



Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

Supplemental Environmental Information to support
the Applicant's material change request

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Glossary of Acronyms

AfL	Agreement for Lease
BDC	Broadlands District Council
BNG	Biodiversity Net Gain
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
DEL	Dudgeon Extension Limited
DEP	Dudgeon Offshore Wind Farm Extension Project
DOW	Dudgeon Offshore Wind Farm
EIA	Environmental Impact Assessment
ES	Environmental Statement
FEP	Food Enterprise Park
GVA	Gross Value Added
HDD	Horizontal Directional Drilling
HVAC	High Voltage Alternating Current
LDO	Local Development Order
MW	Megawatts
MMP	Materials Management Plan
OCoCP	Outline Code of Construction Practice
OCTMP	Outline Construction Traffic Management Plan
OEMP	Outline Ecological Management Plan
PEIR	Preliminary Environmental Information Report
PROW	Public Right of Way
SEI	Supplemental Environmental Information
SEL	Scira Extension Limited
SEP	Sheringham Shoal Offshore Wind Farm Extension Project
SNC	South Norfolk Council
SOW	Sheringham Shoal Offshore Wind Farm
SPZ	Groundwater Source Protection Zone
SWMP	Site Waste Management Plan
TCE	The Crown Estate
WCH	Walkers, Cyclists and Horse-riders

WSI	Written Scheme of Investigation
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Glossary of Terms

DCO Application	An Application for Development Consent, specifically relating to the SEP and DEP DCO Application, as submitted to the Planning Inspectorate on 05 September 2022.
Dudgeon Offshore Wind Farm (DOW)	The existing wind farm, of which DEP is an extension.
FEP Phase 2 site	The area of land on which Phase 2 of the FEP development is proposed to be located, through which the SEP and DEP cable corridor passes.
Open cut crossing	Open cut is a method of installing cable ducts by clearing the ground, excavating a trench and installing the ducts, then backfilling the trench and returning the ground to its previous condition.
Order Limits	The area subject to the DCO Application, including all permanent and temporary works for SEP and DEP.
Proposed change	The proposed amendments to the DCO Application including the amendment of the Order Limits, use of an existing access road, and potential option to undertake a trenchless crossing of Church Lane as detailed in this Supplemental Environmental Information [document reference 17.2].
Sheringham Shoal Offshore Wind Farm (SOW)	The existing wind farm, of which SEP is an extension.
Site of the Proposed Change	The area within the updated Order Limits comprising new elements of the Project required as part of the proposed change (i.e. the extension to the Order Limits, the indicative trenchless crossing compound areas, and the FEP access road) as shown on Figure 1 .
SPZ1 (Inner Protection Zone)	This zone is defined by a travel time of 50-days or less from any point within the zone at, or below, the water table. Additionally, the zone has as a minimum a 50-metre radius. It is based principally on biological decay criteria and is designed to protect against the transmission of toxic chemicals and water-borne disease (Environment Agency, 2023).
SPZ2 (Outer Protection Zone)	This zone is defined by the 400-day travel time from a point below the water table. Additionally, this zone has a minimum radius of 250 or 500 metres, depending on the size of the abstraction. The travel time is derived from consideration of the minimum time required to

	provide delay, dilution and attenuation of slowly degrading pollutants (Environment Agency, 2023).
SPZ3 (Total Catchment)	The total area needed to support the abstraction or discharge from the protected groundwater source (Environment Agency, 2023).
Supplemental Environmental Information	This document produced to support the Applicant's Proposed Change request.
The Applicant	Equinor New Energy Limited
Trenchless crossing	Installation of the cable using Horizontal Directional Drilling (HDD) technique. This involves drilling from underneath one side of a specific feature to another e.g. a road.

1 Introduction

1.1 Project Overview

1. An Application for a Development Consent Order (DCO) (“the DCO Application”) was submitted to the Planning Inspectorate on 05 September 2022 for the Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects (SEP and DEP) (the “Proposed Development”). The DCO Application was accepted for Examination on 03 October 2022, and Examination is ongoing at the time of writing (April 2023).
2. SEP and DEP will each have a maximum export capacity greater than 100 megawatts (MW). The SEP and DEP wind farm sites are 15.8 kilometres (km) and 26.5km from the coast for SEP and DEP respectively at their closest point (ES **Chapter 4 Figures - Project Description, Figure 4.1 Project Location Overview** [APP-117]). SEP and DEP will be connected to shore by offshore export cables installed at the landfall at Weybourne, on the north Norfolk coast. From there, the onshore export cables travel approximately 60km inland to a new high voltage alternating current (HVAC) onshore substation near to the existing Norwich Main substation. The onshore substation will be constructed to accommodate the connection of both SEP and DEP to the transmission grid.

1.2 The Applicant

3. The existing Sheringham Shoal and Dudgeon Offshore Wind Farms (SOW and DOW) are owned by different partners, with Equinor New Energy Limited (hereafter “the Applicant”) being the only partner with ownership in both projects. In 2018 The Crown Estate (TCE) invited developers to bid for extensions to operational offshore wind farms. Equinor New Energy Limited applied, on behalf of the partners in the operational SOW and DOW, for an Agreement for Lease (AfL) for the extension of these two wind farms. An acceptance letter from TCE was received in September 2019 and AfLs were signed in April 2020 for DEP and August 2020 for SEP. The Applicant is leading on the development work for both SEP and DEP.
4. As owners of SEP and DEP, Scira Extension Limited (SEL) and Dudgeon Extension Limited (DEL) are the named undertakers that have the benefit of the DCO. References throughout this Supplemental Environmental Information (SEI) to obligations on, or commitments by, ‘the Applicant’ are given on behalf of SEL and DEL as the undertakers of SEP and DEP.

1.3 Background to the Supplemental Environmental Information

5. Several changes to the DCO Application are proposed (the “proposed change”). The proposed change includes amending the Order Limits for SEP and DEP where the cable corridor passes through a development site known as the Food Enterprise Park (“FEP”). As part of the change, it is proposed to extend the Order Limits and the additional land which is proposed to be added to the Order Limits is henceforth referred to as “the Site of the Proposed Change”, which is shown on **Figure 1**. The Site of the Proposed Change is situated between the A47 to the north and Church Lane to the south, and the areas immediately adjacent, within 50m to the north and 50m to the south of the FEP site. The Site of the Proposed Change also includes

the indicative trenchless crossing compounds and FEP access road. The proposed change does not extend to any other section of the onshore cable corridor or to any other part of the onshore or offshore works.

6. Since the DCO Application was submitted, further information on Phase 2 of FEP became available including emerging site configuration plans. The plans are still at an early stage of development, but indicate a potential conflict between the Phase 2 FEP development and the proposed location of the SEP and DEP cable corridor as included in the DCO Application.
7. The proposed change would facilitate the development of both projects, mitigating the impact of SEP and DEP on FEP and as much as possible enabling the two developments to co-exist by increasing flexibility during detailed design stages. Extending the Order Limits would allow further flexibility to micro-site around areas of potential conflict and for the SEP and DEP cables to avoid obstacles such as buildings and services.
8. Whilst an initial site layout has been shared by FEP, it is understood that this is at an early stage of development and is subject to change. It is therefore proposed to extend the Order Limits of the cable corridor in this location to give both FEP and the Applicant flexibility to deliver both projects.
9. Following further discussions with the landowner, in addition to the proposal to widen the Order Limits as the cable corridor passes through the FEP Phase 2 site, it is also proposed to:
 - reduce the Order Limits slightly in the northern part of the FEP Phase 2 site;
 - utilise the existing FEP access road. This means that it is no longer necessary for the Applicant to seek powers for separate accesses through to the FEP Phase 2 site; and
 - include the option to use trenchless crossing under Church Lane to avoid any conflicts with services planned along the FEP Phase 2 site boundary.
10. This SEI is being submitted to the Planning Inspectorate to support this proposed change to the DCO Application (April 2023). It supplements the environmental information presented in the Environmental Statement (ES) which accompanied the DCO Application and demonstrates that the proposed change would not result in any new or different likely significant environmental effects.
11. Broad support for the change has been given by the landowner of the FEP Phase 2 site and others with an interest in the Site of the Proposed Change. These letters of support are included as an Appendix to the **Rationale for making the proposed changes to support the Applicant's material change request** [document reference 17.5].
12. Additional detail about the proposed change is found in **Section 2**.

1.4 Purpose and Scope of this Report

13. The purpose of this SEI is to assess whether the proposed change will give rise to any materially new or materially different environmental impacts to those previously identified and considered in the ES which accompanied the DCO Application. It will ensure that the environmental impacts of the proposed change have been

appropriately considered to satisfy the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

14. This SEI should be read in conjunction with the ES submitted with the DCO Application. Any mitigation and associated outline management plans recommended as part of the original ES will be strictly applied to all works associated with the proposed change where they are relevant.

2 The Proposed Change

2.1 Background to the FEP Phase 2 Site

15. The Norwich Food Enterprise Zone (FEZ) was designated by the Department for Environment, Food and Rural Affairs (Defra) in 2015 with the aim of 'kickstarting local food and drink economies' (Defra, 2015). It provides 'a central cluster of food-related business... by attracting occupiers and investment from local, regional, national and international companies' (Norfolk Chamber of Commerce, 2023).
16. FEP comprises a 100-acre development site that straddles the administrative boundaries of Broadlands District Council (BDC) and South Norfolk Council (SNC). The site is being developed in phases and a Local Development Order (LDO) was adopted for Phase 1 (a 46-acre site in BDC) in 2017. The LDO streamlines the planning process for potential occupiers by removing the need to obtain planning permission for certain types of development. The Phase 1 site is now partly occupied.
17. The SEP and DEP cable corridor bisects the planned Phase 2 site. Whilst a LDO is not yet in place for Phase 2 of the FEP development, it is under preparation and expected to go through the adoption process by SNC in 2023. The Applicant understands through discussions with SNC that it is likely that the LDO will be adopted towards the end of 2023.

2.2 Description of the Proposed Change

18. The sections below provide a description of the proposed change to the DCO Application. A plan showing the proposed amendments can be found in **Figure 1. ES Chapter 4 Figures - Project Description, Figure 4.10 Onshore Project Area (Sheet 13)** [APP-117] has been updated to reflect the proposed changes and is shown here as **Figure 2**. The change is further reflected in **Works Plan (Onshore) (Revision D)** [document reference 2.6], **Access to Works Plan (Revision D)** [document reference 2.9], and the other plans submitted with the Change Application. A full list of DCO documents which will be updated once the Change Application is accepted to reflect the proposed change is presented at **Annex 2**.
19. It is proposed to amend and widen the Order Limits as the cable corridor passes through and adjacent to the FEP Phase 2 site. Given the uncertainty surrounding the FEP proposals, including the location of plots, services, drainage solutions and other infrastructure, flexibility is required to enable delivery of both projects. The linear nature of the cable corridor means that an unexpected change or obstacle could result in a significant change to the angle of the cable alignment. Flexibility is required to account for such an eventuality.
20. The widening of the Order Limits will allow for further flexibility in micro-siting the SEP and DEP cables, help avoid any potential conflicts with the FEP buildings, access roads and other infrastructure during detailed design stages of both projects and reduce potential impacts on the FEP development.
21. The installation methodology for the cable within the FEP Phase 2 site (with the exception of a potential additional trenchless crossing, see **Section 2.2.3**) remains as described within the DCO Application.

22. The proposed Order Limits remain within the Preliminary Environmental Information Report (PEIR) boundary which was consulted on previously during statutory consultation in April 2021 under Section 42 of the Planning Act 2008.
23. The proposed extended Order Limits have been developed in consultation with the landowner and the Applicant has sought as much as possible to avoid affecting other interests.
24. Discussions with the landowner and other affected parties will continue as further information from FEP becomes available.

2.2.1 Utilise the Existing FEP Access Road

25. Utilising the existing FEP access road would mean that no additional land would be required for a subsidiary access road to serve SEP and DEP.
26. Some works will be required to upgrade the existing access road including within the highway boundary to ensure that it can accommodate construction vehicles.
27. However, the use of the existing access road for construction works means that it is no longer necessary to create an additional access from Church Lane (previously identified as ACC48) or to utilise the Early Works Access point ACEW81 as shown on the [Access to Works Plans \(Revision C\)](#) [REP2-005] to the FEP Phase 2 site.
28. The number of vehicle movements to and from the site remains within the scope of the ES submitted in support of the DCO Application, specifically ES [Chapter 24 Traffic and Transport](#) [APP-134]. For clarity, the accesses in question are ACC48 (adjacent to the site) and ACC49 (opposite the site).
29. With reference to ES [Appendix 24.1.1 Transport Assessment Annexes](#), Annex 16, Table A16.1.1: Summary of Section Vehicle Trips per Access (SEP and DEP) [APP-269]:
 - Access ACC48: it is forecast there will be a peak daily demand of 54 HGV trips and 19 Light Vehicle trips and an average of 12 HGV trips and 12 LV trips; and
 - Access ACC49: it is forecast there will be a peak daily demand of 27 HGV trips and 12 Light Vehicle trips and an average of 8 HGV trips and 5 LV trips.
30. Sharing the access road delivers the benefits of reducing the land take within the FEP Phase 2 site and removing the need for an additional temporary junction with Church Lane. A shared access road also avoids the need for construction of a separate haul road within the FEP site including associated reinstatement works.

2.2.2 Potential Use of Trenchless Crossing Techniques under Church Lane

31. It is also proposed to include the option of using trenchless crossing of Church Lane to avoid services which are proposed within the area. Open cut crossing of Church Lane is also retained as an option, although it should be noted that the updated design means there will be a reduced need for the removal of screening along Church Lane. The Order Limits are wider at the Church Lane crossing point than the previous iteration of the SEP and DEP design, and incorporates a wider section of the hedgerow on the southern boundary of Church Lane; however it should be noted that the amount of vegetation removed (i.e. the construction easement) would be the same as previously proposed. This provides flexibility for the installation

- process, ensuring that the risks associated with trenchless crossings can be managed.
32. The use of trenchless crossings elsewhere along the SEP and DEP cable route is described within ES **Chapter 4 Project Description** [APP-090] submitted in support of the DCO Application. The potential use of trenchless crossing techniques at Church Lane results in the need to widen the cable corridor where it crosses the lane, in order to accommodate the entry and exit pits and associated compounds.
 33. To the south of Church Lane, a construction compound has been proposed as part of the DCO Application. Whilst no additional land is required in this location, a change in powers sought is proposed for part of this location, from temporary possession to acquisition of rights to enable the cable to be installed in this area.
 34. Should trenchless crossing of Church Lane be used, trenchless crossing compounds will be required at either end of the crossing, as detailed in **Section 4.6.1.6** of ES **Chapter 4 Project Description** [APP-090]. The size of these compounds will be within the construction parameters (1,500m² - 4,500m²) stated in **Table 4.32** of ES **Chapter 4 Project Description** [APP-090].
 35. **Table 1** shows a summary of the changes proposed considering the need for further flexibility within and adjacent to the FEP Phase 2 site.

Table 1 Description of the proposed changes relative to the DCO Application

Included in the DCO Application	The Proposed Change
Cable corridor width	
60m	Up to 110m within and adjacent to the FEP Phase 2 site to provide further flexibility to micro-site the cables once the FEP infrastructure is in place.
Cable corridor width at trenchless crossings	
100m	Up to 130m within and adjacent to the FEP Phase 2 site, for the crossing of the A47 and the crossing of Church Lane. This is to provide further flexibility to micro-site the cables and the trenchless crossings once FEP infrastructure is in place.
Crossings (including roads, public rights of way and watercourses)	
Crossing register includes open cut crossing of Church Lane. No Public Right of Way (PRoW) or watercourse crossings are required.	Crossing of Church Lane changed to open cut/trenchless to include alternative for potential trenchless crossing of Church Lane. No PRoW or watercourse crossings are required.
Trenchless crossings compounds	
No trenchless crossing compounds included for the crossing of Church Lane. No PRoW or watercourse crossings are required.	Up to two additional trenchless crossing compounds, one on either side of Church Lane. The size of the compounds would be within the construction parameters stated in the DCO Application (1,500m ² - 4,500m ²). No PRoW or watercourse crossings are required.
Access from Church Lane (to the north)	

Included in the DCO Application	The Proposed Change
<p>Early works access ACEW81. (See Sheet 28 of Access to Works Plan [REP2-005])</p>	<p>Access ACEW81 is no longer required and is removed from the Access to Works Plan [REP2-005].</p>
<p>Construction access ACC48. (See Sheet 28 of Access to Works Plan [REP2-005])</p>	<p>Construction access ACC48 moved to the existing entrance and access road to the FEP Phase 2 site (the same location as ACEW83, see below).</p>
<p>Early works access ACEW83, the existing entrance to the FEP Phase 2 site. (See Sheet 28 of Access to Works Plan [REP2-005])</p>	<p>Both early works access ACEW83 and construction access ACC48 will be located at the existing entrance to the FEP Phase 2 site. ACEW83 remains in its original location as per the DCO Application. Access route updated to utilise the existing access road within the FEP Phase 2 site.</p> <p>Upgrade to existing FEP access road. Enabling works required to widen the entrance to the FEP access road at ACEW83 to enable access for construction vehicles, requiring the removal of an area of the grass verge.</p>

2.3 Assumptions and Limitations

2.3.1 Ecological Surveys

36. The entire Site of the Proposed Change was contained within the Red Line Boundary assessed as part of the PEIR and was therefore subject to ecological surveys during 2020 and 2021. A small area of the Site of the Proposed Change (the FEP access road) was not included as part of the survey area because access to this land parcel was not available; however a desk-based review of the un-surveyed area within the Site of the Proposed Change was undertaken by a licensed ecologist on behalf of the Applicant and was deemed to consist of concrete access roadways and small areas of bordering grass verge, as seen in [Plate 1](#) below. Further detail is provided in [Section 3.4](#).



Plate 1 Aerial image of the FEP access road

37. In line with wider recommendations in the ES, a number of pre-construction surveys will be required post-consent (in accordance with Requirement 13 of the **draft DCO (Revision D)** [REP2-008]) in order to update the environmental baseline and inform the final management plans, including but not limited to the Construction Environmental Management Plan and the Ecological Management Plan, which will be produced by the contractor (in accordance with Requirements 19 and 13 respectively of the **draft DCO (Revision D)** [REP2-008]). Pre-construction surveys will now include the area within the Site of the Proposed Change.
38. All features surveyed during the pre-application surveys, and any additional previously un-surveyed locations or features will be re-surveyed, where necessary, in accordance with industry guidance and methodology (i.e. following the approach used during pre-application surveys, or any updated best practice at that time). Where this occurs, the **Outline Ecological Management Plan (OEMP) (Revision B)** [REP1-027] will be reviewed and updated to include measures for such receptors where appropriate. All pre-construction surveys will be undertaken by appropriately experienced and where necessary, licensed ecologists. The requirement for, and scope of, updated surveys will be dependent on the time elapsed since previous

surveys, the extent of any change to supporting habitats and the information gathered through an updated Extended UK Habitat Classification survey of the construction footprint (including appropriate buffer). All survey updates will be undertaken in accordance with relevant guidance (e.g. CIEEM, 2019; BS 42020:2013). Pre-construction surveys will be undertaken in accordance with **Annex 1** of the **OEMP (Revision B)** [REP1-027].

39. In addition, a full arboricultural survey of the entire Order Limits would be undertaken by an appropriately experienced arboriculturalist, as secured in Requirement 11 of the **draft DCO** [REP2-008]. This survey will define specific mitigation measures to protect trees situated within and adjacent to the working corridor, including defining root protection areas. The arboricultural report would be submitted to and agreed with the local authority prior to the commencement of any construction works.
40. The Applicant will engage with FEP/SNC and request details of any ecology surveys that may have been undertaken within this land parcel, to support the LDO Application. The Applicant will request that this data is shared where possible to produce a comprehensive picture of the ecological baseline at the Site of the Proposed Change.

2.3.2 Historic Environment Surveys

41. A proportion of the area within the Site of the Proposed Change was surveyed as part of priority geophysical surveys conducted in 2020 / 2021 (specifically under priority area PA10). The area was targeted as a result of predicted higher potential for sub-surface archaeological remains, for example as indicated from the analysis of aerial photographs and existing Norfolk HER data. However, a part of the Site of the Proposed Change fell outside of the survey area and/or was not surveyed due to associated land constraints and has therefore not yet been surveyed. The Site of the Proposed Change will be subject to full survey post-consent, as agreed in consultation with Norfolk County Council's Historic Environment Service and Historic England (where required) (**Outline WSI (Onshore) (Revision C)** [REP2-032]), the results of which will inform further initial informative stages of mitigation and subsequent mitigation strategies, as and where required.

2.3.3 Use of SEP and DEP Environmental Statement

42. The assessments, conclusions and methodology contained within the ES have been used as the basis of the assessments within this SEI (with the exception of the baseline, as described above). If the ES chapters had been updated since submission of the DCO Application at the time of writing (April 2023), these were used as the most up-to-date source of information. However, should the ongoing Examination process lead to further amendment or update of ES chapters, or the assessment or conclusions within them, the conclusions within this SEI may need revisiting.

2.3.4 Crossing assumptions

43. As stated in **Section 2.2.1** above, there are two potential crossing options for the cable route under Church Lane. The crossing could be open cut or trenchless, and this will be confirmed at detailed design. Each crossing methodology could affect different environmental receptors in different ways, therefore each environmental

assessment in **Section 3** presents the worst-case crossing option for that ES topic. This is stated in each section. Given the worst-case is assessed, it can be concluded that the environmental impacts will be the same or less than the impacts stated in this SEI regardless of the crossing option selected.

3 Potential Environmental Impacts of the Proposed Change

44. This section outlines the potential environmental impacts associated with the proposed change. Each sub-section below considers the ES topics submitted in support of the DCO Application. Each ES topic describes how the baseline environment may differ within the Site of the Proposed Change when compared to the ES and identifies the worst-case crossing scenario for each ES topic (see **Section 2.3.3**). Each topic sets out whether the proposed change may lead to new or materially different environmental impacts relative to those stated in the ES, and what mitigation might be required to avoid, reduce or offset these impacts.
45. Key environmental constraints relevant to the Site of the Proposed Change are shown in **Figure 3**.
46. If the proposed change is accepted, then any individual ES chapters (and associated figures and appendices) will be updated as necessary to incorporate the information set out within this SEI and will be submitted into the Examination as appropriate. Annex 2 provides more details in relation to the expected updates.

3.1 Ground Conditions and Contamination

47. The Site of the Proposed Change is currently, and has historically been, in agricultural use and the associated risk of significant contamination being present within soils and / or groundwater is therefore considered to be low. The Site of the Proposed Change is located within an area of medium groundwater vulnerability. The status of underlying groundwater bodies is classified as a Source Protection Zone (SPZ) 3 and there is an SPZ1 and 2 located approximately 1.1km southeast of the Order Limits. Overall, baseline features remain unchanged from those previously identified and assessed within the ES submitted in support of the DCO Application.
48. The worst-case crossing scenario for this topic is a trenchless crossing under Church Lane because the underlying groundwater is located within SPZ3, and therefore there is some risk of adverse impacts on potable water resources should a pollution incident or bentonite breakout occur. Impacts of an incident or breakout would be similar for an open cut crossing, however the number of receptors affected by an incident / breakout caused by a trenchless crossing would be greater.
49. Given trenchless crossings (specifically horizontal directional drills) are assessed in full in the ES, and this trenchless crossing is not likely to cause any impacts that are different to those reported in the ES, the potential impacts remain as previously assessed. The removal of the access road from the DCO Application and use of the existing FEP access road as an alternative, will lead to a reduction in ground disturbance relative to the ES. The extended Order Limits will not affect any additional receptors or generate any additional material to that assessed in the ES. Potential impacts include risks to human health during excavations and potential release of contaminating substances to soils, surface water and groundwater resources.
50. Mitigation measures to prevent and/or minimise contamination risks to workers, the public, soils and groundwater during construction will be implemented, as set out within **Section 17.6** of ES **Chapter 17 Ground Conditions and Contamination**

[APP-103] and **Outline Code of Construction Practice (OCoCP) (Revision B)** [REP1-023], included with the DCO Application. In particular, the **OCoCP** includes for a Site Waste Management Plan (SWMP) and Materials Management Plan (MMP) which will set out appropriate control measures, waste management, material handling and storage protocols for works at the Site of the Proposed Change. As per the ES, a ground investigation at the trenchless crossing entry and exit pits will be required, and consequent amendments to the design of the trenchless crossing may be required.

51. As a result, **no materially new or materially different** ground conditions or contamination related impacts are anticipated as a result of the proposed change.

3.2 Water Resources and Flood Risk

52. The Site of the Proposed Change is located within the River Wensum catchment but does not intersect any watercourses or ditches. The closest Main River is the River Tud, located approximately 650m north of the Site of the Proposed Change. The Site of the Proposed Change is underlain by a principal aquifer and an area of medium groundwater vulnerability (as mentioned in **Section 3.1**). The underlying groundwater forms part of a SPZ3 (Environment Agency, 2023). The water abstraction that this protects is located in SPZ1, approximately 1.1km southeast of the Order Limits, and the intermediate SPZ2 is located 1.15km southeast. The Site of the Proposed Change is located within Flood Zone 1 with a <0.1% annual probability of flooding. It has a very low risk of surface water flooding and flooding from reservoirs. There are no surface water flow paths across the Site of the Proposed Change. Overall, baseline features remain unchanged from those identified and assessed with the ES submitted in support of the DCO Application.
53. The worst-case scenario for this topic is a trenchless crossing under Church Lane. This is because the underlying groundwater is located within SPZ3, and therefore there is some risk of adverse impacts on potable water resources should a pollution incident or bentonite breakout occur. For completeness, an open cut crossing has the potential for impacts on watercourses, flow conveyance and flood risk; however there are no surface watercourses within 500m of the Site of the Proposed Change.
54. Potential impacts remain as previously assessed, namely increased sediment runoff and accidental release of contamination during construction. There is some risk of bentonite breakout associated with HDD. The removal of the access road from the Proposed Development and use of the existing FEP access road as an alternative, will lead to a reduction in ground disturbance and reduction in surface water runoff associated with the Projects relative to the ES. Best practice mitigation measures to minimise sediment runoff and release of contamination during construction will be implemented, as outlined in **Section 18.6** of ES **Chapter 18 Water Resources and Flood Risk** [APP-104] and **OCoCP (Revision B)** [REP1-023].
55. A site-specific risk assessment will be undertaken as part of the post-consent detailed design process, as secured under the **OCoCP (Revision B)** [REP1-023]. This will consider the potential risks of using HDD and set out the procedures required to monitor construction activities and avoid bentonite breakouts. This will be agreed with the Environment Agency prior to commencement of construction activities. In addition, the results of the ground investigation at the trenchless crossing entry and exit pits will be provided, to identify the stratigraphy of the sites

and compare against the aquifer level. This may inform the design of the trenchless crossing, including the depth and any specific mitigation measures required.

56. As a result, **no materially new or materially different** water resources and flood risk related impacts are anticipated as a result of the proposed change.

3.3 Land Use, Agriculture and Recreation

57. The FEP land within the Site of the Proposed Change is currently used for agricultural purposes. Phase 1 of the FEP has LDO status to develop food and agri-tech businesses, and Phase 2, if approved, would likely change the land use over time at the Site of the Proposed Change. The Site of the Proposed Change is located on Grade 2 agricultural land, and the land to the north of the Site of the Proposed Change (south of the A47) is subject to an Entry Level plus Higher Level Environmental Stewardship scheme. The settlement of Easton is situated to the east of the Site of the Proposed Change, containing some recreational facilities, including a number of allotments located 300m east, and the Jubilee Playing Fields is located 1km east of the Site of the Proposed Change. There are no Public Rights of Way which cross, or which are in the vicinity of the Site of the Proposed Change, although some Walkers, Cyclists and Horse Riders (WCH) may use the rural roads in the vicinity of the Site of the Proposed Change (Blind Lane and Church Lane). Land use remains unchanged from that identified and assessed within the ES submitted in support of the DCO Application.
58. The worst-case crossing scenario is an open cut crossing across Church Lane, as there could potentially be impacts on WCH users of Church Lane in the open cut crossing scenario, with some short-term road closures and diversions likely to be in place.
59. Potential impacts of the proposed change remain the same as previously assessed, namely temporary disruption to agricultural land and soils, impact to agri-environment schemes, and recreational users of nearby routes. The open cut crossing of Church Lane would cause similar impacts to other open cut crossings along the route, as assessed in the ES. The removal of the additional access road from the Proposed Development and use of the existing FEP access road as an alternative, will lead to a reduction in the potential agricultural land disturbed relative to the scenario assessed in the ES. The extended Order Limits will not affect any additional receptors or cause any different impacts to that assessed in the ES. There is the potential for implications for the Stewardship scheme located to the north of the Site of the Proposed Change, and the level of impact could range from the termination of an agreement, to no impact, or a minor and temporary change. The impact on this specific agreement will only be known following detailed design, and when landowner agreements are in place, confirming the extent and duration of impacts to specific land parcels.
60. Best practice mitigation measures to minimise impacts to agricultural soils and businesses, and recreational receptors during construction will be implemented, as outlined in **Section 19.7** of ES **Chapter 19 Land Use, Agriculture and Recreation (Revision B)** [REP2-022] and **OCoCP (Revision B)** [REP1-023]. Collaboration with the landowners at the Site of the Proposed Change will be ongoing in relation to access, soil management and cable routing, to minimise impacts to the agricultural land and business.

61. As a result, **no materially new or materially different** land use, agriculture and recreation related impacts are anticipated as a result of the proposed change.

3.4 Onshore Ecology and Ornithology

62. The Site of the Proposed Change is not located within a statutory or non-statutory designated site for nature conservation. The closest area of Ancient Woodland is Harmans Grove, located 645m from the Site of the Proposed Change, which is further than the previous iteration of the Order Limits (580m). A suite of ecological surveys was undertaken in 2020 and 2021 to inform the PEIR and ES, which included an Extended Phase 1 Habitat Survey (combined with badger survey) and breeding bird survey which covered the majority of the Site of the Proposed Change. The ecological surveys identified the habitats at the Site of the Proposed Change to comprise:
- Cultivated / disturbed land (arable);
 - Broadleaved woodland plantation;
 - Broadleaved semi-natural woodland;
 - Species poor intact hedgerow;
 - Standing water; and
 - Hard standing (the existing access roads leading into FEP from Church Lane).
63. From an aerial desktop review of the FEP access road (which was not included in the original surveys due to access limitations), the habitat in this area consists of concrete access roadways and small areas of bordering grass verge, as per **Section 2.3.1** of this SEI. The habitats within the Site of the Proposed Change are shown in **Figure 4**. The breeding bird survey undertaken in 2020/21 found that the arable field within the extended Order Limits supported skylark breeding territories.
64. The worst-case scenario for this topic is an open cut crossing across Church Lane. This is because the open cut crossing would remove an area of broadleaved woodland plantation, and the ground/vegetation disturbance would be greater than the establishment of trenchless crossing compounds (which would be confined to arable habitat). It should be noted that whilst the Order Limits are wider in this location and incorporates a wider section of the hedgerow on the southern boundary of Church Lane than assessed in ES **Chapter 20 Onshore Ecology and Ornithology (Revision B)** [REP2-024], the amount of vegetation removed (i.e. the construction easement) is the same as previously proposed. The young plantation woodland would be avoided in the trenchless crossing scenario. Given there are no watercourses or sensitive waterbodies nearby, the risk of bentonite breakouts has smaller consequences than other crossings along the SEP and DEP cable route, so the open cut crossing remains the worst-case. It should be noted that the open cut crossing option is an improvement on the design assessed as part of the ES, because removal of vegetation for early works access ACEW81 and construction access ACC48 is no longer required. This means the width of the construction easement and consequent vegetation removal has now reduced to 20m, as per other open cut hedge crossings.
65. Potential impacts from the proposed change remain as previously assessed in the ES. As mentioned above, the open cut crossing would remove an area of

broadleaved woodland plantation and hedgerows bordering Church Lane which could affect bird nesting habitat and may reduce habitat connectivity for certain animals, although less vegetation would be removed than assessed in the ES. Ground nesting birds in the arable fields could be disturbed but given the construction easement and mitigation would be the same, the impacts would not be worse than assessed in the ES. The removal of the access road from the DCO Application and use of the existing FEP access road as an alternative, will lead to a reduction in ground disturbance and a narrower corridor of hedgerow removal relative to the ES. The extended Order Limits will not affect any additional receptors or cause any different impacts to that assessed in the ES. Based on existing survey data and appraisals of habitat suitability, impacts are expected to be negligible.

66. Potential ecological impacts will be minimised by the application of mitigation measures set out within **Section 20.6** of ES **Chapter 20 Onshore Ecology and Ornithology (Revision B)** [REP2-024], the **OCoCP (Revision B)** [REP1-023], and the **OEMP (Revision B)** [REP1-027], submitted as part of the DCO Application. In particular, pre-construction surveys (which will include the extended Order Limits) will be undertaken prior to construction commencing, as per Requirement 13 of the **draft DCO (Revision D)** [REP2-008]; the presence of protected / notable species, such as skylark, badgers, roosting bats or great crested newts, will be confirmed through species-specific surveys (to be completed where required), and the mitigation strategies for protected species outlined in the **OEMP (Revision B)** [REP1-027] will be applied where necessary. To minimise impacts to skylarks, areas of arable fields that have been identified as either having historically supported or having the potential to support nesting skylarks will be managed prior to commencement of construction to deter nesting skylarks which may seek to use this habitat for nesting. Such management measures may involve the clearance of ground cover (i.e., arable cover) to create unfavourable nesting conditions.
67. As stated in the **OCoCP (Revision B)** [REP1-023], where hedgerows require removal, these would be replanted on their original alignment. Where trees and groups of trees require removal, these would be replanted within the construction corridor but outside the final 20m wide operational easement, where tree planting would be prohibited. Planting would be implemented during the first planting season following completion of construction (subject to landowner agreements). Removal of vegetation such as hedgerows and scrub will be undertaken outside of the main bird nesting season which runs between March and August inclusive. The Site of the Proposed Change could also be considered to host habitat enhancement measures in addition to any replacement mitigation/enhancement planting, in line with the Biodiversity Net Gain (BNG) strategy outlined in the **Initial BNG Assessment** [APP-219], subject to discussions with the landowner.
68. As a result, **no materially new or materially different** ecological impacts are anticipated as a result of the proposed change.

3.5 Onshore Archaeology and Cultural Heritage

69. There are no Scheduled Monuments or Listed Buildings within the Site of the Proposed Change, and it is not located within a Conservation Area or Registered Park and Garden. The closest Listed Building is the Grade I Listed Church of St Peter, located approximately 420m away to the east. It should be noted that the

reduction in Order Limits immediately south of the A47, to the north of the Site of the Proposed Change (as shown on **Figure 1**) will move the cable corridor slightly further from this Listed Building (previous distance was 330m). The most relevant previously recorded non-designated heritage assets and findspots to this immediate area and near surrounds are: 'Cropmark enclosures and fields of probable Roman date' (NHER Pref Ref 53628); a 'Neolithic axehead and Roman pottery' (NHER Pref Ref 15898); and a 'Post-medieval field boundary and undated features' (NHER Pref Ref 65215). The aerial photographic and LiDAR analysis undertaken to inform the assessment in the ES also highlighted APS_051 and APS_052 'Cropmarks of a possible ring ditch of Bronze Age date and enclosures of Roman date'. This area also corresponds to and partly overlaps Priority Geophysical Survey Area PA10 described as 'Linear anomalies possibly forming part of a field system/enclosures'; however, following survey none of the identified anomalies were interpreted as being of possible or probable archaeological origin. A more complete picture of the archaeological baseline will be available once any outstanding geophysical surveys (where applicable) and trial trenching are complete, which will be undertaken early in the post-consent programme, as secured by Requirement 18 of the **draft DCO (Revision D)** [REP2-008]. The historic landscape character of the Site of the Proposed Change (and wider area) is classified as Boundary loss (bl). The baseline remains unchanged from that identified and assessed within the ES submitted in support of the DCO Application.

70. The worst-case crossing scenario for this topic is not clear cut, as the amount of topsoil stripping (ground intrusive construction works) between the two options is not notably different, and this is likely a key determinant of potential impacts to any surviving sub-surface archaeological remains.
71. Potential impacts and associated impacts of both the open cut and trenchless crossing remain as previously assessed, namely largely direct but also the possibility of indirect impacts on previously recorded (but largely unconfirmed) - as well as unknown and potential - buried archaeological remains. Indirect (setting) impacts on designated assets within the surrounding area are not anticipated due to lack of intervisibility with the Site of the Proposed Change, as well as the temporary nature of construction activities and no permanent above ground infrastructure of any height at this location during operation.
72. The removal of the access road from the DCO Application and use of the existing FEP access road as an alternative means that, with respect to subsurface archaeological potential, less topsoil will be stripped, so there may potentially be a lesser impact relative to the original design assessed in the ES. The extended Order Limits are not anticipated to affect any additional assets or cause any different impacts and associated impacts to that assessed in the ES.
73. These impacts will be mitigated prior to and during construction of SEP and DEP through both survey-specific pre-construction Written Schemes of Investigation (WSIs) and associated investigations, followed by subsequent pre-construction archaeological mitigation excavations (where identified to be required), as well as a Construction Stage Archaeological WSI, all of which will accord with the **Outline WSI (Onshore) (Revision C)** [REP2-032], as secured by Requirement 18 of the **draft DCO (Revision D)** [REP2-008]. Additional geophysical surveys outside the original priority areas will be undertaken at a number of locations across the SEP

and DEP cable route, followed by a scheme-wide approach to trial trenching to be agreed with Norfolk County Council (NCC) as the archaeological adviser to the local planning authorities, and the Site of the Proposed Change will be included as part of this additional survey effort. The complete geophysical survey data and associated findings will inform the scope of the trial trenching (locational and spatial coverage), with the trial trenching largely informing subsequent mitigation, as outlined in **Section 21.6** of ES **Chapter 21 Onshore Archaeology and Cultural Heritage** [APP-107] and **Outline WSI (Onshore) (Revision C)** [REP2-032].

74. As a result, **no materially new or materially different** archaeological and heritage impacts are anticipated as a result of the proposed change.

3.6 Air Quality

75. There are no Air Quality Management Area's (AQMA's) within Broadland District or South Norfolk Council local authority areas. The closest AQMA, the Norwich City Council AQMA, is 10km from the Site of the Proposed Change. Background pollutant concentrations of NO₂, PM₁₀ and PM_{2.5} at the Site of the Proposed Change and across the study area considered in ES **Chapter 22 Air Quality** [APP-108] are 'well below' (e.g., less than 75% of) the relevant Air Quality Objectives; these are presented in **6.3.22.3 Environmental Statement, Appendix 22.3 Air Quality Background Pollutant Concentrations** [APP-261]. This is to be expected in areas that are largely rural in nature. This baseline remains unchanged from that identified and assessed within the ES submitted in support of the DCO Application.
76. The worst-case scenario for this topic is a trenchless crossing under Church Lane. This is because generator(s) would be required to power and operate the drilling rig(s), and therefore would result in greater exhaust emissions than a standard open cut crossing. Generators used in trenchless crossings are also situated in a fixed location for a longer period of time than other Non-Road Mobile Machinery (NRMM) plant (i.e., dozer, low loader, tracked excavator etc.) required for an open cut crossing. However, it is considered that the distance from the closest receptors (approximately 300m) would provide sufficient dilution and dispersion of pollutant emissions from plant and NRMM and therefore, as concluded in ES **Chapter 22 Air Quality** [APP-108], it is unlikely that plant and/or NRMM would have a significant impact on local air quality where relevant control and management measures are employed, as set out within the **OCoCP** [REP1-023].
77. Potential impacts of the proposed change remain the same as previously assessed, namely nuisance impacts caused by dust emissions from construction works, vehicles and plant. The potential trenchless crossing at Church Lane would cause similar impacts to other trenchless crossings along the route, as assessed in the ES. The removal of the access road from the Proposed Development and use of the existing FEP access road as an alternative, will lead to a reduction in the potential dust generation from material excavation, relative to that assessed in the ES. The extended Order Limits will not affect any additional receptors or cause any different impacts to that assessed in the ES. There will be no change to the number of construction traffic movements compared to that assessed in the ES.
78. As detailed in **Section 22.6** of ES **Chapter 22 Air Quality** [APP-108], air pollution and dust generation would be appropriately controlled by the application of best practice mitigation measures set out within **Section 22.6** of ES **Chapter 22 Air**

Quality [APP-108] and the **OCoCP (Revision B)** [REP1-023], secured within Requirement 19 of the **draft DCO (Revision D)** [REP2-008].

79. As a result, **no materially new or materially different** air quality related impacts are anticipated as a result of the proposed change.

3.7 Noise and Vibration

80. The closest noise sensitive receptor to the Site of the Proposed Change is Model Farmhouse, which is located approximately 400m to the southeast. Baseline noise at this receptor is likely to be dominated by road traffic noise from the A47, with other notable sources related to agricultural activities and operation of associated machinery and plant. The Noise Important Area (NIA) no. 5202 is located 600m east and a second NIA, no. 6287, is located 850m west along the A47 (Extrium, 2019). The extended Order Limits mean the works are further away from NIA no. 5202. This baseline remains unchanged from that identified and assessed within the ES submitted in support of the DCO Application.
81. The worst-case scenario for this topic is a trenchless crossing under Church Lane. This is because the works are in a fixed location for a longer period than the works required for an open cut crossing.
82. Potential impacts remain the same as previously assessed, namely annoyance-related impacts caused by noise generated by construction works, vehicles and plant. The Design Manual for Roads and Bridges (DMRB) LA111 Noise and Vibration version 2 (DMRB, 2021) defines a study area for the assessment of construction noise impacts of 300m from the works. The closest receptor is further than 300m from the works; hence, adverse impacts are not anticipated, and impacts are not likely to be worse than those assessed in the ES. The removal of the access road from the Proposed Development and use of the existing FEP access road as an alternative, will move construction vehicles slightly closer to a receptor (Red Barn); however, the distance is still sufficient that no impacts will occur. This impact is the same for the extended Order Limits. There will be no material change to the number of construction traffic movements compared to that assessed in the ES, so the road traffic noise impacts will be no worse than those assessed in the ES.
83. Potential noise and vibration impacts will be controlled by the application of mitigation measures set out within **Section 23.6** of **ES Chapter 23 Noise and Vibration** [APP-009] and **OCoCP (Revision B)** [REP1-023], secured within the **draft DCO (Revision D)** [REP2-008]. Specifically, measures will be included as part of a Construction Noise Management Plan (CNMP) which will form part of the CoCP.
84. As a result, **no materially new or materially different** noise and vibration related impacts are anticipated as a result of the proposed change.

3.8 Traffic and Transport

85. The assessment of traffic and transport impacts within **ES Chapter 24 Traffic and Transport** [APP-110] was informed by assessing the forecast change in traffic flows relative to the baseline traffic conditions. The traffic and transport baseline traffic conditions would remain unchanged under the proposed change from those assessed within the ES submitted in support of the DCO Application.

86. The worst-case scenario for this topic is a trenchless crossing under Church Lane. This is because there would be a marginally larger number of vehicle movements, when compared with an open cut crossing.
87. Forecast construction traffic flows contained within ES **Chapter 24 Traffic and Transport** [APP-110] were derived by construction contractors with experience of delivering similar offshore wind farm projects. The potential option to now include trenchless crossing of Church Lane could result in a marginal increase in traffic movements (compared to open cut). However, on balance, there would be no material change to peak traffic demand forecasts and any changes could be contained within the assessed worst case. The amended Order Limits would not materially increase vehicle movements, whilst the proposed utilisation of an existing access road within the FEP Phase 2 site (rather than the creation of a new access) would reduce the number of vehicle movements.
88. Mitigation measures set out within ES **Chapter 24 Traffic and Transport** [APP-134] and included within the SEP and DEP DCO will be applied, notably through the implementation of a Construction Traffic Management Plan (CTMP) to ensure that the construction traffic parameters (e.g., traffic numbers and routes) assessed within the ES are managed and not exceeded, as secured in Requirement 15 of the **draft DCO** [REP2-008]. It is therefore considered that the targets, measures and monitoring processes contained within the **Outline Construction Traffic Management Plan (OCTMP) (Revision B)** [REP1-021] would be appropriate to manage any revised construction activities proposed as part of the amendments.
89. As a result, **no materially new or materially different** traffic and transport related impacts are anticipated as a result of the proposed change.

3.9 Landscape and Visual Impact

90. The Site of the Proposed Change does not lie within any nationally designated/defined landscapes (such as the North Norfolk AONB or North Norfolk Heritage Coast) or any other local landscape designations; and there is no documented evidence to suggest that the susceptibility, value or sensitivity of the landscape within the revised extents of the onshore cable corridor (or its study area) should be considered any greater than has already been identified and assessed in ES **Chapter 26 Landscape and Visual Impact Assessment** [APP-112]. It is judged that the LVIA's baseline study, set out in the **Section 26.5 of Chapter 26 Landscape and Visual Impact Assessment** [APP-112], remains valid.
91. The worst-case scenario for this topic is an open cut crossing of Church Lane, as this option has greater vegetation removal requirements. It should be noted that whilst the Order Limits are wider in this location and incorporates a wider section of the hedgerow on the southern boundary of Church Lane than assessed in ES **Chapter 26 Landscape and Visual Impact Assessment** [APP-112], the amount of vegetation removed (i.e. the construction easement) is the same as previously proposed. Regardless of crossing method (open cut trench or trenchless crossing) through Church Lane, impacts on landscape character and visual receptors within and surrounding the Site of the Proposed Change – including residents and visitors to Easton; and users of the A47 and Church Lane – would be no greater than those already identified and assessed in **Section 26.6 of ES Chapter 26 Landscape and Visual Impact Assessment** [APP-112].

92. Impacts on landscape and visual receptors arising as a consequence of SEP and/or DEP would, as already assessed in ES **Chapter 26 Landscape and Visual Impact Assessment** [APP-112], remain short-term, temporary and reversible i.e., landscape features would be reinstated following completion of construction activities. Replacement planting would still be implemented during the first planting season following completion of construction, except for tree/woodland removal which would not be re-planted within the 20m wide cable (SEP and DEP concurrently or sequentially) or 10m (SEP or DEP in isolation) easement, but which would be provided elsewhere within the cable corridor.
93. The **Design and Access Statement (Onshore)** [APP-287]; **Outline Landscape Management Plan (Revision B)** [REP1-025] (Requirement 11 of the **draft DCO (Revision D)** [REP2-008]) and **OEMP (Revision B)** [REP1-027] (Requirement 13 of the **draft DCO (Revision D)** [REP2-008]) provide the framework from which to agree the detailed plans and operations for the soft landscape proposals (planting and seeding) for the onshore cable corridor to ensure that the design and mitigation intent is realised. The landscape proposals and management prescriptions provide information to help ensure successful establishment and growth of proposed planting and seeding following the construction works.
94. As a result, **no materially new or materially different** landscape and visual amenity related impacts are anticipated as a result of the proposed change.

3.10 Socio-economics and Tourism

95. The Site of the Proposed Change is located within the East Anglia study area assessed within ES **Chapter 27 Socioeconomics and Tourism** [APP-113]. The Site of the Proposed Change is not located near to any tourist destinations or social, health and community infrastructure meaning there is unlikely to be any changes to these receptors. There are, however, a number of tourist accommodation establishments in the nearby town of Easton.
96. Unemployment in East Anglia is rising compared to the national average, although there are relatively low levels of deprivation compared to the national average. Impacts on employment and Gross Value Added (GVA) are driven by the scale of project expenditure. In the context of the project as a whole, the proposed change would represent a very small change in investment value, resulting in a very small potential change (if any) to jobs and GVA. It would also represent a very small change in the context of the local study areas used in the ES. Therefore the general baseline environment will remain unchanged from that identified and assessed within the ES submitted in support of the DCO Application.
97. The worst-case crossing scenario for this topic is not clear cut, as the employment requirements are the same for each scenario, and there would be no regional implications for either of the crossing options.
98. Potential impacts remain as previously assessed. In the regional context studied as part of the original ES, the proposed change will not create any changes to local employment levels, tourism, access to social or health infrastructure, or deprivation.
99. No mitigation measures were recommended in ES **Chapter 27 Socioeconomics and Tourism** [APP-113] due to the minimal impacts of SEP and DEP and given the scale and nature of the proposed change, no additional mitigation is required.

100. As a result, **no materially new or materially different** socioeconomic and tourism related impacts are anticipated as a result of the proposed change.

3.11 Health

101. The Site of the Proposed Change is on the boundary between Broadlands District and South Norfolk Councils. According to ES **Chapter 28 Health** [APP-114], these Councils both have older populations than the UK average, with average levels of ill-health. The districts have slightly higher life expectancy than the UK average.
102. The proposed change is at a very small scale, and therefore the baseline remains unchanged from that identified and assessed within the following chapters of the ES submitted in support of the DCO Application:
- **Chapter 28 Health** [APP-114];
 - **Chapter 17 Ground Conditions and Contamination** [APP-103];
 - **Chapter 18 Water Resources and Flood Risk** [APP-104];
 - **Chapter 19 Land Use, Agriculture and Recreation** [REP2-023];
 - **Chapter 22 Air Quality** [APP-108];
 - **Chapter 23 Noise and Vibration** [APP-109];
 - **Chapter 24 Traffic and Transport** [APP-110]; and
 - **Chapter 27 Socioeconomics and Tourism** [APP-113].
103. ES **Chapter 28 Health** [APP-114] assesses the impacts on population groups by geography and by vulnerability. It considers the conclusions of other environmental topics on health, including air quality, noise, recreation, journey times and access and contaminated land / water. The potential health impacts from each of these topics is germane to the potential impacts on health. These are discussed in the relevant sections of this SEI above. The worst-case scenario for Health in this SEI is likely to be the open cut crossing technique in terms of disruption to road and WCH users.
104. Potential impacts remain as assessed in ES **Chapter 28 Health** [APP-114], and as mentioned in the relevant sections of the SEI above. Should contamination be discovered, there could be health implications to workers on-site. This is not considered likely given the mitigation that will be in place. If an open cut crossing option is chosen, there could be some disruption to WCH users in the vicinity of the Site of the Proposed Change (Blind Lane and Church Lane), and employees at the FEP site. There are unlikely to be health impacts relating to noise and air quality due to the distance to relevant receptors. The improvement in access arrangements through use of the existing FEP access road could lead to a reduction in preparatory works and associated disruption.
105. Best practice mitigation measures referred to in the relevant sections of this SEI will be implemented, as outlined in the ES and **OCoCP (Revision B)** [REP1-023].
106. As a result, **no materially new or materially different** health related impacts, on population groups by geography or by vulnerability, are anticipated as a result of the proposed change.

3.12 Other Environmental Topics

107. Due to the scale and nature of the proposed change, the following topics are unlikely to affect, or be affected by the proposed change, and so it is considered appropriate that these are scoped out of this SEI:
- Climate change and GHGs;
 - Major accidents and disasters;
 - Transboundary effects; and
 - Combined and cumulative effects.
108. In addition, due to the distance of the Site of the Proposed Change from the coast, no offshore topics will be affected.

4 Conclusions

109. The proposed change represents a minor change to the development previously assessed in the DCO Application, comprising small extensions (and a reduction) to the Order Limits and minor amendments to the design. These changes do not introduce any new environmental receptors or additional impacts on previously identified receptors. Furthermore, all works associated with the proposed change will be undertaken in strict accordance with the environmental and construction management measures outlined within the wider DCO Application, as secured by the SEP and DEP **draft DCO (Revision D)** [REP2-008].
110. This SEI therefore demonstrates that **the proposed change will not lead to any materially new or different environmental impacts** to those previously assessed and reported within the ES. It is therefore concluded that the mitigation measures secured by the SEP and DEP **draft DCO (Revision D)** [REP2-008] are sufficient to appropriately manage any potential impacts from the proposed change.

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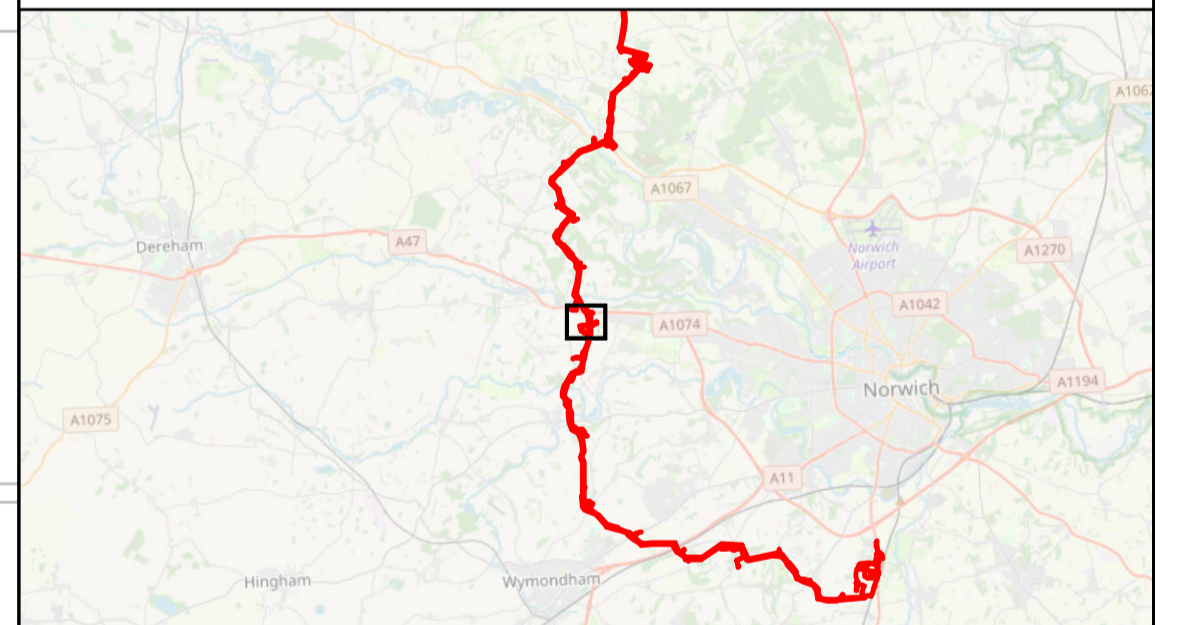
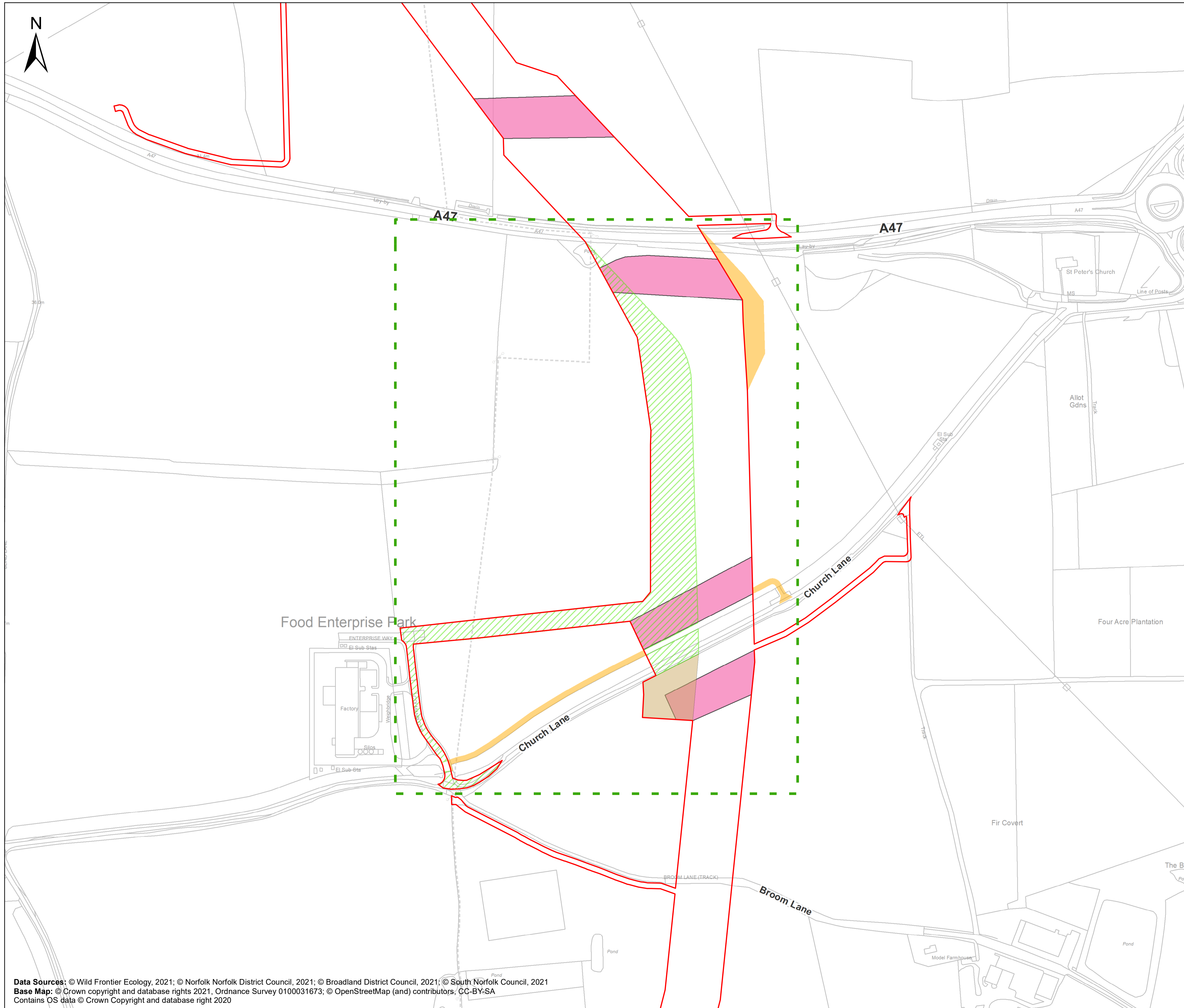
Annex 1 – Figures

Sheringham Shoal and Dudgeon Extension Projects

Title: Material Change Request – Figure 1
Overview of Scheme Changes

Legend:

- Updated Order Limits
- Site of the Proposed Change
- Decrease in Order Limits
- Increase in Order Limits
- Secondary Compound
- Indicative Trenchless Crossing Compounds



Coordinate Reference System: British National Grid
Transformation WGS84: OSGB_1936_To_WGS_1984_7

0 20 40 60 80 100 120 140 160 180 200 Metres

0 0.15 Miles

Scale: 1:2,000 Scale at size: A1

Doc no. PB8164-RHD-ZZ-ON-M2-Z-0274

REV	DATE	STATUS	DRW	CHK	APR
A	11/04/2023	First Issue	DE	CS	CS

Sheringham Shoal and Dudgeon Extension Projects

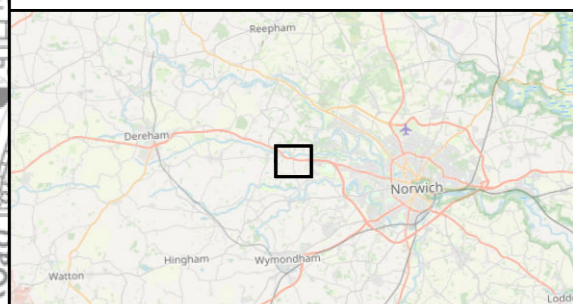
Title: Material Change Request – Figure 2 Onshore Project Area

Document: Environmental Statement (ES) Chapter 4 Project Description

Application Doc. no.: 6.2.4

- Legend:**
- Order Limits
 - Secondary compound
 - Indicative trenchless crossing compound
 - Open Cut / Trenchless route section
 - Trenchless route section

- Access**
- Construction
 - Early Works



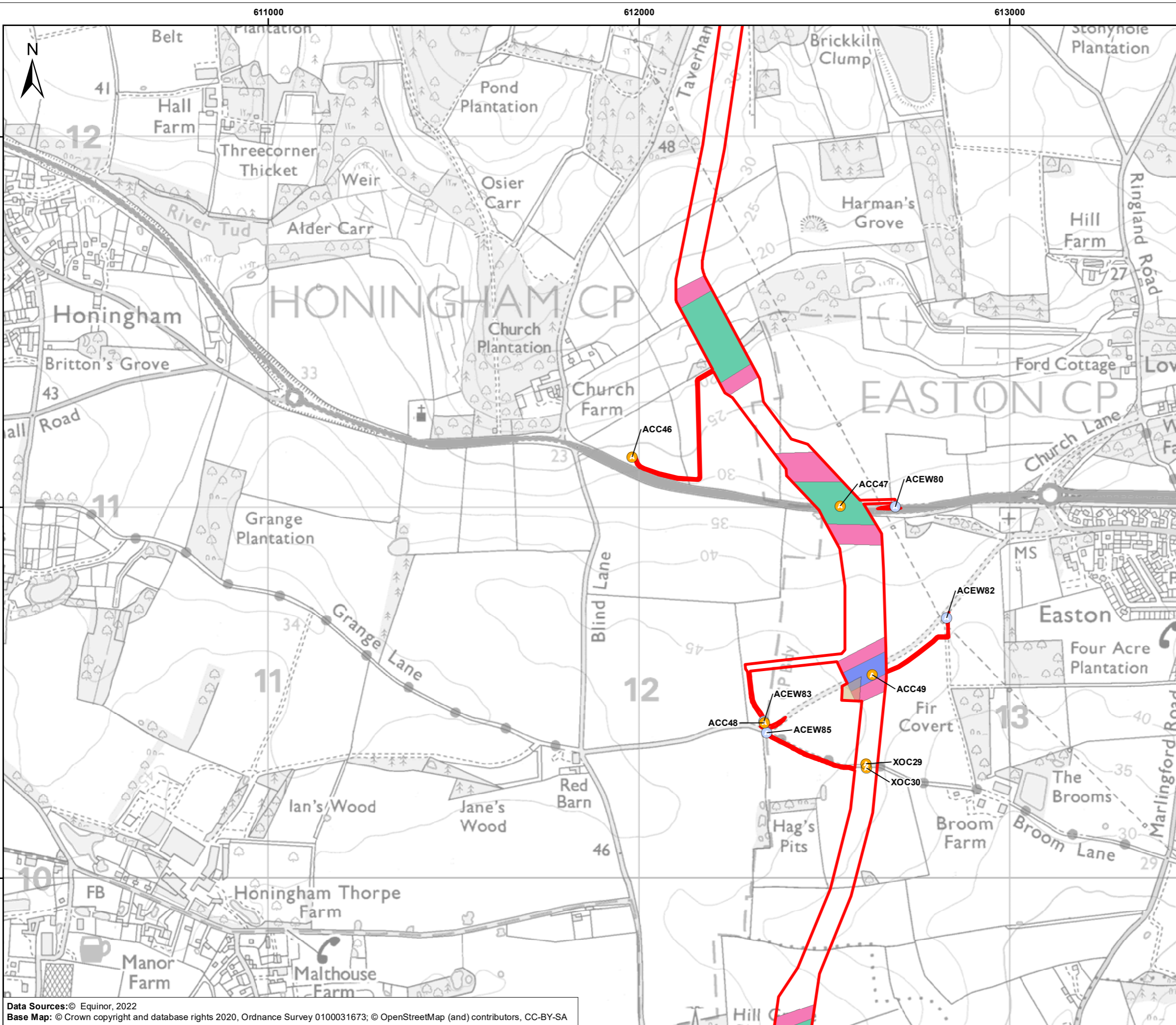
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Scale: 1:10,000 Scale at size: A3

Equinor Doc. no.: C282-RH-Z-GA-00048
 RHDHV Doc. no.: PB8164-RHD-ZZ-OF-DR-Z-0281

REV	DATE	STATUS	DRW	CHK	APR
A	11/04/2022	First Issue	DE	GK	SM



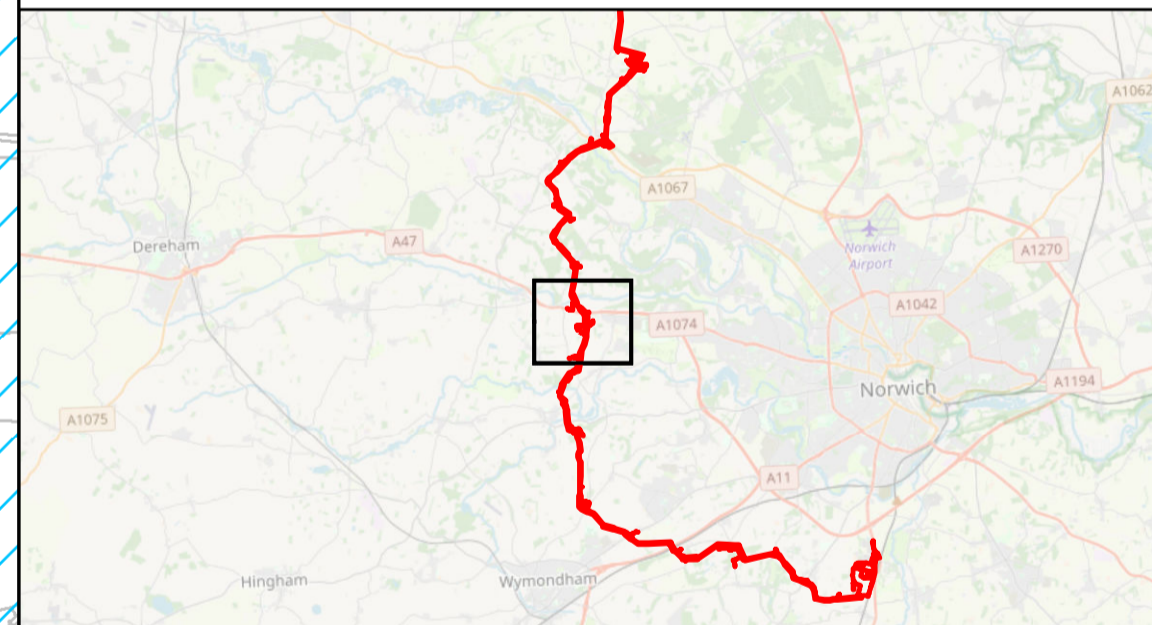
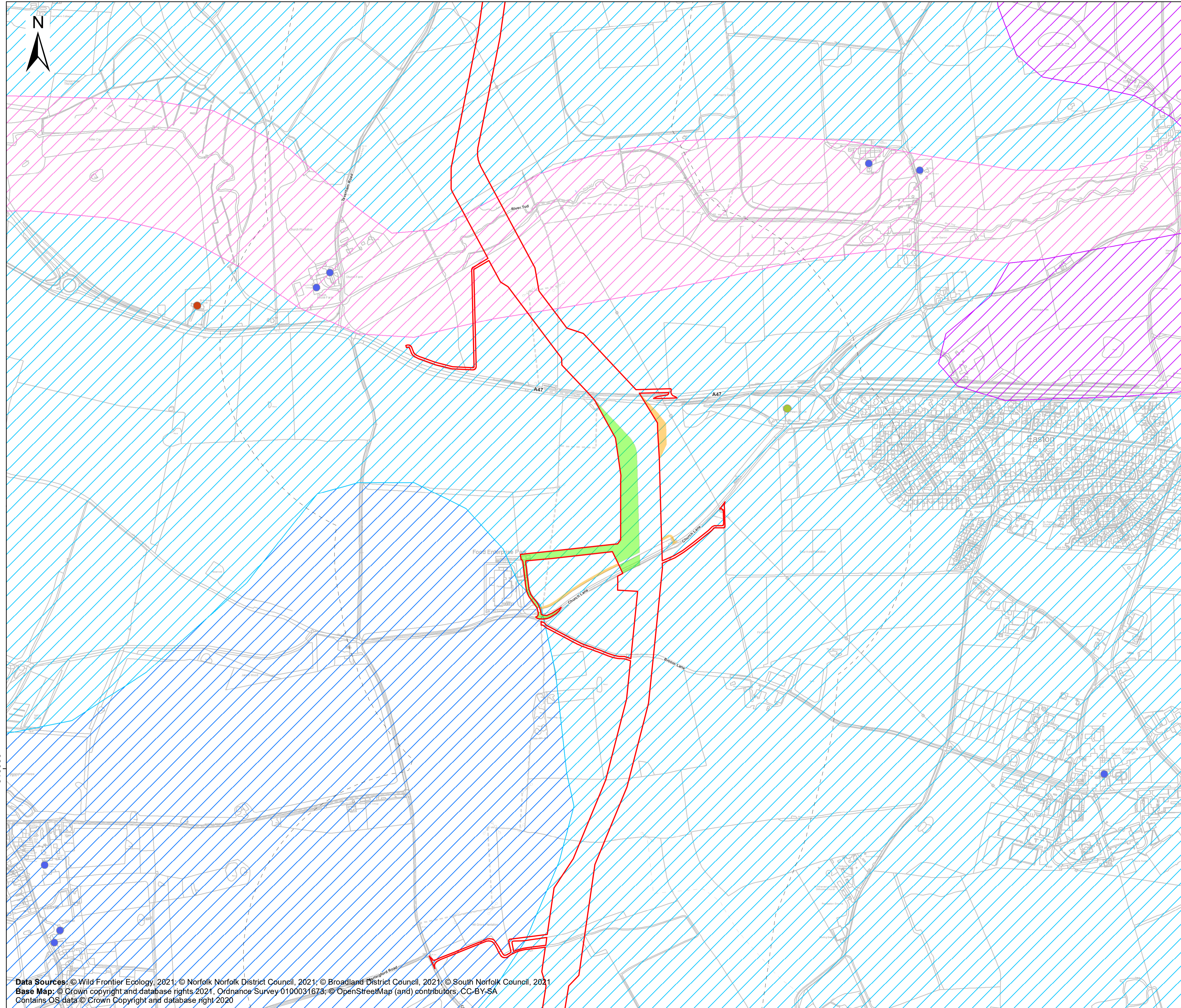
Data Sources: © Equinor, 2022
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Sheringham Shoal and Dudgeon Extension Projects

Title: Material Change Request – Figure 3
Environmental Constraints
Sheet 1 of 2

Legend:

- Updated Order Limits
 - Order Limits 500m buffer
 - Decrease in Order Limits
 - Increase in Order Limits
- Listed Buildings**
- II
 - II*
 - I
- ALC GRADE**
- Grade 2
 - Grade 3
 - Grade 4
 - Non Agricultural



Coordinate Reference System: British National Grid
Transformation WGS84: OSGB_1936_To_WGS_1984_7

0 50 100 150 200 250 300 350 400 450 500 Metres

0 0.35 Miles

Scale: 1:5,000 Scale at size: A1

RHDHV Doc. no.: C282-RH-Z-GA-0000270

A	06/04/2023	First Issue	DE	GK	ES
REV	DATE	STATUS	DRW	CHK	APR

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Sheringham Shoal and Dudgeon Extension Projects

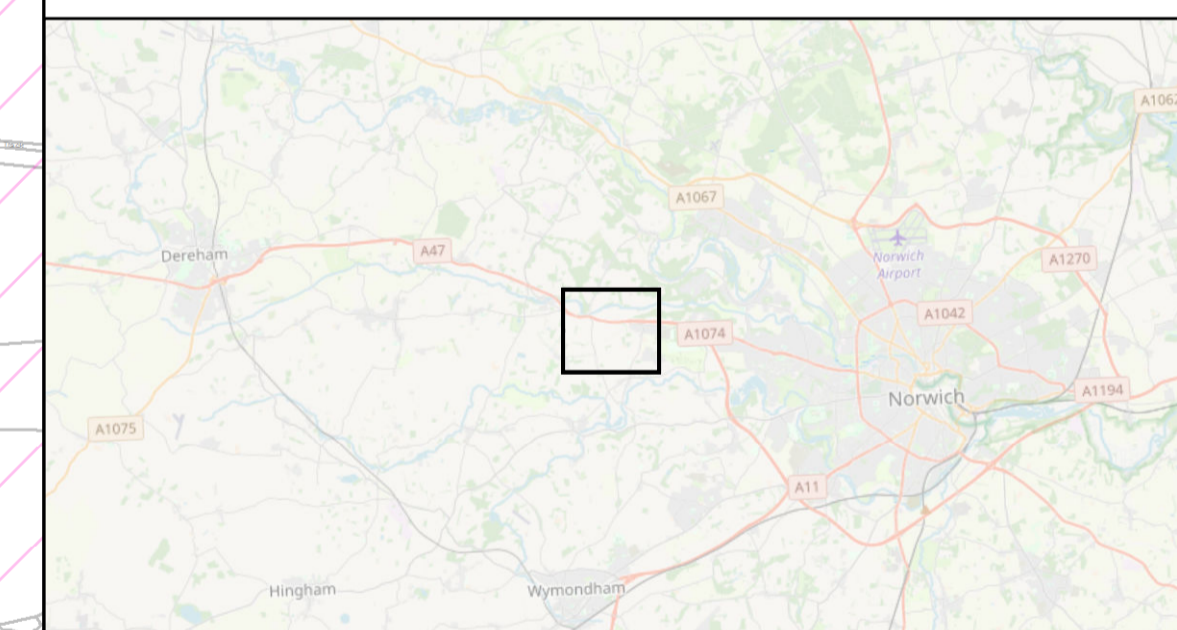
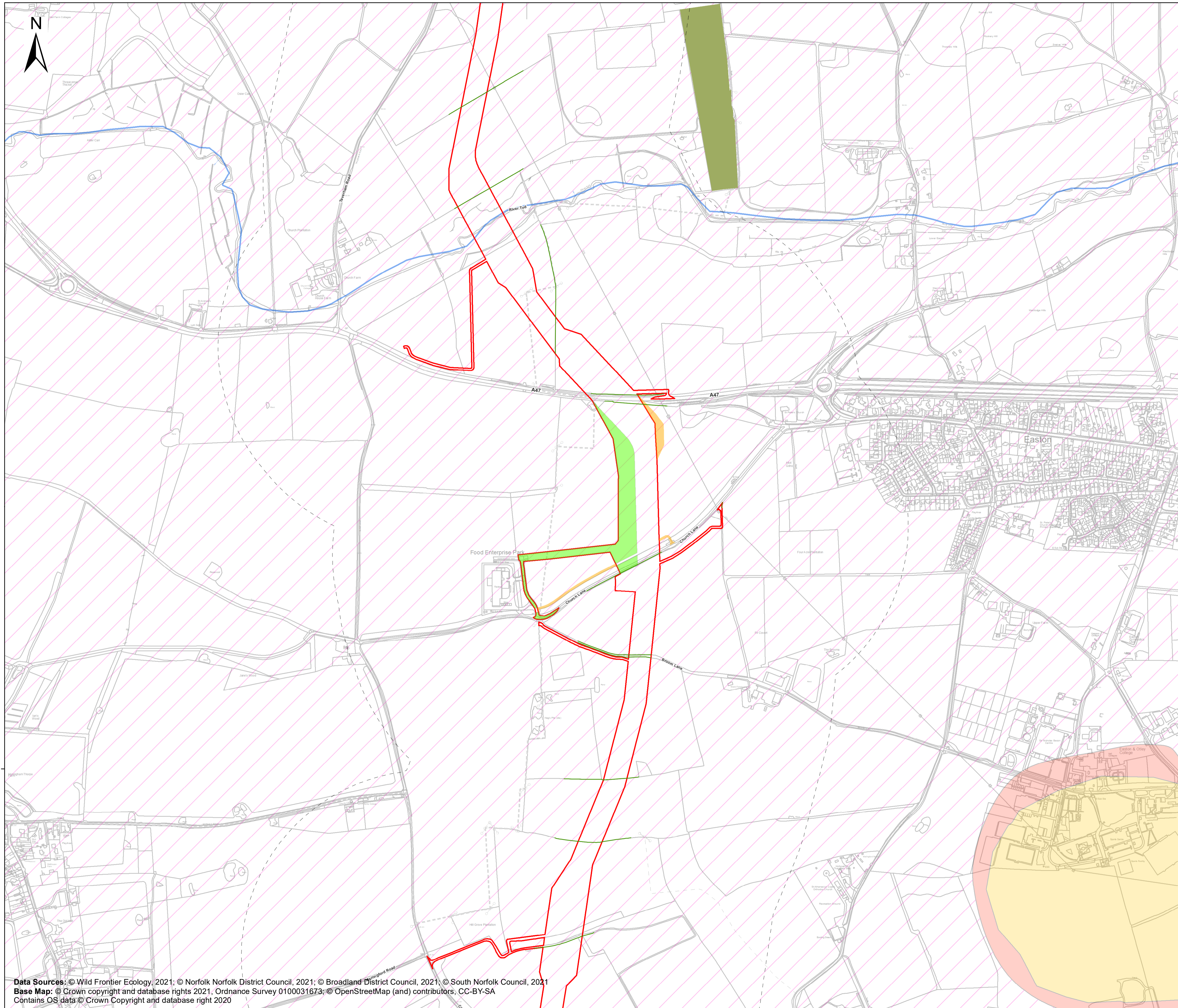
Title: Material Change Request – Figure 3
Environmental Constraints
Sheet 2 of 2

Legend:

- Updated Order Limits
- Order Limits 500m buffer
- Important Hedgerows
- River Water Bodies
- Decrease in Order Limits
- Increase in Order Limits
- Ancient Woodland

Groundwater Source Protection Zone

- 1
- 2
- 3



Coordinate Reference System: British National Grid
Transformation WGS84: OSGB_1936_To_WGS_1984_7
0 50 100 150 200 250 300 350 400 450 500 Metres
0 0.35 Miles

Scale: 1:5,000 Scale at size: A1

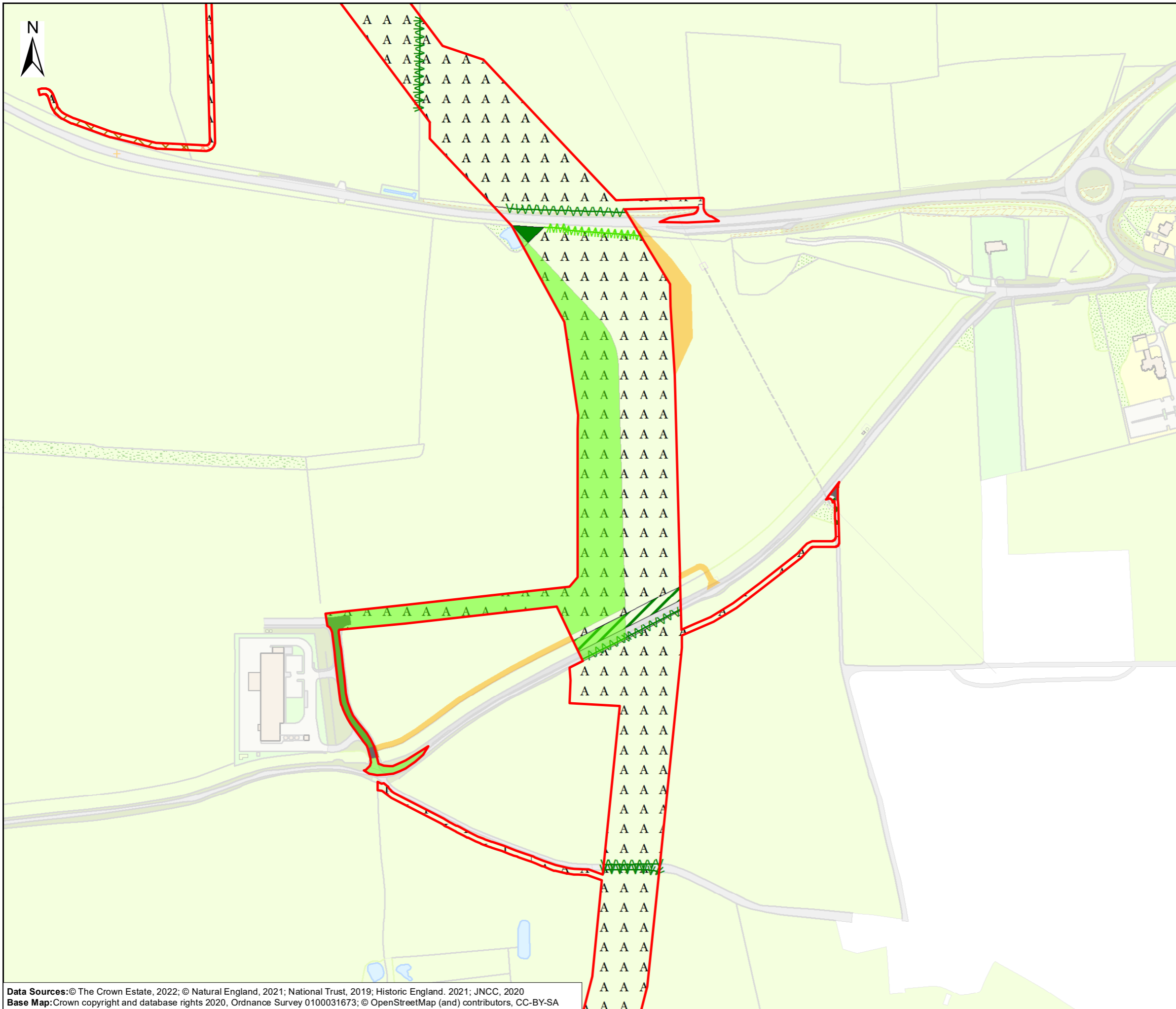
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REV	DATE	STATUS	DRW	CHK	APR

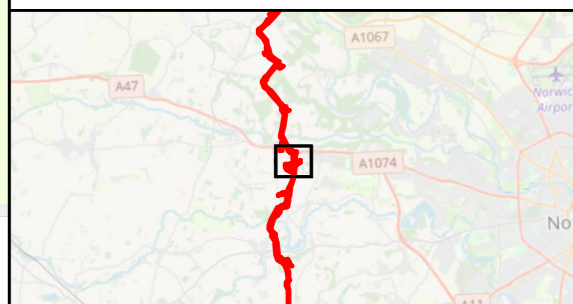
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Sheringham Shoal and Dudgeon Extension Projects

Title:
Material Change Request – Figure 4
Phase I Habitat Map



- Legend:**
- Updated Order Limits
 - Decrease in Order Limits
 - Increase in Order Limits
 - Intact hedge - native species-rich
 - Intact hedge - species-poor
 - Hedge with trees - native species-rich
 - Defunct hedge with trees - native species-rich
 - Broadleaved woodland - semi-natural
 - Broadleaved woodland - plantation
 - Improved grassland
 - Cultivated/disturbed land - arable
 - Hardstanding
 - Arable
 - Improved grassland
 - Scrub - dense/continuous
- Phase 1 Habitat Survey**
- Norfolk Biodiversity Information Service Living Map**



Coordinate Reference System: British National Grid
Transformation WGS84: OSGB_1936_To_WGS_1984_7

0 0.25 km
0 40 80 120 160 Metres

Scale: 1:4,000 Scale at size: A3

RHDHV Doc. no.: PB8164-RHD-ZZ-ON-M2-Z-0275

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Annex 2 – List of DCO Application documents to be updated

Table A contains the list of ES documents which will require an update as a result of the proposed change. These will be re-submitted if the change application is accepted at the next practical deadline.

Table A – DCO Application Documents requiring update

Document number	Document reference	Comments
APP-090	6.1.4 Environmental Statement Chapter 4 Project Description	Table 4.32 'Onshore Cable Corridor Construction Parameters' to be updated
REP2-024	6.1.20 Environmental Statement Chapter 20 Onshore Ecology and Ornithology	Table 20-11 to be updated
APP-117	6.2.4 Environmental Statement Chapter 4 Figures – Project Description Figure 4.10	Figure 4.10, Sheet 13 (Onshore Project Area) to be updated
APP-206	6.3.17.1 Environmental Statement Appendix 17.1 - Land Quality Desk Study and Preliminary Risk Assessment Report	Figures 17.1.1-17.1.5 to be updated to show the revised Order limits
APP-208	6.3.18.1 Environmental Statement Appendix 18.1 - Water Framework Directive Compliance Assessment	Figures 18.1.2-18.1.4 to be updated to show the revised Order limits
APP-212	6.3.18.3 Environmental Statement Appendix 18.3 - Geomorphological Baseline Survey Technical Report	Figure 18.3.1 (Geomorphological Survey Study Area) to be updated to show the revised Order Limits
APP-214	6.3.20.1 Environmental Statement Appendix 20.1 - Extended Phase 1 Habitat Survey Report	Table 1 and Table 3 to be updated
APP-215	6.3.20.2 Environmental Statement Appendix 20.2 - Great Crested Newt Survey Report	Figure 11, Maps 11-12, to be updated to show the revised Order Limits
APP-217	6.3.20.4 Environmental Statement Appendix 20.4 - Wintering Birds Survey Report	Figure 8 to be updated to show the revised Order Limits
APP-218	6.3.20.5 Environmental Statement Appendix 20.5 - Breeding Birds Survey Report	Figure 11, Map 11 to be updated to show the revised Order Limits
APP-219	6.3.20.6 Environmental Statement Appendix 20.6 - Initial Biodiversity Net Gain Assessment	Figure 29, Map 29 to be updated to show the revised Order Limits
APP-220	6.3.20.7 Environmental Statement Appendix 20.7 - Onshore Ecology Desk Study	Figure 5, Maps 5 and 6 to be updated to show the revised Order Limits
APP-222	6.3.20.9 Environmental Statement Appendix 20.9 - White Clawed Crayfish Survey Report	Figure 3, Map 3 to be updated to show the revised Order Limits
APP-226	6.3.20.13 Environmental Statement Appendix 20.13 - Riparian Mammals (Water Vole and Otter) Survey Report	Figure 4, Map 4 to be updated to show the revised Order Limits

Document number	Document reference	Comments
AS-020	6.3.4.1 Crossing Schedule	Crossing Schedule to be updated to indicate that Church Lane would either be crossed using trenchless techniques or open cut