded in the area and appear to be relatively widely distributed.
- 2.1.10 All four species of common reptile (slow worm, grass snake, common lizard and adder) have been recorded in the Study Area. Amphibians and aquatic mammals are recorded within 2km but not within or within close proximity to LACR-01d due to lack of freshwater habitats.
- 2.1.11 A diverse array of invertebrates, many associated with calcareous grassland and woodland ride habitats, have been reported from the Study Area, alongside a long list of flora that is also characteristic of these habitats.
- 2.1.12 As would be expected for a Study Area that covers habitats associated with extensive woodland, calcareous grassland and arable farmland the list of birds both breeding and wintering in the area is large. The results gained are in keeping with those presented in [Appendix 23.2](#) of the [PEIR](#) (RED, 2021) and include a range of raptors, wildfowl, waders and passerines.

⁶ The SXBRC Environmental Survey Directory 1994 is a data source quoted by Magic, as opposed to being a publicly available document.

2.2 Field Survey Results

- 2.2.1 Phase 1 habitat survey data has been collected for LACR-01d. Data was gathered in areas where access to private land was granted, and from PRowS and the public highway where it was not available. The land access available has been sufficient for assigning a Phase 1 habitat category to approximately 90% of the habitat along LACR-01d and within 50m of it. Where habitat categories have not been assigned in the field, professional judgement has been used to assign habitat type based on satellite imagery and more remote observations. **Figure E1** shows the areas of habitat assigned a category during field survey, whilst **Figure E2** shows the Phase 1 habitat map.
- 2.2.2 LACR-01d progresses from the route shown in the **PEIR SIR** (RED, 2022) for LACR-01c in a northerly direction. LACR-01d (west) passes across areas of arable land and improved grassland before interfacing with LACR-01d (north). LACR-01d (west) crosses a tree line between fields and is then flanked on either side (outside of the boundary) by other tree lines and two small woodland copses. LACR-01d (east) crosses arable fields, prior to cutting across a species-poor hedgerow onto Blackpatch Hill. The grassland on Blackpatch Hill (also crossed by AA-33W) appears from adjacent areas to be poor semi-improved grassland (this is in keeping with photographs of the grassland available online⁷). LACR-01d (east) travels north across the flank of the hill, adjacent with a footpath, before interfacing with LACR-01d (north). LACR-01d (north) then progresses through arable land, with few field boundaries, until reaching Sullington Hill. The area of Sullington Hill LWS within the bounds of LACR-01d (north) is characterised by a mosaic of scrub and calcareous grassland (noting this area is to be crossed via trenchless crossing technique).
- 2.2.3 Survey also identified 23 trees with potential to support roosting bats within the Survey Area. All but one of these trees flank potential cable routes and would be retained, with a single ash on LACR-01d (west) being within a potential working area.

⁷ Photo albums of Blackpatch Hill available on websites Trigpointing UK and The Megalithic Portal

3. Further detail on embedded environmental measures for hedgerows

3.1 Introduction

- 3.1.1 The design of the onshore part of the Proposed Development has continued to progress taking into consideration feedback from statutory consultation (Section 42) and technical engagement, further data generated from the ongoing onshore environmental survey programme and the formulation of a greater understanding of the technical details associated with the construction and operation of the Proposed Development. Part of this onshore design evolution process focused on the design of embedded environmental measures for hedgerows and tree lines. Following technical engagement with the members of the EPP ETG in November 2022 and comments gathered in response to the **PEIR SIR** (RED, 2022), further amendment and clarification of the approach is provided here. This includes the direct reference to tree lines and acknowledgement that the approach of temporary translocation will be applied only where ground conditions suggest a good chance of success. The embedded mitigation measures 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** of the **PEIR FSIR**.
- 3.1.2 It should be noted that, the assessment of hedgerows (or mobile features that use them) is not reliant on whether restoration is via translocation or replanting, as described in the **PEIR** (RED, 2021). Habitat loss and fragmentation of hedgerows is considered as the realistic worst-case scenario, which is the removal of section of hedgerow and restoration through the planting of new whips. The approach detailed in **Sections 3.1.6 to 3.1.23**, which is aimed at enhancing the outcome of the restoration, is provided to correspond to the mitigation hierarchy⁸ for this HPI.
- 3.1.3 The installation of up to approximately 40.5km of onshore electrical transmission cables for Rampion 2 between the landfall at Climping and the National Grid's 400kV Bolney Substation requires the crossing of a large number of hedgerows and tree lines (number will depend on final design of the Proposed Development). Furthermore, hedgerows and tree lines will be affected by the creation of temporary construction compounds and the development of temporary accesses for construction vehicles. The information in **Sections 3.1.6 to 3.1.23** describes how each category of hedgerow/tree line will be managed during the construction, establishment and after care phases.
- 3.1.4 All hedgerows and tree lines within the proposed Development Consent Order (DCO) Limits will be numbered, outlined on a Vegetation Retention Plan (VRP)

⁸ The mitigation hierarchy is a concept where effects should be first be avoided, prior to being minimised, mitigated and then compensated for. This concept is integral to UK planning policy.

and tabulated. Each hedgerow/tree line will be assigned to one of the following categories:

- Retained hedgerows/tree lines (no loss proposed, any pruning in keeping with typical management);
- Coppiced hedgerows (hedgerow retained but cut to 0.9m where visibility splays for highway access/egress required – allowed to regrow following closure of temporary construction access);
- Notched hedgerows (one or more sections removed from a single hedgerow – reinstated following construction);
- Notched tree lines (one or more sections removed from a single tree line – reinstated following construction with scrub/hedgerow species);
- Temporarily lost hedgerows/tree lines (hedgerows/tree lines temporarily lost due to access, temporary construction compound establishment etc. restored following construction); and
- Permanently lost hedgerows/tree lines (hedgerows/tree lines lost within the permanent footprint of the proposed infrastructure).

3.1.5 In each section below, the proposed temporary construction activities in relation to hedgerows/tree lines is described for each category. Descriptions include reference to hedgerows with standard trees as approach may alter.

Retained hedgerows/tree lines

- 3.1.6 These are hedgerows/tree lines that will be retained intact. Hedgerows/tree lines will be retained in areas where it is possible to deliver the onshore cable installation works effectively without vegetation removal. Retained hedgerows/tree lines will be highlighted on the VRP. There are numerous stretches of hedgerow within the draft DCO Limits that will not be impacted by temporary construction works.
- 3.1.7 The retained hedgerows/tree lines in proximity of works will typically mark the edges of existing farm tracks that will be used for access, those that bound proposed temporary construction compounds and those that will be crossed as an incidental result of the use of trenchless crossing techniques to cross other constraints (e.g. roads and rivers). These hedgerows/tree lines will be managed if necessary (e.g. pruning back of hedgerows bushing out impeding passing of a track), but only to the same degree as would be typically undertaken by a landowner.
- 3.1.8 Where standard trees are present, suitable root protection areas will be maintained in line with *British Standard (BS) 5837:2012 'Trees in Relation to Design, Demolition and Construction'* (British Standards Institution, 2012).

Coppiced hedgerows

- 3.1.9 Where visibility at temporary construction access points to or from the public highway is compromised, and where it is appropriate to do so in line with advice

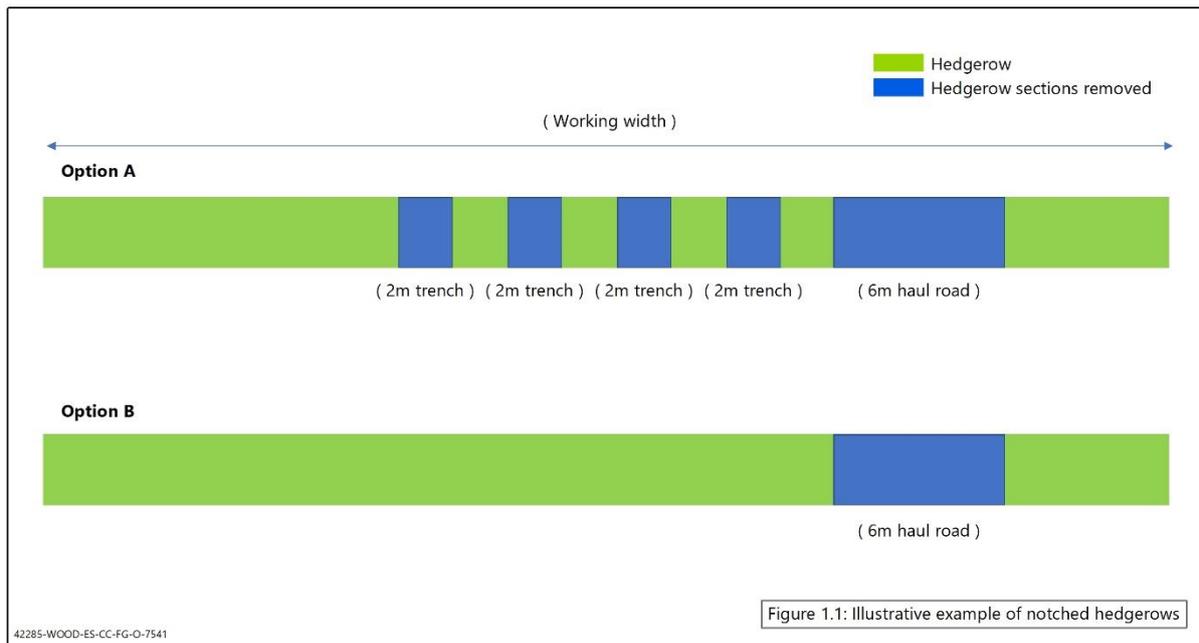
from the local highways authority, hedgerows will be retained but reduced in height to 0.9m; these will be shown on the VRP.

- 3.1.10 Where standard trees are within the hedgerow or there are tree lines, and it is deemed necessary to remove them for traffic safety reasons, these will be highlighted in the VRP.

Notched temporary displacement of hedgerows

- 3.1.11 Where hedgerows are crossed by the onshore electrical transmission cables and/or the temporary construction haul road these will be notched. This is defined as removing one or more short sections within the same hedgerow with the majority being retained within the onshore cable construction working corridor. The two notching options are shown in **Graphic E-1** below. With Option A representing typical hedgerow crossings and Option B representing hedgerows deemed “important” in line with the Hedgerows Regulations 1997 or those with particularly prominent standard trees.

Graphic E-1 Illustrative example of notched hedgerows



- 3.1.12 Each hedgerow crossing using Option A would comprise up to five notches (up to four onshore cable trenches each measuring 2m wide and one temporary construction haul road crossing measuring 6m wide) equating to a total of 14m. Where Option B is employed, cable ducts will be tunnelled with only a single 6m notch removed for the temporary construction haul road.
- 3.1.13 In order to maintain composition and promote habitat connectivity the hedgerow plants from within, notches will be lifted with a tree spade, maintained and then returned to their original positions where ground conditions suggest that success rates would be high (e.g. deep soils that are not typically water-stressed). This will

provide a rapid hedgerow reinstatement that gives structure earlier than would be expected for a standard planting regime. Success rates for transplantation are expected to be high where ground conditions are appropriate and in excess of 80%. However, if some transplants are unsuccessful (**Paragraph 3.1.16 to 3.1.18**) the woody framework that will be left will promote habitat connectivity, whilst also being a framework on which new plantings can be supported. Where conditions are not appropriate for this technique, the notches will be filled by planting new whips of a species composition in keeping with the remainder of the hedgerow.

- 3.1.14 Each hedgerow to be translocated would be pruned at the notches back to hard wood, and reduced in height to approximately 1m, to reduce the strain on the hedge prior to its translocation. A temporary receptor trench (within the immediate vicinity of the hedgerow and inside the proposed working area) would be prepared prior to a tree spade of suitable size being used to move each part of the hedge from its current position to its temporary one. The notching and removal of hedgerow would take place between October and March⁹ (other than in areas waterlogged during this period when works would need to take place as and when construction is possible and other issues such as active birds' nests can be suitably managed) with any gaps not immediately within active construction works being closed with temporary fencing as necessary. This timing allows hedgerows to be relocated at a time of year when the chances of success (i.e. survival of translocated hedge plants) are highest.
- 3.1.15 Following construction activity, the hedgerow lengths will be moved back to their original positions in the first winter period available (between October and March). The hedgerow to be replaced will be assessed at this period to determine whether it should be replaced with no additional planting (this would be the case where the section appears healthy) or with additional planting (if the section is either dead or shows limited prospects). In all instances the hedgerow will be replaced in order to ensure that the gaps are filled by natural material that will promote connectivity.
- 3.1.16 Monitoring would take place over the following spring/summer (April through August; minimum of two visits at least two months apart) to determine whether additional plantings are required at any of the restored notched hedgerows. Where additional planting is required, this will take place in the first winter period following identification of need. Additional checks over the following five spring/summer periods would take place to ensure that any failures are rectified with additional planting.
- 3.1.17 Prior to the commencement of construction a detailed Code of Construction Practice (based on the [outline Code of Construction Practice](#) that will accompany the DCO Application) will be produced that will detail inputs required to enable delivery of successful hedgerow restoration such as approaches to irrigation, pruning and protection from herbivores (e.g. rabbits, deer etc.).
- 3.1.18 Hedgerows that are considered “important” under the definition in the Hedgerows Regulations 1997 or contain mature standard trees of particular note (to be determined on a case-by-case basis) within the working width a notch will be created to take the temporary construction haul road only (see Option B in

⁹ Works would only take place in March, if necessary, with the schedule being set to achieve completion by end of February.

Graphic E-1). The onshore cable ducts would be tunnelled underneath to minimize the amount of temporary loss. The tunnelling will be achieved by hand digging (referred to by the National Joint Utilities Group (2007) as ‘broken trench’ technique) beneath the hedgerow (at typical duct depth of 1.2m) prior to the duct being pushed through (using an excavator) and connected to adjacent lengths of ducting (exact technique may vary dependent on ground conditions etc).

- 3.1.19 The VRP will show the hedgerows that will be notched by the temporary construction haul road and the onshore cable trenches and those notched by the temporary construction haul road separately (i.e. Option A or Option B).
- 3.1.20 Where possible the number or size of notches will be limited by use of existing field accesses and the targeting of gaps currently present within the hedgerows.

Notched tree lines

- 3.1.21 Where a tree line is to be crossed any direct removal will be restricted to notches of the same specification as described above for hedgerows. The detailed design will seek to use existing access routes and gaps in tree lines wherever possible to retain trees (to be outlined in the VRP), with hand digging or other techniques such as vacuum excavation used to avoid the need for felling where possible. Where trees do require felling, the restoration would require to use scrub/hedgerow species due to the need to avoid the planting of large deep rooted trees over or near to the cable ducts.

Temporarily lost hedgerows/tree lines

- 3.1.22 Some hedgerows/tree lines will be temporarily lost due to access works and temporary construction compounds. The hedgerows/tree lines will be removed and, latterly, reinstated with new planting following the completion of construction. The VRP will show the hedgerows that will be temporarily lost.

Permanently lost hedgerows/tree lines

- 3.1.23 Some hedgerows (including with standard trees)/tree lines will be lost to the permanent development at the onshore substation. The VRP will show the hedgerows that will be permanently lost.

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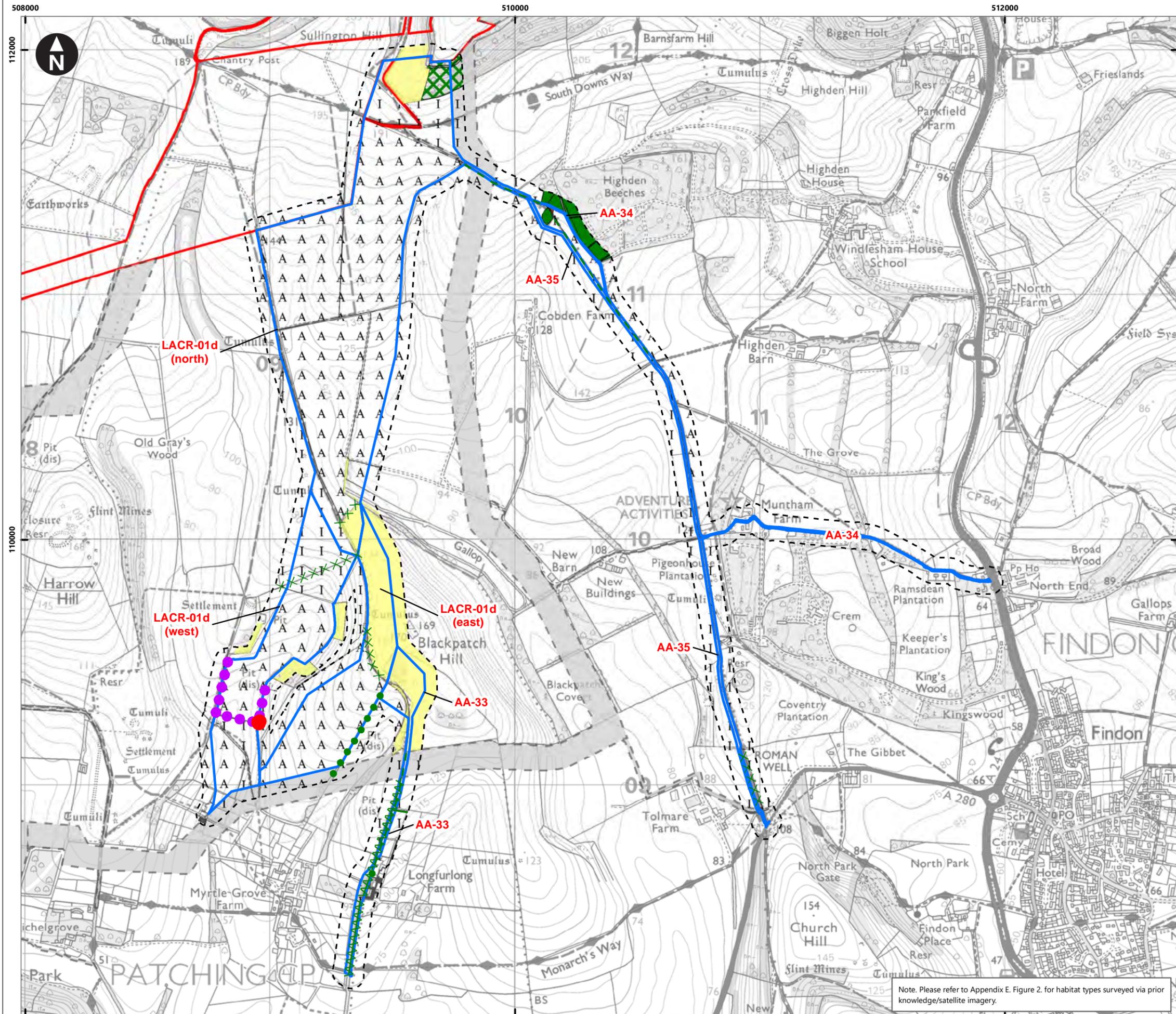
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Key

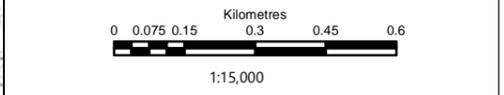
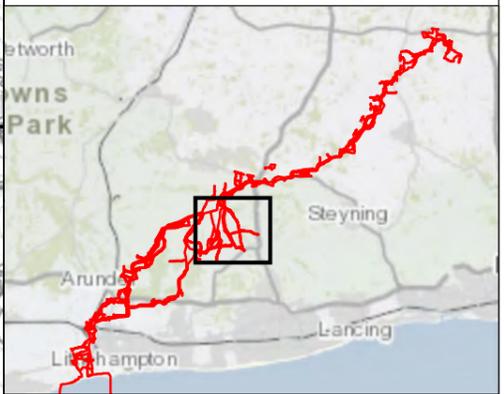
- PEIR Assessment Boundary
- New areas of land affected (assessed in this PEIR) (FSIR)
- LACR-01d 50m buffer
- New areas of land affected (previously assessed in the PEIR SIR)

Phase 1 habitats

- A1.1.1: Broadleaved woodland - semi-natural
- A2.1: Scrub- Dense/Continuous
- A2.2: Scrub- Scattered
- B4: Improved grassland
- C3.1: Tall ruderal
- J1.1: Arable
- J4: Bare ground
- Hardstanding
- A2.2: Scrub- Scattered
- A3.1: Parkland and scattered trees- broad-leaved
- A3.3: Parkland and scattered trees- mixed
- J2.1.1: Intact hedge native species-rich
- J2.1.2: Intact hedge native species poor
- J2.2.1: Defunct hedge native species-rich
- J2.2.2: Defunct hedge native species poor
- Habitats surveyed via prior knowledge/satellite imagery

Bat Roost potential

- High
- Trees with likely suitability to support roosting bats – subject to further survey



Rampion Extension Development

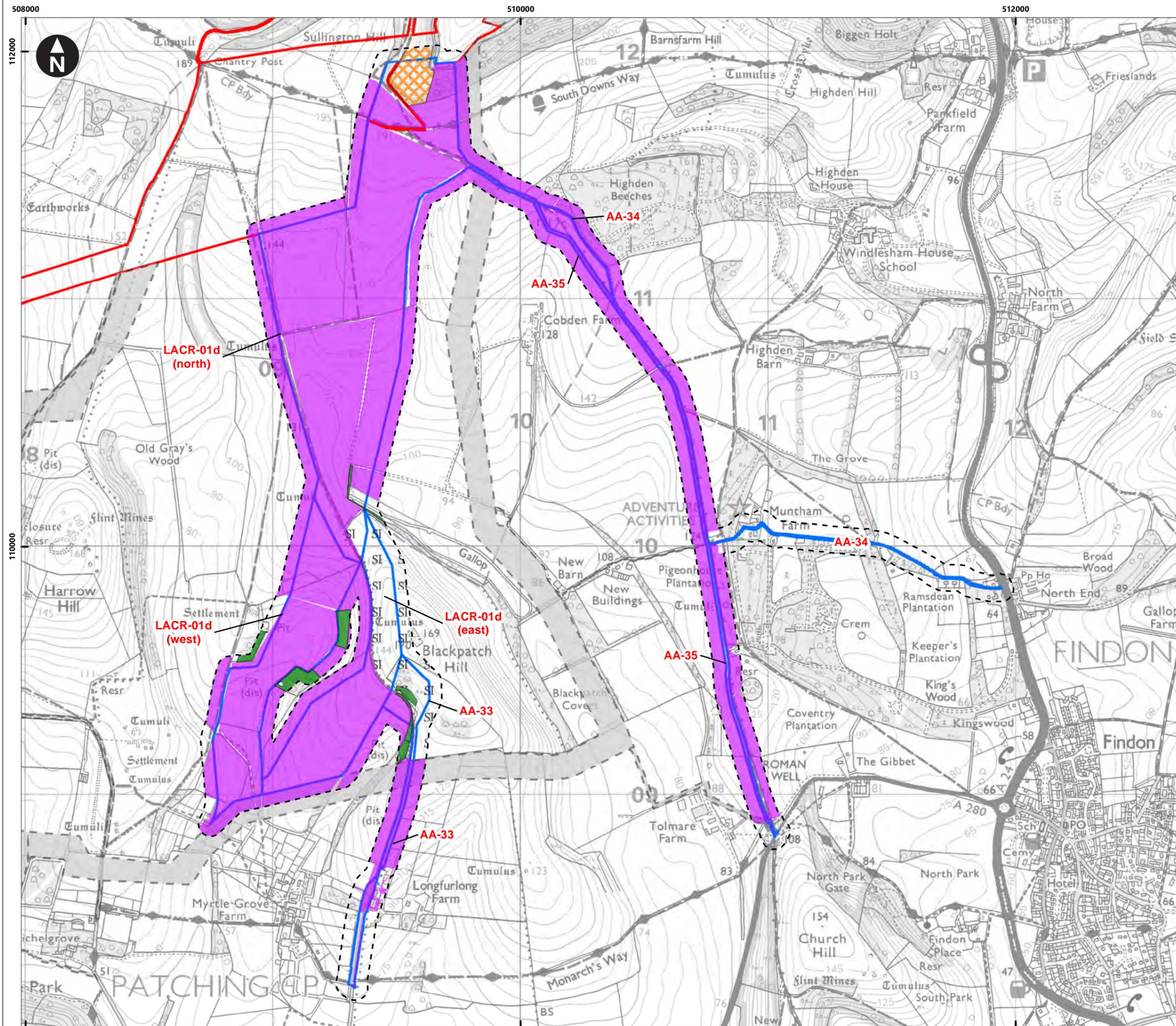
Rampion 2 Offshore Wind Farm

Appendix E. Figure 1. Longer Alternative Cable Route 1D Phase 1 habitat mapping

System Identifier: 42285-WSP-PE-ON-FG-OO-6277_v2 Version: 1.0

Company: WSP Drawn By: SUTET Chk/Prvd: SAVAC Drawn Date: 23/02/2023 Status: FINAL

Note. Please refer to Appendix E. Figure 2. for habitat types surveyed via prior knowledge/satellite imagery.



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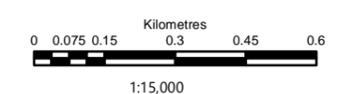
Key

- PEIR Assessment Boundary
- New areas of land affected (assessed in this PEIR FSIR)
- LACR-01d 50m buffer
- New areas of land affected (previously assessed in the PEIR SIR)
- Surveyed areas in the field

Phase 1 habitats (identified via prior knowledge/satellite imagery)

- A1.1.1: Broadleaved woodland - semi-natural
- B3.1: Calcareous grassland - unimproved
- SI B6: Poor semi-improved grassland

Note: please refer to Appendix E, Figure 1 for Phase 1 information for habitats surveyed in the field



Rampion Extension Development

Rampion 2 Offshore Wind Farm

Appendix E, Figure 2. Longer Alternative Cable Route 1D Supplementary Phase 1 habitat mapping

System Identifier:	Version:
42285-WSP-PE-ON-FG-OO-7506	1.0

Company:	Drawn By:	Chk/Prvd:	Drawn Date:	Status:
WSP	SUTET	SAVAC	23/02/2023	FINAL